



APX[™] 8000 ALL-BAND P25 PORTABLE RADIO

UNLIMITED MOBILITY. UNCOMPROMISING PERFORMANCE.

Take command with a 4-in-1 radio that offers limitless interoperability, the clearest, loudest audio and seamless Wi-Fi[®] connectivity. The compact, rugged and secure APX 8000 redefines mission critical communications.

ALL BANDS, NO BOUNDARIES

With four RF bands and multi-mode system access, the APX 8000 knows no limits when it comes to interoperability. Communicate across borders using a single device. Use analog MDC 1200 or digital P25 mode, conventional or trunked operation, SmartNet or SmartZone legacy systems, clear or secure - all across 7/800MHz, VHF and UHF Range 1 & 2 bands.

HEAR AND BE HEARD MORE CLEARLY

Whether it's loud or windy, whether you whisper or yell, the APX 8000 adaptive audio engine and ultra-loud speaker brings clarity into every conversation. The radio dynamically changes the level of noise suppression, microphone gain, windporting and speaker equalization on the fly to consistently produce the loudest, clearest audio in any environment.

VOICE AND DATA, ALL AT ONCE

With Wi-Fi[®] access, the APX 8000 can quickly receive new codeplugs, firmware and software features in order to redeploy the radio fleet with ease as users keep talking without interruption. Mission Critical Wireless Bluetooth[®] connects quickly and securely with remote speaker microphones, surveillance kits and the LEX L10 Mission Critical LTE Handheld for radio remote control. **PRODUCT DATA SHEET** | APX[™] 8000

FIT FOR THE MISSION

Intuitively designed with a familiar look and feel, the compact APX 8000 is always comfortable to use, from your holster to your grip. It contains 4 radio bands packaged into the awardwinning design of the APX 6000. The all-band antenna is flexible so it doesn't get in the way.

RUGGED, ROBUST & RELIABLE

With a water-tight seal, drop-resistant dual battery latch, pressure-tested tempered glass display and a shockabsorbing aluminum alloy endoskeleton, the APX 8000 is ready for unpredictable environments. It can survive 2 meter water submersion for 2 hours (IP68) and Motorola's renowned Accelerated Life Test.

DESIGNED TO SECURE & PROTECT

The APX 8000's voice and data is secured by multiple hardware encryption algorithms (256-bit AES, DES, ADP), up to 128 keys and the ability to re-key over the air so that sensitive information stays protected from scanners and eavesdroppers. P25 Radio Authentication ensures only valid users can access the system while two-factor authentication allows users to securely log in to databases.





RF BANDS: 700/800 MHz, VHF, UHF Range 1 & 2

OPERATION MODES:

9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking

3600 Baud SmartNet[®], SmartZone[®], SmartZone, Omnilink Trunking

Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II System Configurations

Narrow and wide bandwidth digital receiver (6.25 kHz equivalent/25/20/12.5 KHz)

STANDARD FEATURES:

Mission Critical Wireless Bluetooth* ASTRO 25 Integrated Voice & Data Integrated GPS/GLONASS for outdoor location tracking Software Key Text-Messaging Voice Announcements ISSI 8000 Roaming Radio Profiles, Dynamic Zone Intelligent Lighting Single-key ADP Encryption IP68 submersion (2 meters, 2 hours) IMPRES Battery

ADAPTIVE AUDIO ENGINE:

3 Watt Speaker with Adaptive Equalization Adaptive Dual-sided Operation Adaptive Noise Suppression Intensity Adaptive Gain Control Adaptive Windporting

PROGRAMMING:

Utilizes Windows 7 & 8 Customer Programming Software (CPS) with Radio Management

OPTIONAL FEATURES:

Wi-Fi^{*} 802.11 b/g/n RFID Volume Knob Multi-key for 128 keys and multi-algorithm Programming Over Project 25 (OTAP) Over the Air Rekey (OTAR) Digital Tone Signaling LEX L10 Collaboration P25 Authentication Man Down Sensor IP68 (2m/4hr), Mil Std 512.X Delta - T

 * Compatible with BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf BT accessories and BT 4.x

| TRANSMITTER - TYPICAL P | ERFORMA | NCE SPECIFI | CATIONS | | | |
|--|--------------------|-------------|------------------------------------|------------------------------|-------------------------------------|-------------------------------|
| | | | 700/800 | VHF | UHF Range 1 | UHF Range 2 |
| Frequency Range/Bandsplits | | | 76, 794-806 MHz 25, 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz |
| Channel Spacing | | 25 | 5/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz |
| Maximum Frequency Separation | | F | ull Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power Adj ¹ | | | MHz: 1-2.5 Watts MHz: 1-3 Watts | 1-6 Watts | 1-5 Watts | 1-5 Watts |
| Frequency Stability ¹ (-30°C to +60°C; +25°C Ref.) | | | +/- 1.0 ppm | +/- 1.0 ppm | +/- 1.0 ppm | +/- 1.0 ppm |
| Modulation Limiting ¹ | | ±5 kHz | / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kH |
| Emissions (Conducted and Radia | ted)1 | | -75 dBc | -75 dBc | -75 dBc | -75 dBc |
| Audio Response ¹ | | | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB |
| FM Hum & Noise (25kHz / 12.5kHz) ¹ | 700 MHz 800 MHz | | 49 dB/-47 dB 49 dB/-46 dB | -51 dB/-51 dB | -51 dB/-51 dB | -51 dB/-47 dB |
| Audio Distortion (25kHz / 12.5kHz) ¹ | 700 MHz 800 MHz | | 90 % / 0.90 % 60 % / 0.90 % | 0.50 % / 0.90 % | 0.50 % / 0.90 % | 0.60 % / 0.90 % |
| BATTERIES FOR APX 8000 | | | | | | |
| Battery Capacity / Type | | Dimen | sions (HxWxD) | Weight | Battery Part Number | Battery Capacity |
| Li-Ion IMPRES 2, 3400 mAh** | | 3.4″ | x 2.3″ x 1.7″ | 6.5 oz | PMNN4486 | 3400 mAh |
| Li-Ion IMPRES 2, 4850 mAh | | 5.0" | x 2.3" x 1.7" | 11.0 oz | PMNN4487 | 4850 mAh |
| Li-Ion IMPRES 2, 5100 mAh | | 5.0" | x 2.3" x 1.7" | 11 oz | PMNN4494 | 5100 mAh |
| KEY AUDIO ACCESSORIES | | | | | | |
| Name | | Туре | Part Number | | Features | |
| Extreme Policing (XP) RSM | | Wired | NMN6271 | Dual-Mic Noise Su | ppression, Emergency, Volume Cont | rol, Prog Button, IP68 |
| Mission Critical Wireless (MCW |) RSM | Bluetooth | RLN6554 | Windporting, Audio Jack, Eme | rgency, Volume Control, Task Light, | IP55, 12 hour 5/35/60 Duty Cy |

**Ships standard with radio

| RADIO MODELS | n-fai | | | |
|---------------------------|--|---|---|--|
| | MODEL 1.5 | MODEL 2.5 | MODEL 3.5 | |
| Display | Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight | Top display <u>plus</u>: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight | Top display <u>plus</u>: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight | |
| Keypad | none | Backlit keypad 3 soft keys 4 direction Navigation key Home and Data buttons | Backlit keypad 3 soft keys 4 direction navigation key 4x3 keypad Home and Data buttons | |
| Channel Capacity | 1200 | 3000 | 3000 | |
| FLASHport Memory | 2 GB | 2 GB | 2 GB | |
| 700/800 MHz (764-870 MHz) | | | | |
| VHF (136-174 MHz) | H91TGD9PW5AN | H91TGD9PW6AN | H91TGD9PW7AN | |
| UHF Range 1 (380-470 MHz) | H911GD9PW5AN | | | |
| UHF Range 2 (450-520 MHz) | | | | |
| Buttons & Switches | | volume control | | |
| Regulatory Information | | | | |
| FCC ID | | AZ489FT7061 | | |
| Industry Canada | | 109U-89FT7061 | | |
| Emission Designators | <u>LMR:</u> 8K1 | DF1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E***, <u>Bluetooth:</u> 852KF1D, 1M17F1D, 1M19F1D <u>WLAN (Wi-Fi):</u> 13M7G1D, 17M0D1D, 18M1D1I | | |

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*** In accordance with FCC mandate, the APX 8000 all band radio is restricted to 12.5kHz operation only and does NOT support 25kHz in the VHF and UHF Bands (excluding T-Band). This applies to customers under Rule Part 90.

| | | 700 | 800 | VHF | UHF |
|---|---|---|--|--|--|
| Frequency Range/Bandsplits | 3 | 764-776 MHz | 851-870 MHz | 136-174 MHz | 380-520 MHz |
| Channel Spacing | | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz |
| Maximum Frequency Separa | ation | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rate | d ¹ | 1 Watt | 1 Watt | 1 Watt | 1 Watt |
| Frequency Stability ¹ (–30°C to +60°C; +25°C Ref | .) | +/- 1.0 ppm | +/- 1.0 ppm | +/- 1.0 ppm | +/- 1.0 ppm |
| Analog Sensitivity ¹ Digital Sensitivity ² | 12 dB SINAD 1% BER 5% BER 5% BER Faded | 0.224 uV 0.316 uV 0.211 uV 0.562uV | 0.224 uV 0.316 uV 0.211 uV 0.562 uV | 0.168 uV 0.251 uV 0.149 uV 0.562 uV | 0.199 uV 0.282 uV 0.158 uV 0.530 uV |
| Selectivity (25 kHz / 12.5 kH | Z) ^{1, 5} | 79 dB / 72 dB | 78 dB / 72 dB | 82 dB / 77 dB | 80 dB / 74 dB |
| Intermodulation Rejection ¹ | | 81 dB | 80 dB | 82 dB | 80 dB |
| Spurious Rejection ¹ | | 98 dB | 98 dB | 92 dB | 98 dB |
| FM Hum and Noise (25 kHz / 12.5 kHz) ¹ | | -55 dB / -53 dB | -54 dB / -52 dB | -57 dB / -55 dB | -56 dB / -54 dB |
| Audio Distortion ¹ | | 0.9 % | 0.9 % | 0.9 % | 0.9 % |

| | MIL- | STD 810C | MIL-STD 810D MIL-STD 810E | | | MIL- | STD 810F | MIL-STD 810G | | |
|-------------------------|--------|-----------------|---------------------------|-------------|--------|-------------|----------|---------------|--------|---------------|
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | II | 500.3 | II | 500.4 | II | 500.5 | II |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Hot | 501.5 | I/A1, II/A1 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | I/A1C3 | 503.3 | I/A1C3 | 503.4 | I | 503.5 | I/C |
| Solar Radiation | 505.1 | II | 505.2 | I | 505.3 | | 505.4 | I | 505.5 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.5 | I, III |
| Humidity | 507.1 | II | 507.2 | | 507.3 | II | 507.4 | 1 Proc | 507.5 | II/Aggravated |
| Salt Fog | 509.1 | I | 509.2 | | 509.3 | | 509.4 | 1 Proc | 509.5 | 1 Proc |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.5 | I |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | II | 510.3 | | 510.4 | II | 510.5 | |
| Submersion ⁶ | 512.1 | I | 512.2 | I | 512.3 | I | 512.4 | I | 512.5 | I |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I/24 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.6 | I, V, VI |
| Shock (Drop) | 516.2 | | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |

| | Inches | Millimeters | | |
|--------------------------------------|---|--------------------|--|--|
| Length | 5.47 | 139 | | |
| Width Push-To-Talk button | 2.39 | 60.7 | | |
| Depth Push-To-Talk button | 1.40 | 35.6 | | |
| Width Top | 2.98 | 75.7 | | |
| Depth Top | 1.58 | 40.1 | | |
| Depth Bottom of Battery | 1.24 | 31.5 | | |
| Weight of the radios without battery | 11.25 oz | 319 g | | |
| ENCRYPTION | | | | |
| Supported Encryption Algorithms | ADP, 256-bit AES, DES, DES-XL Localized Algorithm | , DES-OFB, DVP-XL, | | |
| Encryption Algorithm Capacity | 8 | | | |
| Encryption Keys per Radio | Module capable of storing 102 Programmable for 128 Common Physical Identifier (PID) | , | | |
| Encryption Frame Re-sync Interval | P25 CAI 360 mSec | | | |
| Encryption Keying | Key Loader and Over the Air Re | keying (OTAR) | | |
| Synchronization | XL – Counter Addressing OFB – Output Feedback | | | |
| Vector Generator | National Institute of Standards (NIST) approved random number | 07 | | |
| Encryption Type | Digital and SecureNet | | | |
| Key Storage | Tamper protected volatile or no | n-volatile memory | | |
| Key Erasure | Keyboard command and tampe | r detection | | |
| Standards | FIPS 140-2 Level 3 FIPS 197 | | | |

| GPS/GNSS SPECIFICAT | IUNS |
|-------------------------|---------------------------|
| Constellations | GPS & GLONASS |
| Tracking Sensitivity | —164 dBm |
| Accuracy ³ | <5 meters (95%) |
| Cold Start ³ | <60 seconds (95%) |
| Hot Start ³ | <5 seconds (95%) |
| Mode of Operation | Autonomous (Non-Assisted) |

| Operating Temperature ⁴ | -30°C / +60°C |
|------------------------------------|--------------------------|
| Storage Temperature ⁴ | -40°C/+85°C |
| Humidity | Per MIL-STD |
| ESD | IEC 801-2 KV |
| Water and Dust Intrusion | IP68 (2 meters, 2 hours) |

| RUGGED OPTION | RUGGED OPTION SPECIFICATIONS | | | | | |
|---------------------------|--|--|--|--|--|--|
| Leakage | MIL-STD-810 C, D, E, F and G | | | | | |
| (submersion) ⁶ | Method 512.X Procedure I, IP68 (2 meters, 4 hours) | | | | | |
| HOUSING COLOR | | | | | | |

Black (Standard), Public Safety Yellow, and High Impact Green

¹ Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.
 ² Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.
 ³ Measured conductively with -6 satellites visible at a nominal –130 dBm signal strength. Specs provided are 95th percentile values.
 ⁴ Temperatures listed are for radio specifications. Battery storage is recommended at 25°C, ±5°C to the storage data of the storage data.

ensure best performance. ⁵ Measured using the TIA-603 single-tone method.

⁶ Rugged option only. Specifications subject to change without notice.

All specifications shown are typical. Radio meets applicable regulatory requirements.

Frequency Range/Bandsplits:

Bluetooth: 2402 - 2480 MHz, WLAN (Wi-Fi®): 2400 - 2483.5 MHz

WLAN (Wi-Fi*) 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs

Mission Critical Wireless Bluetooth 2.1 uses 96 bit encryption for pairing & 128 bit encryption for voice, signaling and data. The radio BT supports up to 6 data connections and 1 audio connection.

Bluetooth Low Energy uses 128-bit AES-CCM encryption

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APX[™] 6000 SINGLE-BAND PORTABLE RADIO



From day one, the single-band APX 6000 P25 portable radio has delivered legendary APX ruggedness and reliability, without compromising on the form factor or features required for routine activities and extreme emergencies. Now, as the ever-increasing needs of public safety personnel grow, we are evolving the APX 6000 to support newer technologies like Wi-Fi[®], Adaptive Audio Engine, and Bluetooth[®] 4.0 wireless technology. These advances help improve the operational efficiency and response time of public safety agencies while enhancing the safety of personnel and communities.

VOICE AND DATA, ALL AT ONCE

Update your radio fleet without interrupting voice communications with secure Wi-Fi. This dramatically improves the speed of configuring new codeplugs, firmware and software features over-the-air via Radio Management*. Agencies can pre-provision up to 20 secure Wi-Fi hotspots so personnel can easily access updates at the facility or in the field.

HEAR AND BE HEARD

The APX 6000 is equipped with a 3-watt speaker, 3 integrated microphones and the Adaptive Audio Engine. This changes the level of noise suppression, microphone gain, windporting and speaker equalization to produce clear and loud audio in any environment.

SEAMLESS ON-SCENE COMMUNICATION

Ensure fast and seamless communication and collaboration across all responders arriving on a scene. Mission Critical Geofence automatically changes a radio's active talkgroup based on its GPS location and an agency-defined virtual barrier. For example, an incident commander can create a geofence around the 3-block radius of a burning building so that all arriving personnel are automatically placed in the same talkgroup.

EMERGENCY FIND ME

Bluetooth 4.0 places a wide range of wireless accessories at your disposal and provides personnel with an added level of security by improving response time in emergencies. With Emergency Find Me, a Bluetoothenabled beacon signal guides other Bluetooth-enabled APX radios within range to assist the user in distress.



*Radio Management application simplifies APX radio configuration and management by programming up to 16 radios at one time and tracking which radios have been successfully programmed, providing a clear view of the entire radio fleet and a codeplug history for each radio.

SPECIFICATIONS

RF BANDS

- 700/800 MHz, VHF, UHF Range 1 & UHF Range 2
- 9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking
- 3600 Baud SmartNet[®], SmartZone[®], SmartZone, Omnilink Trunking
- Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II System Configurations Narrow and Wide Bandwidth Digital Receiver (6.25 kHz Equivalent/25/20/12.5 kHz)¹

STANDARD FEATURES

- Mission Critical Wireless Bluetooth® 4.0 (LE)²
- Emergency Find Me²
- ASTRO[®] 25 Integrated Voice & Data
- Integrated GPS/GLONASS for Outdoor Location Tracking
- Voice Announcements
- ISSI 8000 Roaming
- Radio Profiles
- Dynamic Zone
- Intelligent Lighting
- Single-Key ADP Encryption
- IP68 submersion (2 meters, 2 hours)
- IMPRES 2 Battery (PMNN4485)
- Text Message
- Software Key

PROGRAMMING

 Utilizes Windows 7 & 8 Customer Programming Software (CPS) with Radio Management³

ADAPTIVE AUDIO ENGINE (OPTIONAL)

- 3-W Speaker with Adaptive Equalization
- Adaptive Dual-Sided Operation
- Adaptive Noise Suppression Intensity
- Adaptive Gain Control
- Adaptive Windporting

OPTIONAL FEATURES

- Wi-Fi 802.11 b/g/n
- LEX L10 Collaboration
- RFID Volume Knob
- Multi-key for 128 keys and Multi-Algorithm
- Programming Over Project 25 (OTAP)
- Over the Air Rekey (OTAR)
- Digital Tone Signaling
- Mission Critical Geofence
- P25 Authentication
- Man Down Capability
- High Impact Green and Public Safety Yellow Colored Housing Options
- Rugged Option: IP68 (2m/4hr), Mil Std 512.X Delta - T⁴
- Listed by UL to the standards ANSI/TIA 4950-A and CAN/CSA C22.2 NO. 157-92 Classification Rating: Class I, Division 1, Groups C, D; Class II, Division 1, Group E, F, G; Class III, Hazardous (Classified) Locations. ANSI/ISA 12.12.01-2015 and CAN/CSA C22.2 No. 213-15; Class I, Division 2, Groups A, B, C, D; T3C. Tamb = -25° C to +60° C. when used with Motorola Battery: NNTN8921A NNTN8930A 7.4V

1 Per the FCC Narrowbanding rules, new products (APX6000 UHFR1, UHFR2) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25 KHz for United States - State & Local Markets only. 2 Compatible with BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf Bluetooth accessories and Bluetooth 4.x 3 CPS version R12.00.00 and greater ordered after June 2014 will only support Windows 7 and 8 4 Radios meet industry standards (IPx7) for submersion.

| | | 700/800 | VHF | UHF Range 1 | UHF Range 2 |
|--|--------------------|--|----------------------------|----------------------------|----------------------------|
| Frequency Range/Bandsplits | 700 MHz 800 MHz | 763-776, 793-806 MHz 806-824, 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz |
| Channel Spacing | | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz |
| Maximum Frequency Separatio | n | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power Adj ¹ | | 1-3 Watts Max | 1-6 Watts Max | 1-5 Watts Max | 1-5 Watts |
| Frequency Stability ¹ (-30°C to +60°C; +25°C Ref.) | | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % |
| Modulation Limiting ¹ | | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz |
| Emissions (Conducted and Rad | iated)1 | -75 dB | -75 dB | -75 dB | -75 dB |
| Audio Response ¹ | | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB |
| FM Hum & Noise | 25k 25.5k | -52 dB -47 dB | -55 dB -50 dB | -52 dB -47 dB | -52 dB -46 dB |
| Audio Distortion ¹ | 700 MHz 800 MHz | 1.00 % | 1.00 % | 1.00 % | 1.00 % |



| BATTERIES FOR APX 6000 | | | | | | |
|---------------------------------------|--------------------|---------|----------------------------|------------------|--|--|
| Battery Capacity / Type | Dimensions (HxWxD) | Weight | Battery Part Number | Battery Capacity | | |
| Li-Ion IMPRES 2 2550mAh1 | 3.4" x 2.3" x 1.5" | 5.0 oz | PMNN4485 | 2550 mAh | | |
| Li-Ion IMPRES 2 3400mAh | 3.4" x 2.3" x 1.7" | 6.5 oz | PMNN4486 | 3400 mAh | | |
| Li-Ion IMPRES 2 4850mAh | 5" x 2.3" x 1.7" | 11.0 oz | PMNN4487 | 4850 mAh | | |
| Li-Ion IMPRES 2 5100mAh | 5" x 2.3" x 1.7" | 11.0 oz | PMNN4494 | 5100 mAh | | |
| Li-Ion IMPRES 2 2650 mAh ² | 3.4" x 2.3" x 1.7" | 5.7 oz | NNTN8930 | 2650 mAh | | |
| Li-Ion IMPRES 2 4500mAh ² | 5" x 2.3" x 1.7" | 11.0 oz | NNTN8921 | 4500 mAh | | |

1 The standard shipping battery for the APX6000 2 HAZLOC approved.

| RADIO MODELS | gula . | Lea | مدا |
|-------------------------------|--|---|---|
| | MODEL 1.5 | MODEL 2.5 | MODEL 3.5 |
| Display | Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight | Top display plus: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight | Top display plus: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight |
| Keypad | none | Backlit keypad 3 soft keys 4 direction Navigation key Home and Data buttons | Backlit keypad 3 soft keys 4 direction Navigation key 4x3 keypad Home and Data buttons |
| Channel Capacity ¹ | 96 | 1000 | 1000 |
| FLASHport Memory | 64 MB | 64 MB | 64 MB |
| 700/800 MHz (763-870 MHz) | H98UCD9PW5BN | H98UCF9PW6BN | H98UCH9PW7BN |
| VHF (136-174 MHz) | H98KGD9PW5BN | H98KGF9PW6BN | H98KGH9PW7BN |
| UHF Range 1 (380-470 MHz) | H98QDD9PW5BN | H98QDF9PW6BN | H98QDH9PW7BN |
| UHF Range 2 (450-520 MHz) | H98SDD9PW5BN | H98SDF9PW6BN | H98SDH9PW7BN |
| Buttons & Switches | Large PTT button Angled On/Off vo 2-position concentric switch | lume control Orange emergency button 16 Multi-color backlight 3-position toggle switch | position top-mounted rotary switch3 programmable side buttons |
| Regulatory Information | | | |
| | FCC ID | Industry Canada | |
| 700/800 (764-869 MHz) | AZ489FT7086 | 109U-89FT7086 | |
| VHF (136-174 MHz) | AZ489FT7087 | 109U-89FT7087 | |
| UHF Range 1 (380-470 MHz) | AZ489FT7077 | 109U-89FT7077 | |
| UHF Range 2 (420-520 MHz) | AZ489FT7085 | 109U-89FT7085 | |
| FCC Emissions Designators | | | |
| FCC Emissions Designators | 11K0F3 | E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20 | K0F1E ² |
| Power Supply Power Supply | | 2550mAh battery standard (PMNN4485), with | |

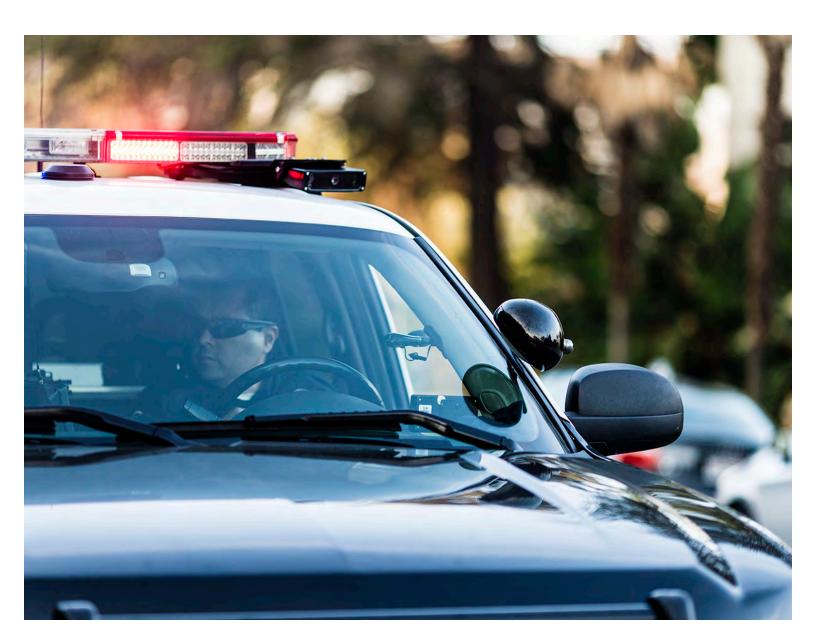
1 Enhancement package available 2 Per the FCC Narrowbanding rules, new products (APX6000 UHFR1, UHFR2) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25 kHz for United States - State & Local Markets only.

| | | 700/800 | VHF | UHF Range 1 | UHF Range 2 |
|---|---|--------------------------------|--------------------------------|----------------------------------|----------------------------------|
| Frequency Range/Bandsplits | 700 MHz 800 MHz | 763-776 MHz 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz |
| Channel Spacing | | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz |
| Maximum Frequency Separation | on | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated ¹ | | 500 mW | 500 mW | 500 mW | 500 mW |
| Analog Sensitivity ² Digital Sensitivity ³ | 12 dB SINAD 1% BER (800 MHz) 5% BER | 0.25 μV 0.375 μV 0.24 μV | 0.17 μV 0.243 μV 0.15 μV | 0.224 μV 0.298 μV 0.200 μV | 0.203 μV 0.296 μV 0.204 μV |
| Selectivity ¹ | 25 kHz channel 12.5 kHz channel | -76 dB -70 dB | -78 dB -73 dB | -77 dB -67 dB | -76 dB -67 dB |
| Intermodulation | | -80.1 dB | -80.2 dB | -80.3 dB | -80.2 dB |
| Spurious Rejection | | -75 dB | -78 dB | -80.5 dB | -80.8 dB |
| FM Hum and Noise | 25 kHz 12.5 kHz | -54 dB -79 dB | -54.3 dB -50.1 dB | -53.5 dB -47.5 dB | -52.5 dB -47.3 dB |
| Audio Distortion at Rated ¹ | | 0.90% | 0.90% | 0.70% | 0.70% |

1 Measured in the analog mode per TIA / EIA 603 under nominal conditions 2 Measured conductively in analog mode per TIA / EIA 603 under nominal conditions. 3 Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.



| | MIL- | STD 810C | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | |
|-------------------|--------|-----------------|--------------|-------------|--------------|-------------|--------------|------------------------|--------------|---------------|
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | II | 500.3 | II | 500.4 | 11 | 500.5 | |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Basic Hot | 501.5 | I/A1, II/A2 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | I/A1C3 | 503.3 | I/A1C3 | 503.4 | I | 503.5 | I/C |
| Solar Radiation | 505.1 | | 505.2 | I | 505.3 | I | 505.4 | I | 505.5 | I/A1 |
| Rain | 506.1 | 1, 11 | 506.2 | I, II | 506.3 | I, II | 506.4 | 1, 111 | 506.5 | I, III |
| Humidity | 507.1 | II | 507.2 | II | 507.3 | | 507.4 | 1 Proc | 507.5 | II/Aggravated |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I | 509.4 | 1 Proc | 509.5 | 1 Proc |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | | 510.4 | I | 510.5 | I |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | II | 510.3 | | 510.4 | II | 510.5 | II |
| Immersion | 512.1 | l | 512.2 | I | 512.3 | I | 512.4 | I | 512.5 | I |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I/24 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.6 | I, V, VI |
| Shock (Drop) | 516.2 | | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |



| Length | | 5.47 in | 139 mm | |
|--------------------------------------|---|------------------------------------|-------------------------------------|--|
| Width Push-To-Talk button | | 2.39 in | 60.7 mm | |
| Depth Push-To-Talk button | | 1.40 in | 35.6 mm | |
| Width Top | | 2.98 in | 75.7 mm | |
| Depth Top | | 1.58 in | 40.1 mm | |
| Depth Bottom of Battery | | 1.24 in | 31.5 mm | |
| Weight of the radios without bat | tery | 10.9 oz | 309 g | |
| ENCRYPTION | | | | |
| Supported Encryption Algorithms | ADP, 256-bit | AES, DES, DES- | XL, DES-OFB, DVP-XL | |
| Encryption Algorithm Capacity | 8 | | | |
| Encryption Keys per Radio | Module capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID) | | | |
| Encryption Frame Re-sync Interval | P25 CAI 300 I | mSec | | |
| Encryption Keying | Key Loader | | | |
| Synchronization | XL – Counter OFB – Output | | | |
| Vector Generator | | itute of Standar ved random num | ds and Technology Iber generator | |
| Encryption Type | Digital | | | |
| Key Storage | Tamper prote | cted volatile or | non-volatile memory | |
| Key Erasure | Keyboard cor | nmand and tam | per detection | |
| Standards | FIPS 140-2 Le FIPS 197 | evel 3 | | |
| | | | | |

| GPS/GPS/GNSS SPECIFI | CATIONS |
|------------------------------------|---|
| Constellations | GPS & GLONASS |
| Tracking Sensitivity | -164 dBm |
| Accuracy ² | <5 meters (95%) |
| Cold Start | <60 seconds (95%) |
| Hot Start | <5 seconds (95%) |
| Mode of Operation | Autonomous (Non-Assisted) |
| RUGGED SPECIFICATION | IS |
| Leakage (submersion) | MIL-STD-810 C, D, E, F and G Method 512.X Procedure I, IP68 (2 meters, 4 hours) |
| HOUSING COLOR | |
| Black (Standard), Public Safe | ety Yellow, and High Impact Green |
| ENVIRONMENTAL SPEC | IFICATIONS |
| Operating Temperature ¹ | -30 °C to +60 °C |
| Storage Temperature ¹ | -50 °C to +85 °C |
| Humidity Per MIL-STD | ESD IEC 801-2 KV |
| Water and Dust Intrusion | IP68 (2 meters, 4 hours) |
| recommend | d are for radio specifications. Battery storage is led at 25 °C, ±5 °C to ensure best performance. ured conductively with >6 satellites visible at a nominal -130 dBm signal strength. Specs |

provided are 95th percentile values.

EMISSION DESIGNATORS

 LMR:
 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E, 20K0F1E

 Bluetooth:
 852KF1D, 1M17F1D, 1M19F1D, 1M04F1D

 WLAN (Wi-Fi): 13M7G1D, 17M0D1D, 18M1D1D

WIRELESS CONNECTIVITY AND SECURITY

Frequency Range/Bandsplits: Bluetooth: 2402 - 2480 MHz, WLAN (Wi-Fi): 2400 - 2483.5 MHz

WLAN (Wi-Fi) 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs 1

Mission Critical Wireless Bluetooth 2.1 uses 96 bit encryption for pairing & 128 bit encryption for voice, signaling and data. The radio BT supports up to 6 data connections and 1 audio connection

Bluetooth 4.0 Low Energy uses 128-bit AES-CCM encryption

1 2400 - 2483.5 MHz for EMEA region and includes guardband. Channels 1 – 11 used for FCC/IC region.



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MISSION READY WHEN IT MATTERS MOST

APX[™] 4000 PROJECT 25 PORTABLE RADIO

Chemical spill. Catastrophic storm. Power outage. When every minute matters, you must communicate instantly with other agencies and responders. But how do you prepare for a disaster and keep control of operating costs? That's where the APX 4000 P25 portable radio answers the call, expertly and affordably.

The APX 4000 delivers all the benefits of TDMA technology in the smallest P25 capable portable in the industry. Easy to use, tough as nails, a hard value to beat, it seamlessly connects agencies throughout your city for fast, interoperable communications.

TRUSTED APX QUALITY

The APX 4000 leverages the leading attributes of the APX family of P25 TDMA portables. From the 2-microphone design that reduces background noise so you can speak and hear clearly over heavy equipment, diesel engines and sirens to the high-spec RF performance for excellent coverage in challenging environments.

With its easy-to-use interface, color display, intelligent lighting and radio profiles, you get all the power of APX in a compact radio. Plus, you can extend the performance of your radio with a complete portfolio of industry-leading IMPRES™ smart energy and audio accessories.

COMPACT AND UNCOMPROMISING

A compact P25 Phase 2 capable portable, the APX 4000 gets the job done without getting in the way. With two dedicated knobs for volume and channel control, the APX 4000 provides readiness for any type of work setting. And its standard IP67 and MIL-STD certified to withstand dust, heat, shock, drops and water immersion, so you can count on it wherever you need it – at the factory line, power line or fire line.

P25 PERFORMANCE, INSIDE AND OUT

Loaded with key P25 features to increase safety, the APX 4000 features Mission Critical Wireless. This unique Bluetooth® solution provides an encrypted link to a high performance earpiece, GPS for quickly locating personnel outdoors, 256-bit AES encryption for improved security, and over-the-air programming to program radios in the field without interrupting voice operation.

IMPROVE RESPONSE AND EXPENSES

The APX 4000 is P25 Phase 2 capable for twice the voice capacity so you can add more users without adding more frequencies or infrastructure. And it's backwards and forwards compatible with all Motorola mission critical radio systems, so you can interoperate with confidence while you improve operating expenses.

POWER UP WITH APX 4000 ACCESSORIES

- Designed, tested and certified for optimum performance with your radio.
- Complete portfolio of remote speaker microphones, headsets and Mission Critical Wireless Bluetooth[®] accessories.
- High-powered IMPRES[™] batteries that have a slim design to fit the compact radio size.



FEATURES AND BENEFITS

Available in 700/800 MHz, VHF, UHF R1, UHF R2 and 900 MHz bands

- Trunking standards supported:
- Clear or digital encrypted ASTRO[®]25 Trunked
 Operation
- Capable of SmartZone[®], SmartZone Omnilink, SmartNet[®]
- Analog MDC-1200 and Digital APCO P25 Conventional
- System Configurations
- Narrow and wide bandwidth digital receiver (6.25 kHz equivalent / 12.5 kHz / 30 kHz / 25 kHz)¹
- Standard with 2 dedicated control knobs for volume and channel changes
- Embedded digital signaling (ASTRO & ASTRO 25)
- Man Down
- Available in 2 models
- Lightbar with Intelligent Lighting
- Radio Profiles
- Unified Call List
- Software Key
- ASTRO 25 Integrated Voice & Data
- User programmable Voice Announcement
- Meets Applicable MIL-STD-810C, D, E, F and G
- IP67 standard

- Rugged Submersible housing (2 meters for 2 hours)²
- Superior Audio Features:
 - 0.5 W high audio speaker
 - 2-mic noise canceling technolog
- GPS Outdoor Location Tracking
- Utilizes Windows XP, Vista and Windows 7 and 8 Customer Programming Software (CPS)
 - Supports USB communications
 - Built in FLASHport[™] support
- Full portfolio of accessories including IMPRES batteries, chargers and audio devices¹
- Mission Critical Wireless Bluetooth²

OPTIONAL FEATURES

- 256-bit AES Encryption
- Programming Over Project 25
- Text Messaging
- Man Down
- Site Selectable Alert Tones
- P25 Link Layer Authentication
- Enhanced Data
- Rugged Option: Mil Std 512.X, Delta T

¹ Chargers and batteries for the APX 4000 radios are not compatible with other APX radios. ² Compatible with BT 2.1 HSP, PAN, DUN and SPP BT Profiles. ³ When used with a Hazardous Location tested radio.

| TRANSMITTER - T | YPICAL PERFOR | MANCE SPECIFICATIONS | | | | |
|---|------------------------------|--|----------------------------|----------------------------|----------------------------|----------------------|
| | | 700/800 | VHF | UHF Range 1 | UHF Range 2 | 900 MHz ⁶ |
| Frequency Range/ Bandsplits | 700 MHz 800 MHz | 763-776, 793-806 MHz 806-824, 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz | 896-901, 935-940 MHz |
| Channel Spacing | | 25/12.5 kHz | 30/25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 12.5 kHz |
| Maximum Frequency | Separation | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Powe | er Adj ¹ | 1-3 Watts Max | 1-5 Watts Max | 1-5 Watts Max | 1-5 Watts Max | 1-2.5 Watts Max |
| Frequency Stability ¹ (-30°C to +60°C; +25° | °C Ref.) | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % |
| Modulation Limiting ¹ | | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±5 kHz / ±4 kHz / ±2.5 kHz | ±2.5 kHz |
| Emissions (Conducted | I and Radiated) ¹ | -75 dB | -75 dB | -75 dB | -75 dB | -75 dB |
| Audio Response ¹ | | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB |
| FM Hum & Noise | 25 kHz 12.5 kHz | -47 dB -45 dB | -47 dB -47 dB | -47 dB -45 dB | -47 dB -45 dB | -45 dB |
| Audio Distortion ¹ | 25 kHz 12.5 kHz | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| BATTERIES FOR A | PX 4000 | | | | | |
| Battery Capacity / | Туре | Dimensions (HxW | /xD) Weight | Battery Part Nu | mber B | attery Capacity |
| Li-Ion IMPRES 1900 m | nAh IP67 | 114.5x55.04x17.8 | 5 150 grams | NNTN8128A | | 1900 mAh |
| Li-Ion IMPRES 2300 mAh IP67 Non-HazLoc | | oc 114.5x55.04x23.1 | 5 160 grams | PMNN4424AR | | 2300 mAh |
| Li-Ion IMPRES 2300 m | nAh IP67 HazLoc ³ | 114.5x55.04x23.1 | 5 210 grams | NNTN8560A | | 2500 mAh |
| Li-Ion IMPRES 2700 mAh IP54 Non-HazLoc ³ | | ос ³ 114.5 х 55.04 х 23. | 15 160 grams | PMNN4448AR | | 2700 mAh |

| RADIO MODELS | | ····································· | | | |
|---------------------------------------|--|---|--|--|--|
| | MODEL 2 | MODEL 3 | | | |
| Display | Full bitmap color LCD display 3 lines of text x 14 characters 1 line of icons 1 menu line x 3 menus White backlight | Full bitmap color LCD display 3 lines of text x 14 characters 1 line of icons 1 menu line x 3 menus White backlight | | | |
| Keypad | Backlight keypadBacklight keypad3 soft keys3 soft keys4 direction Navigation key4 direction navigationHome and Data buttonsHome and Data buttons | | | | |
| Channel Capacity | 512 | 512 | | | |
| FLASHport Memory | 64 MB | 64 MB | | | |
| 700/800 MHz (763-870 MHz) | H51UCF9PW6AN Q360GK | H51UCH9PW7AN Q360GK | | | |
| VHF (136-174 MHz) | H51KDF9PW6AN Q360GX | H51KDH9PW7AN Q360GX | | | |
| UHF Range 1 (380-470 MHz) | H51QDF9PW6AN Q360GL | H51QDH9PW7AN Q360GL | | | |
| UHF Range 2 (450-520 MHz) | H51SDF9PW6AN Q360HA | H51SDH9PW7AN Q360HA | | | |
| 900 MHz (896-940 MHz) | H51WCF9PW6AN Q360JF | H51WCH9PW7AN Q360JE | | | |
| Buttons & Switches | | ntrol = 16 position top-mounted rotary switch 3 programmable side buttons | | | |
| TRANSMITTER CERTIFICATION | | | | | |
| 700/800 (764-869 MHz) | AZ489 | FT7049 | | | |
| VHF (136-174 MHz) | AZ489 | FT3828 | | | |
| UHF Range 1 (380-470 MHz) | AZ489 | FT4905 | | | |
| UHF Range 2 (450-520 MHz) | AZ489FT4910 | | | | |
| 900 MHz (896-901, 935-940 MHz) | AZ489 | FT5864 | | | |
| FCC EMISSIONS DESIGNATORS | | | | | |
| FCC Emissions Designators | 11K0F3E, 16K0F3E, 8K10F1D, | 8K10F1E, 8K10F1W, 20K0F1E* | | | |
| FCC Emissions Designators for 900 MHz | 11K0F3E, 8K10F1D | 8K10F1E, 8K10F1W | | | |
| | | | | | |

POWER SUPPLY Power Supply

One rechargeable Li-Ion 1900 mAh battery standard, or 2300 mAh/2700 mAh high cap Li-Ion.

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

| RECEIVER - TYPICAL PERFORM | ANGE SPECIFICATIONS | | | | | |
|--|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| | | 700/800 | VHF | UHF Range 1 | UHF Range 2 | 900 MHz |
| Frequency Range/Bandsplits | 700 MHz 800 MHz | 763-776 MHz 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz | 935-940 MHz |
| Channel Spacing | | 25/12.5 kHz | 30/25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 12.5 kHz |
| Maximum Frequency Separation | | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated ¹ | | 500mW | 500mW | 500mW | 500mW | 500mW |
| Frequency Stability ¹ (-30°C to +60°C; +25°C Ref.) | | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % |
| Analog Sensitivity³ Digital Sensitivity⁴ | 12 dB SINAD 1% BER (800 MHz) 5% BER | 0.250μV 0.400μV 0.250μV | 0.216μV 0.277μV 0.188μV | 0.234μV 0.307μV 0.207μV | 0.234μV 0.307μV 0.207μV | 0.236μV 0.33μV 0.222μV |
| Selectivity ¹ | 25 kHz channel 12.5 kHz channel | -76 dB -67 dB | -76 dB -70 dB | -76 dB -67 dB | -76 dB -67 dB | -67 dB |
| Intermodulation | | -75 dB | -79 dB | -77 dB | -77 dB | -75 dB |
| Spurious Rejection | | -76.6 dB | -80.5 dB | -80.3 dB | -80.3 dB | -80 dB |
| FM Hum and Noise | 25 kHz 12.5 kHz | -53 dB -47 dB | -51 dB -45 dB | -50 dB -45 dB | -50 dB -45 dB | -47 dB |
| Audio Distortion ¹ | | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| | | | | | | |

| | MIL- | STD 810C | MIL-S | STD 810D | MIL-S | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | |
|-------------------|--------|-----------------|--------|-------------|--------|--------------|--------|---------------------|--------|---------------|--|
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | |
| Low Pressure | 500.1 | I | 500.2 | 1 | 500.3 | II | 500.4 | II | 500.5 | II | |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Basic Hot | 501.5 | I/A1, II/A2 | |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 | |
| Temperature Shock | 503.1 | I | 503.2 | I/A1C3 | 503.3 | I/A1C3 | 503.4 | I | 503.5 | I/C | |
| Solar Radiation | 505.1 | 11 | 505.2 | I | 505.3 | l | 505.4 | I | 505.5 | I/A1 | |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | 1, 111 | 506.5 | I, III | |
| Humidity | 507.1 | 11 | 507.2 | II | 507.3 | II | 507.4 | 1 Proc | 507.5 | II/Aggravated | |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | ļ | 509.4 | 1 Proc | 509.5 | 1 Proc | |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | | 510.4 | I | 510.5 | I | |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | I | 510.3 | II | 510.4 | II | 510.5 | ll | |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I/24 | |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.6 | I, V, VI | |
| Shock (Drop) | 516.2 | | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV | |

| DIMENSIONS OF THE RADIOS WITHOUT BATTERY | | | | |
|--|----------|-------------|--|--|
| | Inches | Millimeters | | |
| Length | 5.42 | 137.7 | | |
| Width Push-To-Talk button | 2.42 | 61.4 | | |
| Depth Push-To-Talk button | 1.41 | 35.75 | | |
| Width Top | 2.62 | 66.55 | | |
| Depth Top | 1.84 | 46.7 | | |
| Weight of the radios without battery | 10.05 oz | 285 g | | |

| GPS SPECIFICATIONS | |
|-----------------------|-------------------------------|
| Channels | 12 |
| Tracking Sensitivity | —159 dBm |
| Accuracy ⁵ | <10 meters (95%) |
| Cold Start | <60 seconds (95%) |
| Hot Start | <10 seconds (95%) |
| Mode of Operation | Autonomous (Non-Assisted) GPS |

| ENCRYPTION | | ENVIRONMENT |
|--------------------------------------|--|--|
| Supported Encryption Algorithms | 256-bit AES, ADP | Operating Tempera |
| Encryption Algorithm Capacity | 8 | Storage Temperat |
| Encryption Keys per Radio | Module capable of storing 1024 keys. | Humidity |
| | Programmable for 48 Common Key Reference (CKR) or | ESD |
| | 16 Physical Identifier (PID) | Water and Dust In |
| Encryption Frame Re-sync Interval | P25 CAI 300 mSec | Submersion |
| Encryption Keying | Key Loader | |
| Synchronization | XL – Counter Addressing OFB – Output Feedback | |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator | Measured in the analog i When used with an UL a Measured conductively ii |
| Encryption Type | Digital | ⁴ Measured conductively in ⁵ Accuracy specs are for log |
| Key Storage | Tamper protected volatile or non-volatile memory | nominal –130 dBm signa 6 Temperatures listed are f |
| Key Erasure | Keyboard command and tamper detection | ±5°C to ensure best perf |
| Standards | FIPS 140-2 Level 3; FIPS 197 | Specifications subject to Radio meets applicable r |
| | | |

| ENVIRONMENTAL SPECIFICA | TIONS |
|------------------------------------|---------------|
| Operating Temperature ⁶ | -30°C/+60°C |
| Storage Temperature ⁶ | -40°C/+85°C |
| Humidity | Per MIL-STD |
| ESD | IEC 801-2 KV |
| Water and Dust Intrusion | IP67 |
| Submersion | MIL-STD 512.X |

og mode per TIA / EIA 603 under nominal conditions L approved intrinsically safe radio ly in analog mode per TIA / EIA 603 under nominal conditions. ly in digital mode per TIA / EIA IS 102.CAAA under nominal conditions. long-term tracking (95th percentile values >5 satellites visible at a

hal strength). e for radio specifications. Battery storage is recommended at 25°C,

to change without notice. All specifications shown are typical. regulatory requirements.

Motorola Solutions, Inc. 1301 East Algonquin Road Schaumburg, Illinois 60196, U.S.A. 800-367-2346 motorolasolutions.com

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APX 900 SINGLE-BAND P25 PORTABLE TWO-WAY RADIO

FEATURES AND BENEFITS

- Dual-Knob Solution
- Available in VHF, UHF (R1 and R2), 700/800 MHz, and 900 MHz bands
- Modes of Operation:
- Clear or digital-encrypted ASTRO[®] 25 Trunked Operation
- Analog MDC-1200 and Digital P25
- Conventional System Configurations
- Narrow and wide bandwidth digital receiver (6.25 kHz equivalent / 12.5 kHz / 25 kHz)¹
- Embedded digital signaling (ASTRO and ASTRO 25)
- Intelligent Priority Scan
- Available in models 2 and 3
- Radio Profiles
- Unified Call List
- User-programmable Voice Announcement
- Instant Recall
- Meets Applicable MIL-STD-810C, D, E, F and G
- Full Portfolio of Accessories, including IMPRES batteries, chargers and audio devices²

STANDARD FEATURES

- Operational-Critical Wireless Bluetooth® 4.0 (LE)³
- Emergency Find Me
- ASTRO 25 Integrated Voice & Data
- Integrated GPS/GLONASS for Outdoor Location-Tracking

- Single-Key Advanced Digital Privacy (ADP) Encryption
- IP68 submersion (2 meters, 2 hours)
- IMPRES Battery (PMNN4491B)
- Embedded digital signaling (ASTRO and ASTRO 25)
- Text Messaging
- Software key

PROGRAMMING

• Utilizes Windows 7, 8 and 10 Customer Programming Software (CPS) with Radio Management

OPTIONAL FEATURES

- AES 256-bit Software Encryption (AES-256)
- Enhanced Data
- Enhanced Noise Suppressor (Highly Recommended)
- Multi-Key
- Programming Over Project 25 (OTAP)
- RFID Volume Knob (Accessory only)
- Mission Critical Geofence
- P25 Authentication
- Digital Tone Signaling
- UL-certified



Product shown with optional stubby antenna

TRANSMITTER- TYPICAL PERFORMANCE SPECIFICATIONS

| THAITOMITTER TITTOAETERIOR | | | | | |
|---|----------------|----------------|----------------|--|----------------------------|
| | VHF | UHF Range 1 | UHF Range 2 | 700/800 MHz | 900 MHz |
| Frequency Range/Bandsplits | 136-174 MHz | 380-480 MHz | 450-520 MHz | 764-776 MHz 794-806 MHz 806-824 MHz 851-870 MHz | 896-902 MHz 935-941 MHz |
| Channel Spacing ⁴ | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5 kHz |
| Maximum Frequency Separation | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power (Adjustable) ⁵ | 1-5 W | 1-5 W | 1-5 W | 700 MHz: 1-2.5 W 800 MHz: 1-3 W | 1-2.5 W |
| Frequency Stability ⁵ (-30 °C to +85 °C; +25 °C Ref.) | ±1.0 ppm | ±1.0 ppm | ±1.0 ppm | ±1.0 ppm | ±1.0 ppm |
| Modulation Limiting (12.5/20/25 kHz) | ± 2.5/4/5 kHz | ± 2.5/4/5 kHz | ± 2.5/4/5 kHz | ± 2.5/4/5 kHz | ± 2.5 kHz |
| Audio Response ⁵ | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB |
| Emissions ⁵ (conducted and radiated) | -75 dBc | -75 dBc | -75 dBc | -75 dBc | -75 dBc |
| FM Hum & Noise (12.5/25 kHz) | -45/-47 dB | -45/-47 dB | -45/-47 dB | -45/-47 dB | -45 dB |
| Audio Distortion ⁵ | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| | | | | | |

| RECEIVER- TYPICAL PERFORMAN | ICE SPECIFICATI | ONS | | | |
|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | VHF | UHF Range 1 | UHF Range 2 | 700/800 MHz | 900 MHz |
| Frequency Range/Bandsplits | 136-174 MHz | 380-480 MHz | 450-520 MHz | 764-776 MHz 851-870 MHz | 935-941 MHz |
| Channel Spacing ⁴ | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5/20/25 kHz | 12.5 kHz |
| Maximum Frequency Separation | Full Bandsplit |
| Audio Output Power at Rated ⁵ | 500 mW |
| Frequency Stability (-30 °C to +85 °C; +25 °C Ref.) | ±1.0 ppm |
| Analog Sensitivity ⁷ 12 dB SINAD Digital Sensitity ⁸ 1% BER 5% BER | 0.216 μV 0.277 μV 0.188 μV | 0.234 μV 0.307 μV 0.207 μV | 0.234 μV 0.307 μV 0.207 μV | 0.250 μV 0.400 μV 0.250 μV | 0.237 μV 0.330 μV 0.224 μV |
| Selectivity ⁵ (12.5/25 kHz) | -70/-76 dB | -67/-76 dB | -67/-76 dB | -67/-76 dB | -67 dB |
| Intermodulation | 79.5 dB | 77.0 dB | 77.0 dB | 75.0 dB | 75.0 dB |
| Spurious Rejection | -79.3 dB | -80.3 dB | -80.3 dB | -76.6 dB | -76.0 dB |
| FM Hum & Noise (12.5/25 kHz) | -45/-51 dB | -45/-50 dB | -46/-52 dB | -47/-53 dB | -47 dB |
| Audio Distortion ⁴ | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |

FCC EMISSION DESIGNATO

FCC Emission Designators

11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W

| REGULATORY INFORMATION | | |
|------------------------|-------------|-----------------|
| | FCC ID | Industry Canada |
| VHF | AZ489FT7098 | 109U-89FT7098 |
| UHF Range 1 | AZ489FT7097 | 109U-89FT7097 |
| UHF Range 2 | AZ489FT7099 | 109U-89FT7099 |
| 700/800 MHz | AZ489FT7096 | 109U-89FT7096 |
| 900 MHz | AZ489FT7100 | 109U-89FT7100 |





RADIO MODEL

| RADIU MUDEL | | |
|--------------------|---|--|
| | MODEL 2 | MODEL 3 |
| Display | Full bitmap color LCD display, 3 lines of text x 14 charac | ters, 1 line of icons, 1 menu line x 2 menus, White backlight |
| Keypad | Backlit keypad, 2 soft keys, 4-direction navigation key, Home and Back buttons | Backlit keypad, 2 soft keys, 4-direction navigation key, 4x3 keypad, Home and Back buttons |
| Channel Capacity | 512 | |
| FLASHport Memory | 2 GB | |
| VHF | H92KDF9PW6AN | H92KDH9PW7AN |
| UHF Range 1 | H92QDF9PW6AN | H92QDH9PW7AN |
| UHF Range 2 | H92SDF9PW6AN | H92SDH9PW7AN |
| 700/800 MHz | H92UCF9PW6AN | H92UCH9PW7AN |
| 900 MHz | H92WCF9PW6AN | H92WCH9PW7AN |
| Buttons & Switches | PTT button • Two-knob (volume + channel/talkgroup) • | • Orange emergency button • 3 programmable side buttons |

POWER SUPPLY

One rechargeable IMPRES Li-Ion 2100 mAh, slim high density battery IP68 (PMNN4491B), with alternate battery options available.

| BATTERIES FOR APX 900 | | | | |
|--|------------------------|--------|---------------------|------------------|
| BATTERY CAPACITY / TYPE | DIMENSIONS (H X W X D) | WEIGHT | BATTERY PART NUMBER | BATTERY CAPACITY |
| IMPRES Standard Li-Ion 2100 mAh, slim high density battery (IP68) | 113 x 52 x 18 mm | 135 g | PMNN4491B | 2100 mAh |
| IMPRES Hi-Cap Li-Ion 3000 mAh battery, low voltage (IP68) | 113 x 52 x 23 mm | 155 g | PMNN4493A | 3000 mAh |
| IMPRES Hi-Cap Li-Ion 2900 mAh low voltage battery (IP68, UL-rated ⁶) | 113 x 52 x 23 mm | 210 g | PMNN4489A | 2900 mAh |

| | MIL | STD 810C | MIL- | STD 810D | MIL | STD 810E | м | L-STD 810F | MIL-S | TD 810G |
|-------------------|--------|-----------------|--------|-------------|--------|-------------|--------|---------------------|--------|--------------|
| | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat |
| Low Pressure | 500.1 | | 500.2 | II | 500.3 | | 500.4 | II | 500.5 | II |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Basic Hot | 501.5 | I/A1, II/A2 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | I/A1C3 | 503.3 | I/A1C3 | 503.4 | I | 503.5 | I/C |
| Solar Radiation | 505.1 | II | 505.2 | I | 505.3 | I | 505.4 | I | 505.5 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | 1, 111 | 506.5 | I, III |
| Humidity | 507.1 | II | 507.2 | 11 | 507.3 | | 507.4 | 1 Proc | 507.5 | II/Aggravate |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I | 509.4 | 1 Proc | 509.5 | 1 Proc |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.5 | I |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | П | 510.3 | II | 510.4 | II | 510.5 | Ш |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | 1/24 | 514.6 | I/24 |
| Shock | 516.2 | I, III | 516.3 | I, VI | 516.4 | I, VI | 516.5 | I, VI | 516.6 | I, VI |
| Shock (Drop) | 516.2 | | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |

| BLUETOOTH | |
|-------------|---|
| Version | Bluetooth 4.0 (LE) |
| Encryption | SSP Pairing 128-bit AES-CDM Encryption for voice, data and signaling |
| Connections | Up to 6 data + 1 audio |

| DIMENSIONS: RADIO WITH BATTERY | | | |
|--------------------------------|-----------------|-----------------|--|
| | STD BATTERY | HI-CAP BATTERY | |
| Length | 5.1 in (130 mm) | 5.1 in (130 mm) | |
| Width | 2.2 in (55 mm) | 2.2 in (55 mm) | |
| Thickness | 1.4 in (36 mm) | 1.6 in (41 mm) | |
| Weight | 11 oz (315 g) | 12 oz (347 g) | |

| CPS/C | NSS 8 | PECIE | ICATIONS 11 | 3 |
|-------|-------|-------|-------------|---|

| Constellations | GPS and GLONASS |
|-----------------------|-------------------------------|
| Tracking Sensitivity | -154 dBm |
| Accuracy ⁹ | <10 m (95%) |
| Cold / Hot Start | <60 / <5 s (95%) |
| Mode of Operation | Autonomous (non-assisted) GPS |
| | |

1 Per the FCC Narrowbanding rules, new products submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25 kHz for United States - State and Local Markets only. 2 Chargers and batteries for APX 1000 will interoperate with APX 900 3 Compatible with BT 2.1, HSP, PAN, DUN and SPP Profiles in off-the-shelf Bluetooth accessories and Bluetooth 4.x

4 Check your regional regulatory agency for availability of different channels bandwidths

5 6

Measured in the analog mode per TIA / EIA 603 under nominal conditions When used with an UL-approved intrinsically safe radio Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.

Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.
 Accuracy specs are for long-term tracking (95th percentile, >5 satellites visible at a nominal -130 dBm signal strength).
 Temperatures listed are for radio. Battery storage is recommended at 25 °C, ±5 °C to ensure best performance.

For more information, please visit motorolasolutions.com/apx



Motorola Solutions Inc., 500 West Monroe St, Chicago, IL 60661 U.S.A. motorolasolutions.com

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| ENCRYPTION | |
|-----------------------------------|--|
| Supported Encryption Algorithms | Advanced Digital Privacy (ADP) |
| | AES 256-bit Software Encryption (AES-256) |
| Encryption Keys per Radio | 48 |
| Encryption Frame Re-sync Interval | P25 CAI 360 ms |
| Encryption Keying | Key Loader |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator |
| Encryption Type | Digital |
| Key Storage | Non-volatile Memory |
| Key Erasure | Keyboard Command |
| Standards | FIP 140-2 Level 1; FIPS 197 |

| ENVIRONMENTAL SPECIFICATION | IS |
|-----------------------------------|--------------------------|
| Operating Temperature | -30 °C to +60 °C |
| Storage Temperature ¹⁰ | -40 °C to +85 °C |
| Humidity | Per MIL-STD |
| ESD | IEC 801-2 KV |
| Water and Dust Intrusion | IP68 (2 meters, 2 hours) |
| Housing Color Availability | Black only |

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements.

APPA DEXT PROTECT YOUR FOCUS

IN PUBLIC SAFETY, FOCUS IS YOUR GREATEST RESOURCE. MAKE SURE IT'S PROTECTED WITH APX NEXT[®].

A MASSIVE ADVANCE IN MISSION-CRITICAL VOICE AND DATA

Your radio is your lifeline. APX NEXT is our next step in advancing it. It's designed to military standards for extreme ruggedness. The touchscreen works with or without gloves—in rain, dirt, and dust. Digital mics and high-power speakers deliver our best audio ever, while SmartConnect keeps you connected even beyond your P25 system. The result is a radio that works when you need it, without pause, distraction or doubt.

EFFORTLESS IS ALWAYS IN REACH

\$ 11:30

Ē

2

5

More

My Status

En Route

LI & Z H/L

East Zone

Patrol 1

4

Clark, Robert

On my way

F

APX NEXT is designed for effortless usability when everything is on the line. Intuitive knobs and buttons are easily distinguished by touch. A mission-critical touchscreen makes it fast and easy to operate your radio. ViQi understands a huge range of natural language voice commands, so you can operate the radio with eyes-up awareness. Every interaction is simple, fast and logical. You stay focused on what matters—your mission and your safety.

BRING NEW INTELLIGENCE TO THE POINT OF ENGAGEMENT

APX NEXT mission-critical apps bring new intelligence to the field. ViQi enables natural language database queries, rapidly giving vital information, and letting dispatchers stay focused on critical situations. And as part of our unique, end-to-end public safety ecosystem, APX NEXT data and operations are secure, and new capabilities can be seamlessly added as your needs evolve.

UPDATE YOUR FLEET IN MINUTES, NOT MONTHS

APX NEXT gives you back time: a cloud-based provisioning system prepares radios before they arrive. Remote updating keeps radios in the field, with zero touch and zero downtime. MyView Portal provides direct access to subscriptions, warranties and licenses, and a range of services helps you manage your operation. With APX NEXT, your ownership experience is streamlined, so your valuable resources stay focused and ready.





MISSION-CRITICAL DESIGN



FEATURES

OPERATION MODES

| Digital Trunking: 9600 Baud APCO P25 Phase 1 FDMA and Phase 2 TDMA |
|---|
| Digital Conventional: APCO 25 |
| Analog Trunking: 3600 Baud SmartNet®, SmartZone®, Omnilink® |
| Analog Conventional: MDC 1200 |
| ASTRO® 25 Integrated Voice and Data |
| SmartConnect Multi-net Connectivity* |
| |

FREQUENCY BANDS

| All-band: Simultaneous Operation in VHF, UHF Range 1, |
|--|
| UHF Range 2, 700 and 800 MHz Bands |
| Available in Multi-band and Single-band Configurations |
| Up to 3000 Channels |
| Up to 125 Zones |

ADDITIONAL CONNECTIVITY

| Bluetooth (Version 5.0) |
|---|
| WiFi (802.11a/b/g/n/ac), 2.4 and 5 GHz Bands |
| LTE (FirstNet®, Verizon, & Bell Mobility - certified) |
| NFC (Near-Field Communications)** |

AUDIO FEATURES

| 3 W Speaker with Adaptive Equalization |
|---|
| 2 Internal Digital Microphones |
| Adaptive Dual-sided Operation |
| Adaptive Noise Suppression Intensity |
| Adaptive Gain Control |
| Adaptive Windporting |
| IMPRES [™] Audio Accessory Compatibility |
| |

MANAGEMENT

| RadioCentral™ |
|-----------------------|
| SmartProgramming* |
| SmartInsight* Preview |

LOCATION-TRACKING

| Built-in GNSS (GPS and GLONASS) | |
|-------------------------------------|--|
| SmartLocate and Indoor Positioning* | |
| Mission-critical Geofence** | |
| SmartMapping* | |

SECURITY

| 256-bit AES* |
|--|
| Single-key ADP Encryption* |
| Software Key |
| P25 Authentication* |
| Multikey for 128 Keys and Multi-algorithm* |
| Over-The-Air Key Loading*** |
| Over-The-Air Rekeying (OTAR)* |

INGRESS PROTECTION

| IP6x Dust |
|------------------------------------|
| IPx8 Submersion (2 m, 4 hr) |
| MIL-STD Delta-T, 512.X Procedure 1 |

MESSAGING

| Text Messaging | |
|-----------------------------|--|
| Freeform or Canned Messages | |
| SmartMessaging* | |

USER INTERFACE

| 3.6" Mission-critical Touchscreen: 800x480 TFT 24-bit Full Color Transflective Display, 1 mm Toughened Glass Lens |
|--|
| Capacitive Touch Technology: Usable with Gloves Up to 4 mm Thick, Resistant to False Actuation from Fresh or Salt Water, Snow, Ice, Dirt or Grease |
| High Velocity User Interface: Large Touch Targets, Shallow Menu Hierarchy, Home Screen Information at a Glance, Integrated Applications |
| 1.2" Top Display: 200x112 TFT 18-bit Color Transflective Screen, 1 Line of Icons, 2 Lines of Text, 14 Characters per Line, 2 mm Toughened Glass Lens |
| PTT Button: 1.32 x 0.54 in (33.5 x 13.8 mm) |
| 16-position Channel Selector |
| Angled Power/Volume Knob |
| Large Orange Emergency Button |
| 3 Programmable Side Buttons (1-dot, 2-dot, purple) |
| Concentric 2-position Switch |
| ABC Zone Switch |
| ViQi Button (3-dot) |
| Display On/Off/Home Button |
| |

ViQi VOICE INTERACTION

| Customizable Voice Announcements |
|--|
| Voice Control: 13 Actions with Intuitive Commands* |
| Virtual Partner Service* |
| |

ENERGY

| Standard 4400 mAh Battery |
|--|
| Optional High Capacity 5650 mAh Battery* |
| IMPRES 2 Smart Battery Technology |
| |

SENSORS

| Ambient Light |
|--|
| Accelerometer x2 (Display Orientation, Man Down) |
| Magnetometer (eCompass) |

OTHER FEATURES

| Radio Profiles | |
|-------------------------|--|
| Enhanced Data* | |
| Multicast Voting Scan* | |
| Man Down* | |
| DVRS PSU* | |
| Digital Tone Signaling* | |

DIMENSIONS

| Radio with Standard Battery, no Antenna | |
|--|--|
| Height: 5.4 in (138 mm) | |
| Width: 2.5 in (63 mm) | |
| Depth: 1.7 in (43 mm) | |
| Weight: 18.5 oz (525 g) | |
| Radio with High Capacity Battery, no Antenna | |
| Height: 7.1 in (180 mm) | |
| Width: 2.5 in (63 mm) | |
| Depth: 1.7 in (43 mm) | |
| Weight: 22.8 oz (647 g) | |
| | |







PERFORMANCE

TRANSMITTER

| | Footnote | VHF | UHF Range 1 | UHF Range 2 | 700 MHz | 800 MHz |
|---|----------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| Frequency Range / Bandsplits | - | 136-174 MHz | 380-470 MHz | 450-520 MHz | 762-776, 792-806 MHz | 806-825, 851-870 MHz |
| Channel Spacing | 1 | 12.5 / 20 / 25 kHz |
| Maximum Frequency Separation | - | Full Bandsplit |
| Rated RF Output Power (Adjustable) | 2 | 1-6 W | 1-5 W | 1-5 W | 1-2.5 W | 1-3 W |
| Frequency Stability (-30 °C to +60 °C; +25 °C Ref.) | 2 | ±1.0 ppm |
| Modulation Limiting (12.5 / 20 / 25 kHz Channel) | 2 | ±2.5 / ±4 / ±5 kHz |
| Emissions (Conducted and Radiated) | 2 | -75 dBc |
| Audio Response | 2 | +1, -3 dB |
| FM Hum and Noise (12.5 / 25 kHz Channel) | 2 | -53 / -55 dB | -52 / -54 dB | -51 / -54 dB | -50 / -55 dB | -49 / -53 dB |
| Audio Distortion (12.5 / 25 kHz Channel) | 2 | 0.75% / 0.75% | 0.75% / 0.75% | 0.75% / 0.75% | 0.85% / 0.85% | 0.85% / 0.85% |
| RECEIVER | | | | | | |
| | Footnote | VHF | UHF Range 1 | UHF Range 2 | 700 MHz | 800 MHz |
| Frequency Range / Bandsplits | - | 136-174 MHz | 380-470 MHz | 450-520 MHz | 762-776, 799-806 MHz | 851-870 MHz |
| Channel Spacing | 1 | 12.5 / 20 / 25 kHz |
| Maximum Frequency Separation | - | Full Bandsplit |
| Frequency Stability (-30 °C to +60 °C; +25 °C Ref.) | 2 | ±1.0 ppm |
| Analog Sensitivity (12 dB SINAD) | 2 | 0.178 µV (-122.0 dBm) | 0.211 µV (-120.5 dBm) | 0.211 µV (-120.5 dBm) | 0.224 µV (-120.0 dBm) | 0.237 µV (-119.5 dBm |
| Digital Sensitivity (1% BER) | 3 | 0.266 µV (-118.5 dBm) | 0.298 µV (-117.5 dBm) | 0.298 uV (-117.5 dBm) | 0.335 µV (-116.5 dBm) | 0.335 µV (-116.5 dBm |
| Digital Sensitivity (5% BER) | 3 | 0.158 µV (-123.0 dBm) | 0.178 µV (-122.0 dBm) | 0.178 µV (-122.0 dBm) | 0.224 µV (-120.0 dBm) | 0.224 µV (-120.0 dBm |
| Selectivity (12.5 / 25 kHz Channel) | 2 | 77 / 84 dB | 74 / 81 dB | 74 / 81 dB | 72 / 80 dB | 72 / 79 dB |
| Intermodulation Rejection | 2 | 82 dB | 80 dB | 80 dB | 80 dB | 80 dB |
| Spurious Rejection | 2 | 98 dB | 95 dB | 95 dB | 98 dB | 98 dB |
| FM Hum and Noise (12.5 / 25 kHz Channel) | 2 | 55 / 59 dB | 54 / 58 dB | 54 / 58 dB | 53 / 57 dB | 52 / 56 dB |
| Audio Distortion | 2 | 0.90% | 0.90% | 0.90% | 0.90% | 0.90% |
| | | | | | | |



IMPRES[™] 2 BATTERIES

| | Footnote | Part No | Capacity | Availability | | | |
|------------------------------|-------------------|---|-----------------|--------------|--|--|--|
| Standard | - | NNTN9216 | 4400 mAh | Included | | | |
| High Capacity | - | NNTN9089 | 5650 mAh | Optional | | | |
| Standard HazLoc | 4 | NNTN9217 | 4400 mAh | Optional | | | |
| High Capacity HazLoc | 4 | NNTN9090 | 5650 mAh | Optional | | | |
| ENCRYPTION | | | | | | | |
| Supported Encryption Algorit | | P, AES, DES, DES-X calized Algorithm | L, DES-OFB, D\ | /P-XL, | | | |
| Encryption Algorithm Capacit | ty 8 | | | | | | |
| Encryption Keys per Radio | | 1024 Keys, Programmable for 128 Common Key References (CKR) or 16 Physical Identifiers (PID) | | | | | |
| Encryption Keying | | Local Key Loader and Over-the-Air Rekeying (OTAR) | | | | | |
| Synchronization | | XL - Counter Addressing OFB - Output Feedback | | | | | |
| Vector Generator | | NIST-Approved Random Number Generator | | | | | |
| Encryption Type | Diç | Digital and SecureNet, TLS1.2, SRTP | | | | | |
| Key Storage | | nper-protected Vola n-volatile Memory | atile or | | | | |
| Key Erasure | Ke | yboard Command a | nd Tamper Dete | ection | | | |
| Standards | FIP | 'S 140-2 Level 1 and | Level 3, FIPS 1 | 97 | | | |
| Device Certificates | x.5 | 09v3 ECC-P384, x.5 | 509v3 RSA-204 | 8 | | | |
| Cipher Suites | TL: TL: TL: | ECDHE_ECDSA_WITH_AES256_GCM_SHA384 TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 TLS_RSA_WITH_AES_256_GCM_SHA384 SRTP_AEAD_AES_256_GCM1 | | | | | |

| COLON | |
|--|---|
| Standard Color | Black/Gray |
| Optional Side Panel Colors (Supplied as Retro-fit Kits) | Red, Blue, Orange, Public Safety Yellow, High Impact Green, Coyote Brown |

WIRELESS

| LTE | |
|-----------------------------------|---|
| Bands Supported | 2, 4, 12, 13, 14 |
| Bands (Hardware Ready) | 5, 17 |
| Device Category | 4 |
| Certifications | FirstNet®, Verizon, Bell Mobility |
| WiFi | |
| Standards Supported | 802.11a/b/g/n/ac |
| Frequency Range | 2400-2472, 5180-5825 MHz |
| Security | Supports WPA-2, WPA, WEP |
| Capacity | Up to 20 SSIDs |
| Bluetooth | |
| Version | 5.0 |
| Frequency Range | 2402 - 2480 MHz |
| Security | 128-bit AES-CCM Encryption |
| AUDIO | |
| Audio Output Power at Rated | 3 W |
| Audio Output Power at Max | 5 W |
| Audio Response (EIA) | +1, -3 dB |
| Speech Loudness at 12 in (300 mm) | 105 Phon |
| Audio Features | Adaptive Equalization Adaptive Dual-sided Operation Adaptive Noise Suppression Intensity Adaptive Gain Control Adaptive Windporting IMPRES Audio |

LOCATION-TRACKING

| | Footnote | |
|----------------------|----------|---|
| Constellations | - | GNSS (GPS and GLONASS) |
| Tracking Sensitivity | - | -159 dBm |
| Accuracy | 5 | <5m (95%) |
| Cold Start | 5 | <60 Seconds (95%) |
| Hot Start | 5 | <5 Seconds (95%) |
| Mode | - | Autonomous (Assisted only with LTE service) |

ENVIRONMENTAL AND REGULATORY

MIL-STD 810

| | MIL- | MIL-STD 810C MIL-STD 810D | | MIL-S | MIL-STD 810E | | TD 810F | MIL-STD 810G/H | | |
|-------------------|--------|---------------------------|--------|-------------|--------------|-------------|---------|----------------|--------|--------------|
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | II | 500.3 | II | 500.4 | II | 500.5 | |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | l/Hot, ll/Hot | 501.5 | I/A1, II/A1 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | I/A1, C3 | 503.3 | I/A1, C3 | 503.4 | I | 503.5 | I/C |
| Solar Radiation | 505.1 | II | 505.2 | I | 505.3 | I | 505.4 | I | 505.5 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | 1, 11 | 506.3 | I, II | 506.4 | 1, 111 | 506.5 | I, III |
| Humidity | 507.1 | II | 507.2 | II | 507.3 | II | 507.4 | 1 Proc | 507.5 | II/Aggravate |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I | 509.4 | 1 Proc | 509.5 | 1 Proc |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.5 | I |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | II | 510.3 | II | 510.4 | II | 510.5 | |
| Submersion | 512.1 | I | 512.2 | I | 512.3 | I | 512.4 | I | 512.5 | I |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I/24 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.6 | I, V, VI |
| Shock (Drop) | 516.2 | 11 | 516.3 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |

ENVIRONMENTAL

| | Footnote | |
|----------------------------------|----------|--|
| Operating Temperature | 6 | -30 to +60 °C (-22 to +140 °F) |
| Storage Temperature | 6 | -40 to +85 °C (-40 to +185 °F) |
| Humidity | - | Per MIL-STD 810 |
| ESD | - | IEC 801 - 2 kV |
| Dust Resistance | - | IP6X |
| Water Resistance (Submersion) | - | IPX8 (2 meters, 4 hours) MIL-STD Delta-T, 512.X Procedure 1 |

FOOTNOTES:

- 1. Please refer to local regulations for available channel bandwidths.

- Prease refer to local regulations for available challed baldwiddls.
 Measured conductively in analog mode per TIA / EIA 603 under nominal conditions, and at 1 W Rated Audio for Rx. Selectivity measured using the TIA-603 single-tone method.
 Measured conductively in digital mode per TIA / EIA IS 102.
 Listed by UL to non-incendive standards: UL 121201 and CAN/CSA C22.2 No. 213-17 as safe for use in Class I, Division 2, Groups A,B,C,D; Class II, Division 2, Groups F,G; Class III Hazardous Locations.
- 5. Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength. Specs provided are 95th percentile values.

REGULATORY

| FCC ID | AZ489FT7119 |
|--------------------------|--|
| IC ID | 109U-89FT7119 |
| LMR | 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E, 20K0F1E |
| Bluetooth | 1M18G1D, 1M1F1D, 2M1F1D |
| WiFi | 12M9G1D, 16M7D1D, 17M9D1D, 36M2D1D, 17M5D1D, 18M4D1D, 36M8D1D, 76M1D1D |
| LTE | Band 2 (1850.7 - 1900 MHz), Modulation: *G7D, *D7W Band 4 (1710.7 - 1745 MHz), Modulation: *G7D, *D7W Band 12 (699.7 - 711 MHz), Modulation: *G7D, *D7W Band 14 (790.5 - 793 MHz), Modulation: *G7D, *D7W |
| All-band Model Number | H55TGT9PW8AN |
| Single-band Model Number | H45TGT9PW8AN |

6.LMR only. Front display, LTE, WiFi, Bluetooth and GPS not available when radio internal temperature is below -20 °C (-4 °F). Hi-capacity battery required for operation between -20 °C (-4 °F) and -30 °C (-22 °F). Batteries should be charged at 0 to +45 °C (+32 to +113 °F) and stored at +20 to +25 °C (+68 to +77 °F). Reference motorolasolutions.com/batterycare

All specifications are subject to change without notice. For full details consult product service manual, document no. MN005643A01





ACCESSORIES

EXPAND AND CUSTOMIZE YOUR RADIO'S FUNCTIONALITY WITH BEST-IN-CLASS ACCESSORIES.

AUDIO

HEAR AND BE HEARD LIKE NEVER BEFORE



XV Remote Speaker Microphone

PMMN4123

- Loudest, clearest speaker New adaptive noise
- Four digital microphones suppression
- Enhanced windporting Dedicated ViQi button

ANTENNAS

DESIGNED FOR WEARABILITY



Whip All-band Antenna 200 mm (V,U,7/800 MHz) AN000297A01

Colored antenna ID bands are available for easy customization and come in packs of 10.

32012144001 Gray
 32012144002 Yellow
 32012144003 Green

32012144004 Blue 32012144005 Purple

CARRY

SECURE, EASY ACCESS



Classic Holster PMLN7947



PMLN7948 Standard Capacity PMLN7964 High Capacity ENERGY MAXIMIZED POWER,

LIFE AND MANAGEMENT



IMPRES 2 Multi-Unit Charger NNTN9115



IMPRES 2 Single-Unit Charger NNTN9199



IMPRES 2 Standard Capacity Battery NNTN9126 4400 mAh NNTN9127 4400 mAh UL Div 2 (see footnote 4)



IMPRES 2 High Capacity Battery NNTN9089 5650 mAh NNTN9090 5650 mAh UL Div 2 (see footnote 4)

For a complete list of accessories, please visit motorolasolutions.com/apxnext

MANAGED AND SUPPORT SERVICES

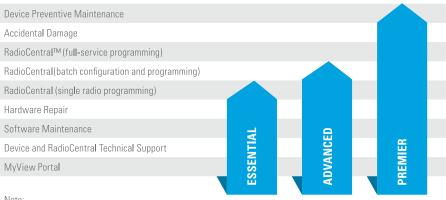
ACHIEVE MISSION CRITICAL PERFORMANCE

IN PUBLIC SAFETY, FOCUS IS YOUR GREATEST RESOURCE. APX NEXT PROTECTS YOUR FOCUS WHEN IT MATTERS MOST. YOUR MISSION-CRITICAL COMMUNICATIONS DEPEND ON THE CONSISTENT AVAILABILITY OF YOUR RADIOS.

Essential and Advanced Services provide the tools and expert support needed to efficiently manage your radio fleet. With Premier Services, you transfer your APX NEXT two-way radio operations to our managed services professionals who are focused on maximizing performance.

Rely on us to help you achieve your performance targets with the right service level you need for systems, devices and applications. Each package provides a higher level of support, transferring the risk and responsibility to Motorola Solutions.

SERVICES AT - A - GLANCE



Note

• Accidental damage can be offered as an add-on service with Essential and Advanced packages. • Device management training can be offered as an add-on service with all three packages.



PROTECT YOUR FOCUS WHEN IT MATTERS MOST

For more information, please visit motorolasolutions.com/apxnext



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ASTRO® 25 TRUNKED SYSTEMS

PROJECT 25 TDMA WITH DYNAMIC DUAL MODE

Improving spectrum efficiency is a critical issue facing government organizations. Agencies want to do more with the spectrum that they have assigned. And government spectrum bodies are mandating that equipment become more spectrum efficient. Project 25 has addressed this new requirement with the Phase 2 TDMA standard.

ASTRO 25 trunked systems are now available with Project 25 standardsbased TDMA. This capability provides organizations with the flexibility required to maximize current frequency allocations with a standards-based solution while maintaining interoperability with other Project 25 systems.

PROJECT 25 TDMA STANDARD

The TIA-102 suite of standards defines Project 25 (P25) TDMA, adding spectrum-efficient TDMA voice service to the existing P25 FDMA trunked voice and packet data services.

P25 TDMA capable systems use the P25 FDMA control channel for all call requests, which allows systems to support FDMA calls as well as TDMA calls.

ENHANCED INTEROPERABILITY

At the cornerstone of all government communications is the need to interoperate with other users to support emergency response. As the new standard was created, interoperability with existing radios was one of the critical requirements. ASTRO 25 systems and APX subscribers support both P25 FDMA and P25 TDMA for interoperability.

In addition to a manual method for supporting interoperability, which requires the user to manually switch talkgroups on the radio, Motorola delivers seamless interoperability with a software feature called Dynamic Dual Mode that automatically selects what protocol is used based on the resources participating in the call.

SPECTRUM MANDATES

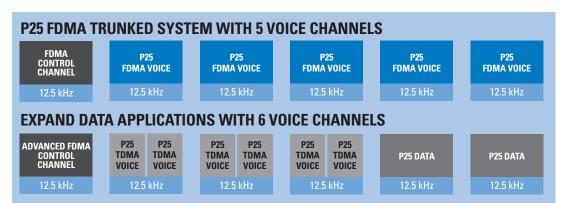
As part of the ongoing efforts to maximize spectrum, governing bodies are mandating that radio systems must move to 6.25e spectrumefficient methods. For example, by 2017 the FCC will require 6.25 kHz equivalent operations for 700 MHz band plans.

SOLUTION BRIEF

P25 TDMA FOR ASTRO 25 TRUNKED SYSTEMS

INCREASED VOICE CAPACITY

With P25 TDMA, organizations can double their voice capacity within their fixed allocation of frequencies. For example, they can go from having 5 simultaneous voice calls using P25 FDMA trunked operation to the ability to have up to 10 simultaneous voice calls using P25 TDMA trunked operation. ASTRO 25 TDMA provides the additional advantage of increasing the potential voice path capacity of your system by offering up to 30 voice paths at a site.



ASTRO 25 is a robust solution for government agencies. P25 TDMA functionality can be added to ASTRO 25 systems along with P25 FDMA trunking and conventional, 3600 trunking, analog conventional, and integrated data operation for total flexiblity.

DYNAMIC DUAL MODE

Dynamic Dual Mode, an optional feature, allows users to interoperate between P25 FDMA and P25 TDMA services. It is part of the call processing application and uses an advanced control channel that dynamically switches call assignments between FDMA and TDMA.

Dynamic Dual Mode is seamless to users and requires no intervention from users or network operators. For example, if a user in an active P25 TDMA talkgroup call, roams onto a P25 FDMA-only site, the system automatically initiates P25 FDMA mode at the next pushto-talk (PTT). Or if an active P25 TDMA talkgroup call is underway at a site and a P25 FDMA-only member of the talkgroup joins (or "affiliates") with the call, the system automatically switches the call to P25 FDMA mode at the next PTT. The FDMA-only user is now included in the call, and the call switched without any user intervention or awareness.

As an added benefit in encrypted systems, the call set-up automatically switches between FDMA and TDMA while maintaining end-to-end encryption. This provides a high level of assurance that the system remains secure from dispatcher to radio user.

IMPROVED SYSTEM OPERATION

Dynamic Dual Mode improves ease of use in ASTRO 25 systems with a mixed fleet of P25 FDMA and P25 TDMA radios.

- Radio users have seamless interoperability regardless of the operations mode.
- Dispatch operators can automatically coordinate between P25 TDMA radio users and P25 FDMA radio users with no need to track or patch users together.
- System administrators do not need to preassign base stations as P25 TDMA or P25 FDMA; the system automatically assigns the appropriate station mode based on the needs of the user.

IMPLEMENTATION CONSIDERATIONS

Starting with ASTRO 25 System Release 7.11, P25 TDMA and Dynamic Dual Mode are available in trunked, simulcast and standalone repeater configurations operating in the VHF, UHF, 700 MHz and 800 MHz bands.

On fielded ASTRO 25 systems, key system components including G-series stations, controllers and comparators, the MCC 7500 IP Dispatch Console, and APX[™] radios can be software upgraded to P25 TDMA.



ADDITIONAL



The APX series of trunked radios is available with P25 FDMA and P25 TDMA in the same radio. Dynamic Dual Mode automatically switches between the capabilities.

Motorola Solutions, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. motorola.com/ASTR025

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APX[®] ALL-BAND CONSOLETTE



Racing to an emergency or repairing a power outage, every moment matters as you mount a response. The right control station can make all the difference in making sure communications are clear, continuous and coordinated – across multiple users, agencies and miles. The APX All-Band Consolette is the ideal complement to your dispatch console. It's the low cost, mid-power wireless control station for an ASTRO[®] 25 system. You can use it as an emergency backup station when infrastructure is off-line, or for wireless access to different system types for increased interoperability between agencies.



CONNECT WITH CONFIDENCE

Designed around proven APX technology, the Consolette combines forward-thinking technology with time-tested functionality. Project 25 Phase 2 technology delivers twice the voice capacity so you can add more users without adding more frequencies or infrastructure. Talk with confidence to a squad car or desk station, a job site across town or an incident in the next county.

And with Wi-Fi, the Consolette keeps your team in touch and within reach of over-the-air updates. Receive new codeplugs, firmware updates and software features at the speed of Wi-Fi—without interruptions to voice communication.

MIGRATE AT YOUR OWN PACE

The APX All-Band Consolette is backwards and forwards compatible, developed to meet current P25 standards and future-ready to support new technology and data applications. Now you can achieve your interoperability objectives—whether upgrading an existing system or designing a new one—based on your dollars and deadlines.

BUILT FOR THE TOUGHEST TASKS

Innovative design and skillful engineering make the APX All-Band Consolette a tireless performer. The robust metal housing assures extra durability, but allows for easy servicing and programming without removing the lid. An integrated front panel numeric keypad gives you fast access to radio controls. And it meets stringent FCC and UL certifications for exceptional safety.

ROBUST AND MISSION-READY

When you lose power, count on the automatic battery revert feature to keep your people connected. All you need is a DC source, such as a marine battery, and the Consolette will switch over automatically to keep communications strong.

Rich in features, the APX All-Band Consolette gives you the largest number of interface connections to a wide variety of consoles and desk sets, and easy access to contact information with one unified call list. What's more, an ACIM wireless interface provides back-up dispatch if your console's link to the ASTRO 25 trunked system is ever lost.



STANDARD FEATURES

Available in 700/800 MHz, VHF or UHF (R1/R2) bands

Optional multiband operation

2000 Channels

Trunking Standards supported:

- Clear or digitally encrypted ASTRO® 25 Trunked Operation
- Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analog MDC-1200 and Digital APCO P25

Conventional System Configurations

Narrow and wide bandwidth digital receiver (6.25 kHz equivalent/12.5 kHz/30 kHz/25 kHz)*

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated Encryption Hardware

Seamless Wideband Scan Intelligent Priority Scan Intelligent Lighting

Interfaces supported:

- Recorder
- Wireline
- Vehicle Interface Port
- Crosspatch
- Headsets (2)**

110/220 VAC operation with battery revert capability

VU Meter and Clock

Expansion Slot Standard

2 configurations available:

- Full featured front panel
- Limited front panel

- Radio Profiles Unified Call List
- Onnica Oan List
- Tone remote control
- Tactical Inhibit
- Instant Recall

ACIM/CCGW interface including:

- ID decode
- Call alert encode
- * Per the FCC Narrowbanding rules, new products submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25KHz for United States – State & Local Markets only

** Available on full featured models only.

AUXILIARY DISPLAY FEATURES

LCD display

3 soft menu buttons to activate or control the following Consolette features:

- Clock
- Volume Units Meter (VU)
- Crosspatch Linking
- Auxiliary Controls/VIP Activation
- Over-the-air Audible TX Alert Tones



OPTIONAL FEATURES

Enhanced Encryption Software Options Programming over Project 25 (POP25) Text Messaging Over the Air Rekeying (OTAR) Wi-Fi connectivity Extended Dispatch Operation including:

- Emergency Alarm ACK Encode
- Radio Inhibit/Uninhibit Encode
- Radio Monitor Encode
- Radio Check Encode
- Status Query Encode
- Status Query Response Decode
- Status Update Decode
- Message Update Decode



E5 CONTROL HEAD FEATURES

Bright color display

- Easy to read 3 line display in various lighting conditions day or night
- Large tactile knobs and navigation buttons
- 5 programmable menu soft keys and 1 programmable button



| SIGNALING (ASTRO MODE) | DIMENSIONS | | | | |
|---|--|-------------------|---|--|--|
| Signaling Rate | 9.6 kbps | W x D x H | Limited Front Panel Configuration | | |
| Digital ID Capacity | 10,000,000 Conventional / 48,000 Trunking | | 16" x 18" x 4.2" (406 x 457 x 107mm) Full Featured Front Panel Configuration | | |
| Digital Network Access Codes | letwork Access Codes 4,096 network site addresses | | 16" x 18.75" x 4.2" (406 x 476 x 107mm) | | |
| ASTRO Digital User Group Addresses | O Digital User Group Addresses 4,096 network site addresses | | Limited Front Panel Configuration | | |
| Project 25 – CAI Digital User Group Addresses | | 18.9 lbs (8.6 kg) | | | |
| Error Correction Techniques | Golay, BCH, Reed-Solomon codes | | Full Featured Front Panel Configuration 19.9 lbs (9.0 kg) | | |
| Data Access Control | Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions. | | | | |

| | 700 MHz | 800 MHz | | VHF | | UHF Range | e 1 | UHF Rang | e 2 | |
|--|---|---------------------------|--------------------------|----------------------|---------------------|--|---------------------|----------------------|--------------------|--|
| Frequency Range/Bandsplits | 764-776 MHz, 794-806 | 6 MHz 806-825 MH | 806-825 MHz, 851-870 MHz | | 136-174 MHz | | 380-470 MHz | | 450-520 MHz | |
| Channel Spacing | 25/20/12.5 kHz | 25/20/12.5 | кНz | 30/25/12.5 k | Hz | 25/20/12.5 kH | łz | 25/20/12.5 k | Hz | |
| Maximum Frequency Separation | Full Bandsplit | Full Bandspl | it | Full Bandsplit | t | Full Bandsplit | | Full Bandspli | t | |
| Rated RF Output Power ¹ (Adjustable) | 1-30 Watts | 1-35 Watts | | 1-50 Watts | | 1-45 Watts (45 1-40 Watts (380-470 MHz) 1-25 Watts (51 | | 485-512 MHz) | | |
| Frequency Stability ¹ (–30°C to +85°C; +25°C Ref.) | ±0.8 PPM | ±0.8 PPM | | ±0.8 PPM | | ±0.8 PPM | ±0.8 PPM | | ±0.8 PPM | |
| Modulation Limiting ¹ | ±5/±2.5 kHz | ±5/±4 kHz (1 /±2.5 kHz | IPSPAC) | ±5/±2.5 kHz | | ±5/±2.5 kHz | ±5/±2.5 kHz | | ±5/±2.5 kHz | |
| Modulation Fidelity (C4FM) 12.5kHz Digital Channel | 1.10% | 1.10% | | 1.10% | | 1.10% | | 1.10% | | |
| Emissions ¹ | Conducted Radiate -75/-85 dBc -20/-4 | | Radiated –20 dBm | Conducted –85 dBc | Radiated -20 dBm | Conducted –85 dBc | Radiated –20 dBm | Conducted —85 dBc | Radiated 20 dBm | |
| Audio Response ¹ | +1, -3 dB (EIA) | +1, -3 dB (E | A) | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | |
| FM Hum & Noise ¹ 25 kHz 12.5 kHz | 50 dB 48 dB | 50 dB 48 dB | | | 53 dB 52 dB | | 53 dB 50 dB | | 53 dB 50 dB | |
| Audio Distortion ¹ 20 & 25 kHz 12.5 kHz | 0.50 % 0.50 % | 0.50 % 0.50 % | 0.50 % | | 0.50 % 0.50 % | | 0.50 % 0.50 % | | 0.50 % 0.50 % | |

| RECEIVER – TYPICAL PERFOR | MANCE SPECIFICATION | S | | | |
|---|--|--|--|--|--|
| | 700 MHz | 800 MHz | VHF | UHF Range 1 | UHF Range 2 |
| Frequency Range/Bandsplits | 764-776 MHz | 851-870 MHz | 136-174 MHz | 380-470 MHz | 450-520 MHz |
| Channel Spacing | 25/20/12.5 kHz | 25/20/12.5 kHz | 30/25/12.5 kHz | 25/20/12.5 kHz | 25/20/12.5 kHz |
| Maximum Frequency Separation | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power (Speaker) at 3% distortion | 2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω) | 2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω) | 2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω) | 2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω) | 2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω) |
| Frequency Stability ¹ (-30°C to +85°C; +25°C Ref.) | ±0.8 PPM | ±0.8 PPM | ±0.8 PPM | ±0.8 PPM | ±0.8 PPM |
| Analog Sensitivity ¹ 12 dB SINAD Digital Sensitivity 5% BER | -121 dBm -120 dBm -121.5 dBm -120 dBm | -121 dBm -121.5 dBm | Pre-AmpStandard-123 dBm-119 dBm-123 dBm-119 dBm | Pre-Amp Standard -123 dBm -119 dBm -123 dBm -119 dBm | Pre-Amp Standard -123 dBm -119 dBm -123 dBm -119 dBm |
| Intermodulation 25 kHz 12.5 kHz | 85 dB 85 dB | 85 dB 85 dB | 84 dB 86 dB 85 dB 86 dB | 82 dB 86 dB 83 dB 86 dB | 82 dB 86 dB 83 dB 86 dB |
| Spurious Rejection | 100 dB | 100 dB | 90 dB | 90 dB | 90 dB |
| Audio Response ¹ | +1, -3 dB (EIA) | +1, -3 dB (EIA) |
| Audio Distortion at rated ¹ | 1.20 % | 1.20 % | 1.20 % | 1.20 % | 1.20 % |
| Selectivity ¹ 25 kHz 12.5 kHz 30 kHz | 82.5 dB 72 dB | 82.5 dB 72 dB | 87 dB 76 dB 90 dB | 82 dB 76 dB | 82 dB 76dB |

| POWER AND BATTERY DRAIN | | | |
|---|---|--|--|
| Model Type | 136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz | | |
| Minimum RF Power Output | 1-35W (764-870 MHz), 1-50W (136-174MHz), 1-40W (380-470 MHz), 1-45W (450-485 MHz), 1-40W (485-512 MHz), 1-25 (512-520 MHz) | | |
| AC Operation | 110 to 220VAC 50-60Hz | | |
| AC Current | 110VAC: 0.85A (Idle/Rx) 1.7A (Tx) 220VAC: 0.42A (Idle/Rx) 0.85A (Tx) | | |
| AC Surge Spec | EN6100-4-5 Level 5 | | |
| DC Operation | 13.8V DC ±20% Negative Ground | | |
| Standby at 13.8V | 1.4A (764-870 MHz), 1.4A (136-174 MHz), 1.4A (380-470 MHz), 1.4A (450-520 MHz) | | |
| Receive Current at Rated Audio at 13.8V | 3.2A (764-870 MHz), 3.2A (136-174 MHz), 3.2A (380-470 MHz), 3.2A (450-520 MHz) | | |
| Transmit Current (A) at Rated Power | 136-174 MHz (1-50 W) 15A (50W) 8A (15W) 764-870 MHz (1-35 Watt) 13A (50W) 8A (15W) 380-470 MHz (1-40 W) 15A (40W) 8A (15W) 8A (15W) 450-520 MHz (1-45 W) 13A (45W) 8A (15W) | | |

| ENCRYPTION | | |
|------------------------------------|---|--|
| Supported Encryption Algorithms | ADP, AES, DES, DES-XL, DES-OFB, DVP-XL | |
| Encryption Algorithm Capacity | 8 | |
| Encryption Keys per Radio | Module capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID) | |
| Encryption Frame Re-sync Interval | P25 CAI 300 mSec | |
| Encryption Keying | Key Loader | |
| Synchronization | XL – Counter Addressing OFB – Output Feedback | |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator | |
| Encryption Type | Digital | |
| Key Storage | Tamper protected volatile or non-volatile memory | |
| Key Erasure | Keyboard command and tamper detection | |
| Standards | FIPS 140-2 Level 3 FIPS 197 | |
| WIRELESS CONNECTIVITY | | |
| WLAN (Wi-Fi®) | 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs | |

| Operating Temperature | -30°C / +60°C |
|-----------------------|---------------------------------|
| Storage Temperature | -40°C/+85°C |
| Humidity | 95% relative humidity |
| ESD | IEC 61000-4-2 |
| Duty Cycle | EIA/TIA Intermittent Duty Cycle |

¹ Measured in the analog mode per TIA/EIA 603 under nominal

Specifications subject to change without notice. All specifications

Radio meets applicable regulatory

The All Band Consolette is J/F 12 11207 and SPS 22237 certified.

conditions

shown are typical.

requirements.

| FCC/IC TYPE ACCEPTANCE ID | | |
|---------------------------|------------------------------------|--|
| FCC/IC ID | BAND AND POWER LEVEL | |
| FCC ID: AZ492FT7089 | 764-776 MHz (10-30 W) | |
| IC ID: 109U-92FT7089 | 794-806 MHz (10-30 W) | |
| | 806-824 MHz (10-35 W) | |
| | 851-870 MHz (10-35 W) | |
| | 136-174 MHz (10-50 W and 25-110 W) | |
| | 380-470 MHz (10-40 W and 25-110 W) | |
| | 450-485 MHz (10-45 W) | |
| | 485-512 MHz (10-40 W) | |
| | 512-520 MHz (10-25 W) | |
| | | |

For more information, visit motorolasolutions.com/apx



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APX 8500 All-BAND P25 MOBILE RADIO



UNLIMITED MOBILITY. MAXIMUM CONNECTIVITY.

Your next incident doesn't care about frequencies and neither should your first responders. Give them the communication tools to stay connected and stay safe wherever the call takes them. Give them the APX 8500 all-band mobile radio.

The APX 8500 radio enables you to exchange critical voice and data seamlessly with multiple agencies and jurisdictions operating on different radio bands. The available high-power transmitter gives you extraordinary P25 range while the integrated Wi-Fi or tethered

in-vehicle broadband modem can extend communication beyond P25 radio service areas. Offload data to a broadband connection and create a data ecosystem in and around your vehicle. Or, use your broadband connection to send and receive P25 voice and data when outside of P25 coverage. And when your vehicle sustains a high impact, the radio can automatically send an alert to dispatch.

Stay connected and stay safe in more ways than ever with the all-band APX 8500 mobile radio.





ALL BANDS. NO BOUNDARIES.

With a 4-in-1 mobile radio and an all-band antenna, you now have the ability to stay connected and expand communications across multiple agencies with one device. Extend your reach further with an available high-power transmitter and communicate with widely dispersed teams across different bands.



VOICE AND DATA, ALL AT ONCE

Packed with all the connections you need, the APX 8500 keeps your team in touch and within reach of over-the-air updates. Receive new codeplugs, firmware updates and software features at the speed of Wi-Fi— without interruptions to voice communications.



GET CONNECTED AND STAY CONNECTED

When the mission takes you out of range, you risk being left in the dark. The APX 8500, equipped with SmartConnect, can reroute P25 voice and data communication over broadband via built-in Wi-Fi or a tethered LTE/satellite router. Stay connected to your P25 radio system, even when outside of P25 coverage.



ViQi VIRTUAL PARTNE

FAST INFORMATION RETRIEVAL

Running routine database queries doesn't need to slow you down. Simply press a button on the keypad microphone and ask ViQi for the information you need. Keep your eyes on the situation and free up dispatchers to focus on more critical events. Move intelligence faster than ever with ViQi.



KEEP VOICE AND DATA PROTECTED

The APX 8500 secures voice and data using multiple hardware encryption algorithms and the ability to rekey over the air, so it's protected from scanners and eavesdroppers. What's more, P25 Radio Authentication ensures only valid users can access the system while the available two-factor authentication secures database logins.



ALL THE SUPPORT YOU NEED

Motorola Solutions offers three levels of service plans – Essential, Advanced and Premier. From simple support for technical troubleshooting to a complete transfer of optimization and maintenance services to Motorola Solutions, you choose the level of support that suits you best.

02 CONTROL HEAD

EXTREME USABILITY

The O2 control head provides rugged simplicity for efficient and confident communication. Extreme controls with easy to read color display and a built-in 7.5 watt speaker provides clear visual and audible user experiences. Available in high impact green or black. Programmable buttons all around

APX 8500

03 HANDHELD CONTROL HEAD

HANDHELD FLEXIBILITY

The O3 corded control head fits all your mobile controls in your hand. With the O3 your radio controls are never out of reach.

Full color display with intelligent lighting



Fully integrated DTMF keypad

Integrated control head and microphone design

APX 8500 CONTROL HEADS*





Programmable menu buttons



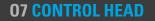
Programmable multi-select buttons

Integrated controls for siren and lights, PA and gunlock or DTMF keypad

E5 CONTROL HEAD

UNMATCHED READABILTY. OPTIMIZED USABILITY.

A bright color display and intelligent lighting makes the E5 easy to read under any condition while the optimized tactility and button placement reduces inadvertent actuations.



INTEGRATED MULTI-FUNCTIONALITY

The 07 is a sophisticated control head with a color display and built-in keypad. It can integrate your radio vehicle control into a single ergonomic interface and supports dual radio installations.

FEATURES

OPERATION MODES

| Digital Trunking: 9600 Baud APCO P25 Phase 1 FDMA and Phase 2 TDMA |
|--|
| Digital Conventional: APCO 25 |
| Analog Trunking: 3600 Baud SmartNet, SmartZone, Omnilink |
| Analog Conventional: MDC 1200 |
| ASTRO® 25 Integrated Voice and Data |
| SmartConnect Multi-net Connectivity* |

FREQUENCY BANDS

All-band: Simultaneous Operation in VHF, UHF Range 1, UHF Range 2, 700 and 800 MHz Bands 100 Watt High-Power available in VHF and UHF Range 1 bands (High-Power model only) Up to 3,000 Channels

ADDITIONAL CONNECTIVITY

| Wi-Fi 802.11 b/g/n* |
|-----------------------|
| Data Modem Tethering* |
| SmartConnect* |
| |

MANAGEMENT

| Radio Management |
|-------------------------------|
| Customer Programming Software |

LOCATION-TRACKING

Integrated GPS/GLONASS for Outdoor Location Tracking Mission-Critical Geofence*

SECURITY

| 265-bit AES, ADP, DES, DVP* |
|--|
| FIPS 140-2 Level 3, FIPS 197 |
| P25 Authentication* |
| Multikey for 128 keys and Multi-algorithm* |
| Over-The-Air-Rekeying (OTAR)* |

USER INTERFACE

| 07 Multi Functional Control Head |
|---|
| E5 Enhanced Control Head |
| O3 Handheld Control Head |
| O2 Extreme Usability Control Head |
| Supports the discontinued 09 Control Head and the 05 Control Head |
| |

OTHER FEATURES

| Intelligent Priority Scan |
|-----------------------------------|
| Instant Recall |
| Impact Detection* |
| Intelligent Lighting |
| Tactical Inhibit* |
| Digital Tone Signaling* |
| 12 Character RFID Asset Tracking* |
| ViQi Virtual Partner* |

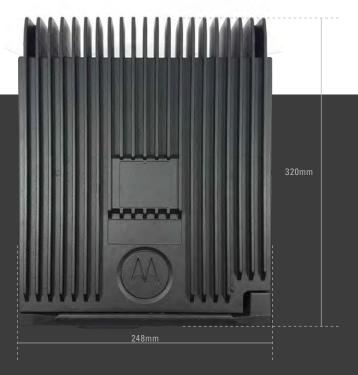




| DIMENSIONS AND WEIGHT | | |
|--|---|-------------------|
| | Dimensions (H x W x D) | Weight |
| 07 Control Head - Remote Mount | 51 x 178 x 81mm (2.0 x 7.0 x 3.2 in) | - |
| E5 Control Head - Remote Mount | 51 x 178 x 79 mm (2.0 x 7.0 x 3.1 in) | - |
| 05 Control Head - Remote Mount | 51 x 178 x 74 mm (2.0 x 7.0 x 2.9 in) | - |
| 02 Control Head - Remote Mount | 68 x 206 x 96 mm (2.7 x 8.1 x 3.8 in) | - |
| Mid Power Radio Transceiver and 07 Control Head - Dash Mount | 51 x 178 x 256 mm (2.0 x 7.0 x 10.1 in) | 3.1 kg (6.8 lbs) |
| Mid Power Radio Transceiver and E5 Control Head - Dash Mount | 51 x 178 x 255 mm (2.0 x 7.0 x 10.0 in) | 3.1 kg (6.8 lbs) |
| Mid Power Radio Transceiver and 05 Control Head - Dash Mount | 51 x 178 x 250 mm (2.0 x 7.0 x 9.8 in) | 3.1 kg (6.8 lbs) |
| Mid Power Radio Transceiver and O2 Control Head - Dash Mount | 68 x 206 x 271 mm (2.7 x 8.1 x 10.7 in) | 3.3 kg (7.23 lbs) |
| Mid Power Radio Transceiver and Remote Mount | 51 x 178 x 232 mm (2.0 x 7.0 x 9.1 in) | 2.9 kg (6.4 lbs) |
| High Power Radio Transceiver and Remote Mount | 88 x 248 x 320 mm (3.4 x 9.7 x 12.6 in) | 8.0 kg (17.6 lbs) |



APX 8500 High-Power Model Shown



PERFORMANCE AND REGULATORY

| TRANSMITTER- TYPICAL PERFORMANC | | | | | | | | | | |
|--|----------------------|---------------------------|----------------------|---------------------------|----------------------|--|--------------------------|--------------------------|----------------------|--------------------------|
| | VI | łF | UHI | F R1 | UHI | F R2 | 700 | MHz | 800 | MHz |
| Frequency Range Band Splits | 136-17 | 4 MHz | 380-47 | '0 MHz | 450-52 | 20 MHz | | 94-806 MHz 51-870 MHz | | 94-806 MHz 51-870 MHz |
| Channel Spacing | 30/25/1 | 2.5 kHz | 25/20/1 | 2.5 kHz | 25/20/1 | 12.5 kHz | 25/20/1 | 12.5 kHz | 25/20/1 | 2.5 kHz |
| Maximum Frequency Separation | Full Ba | ndsplit | Full Ba | ndsplit | Full Ba | Indsplit | Full Ba | ndsplit | Full Ba | ndsplit |
| Rated RF Output Power1 (Adjustable) | | 1id Power) ligh Power) | | 1id Power) ligh Power) | 1-40 W (48 | 0-485 MHz) 5-512 MHz) 2-520 MHz) | 1-3 | 0 W | 1-3 | 5 W |
| Frequency Stability ¹ (-30°C to +85°C; +25°C Ref.) | ±0.8 | PPM | ±0.8 | PPM | ±0.8 | PPM | ±0.8 | PPM | ±0.8 | PPM |
| Modulation Limiting | ±5/±2 | .5 kHz | ±5/±2 | .5 kHz | ±5/±2 | .5 kHz | ±5/±2 | .5 kHz | ±5/±4 (NPSP/ | AC) /±2.5 kHz |
| Modulation Fidelity (C4FM) 12.5 kHz Digital Channel | 1.1 | 0% | 1.1 | 0% | 1.1 | 0% | 1.1 | 0% | 1.1 | 0% |
| Emissions ¹ | Conducted -85 dBc | Radiated -20 dBm | Conducted -85 dBc | Radiated -20 dBm | Conducted -85 dBc | Radiated -20 dBm | Conducted -75/-85 dBc | Radiated -20/-40 dBm | Conducted -75 dBc | Radiated -20 dBm |
| Audio Response ¹ | +1, -3 0 | IB (EIA) | +1, -3 (| ib (EIA) | +1, -3 0 | dB (EIA) | +1, -3 (| dB (EIA) | +1, -3 c | dB (EIA) |
| FM Hum & Noise ¹ (25 kHz / 12.5 kHz) | 53 dB/ | 52 dB | 53 dB/ | ′ 50 dB | 53 dB/ | ′ 50 dB | 50 dB/ | ′ 48 dB | 50 dB/ | ′ 48 dB |
| Audio Distortion ¹ (25 & 20 kHz / 12.5 kHz) | 0.50% | / 0.50% | 0.50% | / 0.50% | 0.50% | / 0.50% | 0.50% | / 0.50% | 0.50% / | / 0.50% |

| | VH | F | UH | FR1 | UH | F R2 | 700 | MHz | 800 MHz | |
|---|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|------------------------|------------------------|----------------------|--|
| Frequency Range Band Splits | 136-174 | 1 MHz | 380-47 | 70 MHz | 450-52 | 20 MHz | 764-776 MHz | 799-806 MHz | 851-870 MHz | |
| Channel Spacing | 30/20/12 | 2.5 kHz | 25/20/ | 12.5 kHz | 25/20/ | 12.5 kHz | 25/20/ | 12.5 kHz | 25/20/12.5 kHz | |
| Minimum Frequency Separation | Full Bar | ıdsplit | Full Ba | Indsplit | Full Ba | andsplit | Full Ba | Indsplit | Full Bandsplit | |
| Audio Output Power 3% distortion, 8/3.2 Ohm speakers | 7.5 W/15 W | | 7.5 W/15 W | | 7.5 W/15 W | | 7.5 W/15 W | | 7.5 W/15 W | |
| Frequency Stability1 (-30 °C to +85 °C; +25 °C Ref.) | ±0.8 F | PPM | ±0.8 | PPM | ±0.8 | PPM | ±0.8 | PPM | ±0.8 PPM | |
| Analog Sensitivity' (12 dB SINAD) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 μV) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 μV) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 μV) | -121 dBm (0.199 μV) | -120 dBm (0.224 μV) | -121 dBm (0.199 μV) | |
| Digital Sensitivity (5% BER) | -123 dBm (0.158 μV) | -119 dBm (0.251 μV) | -123 dBm (0.158 μV) | -119 dBm (0.251 μV) | -123 dBm (0.158 μV) | -119 dBm (0.251 μV) | -123 dBm (0.158 μV) | -120 dBm (0.224 μV) | -121.5 dBm (0.188 μV | |
| Intermodulation Rejection (12.5 kHz / 25 kHz) | Pre-Amp 84 dB / 85 dB | Standard 86 dB / 96 dB | Pre-Amp 82 dB / 83 dB | Standard 86 dB / 86 dB | Pre-Amp 82 dB / 83 dB | Standard 86 dB / 86 dB | 85 dB | / 85 dB | 85 dB / 85 d | |
| Spurious Rejection | 90 0 | βB | 90 | dB | 90 | dB | 100 |) dB | 100 dB | |
| Audio Response ¹ | +1, -3 dl | B (EIA) | +1, -3 (| dB (EIA) | +1, -3 (| dB (EIA) | +1, -3 (| dB (EIA) | +1, -3 dB (EIA) | |
| Audio Distortion at rated ¹ | 1.20 | 1% | 1.2 | 0% | 1.2 | 20% | 1.2 | 0% | 1.20% | |
| Selectivity ¹ 12.5 kHz / 25 kHz / 30 kHz) | 76 c 87 c 90 c | lВ | | dB dB | | dB dB | | dB 5 dB - | 72 dB 82.5 dB | |

| POWER AND BATTERY DRAIN | | | | | |
|---|--|---|--|-----------------------------------|-----------------------------------|
| | VHF | UHF R1 | UHF R2 | 700 MHz | 800 MHz |
| Frequency Range Band Splits | 136-174 MHz | 380-470 MHz | 450-520 MHz | 764-775, 794-806 MHz | 806-825, 851-870 MHz |
| RF Power Output | 1-50 W (mid-power) 1-100 W (high-power) | 10-40 W (mid-power) 1-100 W (high-power) | 1-45 W (450-485 MHz) 1-40 W (485-512 MHz) 1-25 W (512-520 MHz) | 1-33 W | 1-35 W |
| Operation | 13.8 V DC ±20% Negative Ground | 13.8 V DC ±20% Negative Ground | 13.8 V DC ±20% Negative Ground | 13.8 V DC ±20% Negative Ground | 13.8 V DC ±20% Negative Ground |
| Standby at 13.8 V | 1.4 A | 1.4 A | 1.4 A | 1.4 A | 1.4 A |
| Receive Current at Radio Audio at 13.8 V | 3.2 A | 3.2 A | 3.2 A | 3.2 A | 3.2 A |
| Transmit Current at Rated Power (mid-power) | 8 A @ 15 W 15 A @ 50 W | 8 A @ 15 W 15 A @ 40 W | 8 A @ 15 W 13 A @ 45 W | 8 A @ 15 W 13 A @ 33 W | 8 A @ 15 W 13 A @ 33 W |
| Transmit Current at Rated Power (high-power) | 8 A @ 15 W 30 A @ 100 W | 8 A @ 15 W 30 A @ 100 W | - | - | - |

| LOCATION - TRACKING | |
|-----------------------|--|
| Channels | 12 |
| Tracking Sensitivity | -164 dBm |
| Accuracy ² | <5 meters (95%) |
| Cold Start | <60 seconds (95%) |
| Hot Start | <5 seconds (95%) |
| Mode of Operation | Autonomous (Non-Assisted) GNSS or SBAS |

| FCC/IC ID | Band and Power Level |
|---|-----------------------|
| | 764-776 MHz (10-30 W) |
| | 794-806 MHz (10-30 W) |
| | 806-824 MHz (10-35 W) |
| | 851-870 MHz (10-35 W) |
| FCC ID: AZ492FT7089 IC ID: 109U-92FT7089 | 136-174 MHz (10-50 W) |
| | 380-470 MHz (10-40 W) |
| | 450-485 MHz (10-45 W) |
| | 485-512 MHz (10-40 W) |
| | 512-520 MHz (10-25 W) |
| FCC ID: AZ492FT7118 | 136-174 MHz (1-100 W) |
| IC: N/A | 380-470 MHz (1-100 W) |

 1 Measured in the analog mode per TIA / EIA 603 single-tone method under nominal conditions 2 Measured conductivity with >6 satellites visible at a nominal -130 dBm signal strength.

| ENCRYPTION | | |
|-----------------------------------|--|--|
| Supported Encryption Algorithms | 256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL | |
| Encryption Algorithm Capacity | 8 | |
| Encryption Keys per Radio | Module capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID) | |
| Encryption Frame Re-sync Interval | P25 CAI 300 mSec | |
| Encryption Keying | Key Loader | |
| Synchronization | $XL-Counter\ Addressing\ OFB-Output\ Feedback$ | |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator | |
| Encryption Type | Digital | |
| Key Storage | Tamper protected volatile or non-volatile memory | |
| Key Erasure | Keyboard command and tamper detection | |
| Standards | FIPS 140-2 Level 3, FIPS 197 | |

| ENVIRONMENTAL SPECIFICATIONS | | | |
|------------------------------|--------------|--|--|
| Operating Temperature | -30°C/+60°C | | |
| Storage Temperature | -40°C/+85°C | | |
| Humidity | Per MIL-STD | | |
| ESD | IEC 801-2 KV | | |
| Water & Dust Intrusion | IP56 | | |





| MOBILE MILITARY STANDARDS 810, C, D, E, F & G | | | | | | | | | | |
|---|--------------|-----------------|--------------|-------------|--------------|-------------|--------------|---------------|--------------|---------------|
| | MIL-STD 810C | | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | |
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | 1 | 500.3 | | 500.4 | I/II | 500.5 | |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Hot | 501.5 | I/A1, II/A1 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | l Proc | 503.2 | 1/A1C3 | 503.3 | 1/A1C3 | 503.4 | 1 | 503.5 | I/C |
| Solar Radiation | 505.1 | I | 505.2 | I | 505.3 | | 505.4 | 1 | 505.5 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.5 | I, III |
| Humidity | 507.1 | I | 507.2 | 1 | 507.3 | | 507.4 | l Proc | 507.5 | II/Aggravated |
| Salt Fog | 509.1 | l Proc | 509.2 | l Proc | 509.3 | I Proc | 509.4 | l Proc | 509.5 | l Proc |
| Blowing Dust | 510.1 | I | 510.2 | I, II | 510.3 | l, II | 510.4 | I, II | 510.5 | I, II |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I/24 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.6 | I, V, VI |

For more information, please visit us on the web at: www.motorolasolutions.com/APX



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, II 60661 U.S.A. motorolasolutions.com

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STAY INFORMED. STAY SAFE.

You may not know what the next call will entail, but you do know that your team needs communication they can count on. Whether on a motorcycle, in a squad car or a fire truck, the rugged and compact design of the evolved APX[™] 6500 mobile radio is designed to maximize the real estate in your vehicle and keep your entire agency safely connected. Now with integrated Wi-Fi and SmartConnect, the APX 6500 gives you more ways to manage your radio and stay connected. And when your vehicle sustains a high impact, the radio can automatically alert dispatch. Security is more important than ever. Criminals are testing you on the streets and over the air. Fight back with multiple levels of protection to encrypt and secure your voice and data communication against eavesdropping.

Stay connected, keep safe and secure your communications with the APX 6500 single-band mobile radio.





GET CONNECTED AND STAY CONNECTED

When the mission takes you out of range, you risk being left in the dark. The APX 6500, equipped with SmartConnect, can reroute P25 voice and data communication over broadband via built-in Wi-Fi or a tethered LTE/satellite router. Stay connected to your P25 radio system, even when outside of P25 coverage.



VOICE AND DATA, ALL AT ONCE

Packed with all the connections you need, the APX 6500 keeps your team in touch and within reach of over-the-air updates. Receive new codeplugs, firmware updates and software features at the speed of Wi-Fi— without interruptions to voice communications.

VIQI VIQI VIRTUAL PARTNER

FAST INFORMATION RETRIEVAL

Running a routine database queries doesn't need to slow you down. Simply press a button on the keypad microphone and ask ViQi for the information you need. Keep your eyes on the situation and free up dispatchers to focus on more critical events. Move intelligence faster than ever with ViQi.



DESIGNED TO SECURE AND PROTECT

KEEP VOICE AND DATA PROTECTED

The APX 6500 secures voice and data using multiple hardware encryption algorithms and the ability to rekey over the air, so it's protected from scanners and eavesdroppers. What's more, P25 Radio Authentication ensures only valid users can access the system while the available two-factor authentication secures database logins.

└ │ LIGHTWEIGHT, COMPACT ∠ ∖ DESIGN

FLEXIBLE, EASY INSTALLATION

The small and light form-factor of the APX 6500 allows for easy installation across a growing ecosystem of vehicles and installations. Users can choose one of several interchangeable control heads to best fit their need. Dual control head configuration enables radio operation from multiple locations within the same vehicle, such as a large fire truck.



ALL THE SUPPORT YOU NEED

Motorola Solutions offers three levels of service plans – Essential, Advanced and Premier. From simple support for technical troubleshooting to a complete transfer of optimization and maintenance services to Motorola Solutions, you choose the level of support that suits you best.

02 CONTROL HEAD

EXTREME USABILITY

The O2 control head provides rugged simplicity for efficient and confident communication. Extreme controls with easy to read color display and a built-in 7.5 watt speaker provides clear visual and audible user experiences. Available in high impact green or black. Programmable buttons all around

DTOROL

03 HANDHELD CONTROL HEAD

HANDHELD FLEXIBILITY

The O3 corded control head fits all your mobile controls in your hand. With the O3 your radio controls are never out of reach.

Full color display with intelligent lighting



Fully integrated DTMF keypad

Integrated control head and microphone design

APX 6500 COMPATIBLE CONTROL HEADS*

Dedicated volume and channel knobs for quick control



Programmable menu buttons



Programmable multi-select buttons

Integrated controls for siren and lights, PA and gunlock or DTMF keypad

E5 CONTROL HEAD

UNMATCHED READABILTY. OPTIMIZED USABILITY.

A bright color display and intelligent lighting makes the E5 easy to read under any condition while the optimized tactility and button placement reduces inadvertent actuations.

07 CONTROL HEAD

INTEGRATED MULTI-FUNCTIONALITY

The 07 is a sophisticated control head with a color display and built-in keypad. It can integrate your radio vehicle control into a single ergonomic interface and supports dual radio installations.



FEATURES

| GENERAL FEATURES | |
|------------------------|---|
| Channel Capacity | 1,000 channels standard, expandable to 3,000 channels |
| Wireless Connectivity | GPS/GLONASS, Wi-Fi |
| WLAN (Wi-Fi) Protocols | 802.11 b/g/n (2.4GHz) 802.11 a/n/ac (5GHz) |
| Encryption Algorithms | 256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL |

OPERATING MODES

Digital Trunking: 9600 Baud APCO P25 Phase 1 FDMA and Phase 2 TDMA

Analog Trunking: 3600 Baud SmartNet®, SmartZone®, Omnilink

Digital Conventional: APCO 25

Analog Conventional: Analog MDC 1200, Quik Call II System Configurations

SmartConnect Connectivity

INTEGRATED WI-FI, GPS AND DATA CONNECTIVITY

| Wi-Fi 802.11 b/g/n with up to 20 Wi-Fi networks provisioned in the radio ¹ |
|---|
| Data Modem Tethering ¹ |
| ASTRO 25 Integrated Voice and Data |
| Enhanced Data1 |
| Integrated GPS/GLONASS for Outdoor Location Tracking |
| Mission Critical Geofence ¹ |
| Personnel Accountability ¹ |
| SmartConnect ¹ |
| ViQi Virtual Partner ¹ |

MANAGEMENT

Customer Programming Software (CPS)

Radio Management

Over-the-air Programming (OTAP)¹

| SECURITY |
|--|
| Tactical Inhibit ¹ |
| P25 Authentication ¹ |
| Software Key ¹ |
| Single-key ADP Encryption ¹ |
| Multikey for 128 keys and multi-algorithm ¹ |
| Over-the-air Rekeying (OTAR) ¹ |

| GPS/GNSS SPECIFICATIONS | | |
|-------------------------|--|--|
| Channels | 12 | |
| Tracking Sensitivity | -164 dBm | |
| Accuracy ² | <5 meters (95%) | |
| Cold Start ² | <60 seconds (95%) | |
| Hot Start ² | <5 seconds (95%) | |
| Mode of Operation | Autonomous (Non-Assisted) GNSS or SBAS | |

¹ Optional ² Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength



| ENCRYPTION | | | | |
|---|---|--|--|--|
| Supported Encryption Algorithms | ADP, AES, DES, DES-XL, DES-OFB, DVP-XL | | | |
| Encryption Algorithm Capacity | 8 | | | |
| Encryption Keys per Radio | Module capable of storing 1024 keys. Programmable for 128 Common KeY Reference (CKR) or 16 Physicalldentifier (PID) | | | |
| Encryption Frame Re-sync Interval | P25 CAI 300 mSec | | | |
| Encryption Keying | Key Loader | | | |
| Synchronization | $\rm XL-Counter\ Addressing\ \ OFB-Output\ Feedback$ | | | |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator | | | |
| Encryption Type | Digital | | | |
| Key Storage | Tamper protected volatile or non-volatile memory | | | |
| Key Erasure Keyboard command and tamper detection | | | | |
| tandards FIPS 140-2 Level 3, FIPS 197 | | | | |

| OTHER FEATURES | |
|---|--|
| Text Messaging | |
| Radio Profiles | |
| Dynamic Zone | |
| Intelligent Priority Scan | |
| Unified Call List | |
| Instant Recall | |
| Data Modem Connection (wired or Wi-Fi) ¹ | |
| 12 Character RFID Asset Tracking ¹ | |
| Digital Tone Signaling ¹ | |
| | |

| INTEGRATED WI-FI, GPS AND DATA CONNECTIVITY | | | |
|---|---|--------------------------|--|
| Frequency Range/Band splits | WLAN (Wi-Fi): 2412 - 2472 MHz; 5180 - 5320 MHz; 5500 - 5825 MHz | | |
| WLAN (WiFi) 802.11 b/g/n (2.4GHz) 802.11 a/n/ac (5GHz) | Security protocols | WPA-2, WPA, WEP | |
| | SSIDs | Up to 20 pre-provisioned | |
| Integrated GPS/GLONASS for outdoor location tracking | | | |
| Data Modem Tethering ¹ | | | |

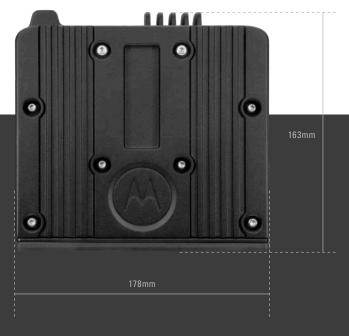
| SIGNALING (ASTRO 25 MODE) | | | | |
|---|--|--|--|--|
| Signalling Rate | 9.6 kbps | | | |
| Digital ID Capacity | 10,000,000 Conventional / 48,000 Trunking | | | |
| Digital Network Access Codes | 4,096 network site addresses | | | |
| ASTRO Digital User Group Addresses | 4,096 network site addresses | | | |
| Project 25 – CAI Digital User Group Addresses | 65,000 Conventional / 4,094 Trunking | | | |
| Error Correction Techniques | Golay, BCH, Reed-Solomon codes | | | |
| Data Access Control | Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions | | | |

¹ Optional



| DIMENSIONS AND WEIGHT | | |
|--|---|--------------------|
| Radio Transceiver | 51 x 178 x 163 mm (2.0 x 7.0 x 6.4 in) | 2.18 kg (4.80 lbs) |
| Radio Transceiver and 02 Control Head - Dash Mount | 69 x 207 x 223 mm (2.7 x 8.1 x 8.8 in) | 2.43 kg (5.36 lbs) |
| Radio Transceiver and 05 Control Head - Dash Mount | 51 x 178 x 202 mm (2 x 7 x 8.0 in) | 2.24 kg (4.94 lbs) |
| Radio Transceiver and E5 Control Head - Dash Mount | 51 x 178 x 209 mm (2.0 x 7.0 x 8.2 in) | 2.24 kg (4.94 lbs) |
| Radio Transceiver and 07 Control Head - Dash Mount | 51x 178 x 208 mm (2 x 7 x 8.2 in) | 2.24 kg (4.94 lbs) |
| Radio Transceiver and Remote Mount | 51 x 178 x 193.6 mm (2 x 7 x 7.6 in) | 2.18 kg (4.80 lbs) |
| O2 Control Head Remote Mount | 68 x 206 x 53 mm (2.7 x 8.1 x 2.1 in) | - |
| O5 Control Head Remote Mount | 51 x 180.3 x 64 mm (2.0 x 7.0 x 2.5 in) | - |
| E5 Control Head Remote Mount | 51 x 178.5 x 64 mm (2.0 x 7.0 x 2.5 in) | - |
| 07 Control Head Remote Mount | 51 x 178 x 40 mm (2.0 x 7.0 x 1.5 in) | - |





PERFORMANCE AND REGULATORY

| TRANSMITTER | | | | | | | | | |
|--|----------------------|----------------------------|----------------------|---------------------|--------------------------|-------------------------|----------------------|----------------------|--|
| | V | VHF | | UHF R1 | | 700 MHz | | 800 MHz | |
| Frequency Range/Bandsplits | 136-17 | 136-174 MHz | | 380-470 MHz | | 764-776, 794-806 MHz | | 806-825, 851-870 MHz | |
| Rated RF Output Power (Adjustable) | 1-5 | 1-50 W | | 1-40 W | | 3-30 W | | 3-35 W | |
| Frequency Stability (-30°C to +60°C; +25°C Ref.) | ± 0.8 | ±0.8 PPM ±0.8 PPM ±0.8 PPM | | 8 PPM | ±0.8 PPM | | | | |
| Emissions | Conducted -85 dBc | Radiated -10 dBm | Conducted -85 dBc | Radiated -20 dBm | Conducted -75/-85 dBc | Radiated -20/-40 dBm | Conducted -75 dBc | Radiated -20 dBm | |
| Modulation Limiting (12.5/20/25 kHz) | ±5/±2 | ±5/±2.5 kHz | | ±5/±2.5kHz | | ±5/±2.5 kHz | | ±5/±2.5 kHz | |
| Modulation Fidelity (C4FM) 12.5 kHz Digital Channel | 2. | 2.5% | | 1.50% | | 50% | 1.5 | 0% | |
| Audio Response | +1, -3 (| +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | |
| FM Hum & Noise (12.5 kHz/25 kHz) | -52 dB | -52 dB / -53 dB | | -50 dB/ -53 dB | | -48 dB / -50 dB | | -48 dB / -50 dB | |
| Audio Distortion (12.5 kHz/25 kHz) | 0.5 | 0.50% | | 0.50% | | 0.50% / 0.50% | | 0.50% / 0.50% | |

| | VI | łF | UH | F R1 | 700 MHz | 800 MHz |
|---|-------------------------------|--------------------------------|-------------------------------|--------------------------------|----------------------|---------------------|
| Frequency Range/Bandsplits | 136-17 | 136-174 MHz | | 70 MHz | 764-776 MHz | 851-870 MHz |
| Channel Spacing | 12.5/2 | 12.5/25 kHz | | 25 kHz | 12.5/25 kHz | 12.5/25 kHz |
| Maximum Frequency Separation | Full Ba | ndsplit | Full Ba | andsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated/Max | 7.5 / | 15 W | 7.5 / 15 W | | 7.5 / 15 W | 7.5 / 15 W |
| Frequency Stability (-30 °C to +60 °C; +25 °C Ref.) | ±0.8 | PPM | ±0.8 ppm | | ±0.8 ppm | ±0.8 ppm |
| Analog Sensitivity (12db SINAD) | Pre-Amp -123 dBm (0.158μV) | Standard -119 dBm (0.251µV) | Pre-Amp -123 dBm (0.158µV) | Standard -119 dBm (0.251µV) | -121 dB (0.199 μV) | -121 dB (0.199 μV) |
| 5% BER | Pre-Amp -123 dBm (0.158μV) | Standard -119 dBm (0.251µV) | Pre-Amp -123 dBm (0.158µV) | Standard -119 dBm (0.251µV) | -121.5 dB (0.188 μV) | -121.5 dB (0.188 μV |
| Selectivity (12.5 kHz / 25 kHz / 30 kHz) | 77 dB / 89 | dB / 90 dB | 72 dB / 83 dB / - | | 75 dB / 85 dB / - | 75 dB / 85 dB / - |
| Intermodulation Rejection | Pre-Amp 84dB / 84 dB | Standard 86 dB / 86 dB | Pre-Amp 82 dB / 82dB | Standard 86 dB / 86 dB | 82 dB / 82 dB | 82 dB / 82 dB |
| Spurious Rejection | 95 | 95 dB | | dB | 91 dB | 91 dB |
| FM Hum & Noise (12.5 kHz / 25 kHz) | -50 dB , | B / -59 dB -5 | | / -55 dB | -50 dB / -59 dB | -50 dB / -59 dB |
| Audio Distortion (12.5 kHz / 25 kHz) | 1.2 | 1.2 % | | 5% | 1.2 % | 1.2 % |

| POWER AND BATTERY DRAIN | | | | |
|---|-------------------------------|-------------------------------|----------------------------------|-------------------------------|
| | VHF | UHF R1 | 700 MHz | 800 MHz |
| Frequency Range / Bandsplits | 136-174 MHz | 380-470 MHz | 764-775, 794-806 MHz | 806-825, 851-870 MHz |
| RF Power Output | 1-50 W | 1-40 W | 3-30 W | 3-35 W |
| Operation | 13.8V DC ±20% Negative Ground | 13.8V DC ±20% Negative Ground | 13.9V DC ±20% Negative Ground | 13.9V DC ±20% Negative Ground |
| Standby at 13.8V | 0.85A | 0.85A | 0.85A | 0.85A |
| Receive Current at Rated Audio at 13.8V | 3.2A | 3.2A | 3.2A | 3.2A |
| Transmit Current (A) at Rated Power | 8 A @ 15 W 13 A @ 50 W | 11 A @ 40 W 8A @ 15 W | 8 A @ 15 W | 8 A @ 15 W 12 A @ 35 W |

| ENVIRONMENTAL | | | |
|---|---------------|--|--|
| Operating Temperature | -30°C/+60°C | | |
| Storage Temperature | -40°C/+85°C | | |
| Humidity | Per MIL-STD | | |
| ESD | IEC 61000-4-2 | | |
| Water and Dust Intrusion (w/ O2 control head) | IP56, MIL-STD | | |
| RADIO MODEL NUMBER | | | |
| 700/800 MHz | M25URS9PW1BN | | |
| VHF | M25KSS9PW1BN | | |
| UHF R1 | M25QSS9PW1BN | | |

| FCC/IC TYPE ACCEPTANCE ID | | | | |
|---|----------------------|--|--|--|
| FCC/IC ID | Band and Power Level | | | |
| | 764-776 MHz (3-30 W) | | | |
| FCC ID: AZ492FT7124 | 794-806 MHz (3-30 W) | | | |
| IC ID: 109U-92FT7124 | 806-824 MHz (3-35 W) | | | |
| | 851-870 MHz (3-35 W) | | | |
| FCC ID: AZ492FT7130 IC ID: 109U-92FT7130 | 136-174 MHz (1-50 W) | | | |
| FCC ID: AZ492FT7129 IC ID: 109U-92FT7129 | 380-470 MHz (1-40 W) | | | |



| MOBILE MILITARY S | | | | | | | | | | | | |
|-------------------|--------|------------|--------------|-------------|--------------|-------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | MIL-S | TD 810C | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | | MIL-STD 810H | |
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | I | 500.3 | I | 500.4 | 1/11 | 500.6 | II | 500.6 | I |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | l/Hot, ll/Hot | 501.6 | I/A1, II/A1 | 501.7 | I/A1, II/A1 |
| Low Temperature | 502.1 | 1 | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.6 | I/C3, II/C1 | 502.7 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | 1/A1C3 | 503.3 | 1/A1C3 | 503.4 | 1 | 503.6 | I/C | 503.7 | I/C |
| Solar Radiation | 505.1 | 1 | 505.2 | 1 | 505.3 | I | 505.4 | 1 | 505.6 | I/A1 | 505.7 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.6 | I, III | 506.6 | I, III |
| Humidity | 507.1 | 1 | 507.2 | 1 | 507.3 | 1 | 507.4 | - | 507.6 | II/Aggravated | 507.6 | II/Aggravated |
| Salt Fog | 509.1 | I | 509.2 | 1 | 509.3 | I | 509.4 | - | 509.6 | - | 509.7 | - |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.6 | I | 510.7 | I |
| Blowing Sand | - | - | 510.2 | II | 510.3 | 1 | | I | 510.6 | | 510.7 | II |
| Vibration | 514.2 | VIII, F, W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.7 | I/24 | 514.8 | I/24, II/5 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.7 | I, V, VI | 516.8 | I, V, VI |

For more information, please visit www.motorolasolutions.com/apx



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. 800-367-2346 motorolasolutions.com

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APX 4500 SINGLE-BAND P25 MOBILE RADIO



UNCOMPROMISING PERFORMANCE. EFFECTIVE RESPONSE.

You need a P25 radio to communicate and collaborate effectively with other P25 radio users. And, you need the performance and reliability of an APX^m radio. That is why we built the APX 4500 single-band mobile radio.

Everyone has something to like with the APX 4500. We've paired it with our rugged 02 Control Head for confident, reliable radio communication that can stand up to everyday use. The compact form factor simplifies vehicle installation. Integrated hardware encryption protects your mission-critical communication. Impact detection automatically alerts dispatch to keep its users safer and integrated Wi-Fi helps to keep you current with fast and easy software updates.

Improve your operational efficiency with the performance and reliability of the APX 4500 mobile radio.





RESPOND WITH CONFIDENCE

When out in the field, you face all types of conditions. Your radio shouldn't hold you back. Whether it be getting caught in a storm or undergoing extreme temperature shock, you can remain confident in the APX 4500 and know that it won't let you down in the moments that matter.



VOICE AND DATA, ALL AT ONCE

Integrated Wi-Fi helps to keep your radio update to date with over-the-air updates. Receive new codeplugs, firmware updates and software features at the speed of Wi-Fi— without interruptions to voice communications.

IIGHTWEIGHT, COMPACT ∠ ↓ DESIGN

FLEXIBLE, EASY INSTALLATION

The APX 4500 is ideal for a growing ecosystem of vehicle installations. Its small and lightweight form factor simplifies installation and its IP56 rating provides ample protection from dust and water intrusion.





COLLABORATE SEAMLESSLY

Although you are out of the office, you still need to communicate with others to get the job done. As a P25 mobile radio, the APX 4500 allows you to communicate with other P25 radio users. Seamlessly collaborate within your department or with other departments and organizations using the APX 4500 P25 mobile radio.



ALL THE SUPPORT YOU NEED

Motorola Solutions offers three levels of service plans – Essential, Advanced and Premier. From simple support for technical troubleshooting to a complete transfer of optimization and maintenance services to Motorola Solutions, you choose the level of support that suits you best.

APX 4500 COMPATIBLE CONTROL HEAD

02 CONTROL HEAD

EXTREME USABILITY

The O2 control head provides rugged simplicity for efficient and confident communication. Oversized controls with an easy to read color display and a built-in 7.5 watt speaker provides clear visual and audible user experiences. Available in high impact green or black.







FEATURES

| GENERAL SPECIFICATIONS | | | | |
|------------------------|--|--|--|--|
| Channel Capacity | 512 standard, expandable to 1,000 channels | | | |
| Wireless Connectivity | GPS/GLONASS, Wi-Fi | | | |
| WLAN (Wi-Fi) Protocols | 802.11 b/g/n (2.4GHz) / 802.11 a/n/ac (5GHz) | | | |
| Encryption Algorithms | ADP, 256-bit AES | | | |

OPERATING MODES

Digital Trunking: 9600 Baud APCO P25 Phase 1 FDMA and Phase 2 TDMA

Analog Trunking: 3600 Baud SmartNet®, SmartZone®, Omnilink

Digital Conventional: APCO 25

Analog Conventional: Analog MDC 1200, Quik Call II System Configurations

INTEGRATED Wi-Fi AND DATA CONNECTIVITY

- Wi-Fi (2.4GHz), 802.11 a/n/ac (5GHz) with up to 20 Wi-Fi networks provisioned in the radio¹
- Data Modem Tethering¹
- ASTRO 25 Integrated Voice and Data
- Enhanced Data¹
- Integrated GPS/GLONASS for Outdoor Location Tracking
- Mission Critical Geofence¹
- Personnel Accountability¹

MANAGEMENT

Customer Programming Software (CPS)

Radio Management

Over-the-air Programming (OTAP)¹

| SECURITY |
|--|
| P25 Authentication ¹ |
| Software Key |
| Single-key ADP Encryption ¹ |
| Multikey for 128 keys ¹ |

| GPS/GNSS SPECIFICATIONS | | | | |
|-------------------------|--|--|--|--|
| Channels | 12 | | | |
| Tracking Sensitivity | -164 dBm | | | |
| Accuracy ² | <5 meters (95%) | | | |
| Cold Start ² | <60 seconds (95%) | | | |
| Hot Start ² | <5 seconds (95%) | | | |
| Mode of Operation | Autonomous (Non-Assisted) GNSS or SBAS | | | |



| ENCRYPTION | | | |
|-----------------------------------|--|--|--|
| Supported Encryption Algorithms | ADP, AES 256 | | |
| Encryption Algorithm Capacity | 8 | | |
| Encryption Keys per Radio | Module capable of storing 1024 keys. Programmable for 128 Common KeY Reference (CKR) or 16 PhysicalIdentifier (PID) | | |
| Encryption Frame Re-sync Interval | P25 CAI 300 mSec | | |
| Encryption Keying | Key Loader | | |
| Synchronization | XL – Counter Addressing OFB – Output Feedback | | |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator | | |
| Encryption Type | Digital | | |
| Key Storage | Tamper protected volatile or non-volatile memory | | |
| Key Erasure | Keyboard command and tamper detection | | |
| Standards | FIPS 140-2 Level 3, FIPS 197 | | |

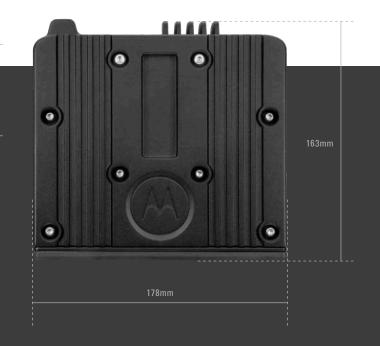
| OTHER FEATURES INTEGRATED WI-FI, GPS AND DATA CONNECTIVITY | | | | | |
|--|--|--|--------------------------|--|--|
| Text Messaging | Frequency Range/Band splits | WLAN (WiFi): 2412 - 2472 MHz; 5180 - 5320 MHz; | | | |
| Radio Profiles | | | 5500 - 5825 MHz | | |
| Dynamic Zone | - WLAN (WiFi) 802.11 b/q/n | Security protocols | WPA-2, WPA, WEP | | |
| | | SSIDs | Up to 20 pre-provisioned | | |
| Unified Call List | Integrated GPS/GLONASS for outdoor location tracking | | | | |
| | Data Modem Tethering ¹ | | | | |
| Instant Recall | | | | | |
| Data Modem Connection (wired or Wi-Fi) ¹ | | | | | |
| 12 Character RFID Asset Tracking ¹ | | | | | |
| Digital Tone Signaling ¹ | - | | | | |



| SIGNALING (ASTRO 25 MODE) | |
|---|--|
| Signalling Rate | 9.6 kbps |
| Digital ID Capacity | 10,000,000 Conventional / 48,000 Trunking |
| Digital Network Access Codes | 4,096 network site addresses |
| ASTRO Digital User Group Addresses | 4,096 network site addresses |
| Project 25 – CAI Digital User Group Addresses | 65,000 Conventional / 4,094 Trunking |
| Error Correction Techniques | Golay, BCH, Reed-Solomon codes |
| Data Access Control | Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions |

| DIMENSIONS AND WEIGHT | | |
|--|--|--------------------|
| Mid Power Radio Transceiver | 51 x 178 x 163 mm (2.0 x 7.0 x 6.4 in) | 2.18 kg (4.80 lbs) |
| Radio Transceiver and 02 Control Head - Dash Mount | 69 x 207 x 223 mm (2.7 x 8.1 x 8.8 in) | 2.43 kg (5.36 lbs) |
| Mid Power Radio Transceiver and Remote Mount | 51 x 178 x 193 mm (2.0 x 7.0 x 7.6 in) | 2.18 kg (4.80 lbs) |





PERFORMANCE AND REGULATORY

| TRANSMITTER | | | | | | | | | |
|--|----------------------|---------------------|----------------------|---------------------|--------------------------|-------------------------|----------------------|---------------------|--|
| | VI | VHF | | UHF R1 | | 700 MHz | | 800 MHz | |
| Frequency Range/Bandsplits | 136-17 | 4 MHz | 380-470 MHz | | 764-776, 794-806 MHz | | 806-825, 851-870 MHz | | |
| Rated RF Output Power (Adjustable) | 1-50 |) W | 1-40 W | | 3-3 | 3-30 W | | 3-35 W | |
| Frequency Stability (-30°C to +60°C; +25°C Ref.) | ±0.8 | PPM | ±0.8 PPM | | ±0.8 PPM | | ±0.8 PPM | | |
| Emissions | Conducted -85 dBc | Radiated -20 dBm | Conducted -85 dBc | Radiated -20 dBm | Conducted -75/-85 dBc | Radiated -20/-40 dBm | Conducted -75 dBc | Radiateo -20 dBm | |
| Modulation Limiting (12.5/20/25 kHz) | ±5/±2 | ±5/±2.5 kHz | | ±5/±2.5kHz | | ±5/±2.5 kHz | | ±5/±2.5 kHz | |
| Modulation Fidelity (C4FM) 12.5 kHz Digital Channel | 2.5 | 2.50% | | 1.50% | | 1.50% | | 1.50% | |
| Audio Response | +1, -3 d | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | |
| FM Hum & Noise (12.5 kHz/25 kHz) | -52 dB / | -52 dB / -53 dB | | -50 dB / -53 dB | | -48 dB / -50 dB | | -48 dB / -50 dB | |
| Audio Distortion (12.5 kHz/25 kHz) | 0.5 | 0.50% | | 0.50% | | 0.50% / 0.50% | | 0.50% / 0.50% | |

| | V | HF | UHF R1 | | 700 MHz | 800 MHz |
|--|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|----------------------|----------------------|
| Frequency Range/Bandsplits | 136-174 MHz | | 380-47 | '0 MHz | 764-776 MHz | 851-870 MHz |
| Channel Spacing | 12.5/2 | 25 kHz | 12.5/2 | 25 kHz | 12.5/25 kHz | 12.5/25 kHz |
| Maximum Frequency Separation | Full Ba | ndsplit | Full Ba | ndsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated/Max | 7.5 / | 15 W | 7.5 / | 15 W | 7.5 / 15 W | 7.5 / 15 W |
| Frequency Stability (-30 °C to +60 °C; +25 °C Ref.) | ±0.8 | ±0.8ppm ±0.8ppn | | ppm | ±0.8 ppm | ±0.8 ppm |
| Analog Sensitivity (12 dB SINAD) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 µV) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 μV) | -121 dB (0.199 μV) | -121 dB (0.199 μV) |
| 5% BER | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 µV) | Pre-Amp -123 dBm (0.158 μV) | Standard -119 dBm (0.251 μV) | -121.5 dB (0.188 µV) | -121.5 dB (0.188 μV) |
| Selectivity (12.5 kHz / 25 kHz / 30 kHz) | 77 dB / 89 dB / 90 dB | | 72 dB / | 83 dB / - | 75 dB / 85 dB / - | 75 dB / 85 dB / - |
| Intermodulation Rejection (12.5 kHz / 25 kHz) | Pre-Amp 84 dB / 84 dB | Standard 86 dB / 86 dB | Pre-Amp 82 dB / 82 dB | Standard 86 dB / 86 dB | 82 dB / 82 dB | 82 dB / 82 dB |
| Spurious Rejection | 95 | dB | 93 dB | | 91 dB | 91 dB |
| FM Hum & Noise (12.5 kHz / 25 kHz) | -50 dB | / -59 dB | -50 dB / | / -55 dB | -50 dB / -59 dB | -50 dB / -59 dB |
| Audio Distortion (12.5 kHz / 25 kHz) | 1.2 | 1.20% | | 0% | 1.20% | 1.20% |

| POWER AND BATTERY DRAIN | | | | | |
|--|-------------------------------|-------------------------------|--|--|--|
| | VHF | UHF R1 | 700/800 MHz | | |
| Model Type | 136-174 MHz | 380-470 MHz | 764-870 MHz | | |
| Minimum RF Power Output | 1-50 W | 1-40 W | 3-30 W (764-776 MHz) 3-30 W (794-806 MHz) 3-35 W (806-824 MHz) 3-35 W (851-870 MHz) | | |
| Operation | 13.8V DC ±20% Negative Ground | 13.8V DC ±20% Negative Ground | 13.9V DC ±20% Negative Ground | | |
| Standby at 13.8 V | 0.85A | 0.85A | 0.85A (764-870 MHz) | | |
| Receive Current at Rated Audio at 13.8 V | 3.2A | 3.2A | 3.2A (764-870 MHz) | | |
| Transmit Current (A) at Rated Power | 13A (50 W) 8A (15 W) | 11A (40 W) 8A (15 W) | 12A (35W) 8A (15 W) | | |



| ENVIRONMENTAL | | | |
|--------------------------|---------------|--|--|
| Operating Temperature | -30°C/+60°C | | |
| Storage Temperature | -40°C/+85°C | | |
| Humidity | Per MIL-STD | | |
| ESD | IEC 61000-4-2 | | |
| Water and Dust Intrusion | IP56, MIL-STD | | |

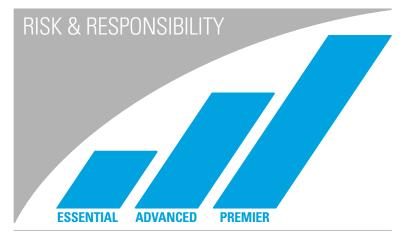
| RADIO MODEL NUMBER | |
|--------------------|--------------|
| VHF | M22KSS9PW1BN |
| UHF R1 | M22QSS9PW1BN |
| 700/800 MHz | M22URS9PW1BN |

| FCC/IC TYPE ACCEPTANCE ID | | | | |
|---|----------------------|--|--|--|
| FCC/IC ID | Band and Power Level | | | |
| FCC ID: AZ492FT7130 IC ID: 109U-92FT7130 | 136-174 MHz (1-50 W) | | | |
| FCC ID: AZ492FT7129 IC ID: 109U-92FT7129 | 380-470 MHz (1-40 W) | | | |
| | 764-776 MHz (3-30 W) | | | |
| FCC ID: AZ492FT7124 | 794-806 MHz (3-30 W) | | | |
| IC ID: 109U-92FT7124 | 806-824 MHz (3-35 W) | | | |
| | 851-870 MHz (3-35 W) | | | |

| MOBILE MILITARY S | STANDARDS 8 | 310, <mark>C, D, E, F, G</mark> | & H | | | | | | | | | |
|--------------------------|-------------|---------------------------------|--------|-------------|--------|-------------|--------|---------------|--------|---------------|--------|---------------|
| | MIL-S | TD 810C | MIL-S | FD 810D | MIL-S | TD 810E | MIL-S | TD 810F | MIL-S | TD 810G | MIL-S | TD 810H |
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | 1 | 500.3 | 1 | 500.4 | 1/11 | 500.6 | I | 500.6 | 11 |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Hot | 501.6 | I/A1, II/A1 | 501.7 | I/A1, II/A1 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.6 | I/C3, II/C1 | 502.7 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | 1/A1C3 | 503.3 | 1/A1C3 | 503.4 | I | 503.6 | I/C | 503.7 | I/C |
| Solar Radiation | 505.1 | I | 505.2 | I | 505.3 | I | 505.4 | I | 505.6 | I/A1 | 505.7 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.6 | I, III | 506.6 | I, III |
| Humidity | 507.1 | I | 507.2 | I | 507.3 | I | 507.4 | - | 507.6 | II/Aggravated | 507.6 | II/Aggravated |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I | 509.4 | - | 509.6 | - | 509.7 | - |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.6 | I | 510.7 | I |
| Blowing Sand | - | - | 510.2 | I | 510.3 | 1 | | I | 510.6 | I | 510.7 | 11 |
| Vibration | 514.2 | VIII, F, W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.7 | I/24 | 514.8 | I/24, II/5 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.7 | I, V, VI | 516.8 | I, V, VI |



ACHIEVE MISSION CRITICAL PERFORMANCE WITH MANAGED AND SUPPORT SERVICES



ENSURE CONTINUITY • ENHANCE PRODUCTIVITY • REDUCE RISK

ESSENTIAL Only Support When You Need It

When the unpredictable happens to your network, Essential Services provide you access to Motorola Solutions Technical Support teams and resources for troubleshooting and maintenance.

ADVANCED

Improve Response and Continuity

Motorola Solutions expert service teams help mitigate downtime and ensure network continuity. Get fast response to network issues by our qualified technicians who analyze and diagnose your network as well as deliver routine maintenance.

PREMIER

Maximize Performance and Reduce Risk

Motorola Solutions Managed Services team helps operate and optimize your mission critical system. With Premier Services, you fully transfer the risk to Motorola Soultions and ensure your system operates at maximum performance levels, allowing your team to keep focus on its primary responsibilities.

For more information, please visit www.motorolasolutions.com/apx



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APX 1500 SINGLE-BAND P25 MOBILE RADIO



P25 CONNECTIVITY. EXCEPTIONAL PRICE.

Your city infrastructure represents a large investment and its users depend on that investment every day. Why not protect it by giving your team the tools they need to operate and maintain it efficiently? Equip them with the affordable APX[™] 1500 P25 mobile radio so they can get work done.

The APX 1500 mobile is designed to provide reliable P25 radio communication at an affordable price while standing up to the riggers

of every day work. The rugged simplicity of the O2 control head includes an easy to read color display and a built-in 7.5 watt speaker for efficient and confident communication. P25 radio capability enables seamless interoperability with first responders and other P25 radio users.

Communicate with ease and confidence at an affordable price on the APX 1500 mobile radio.





DO MORE, DON'T PAY MORE

Just because you have a limited budget doesn't mean you have to limit your communication. The APX 1500 gives you dependable voice and data communication, P25 collaboration and all the features you need to connect your team - all at a great price.



RUGGED AND RELIABLE

RESPOND WITH CONFIDENCE

The APX 1500 is purpose-built for those who get things done. Get efficient and confident communication with the rugged simplicity of an oversized knob, easy-to-read color screen and a loud high-density speaker.





COLLABORATE SEAMLESSLY

Although you are out of the office, you still need to communicate with others to get the job done. As a P25 mobile radio, the APX 1500 allows you to seamlessly collaborate with other P25 radio uses in other departments and organizations.



DEVICE MANAGEMENT SERVICES

ALL THE SUPPORT YOU NEED

Motorola Solutions offers three levels of service plans – Essential, Advanced and Premier. From simple support for technical troubleshooting to a complete transfer of optimization and maintenance services to Motorola Solutions, you choose the level of support that suits you best.



APX 1500 CONTROL HEAD

02 CONTROL HEAD

EXTREME USABILITY

The O2 control head provides rugged simplicity for efficient and confident communication. Oversized controls with an easy to read color display and a built-in 7.5 watt speaker provides clear visual and audible user experiences.





FEATURES

| GENERAL FEATURES | |
|-----------------------|---|
| Channel Capacity | 512 channels |
| Wireless Connectivity | GPS/GLONASS |
| Digital Encryption | 256-bit AES SW, ADP, Programmable for 8 Common Key Reference |

OPERATING MODES

Digital Trunking: 9600 Baud APCO P25 Phase 1 FDMA and Phase 2 TDMA

Digital Conventional: APCO 25

DATA CONNECTIVITY

| ASTRO 25 Integrated Voice and Data | |
|------------------------------------|--|
| Enhanced Data ¹ | |

Integrated GPS/GLONASS for Outdoor Location Tracking

Mission Critical Geofence¹

MANAGEMENT

Customer Programming Software (CPS)

Radio Management

Over-the-air Programming (OTAP)1

| SECURITY | |
|--|--|
| P25 Authentication | |
| Software Key | |
| Single-key ADP Encryption ¹ | |
| Multikey for 8 keys | |
| | |

| GPS/GNSS SPECIFICATIONS | | | | | |
|-------------------------|--|--|--|--|--|
| Channels | 12 | | | | |
| Tracking Sensitivity | -164 dBm | | | | |
| Accuracy ² | <5 meters (95%) | | | | |
| Cold Start ² | <60 seconds (95%) | | | | |
| Hot Start ² | <5 seconds (95%) | | | | |
| Mode of Operation | Autonomous (Non-Assisted) GNSS or SBAS | | | | |

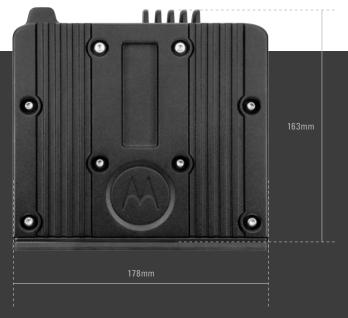
¹ Optional ² Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength



| OTHER FEATURES | SIGNALING (ASTRO 25 MODE) | | | | |
|---|---|---|--|--|--|
| Text Messaging ¹ | Signalling Rate | 9.6 kbps | | | |
| Radio Profiles | Digital ID Capacity | 10,000,000 Conventional / 48,000 Trunking | | | |
| Dynamic Zone | Digital Network Access Codes | 4,096 network site addresses | | | |
| Intelligent Priority Scan | ASTRO Digital User Group Addresses | 4,096 network site addresses | | | |
| Unified Call List | Project 25 – CAI Digital User Group Addresses | 65,000 Conventional / 4,094 Trunking | | | |
| Instant Recall | Error Correction Techniques | Golay, BCH, Reed-Solomon codes | | | |
| 12 Character RFID Asset Tracking ¹ | Data Access Control | Slotted CSMA: Utilizes infrastructure- sourced data status bits embedded in both voice and data transmissions | | | |
| Digital Tone Signaling ¹ | Data Access control | | | | |

| DIMENSIONS AND WEIGHT | | | | | | | | |
|--|--|--------------------|--|--|--|--|--|--|
| Radio Transceiver | 51 x 178 x 163 mm (2.0 x 7.0 x 6.4 in) | 2.18 kg (4.80 lbs) | | | | | | |
| Radio Transceiver and 02 Control Head - Dash Mount | 69 x 207 x 223 mm (2.7 x 8.1 x 8.8 in) | 2.43 kg (5.36 lbs) | | | | | | |





¹ Optional

PERFORMANCE AND REGULATORY

| TRANSMITTER | | | | | | | | | |
|--|----------------------|---------------------|----------------------|---------------------|--------------------------|-------------------------|----------------------|---------------------|--|
| | VHF | | UHF R1 | | 700 MHz | | 800 MHz | | |
| Frequency Range/Bandsplits | 136-174 MHz | | 380-470 MHz | | 764-776, 794-806 MHz | | 806-825, 851-870 MHz | | |
| Rated RF Output Power (Adjustable) | 1-50 W | | 1-40 W | | 3-30 W | | 3-35 W | | |
| Frequency Stability (-30°C to +60°C; +25°C Ref.) | ±0.8 | PPM | ±0.8 PPM ±0.8 PPM | | ±0.8 PPM | | | | |
| Emissions | Conducted -85 dBc | Radiated -20 dBm | Conducted -85 dBc | Radiated -20 dBm | Conducted -75/-85 dBc | Radiated -20/-40 dBm | Conducted -75 dBc | Radiateo -20 dBm | |
| Modulation Limiting (12.5 kHz / 20 kHz / 25 kHz) | ±5/±2.5 kHz | | ±5/±2.5kHz | | ±5/±2.5 kHz | | ±5/±2.5 kHz | | |
| Modulation Fidelity (C4FM) 12.5 kHz Digital Channel | 2.5 | 2.5% | | 1.50% | | 1.50% | | 1.50% | |
| Audio Response | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | +1, -3 dB (EIA) | | |
| FM Hum & Noise (12.5 kHz / 25 kHz) | -52 dB / | -52 dB / -53 dB | | -50 dB/ -53 dB | | -48 dB / -50 dB | | -48 dB / -50 dB | |
| Audio Distortion (12.5 kHz / 25 kHz) | 0.5 | 0.50% | | 0.50% | | 0.50% / 0.50% | | 0.50% / 0.50% | |

| RECEIVER | | | | | | | | | | | | |
|---|---|---------------------------|--------------------------|---------------------------|-------------------|-------------------|-------|--|-------|--|-------|-------|
| | V | łF | UHF R1 | | 700 MHz | 800 MHz | | | | | | |
| Frequency Range/Bandsplits | 136-174 MHz | | 380-470 MHz | | 764-776 MHz | 851-870 MHz | | | | | | |
| Channel Spacing | 12.5/2 | 25 kHz | 12.5/2 | 25 kHz | 12.5/25 kHz | 12.5/25 kHz | | | | | | |
| Maximum Frequency Separation | Full Bandsplit | | Full Ba | ndsplit | Full Bandsplit | Full Bandsplit | | | | | | |
| Audio Output Power at Rated/Max | 7.5/ | 15 W | 7.5/ | 15 W | 7.5/15 W | 7.5/15 W | | | | | | |
| Frequency Stability (-30°C to +60°C; +25°C Ref.) | ±0.8ppm | | ±0.8ppm | | ±0.8 ppm | ±0.8 ppm | | | | | | |
| Analog Sensitivity (12 dB SINAD) | Pre-Amp Standard Pre-Amp Standard -123 dBm -119 dBm -123 dBm -119 dBm (0.158 μV) (0.251 μV) (0.158 μV) (0.251 μV) | | -121 dB (0.211 μV) | -121 dB (0.199 μV) | | | | | | | | |
| 5% BER | Pre-Amp Standard Pre-Amp Standard -123 dBm -119 dBm -123 dBm -119 dBm (0.158 μV) (0.251 μV) (0.158 μV) (0.251 μV) | | -121.5 dB (0.188 μV) | -121.5 dB (0.188 μV) | | | | | | | | |
| Selectivity (12.5 kHz / 25 kHz / 30 kHz) | 77 dB / 89 dB / 90 dB | | 00 dB 72 dB / 83 dB / - | | 75 dB / 85 dB / - | 75 dB / 85 dB / - | | | | | | |
| Intermodulation Rejection (12.5 kHz / 25 kHz) | Pre-Amp 84 dB / 84 dB | Standard 86 dB / 86 dB | Pre-Amp 82 dB / 82 dB | Standard 86 dB / 86 dB | 82 dB / 82 dB | 82 dB / 82 dB | | | | | | |
| Spurious Rejection | 95 dB | | 93 dB | | 91 dB | 91 dB | | | | | | |
| FM Hum & Noise (12.5 kHz / 25 kHz) | -50 dB | -50 dB / -59 dB - | | / -55 dB | -50 dB / -59 dB | -50 dB / -59 dB | | | | | | |
| Audio Distortion (12.5 kHz / 25 kHz) | 1.2 | 0% | 1.50% | | 1.50% | | 1.50% | | 1.50% | | 1.20% | 1.20% |

| POWER AND BATTERY DRAIN | | | | | | | | | | |
|--|-------------------------------|-------------------------------|--|--|--|--|--|--|--|--|
| | VHF | UHF R1 | 700/800 MHz | | | | | | | |
| Model Type | 136-174 MHz | 380-470 MHz | 764-870 MHz | | | | | | | |
| Minimum RF Power Output | 1-50 W | 1-40 W | 3-30 W (764-776 MHz) 3-30 W (794-806 MHz) 3-35 W (806-824 MHz) 3-35 W (851-870 MHz) | | | | | | | |
| Operation | 13.8V DC ±20% Negative Ground | 13.8V DC ±20% Negative Ground | 13.9V DC ±20% Negative Ground | | | | | | | |
| Standby at 13.8 V | 0.85A | 0.85A | 0.85A (764-870 MHz) | | | | | | | |
| Receive Current at Rated Audio at 13.8 V | 3.2A | 3.2A | 3.2A (764-870 MHz) | | | | | | | |
| Transmit Current (A) at Rated Power | 13A (50 W) 8A (15 W) | 11A (40 W) 8A (15 W) | 12A (35W) 8A (15 W) | | | | | | | |



| ENVIRONMENTAL | |
|--------------------------|---------------|
| Operating Temperature | -30°C/+60°C |
| Storage Temperature | -40°C/+85°C |
| Humidity | Per MIL-STD |
| ESD | IEC 61000-4-2 |
| Water and Dust Intrusion | IP56, MIL-STD |

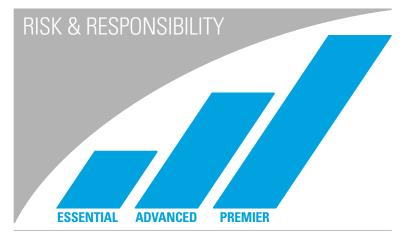
| RADIO MODEL NUMBER | |
|--------------------|--------------|
| VHF | M36KSS9PW1BN |
| UHF R1 | M36QSS9PW1BN |
| 700/800 MHz | M36URS9PW1BN |

| FCC/IC TYPE ACCEPTANCE ID | | | | | | | | |
|---|----------------------|--|--|--|--|--|--|--|
| FCC/IC ID | Band and Power Level | | | | | | | |
| FCC ID: AZ492FT7130 IC ID: 109U-92FT7130 | 136-174 MHz (1-50 W) | | | | | | | |
| FCC ID: AZ492FT7129 IC ID: 109U-92FT7129 | 380-470 MHz (1-40 W) | | | | | | | |
| | 764-776 MHz (3-30 W) | | | | | | | |
| FCC ID: AZ492FT7124 | 794-806 MHz (3-30 W) | | | | | | | |
| IC ID: 109U-92FT7124 | 806-824 MHz (3-35 W) | | | | | | | |
| | 851-870 MHz (3-35 W) | | | | | | | |

| | MIL-STD 810C | | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | | MIL-STD 810H | |
|-------------------|--------------|------------|--------------|-------------|--------------|-------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. | Method | Proc./Cat. |
| Low Pressure | 500.1 | I | 500.2 | II | 500.3 | 1 | 500.4 | 1/11 | 500.6 | | 500.6 | 11 |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/Hot | 501.6 | I/A1, II/A1 | 501.7 | I/A1, II/A1 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.6 | I/C3, II/C1 | 502.7 | I/C3, II/C1 |
| Temperature Shock | 503.1 | I | 503.2 | 1/A1C3 | 503.3 | 1/A1C3 | 503.4 | I | 503.6 | I/C | 503.7 | I/C |
| Solar Radiation | 505.1 | I | 505.2 | I | 505.3 | I | 505.4 | I | 505.6 | I/A1 | 505.7 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.6 | I, III | 506.6 | I, III |
| Humidity | 507.1 | I | 507.2 | II | 507.3 | I | 507.4 | - | 507.6 | II/Aggravated | 507.6 | II/Aggravated |
| Salt Fog | 509.1 | I | 509.2 | I | 509.3 | I | 509.4 | - | 509.6 | - | 509.7 | - |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.6 | I | 510.7 | I |
| Blowing Sand | - | - | 510.2 | II | 510.3 | I | | II | 510.6 | II | 510.7 | I |
| Vibration | 514.2 | VIII, F, W | 514.3 | l/10, ll/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.7 | I/24 | 514.8 | I/24, II/5 |
| Shock | 516.2 | I, III, V | 516.3 | I, V, VI | 516.4 | I, V, VI | 516.5 | I, V, VI | 516.7 | I, V, VI | 516.8 | I, V, VI |



ACHIEVE MISSION CRITICAL PERFORMANCE WITH MANAGED AND SUPPORT SERVICES



ENSURE CONTINUITY • ENHANCE PRODUCTIVITY • REDUCE RISK

ESSENTIAL Only Support When You Need It

When the unpredictable happens to your network, Essential Services provide you access to Motorola Solutions Technical Support teams and resources for troubleshooting and maintenance.

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Motorola Solutions expert service teams help mitigate downtime and ensure network continuity. Get fast response to network issues by our qualified technicians who analyze and diagnose your network as well as deliver routine maintenance.

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Maximize Performance and Reduce Risk

Motorola Solutions Managed Services team helps operate and optimize your mission critical system. With Premier Services, you fully transfer the risk to Motorola Soultions and ensure your system operates at maximum performance levels, allowing your team to keep focus on its primary responsibilities.

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MANAGED AND SUPPORT SERVICES FOR APX TWO-WAY RADIOS

For public safety agencies tasked with mission-critical communications, assuring peak radio performance is critical. Efficient and cost-effective management of an ever-evolving radio technology ecosystem is complex, requiring the right set of expertise and tool sets.

YOUR NEEDS

Maintaining and supporting a large inventory of two-way radios can be complex, expensive and time-consuming. Today radio managers need the right set of people expertise, processes and tools to manage increasing programming complexities, fleet performance issues, budget and IT skill constraints.

As technology evolves, hardware repair and technical support capabilities are some of the critical service capabilities that are needed for your mission-critical communication systems to work optimally. Maintaining and programming radios is vital to keep your radio fleet current and secure. Without streamlined processes and tools you can spend countless hours managing radio configuration files, making firmware updates and going through distributed radio fleet databases.

Having a well-defined approach to tracking, managing and updating all the connected radios, together with applying the latest functionality and security features can help optimize fleet performance.

INCREASING COMPLEXITY

59% Of radio managers cite increased programming complexities as a major challenge.¹

PERFORMANCE ISSUES

70% Of radio managers wait until something breaks to perform maintenance.²

CHALLENGED RESOURCES

55%

Of public-safety organizations cite maintaining in-house talent as a challenge for radio management.³



THE SOLUTION: SERVICE CAPABILITIES

You can rely on us to help you maximize the value of your radio investments with the right level of services designed specifically for your needs. We bring a range of service capabilities that you can choose through our Essential, Advanced and Premier service packages.

KEY SERVICE FEATURES

TECHNICAL SUPPORT

Our experienced technologists are available to help isolate and resolve any issues you may have with your radios. With an extensive knowledge base, trained and certified technical engineers and leading standards for escalation procedures, this team can troubleshoot and provide prompt resolution to your technical device issues. Motorola Solutions understands the importance of maintaining the radio fleet to its optimal performance. That's why we apply leading industry standards to record, monitor, escalate and report technical service calls from our customers.

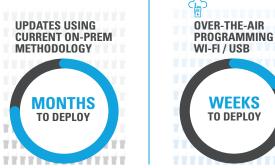
HARDWARE REPAIR

With state-of-the-art diagnostic equipment, repair tools and replacement parts, your radio fleet components are protected in the event of an unexpected failure and are back in operation as soon as possible. When serviced, all device components are returned to you with original factory specifications and updated with the latest firmware. Plus, our service centers are certified to comply with ISO 9001, ensuring the highest quality repairs.

BATCH PROGRAMMING WITH DATABASE HOSTING

Radio management allows you to manage and program multiple radios at a time. Database hosting enables radio codeplugs to be stored in a central database server allowing for remote configuration of data and remote programming of radios. Centralized database allows efficient organization of codeplugs and makes it a one-stop shop for edits or changes to specific devices. A single codeplug can be used as a template, which can then be shared across multiple radios. Template edits may then be easily applied to all affected radios. Changes to a template or to an individual radio's parameters can be scheduled as a programming job. With batch programming, programming jobs may be scheduled through an Over-The-Air-Programming (OTAP) connection, or USB or via Wi-Fi connection.Batch programming allows for simultaneous programming and software upgrading of up to 16 radios.

TIME SAVINGS



FULL SERVICE PROGRAMMING

With end-to-end device programming and provisioning services, we ensure all your two-way radio communication needs are met. These services include programming and provisioning, on-site set up and training, database hosting and access to a management portal that helps you maintain visibility into your devices. Device programming allows us to push specific information and features from the customer codeplug template to the radio itself. Provisioning is a way to add unique device identifiers to the devices, so the network is aware of the device and its feature set. This service is designed to reduce risks, optimize costs and provide end users a better experience with up-to-date and fully operational devices.

ACCIDENTAL DAMAGE

While our two-way radios are built for superior performance, accidents happen. If required, we offer extended accidental damage coverage and support that includes repair and restoration of the device back to original factory specifications and a quick turnaround of the device back to you.

PREVENTIVE MAINTENANCE

With preventive maintenance on your radio components we can help extend the life of your devices. From physical inspection and cleaning of radios to component alignment, we ensure that the device components remain in top condition with the latest firmware and updates. Our certified technicians conduct annual maintenance checks to help extend the useful life of your radios, reducing repair and replacement costs.

ON-SITE SETUP AND DEVICE MANAGEMENT TRAINING

With on-site setup and device management training, our technical teams can help your organization set-up provisioning and programming processes to make you more effective in managing your fleet of devices. We will train your staff on the radio management and radio commissioning in the management database, enabling your team to configure radio channels, set up talkgroups, provide site access and establish user IDs.

MYVIEW PORTAL

MyView is a web-based platform that gives you a transparent, single source view of fleet status and service delivery information to help make smarter, faster and more proactive decisions. With MyView portal you can view your radio data, service case history, firmware and software status information to ensure smooth running of your radios.

CHOOSE THE RIGHT LEVEL OF MANAGED AND SUPPORT SERVICES

With Essential services, we offer the tools and the expert support needed to efficiently manage your radio fleet. With Advanced services, batch programming enables you to manage and program your radio fleet efficiently, saving you precious time for efficient radio fleet management. With Premier services, you transfer your APX two-way radio operations, including full service programming, to our managed services professionals, allowing your team to focus on its primary responsibilities.

SERVICES AT - A - GLANCE



Note:

- Device management training and on-site setup can be offered as add-on services with Advanced package.
- Accidental damage can be offered as an add-on service with Essential and Advanced packages.

WE DELIVER ON RESULTS THAT MATTER



Reduced Management Complexity

Drive efficiency of maintaining your device fleet while addressing technology evolution, time and cost savings.



Optimized Fleet Performance

Superior first responder experience with ongoing software and security updates for fully operational radios.



Optimized Costs

Subscription service that helps with a more predictable opex model, help save staff hours for cost optimization.

MOTOROLA SOLUTIONS YOUR TRUSTED PARTNER

We believe that our set of highly knowledgeable people with industry certifications and mission-critical expertise, industry-leading ITIL process for centralized service delivery and governance, and state-of-the-art tools allow us to provide superior Device Services that address your needs today and in the future.



For more information, please visit **www.motorolasolutions.com/apx**

Resources 1, 2, 3 https://www.motorolasolutions.com/content/static/flipbook/mobile/index.html#p=1



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AirLink® RV55 Rugged LTE-A Pro Router

BENEFITS

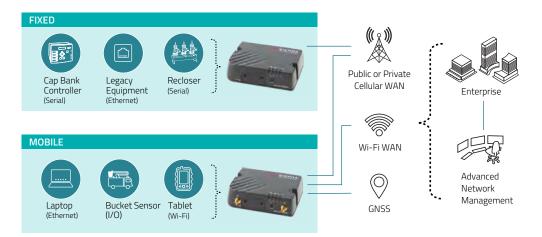
- Centrally managed, secure LTE broadband connectivity for both remote fixed or vehicle applications in harsh environments
- Ultra-Low Power consumption, ideal for solar or battery powered installations.
- Connect your field workers and devices with flexible dual Wi-Fi, and ethernet
- Reduces complexity in connecting legacy equipment with dual-serial, ethernet, and multi-protocol support
- Powerful remote cloud-based or on-premises management solutions
- Proven reliability and over 3 million AirLink routers and gateways deployed
- Peace of mind included 3-year warranty, direct 24/7 support, and device management access¹

Compact, Industrial Grade, Low Power LTE-Advanced Connectivity

The AirLink® RV55 is the industry's most rugged, compact, LTE-Advanced Pro router. Simple to install, and easy to manage, the RV55 router is designed for connecting critical remote assets, infrastructure, and vehicle fleets. The RV55 is especially well suited for applications in energy, utilities, smart city and public safety. The RV55 provides real-time remote connectivity for SCADA, distribution management systems and metering.

The RV55 high-performance LTE-Advanced Pro connectivity, Wi-Fi and GNSS and location-based applications and dual connectivity for vehicle fleets and mobile workforce. An LTE-M/NB-IoT variant is perfectly suited for hard to reach conditions.

The RV55 supports an extensive range of LTE bands worldwide, and its LTE-Advanced Pro capabilities deliver up to 600 Mbps downlink speeds. The RV55 also supports new unlicensed LTE bands (eg. CBRS) to support dedicated Private LTE service.



AirLink® RV55 Rugged LTE-A Pro Router

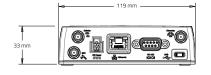
| | | RV55 | |
|-----------------------------------|---|---|--|
| | North America | Global | Global |
| | LTE | -A Pro | LTE-M/ NB-IoT |
| LTE CATEGORY | C | at 12 | Cat M1/NB1 |
| Peak D/L | (Up to 60 | 00 Mbps DL) | Cat-M1: 300kbps Cat-NB1: 27kbps |
| Peak U/L | (Up to 15 | 50 Mbps UL) | Cat-M1: 375kbps Cat-NB1: 65kbps |
| 4G LTE Frequency Bands | 2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 1800(B9), 700(B12), 700(B13), 700(B14), 850(B18), 850(B19), 800(B20), 850(B26), 700(B29), 2300(B30), 1500(B32), TDD B41, TDD B42, TDD B43, TDD B46, CBRS B48, 1700(B66) | 2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 1800(B9), 700(B12), 700(B13), 850(B18), 850(B19), 800(B20), 850(B26), 700(B28), 700(B29), 2300(B30), 1500(B32), TDD B41, TDD B42, TDD B43, TDD B46, CBRS B48, 1700(B66) | 2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 900(B8), 700(B12), 700(B13), 700(B17), 850 (B18), 850(B19), 800(B20), 850(B26), 700(B28) |
| 3G HSPA/HSPA+ Frequency Bands* | 2100(B1), 1900(B2), AWS(B4), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19) | 2100(B1), 1900(B2), AWS(B4), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19) | |
| 2G EDGE/GSM/GPRS Frequency Bands | | | 850, 900, 1800, 1900 |
| APPROVALS Regulatory | FCC, IC, PTCRB | GCF, CE, RCM | FCC, IC, PTCRB, GCF, CE, RCM |
| Carrier | Verizon, AT&T | Planned: Telstra | Planned: Verizon, AT&T |
| PART NUMBER | 1104303 | 1104332 | 1104333 |
| Regulatory | 1104302 (Wi-Fi) | 1104331 (Wi-Fi) | |

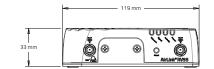
| | Specification | | Specification |
|---------------------|---|----------------------|--|
| HOST INTERFACES | 10/100/1000 Ethernet (RJ45) | SATELLITE NAVIGATION | 30 Channel GPS and GLONASS Receiver |
| | RS-232 serial port (DB-9) | (GNSS) | Acquisition Time: 1 s Hot Start |
| | USB 2.0 Micro-B Connector | | Accuracy: <2 m (50%), <5 m (90%), <0.2 m/s |
| | 3 SMA antenna (cellular, diversity, Active GNSS) | | Tracking Sensitivity: -160 dBm |
| | 2 RP-SMA antenna (1x1 Wi-Fi, Optional) | | Reports: NMEA 0183 V3.0, TAIP, RAP, XORA |
| | LTE-M/NB-IoT: 1 SMA (cellular) only, no GNSS or Wi-Fi | | Multiple Redundant Servers |
| | Active GPS antenna support | | Reliable Store and Forward |
| WI-FI (Optional) | Dual Band 2.4/5GHz Wi-Fi | SECURITY | Remote Authentication (LDAP, RADIUS, TACACS+, DMZ) |
| | Dual Radio, 802.11 b/g/n/ac (Wave2 Client Mode) | | Inbound and Outbound Port filtering |
| | Support for 10 clients, WPA2 Enterprise per radio | | Inbound and Outbound Trusted IP |
| | Output power 16dBm | | MAC Address Filtering |
| | Configurable as Dual Band Access Point (AP) or AP+Client | | PCI compatible |
| | Mode | | Secure Firmware Update |
| | Single SSID Support per radio | NETWORK | Secure mobile network & asset management application |
| | Captive Portal | MANAGEMENT | available in the cloud or licensed platform in the enterprise data center |
| INPUT/OUTPUT | Configurable I/O pin on power connector | | Fleet wide firmware upgrade delivery |
| | Digital Input ON Voltage: 2.7 to 36 VDC | | Router configuration and template management |
| | Configurable Pull-up for dry contact input | | Router staging over the air and local Ethernet connection |
| | Digital Open Collector Output > sinking 500 mA | | Over-the-air software and radio module firmware updates |
| | Analog Input: 0.5-36 VDC | | Device Configuration Templates |
| LAN (ETHERNET/USB) | DHCP Server | | Configurable monitoring and alerting |
| | IP Passthrough | | Remote provisioning and airtime activation (where |
| | VLAN | | applicable) |
| | Host Interface Watchdog | ROUTER MANAGEMENT | ALMS |
| | PPPoE | | Local web user interface |
| SERIAL | TCP/UDP PAD Mode | | AT Command Line Interface (Telnet/SSH/Serial) |
| | Modbus (ASCII, RTU, Variable) | | SMS Commands |
| | PPP | | SNMP |
| | DNP3 Interoperability | EVENTS ENGINE | Custom event triggers and reports |
| | Dual Serial option (with an accessory) | | Configurable interface, no programming |
| NETWORK AND ROUTING | Network Address Translation (NAT) | | Event Types: Digital Input, Network Parameters, Data Usage, |
| | Port Forwarding | | Timer, Power, Device Temperature and Voltage |
| | Policy Routing | | Report Types: RAP, SMS, Email, SNMP Trap, TCP (Binary, |
| | NEMO/DMNR | | XML, CSV) Event Actions: Drive Relay Output |
| | VRRP | | Event Actions. Drive Relay Output |
| | Reliable Static Route | | A/A |
| | Dynamic DNS | | |
| | Verizon PNTM | | SIERRA |
| | IPV6 Gateway | | WIRELESS |

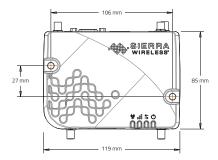
| VPN | IPsec, GRE, and OpenVPN Client | ENVIRONMENTAL | Operating Temperature: -40°C to +70°C / -40°F to +158°F |
|-------------|--|----------------|--|
| | Up to 5 concurrent tunnels | | Operating Temperature (Wi-Fi variant): -30°C to +70°C / -22°F to +158°F |
| | Split Tunnel | | Storage Temperature: -40°C to +85°C / -40°F to +185°F |
| | Dead Peer Detection (DPD) | | Humidity: 95% RH @ 60°C |
| | FIPS 140-2 compatible | | Military Spec MIL-STD-810G conformance to shock, |
| APPLICATION | ALEOS Application Framework (AAF) | | vibration, thermal shock, and humidity |
| FRAMEWORK | LUA Scripting Language | | IP64 rated ingress protection |
| POWER | Input Voltage: 7 to 36 VDC | INDUSTRY | Safety: IECEE Certification Bodies Scheme (CB Scheme), |
| | LTE Idle Power: 900mW (75 mA @ 12VDC) | CERTIFICATIONS | UL 60950 |
| | Standby Mode Power: 53 mW (4.4 mA @ 12 VDC) triggered | | Vehicle Usage: E-Mark (UN ECE Regulation 10.04), |
| | on low voltage, I/O or periodic timer | | ISO7637-2, SAE J1455 (Shock & Vibration) |
| | Low voltage disconnect to prevent battery drain | | Hazardous Environments: Class 1 Div 2 |
| | Built-in protection against voltage transients including 5 VDC | | Environmental: RoHS, REACH, WEEE |
| | engine cranking and +200 VDC load dump | SUPPORT AND | Includes 1st Year AirLink Complete: |
| | Ignition Sense with time delay shutdown | WARRANTY | AirLink Management Service (ALMS) |
| | Configurable features and ports to optimize power | | Direct 24/7 Technical Support |
| | consumption | | 3-year standard warranty; optional 2-year warranty extension |
| DIMENSIONS | 119 mm x 33 mm x 85 mm (102 mm including wi-fi connectors) | | 1-day Accelerated Hardware Replacement available through participating resellers |
| | 4.69 in x 1.34 in x 3.35 in (3.70 in including connectors) | ACCESSORIES | In the Box: DC Power Cable, and Quick Start Guide |
| | Weight: 320 g | | 2000579 AC Adapter, 12VDC |
| | | | 6000659 DIN Rail Mounting Brackets |
| | | | 6001110 Cellular Paddle Antenna |
| | | | 6001111 Wi-Fi 2.4/5GHz Paddle Antenna |
| | | | See website for more antenna options. |

*For carrier specific band support please refer to the hardware user guide.

DIMENSIONS







AirLink Networking Solution - Related Products

AIRLINK NETWORK MANAGEMENT SOLUTIONS

AIRLINK MANAGEMENT SERVICE (ALMS)



- Secure, Cloud-based network and asset management
- Remotely deploy, configure, monitor and manage AirLink devices
- Carrier-grade, high availability, secure, global infrastructure

AIRLINK MANAGER / MOBILITY MANAGER (AM/AMM)



- Deployable in the enterprise data center (on-premises) or in the cloud
- Advanced, end-to-end network and asset management for both fixed and mobile networks.
- Remote, real-time configuration, control and troubleshooting of AirLink devices

AIRLINK VPN APPLIANCE

AIRLINK CONNECTION MANAGER



- VPN appliance built from the ground up for Airlink routers & gateways
- Simplify deployment and management of your VPN solution, extending the enterprise to the network edge for fixed and mobile endpoints
- Carrier agnostic ACM doesn't require fixed and/or public IP
- Compatible with FIPS 140-2, and always-onVPN capability

About Sierra Wireless Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is an IoT pioneer, empowering businesses and industries to transform and thrive in the connected economy. Customers Start with Sierra because we offer a device-to-cloud solution, comprised of embedded and networking solutions seamlessly integrated with our IoT services. OEMs and enterprises worldwide rely on our expertise in delivering fully integrated solutions to reduce complexity, turn data into intelligence and get their connected products and services to market faster. Sierra Wireless has more than 1,400 employees globally and operates R&D centers in North America, Europe and Asia. For more information, visit www.sierrawireless.com.



For more information, visit www.sierrawireless.com.

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NCD 5000 DESKSET SYSTEM VOIP TECHNOLOGY FOR OUR CONVENTIONAL

AND TRUNKED COMMUNICATIONS





EXPAND COMMUNICATIONS WITH VoIP TECHNOLOGY

The MCD 5000 Deskset brings you VoIP technology for your conventional and trunked communications. Ideal for dispatch environments, back-up sites, alternate locations, special events and call monitoring, the MCD 5000 Deskset is a powerful and easy-to-deploy VoIP solution for your radio system. With IP technology, you have the flexibility to quickly install desksets where you need them using your IP network infrastructure. And you can easily expand communication capabilities throughout your organization for increased safety, awareness and coordination.

ADVANCE TECHNOLOGY TO POWER YOUR DISPATCH COMMUNICATIONS

Take full advantage of VoIP technology and enable communication across your network when and where you need it most. The MCD 5000 Deskset connects over your IP network to MCD 5000 Radio Gateway Units (RGUs), each of which supports up to four radios. The MCD 5000 Deskset emulates the buttons and display of the connected radio and performs all the functions of the radio control head. The inherent flexibility of this solution allows you to tailor configurations from a single deskset and a single radio to multiple desksets and multiple radios. Further increasing your capabilities, the MCD 5000 Deskset allows deskset users to dynamically switch between MCD 5000 RGUs, giving you access to additional radios for expanded communications. Each MCD 5000 Deskset can connect and monitor up to four radios (channels) at a time.

DESIGNED FOR THE WAY YOU AND YOUR TEAMS WORK

With maximum usability in mind, the MCD 5000 Deskset is ergonomically designed with a highly intuitive layout and an adjustable viewing angle for both occasional and constant everyday use. The large and easy-to-read color LCD screen gives at-a-glance access to all of the critical information you need, including messages, channel status, and names along with emergency and user IDs. You can further customize the programmable softkeys to meet the needs of your personnel.

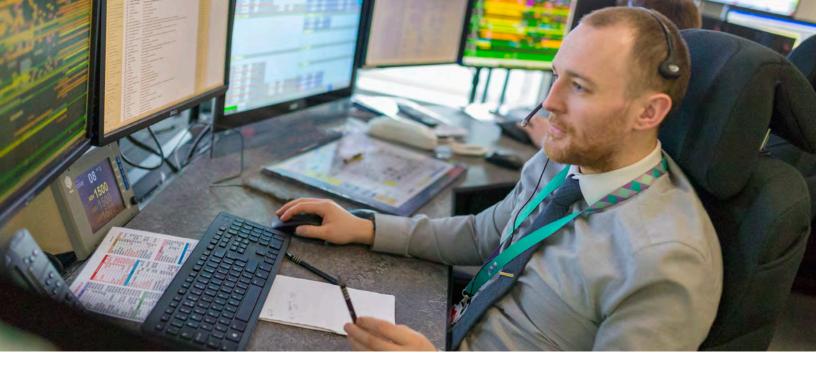
INCREASE THE SAFETY OF YOUR PERSONNEL

Emergencies can take many shapes and can happen anytime, anywhere, the MCD 5000 Deskset includes the orange emergency activation button familiar on so many radios from Motorola Solution. Your staff will have peace of mind knowing that in an emergency, help can be summoned immediately with the simple push of a button.

EMERGENCY NOTIFICATIONS

The MCD 5000 Deskset allows you to manage all of your inbound field unit emergency activations across many system types, including ASTRO® 25 systems. Additionally, the ASTRO 25 radio emergency function allows external alarms to be triggered to notify the MCD 5000 Deskset user of an emergency situation, improving response levels.





GIVE SUPERVISORS PRIORITY TRAFFIC

When a supervisor logs into any MCD 5000 Deskset, their communications take first priority over all other MCD 5000 Desksets, allowing their critical voice traffic to get through immediately.

FREE UP AIRTIME

The intercom facilitates conversation and information exchange between MCD 5000 Deskset users with no need to key a radio channel, preserving airtime and keeping conversations off the air.

SAVE TIME AND PROVIDE ADDITIONAL SUPPORT WITH ROBUST REPORTING TOOLS

Provide timely support and save travel time when you remotely access your system to configure and troubleshoot the MCD 5000 Deskset and RGU using the MCD 5000 Deskset System Configuration Tool application. Run reports and perform queries for information you need to make real-time decisions. Supervisor reporting tools allow monitoring of each MCD 5000 Deskset System devices (MCD 5000 Deskset/MCD 5000 RGU) to enhance training and operational efficiencies.

SECURITY BUILT IN

Secure your communications in locations that are not staffed continuously, have public access or access sensitive channels. Select the individual desksets which need this additional level of security and with the MCD 5000 Deskset's security time lock, you configure the duration of time the deskset remains active, after which an authorized user name and PIN are required to reactivate the device. For increased security, user profiles can establish which radio resources are allowed to be seen and accessed. An activity log on each MCD 5000 Deskset displays the last operations performed by the user as well as received transmissions. Flexible communication options allow the use of the handset, Push-To-Talk (PTT) switch and built-in condenser microphone, or headset, footswitch and desk microphone accessories.

ADAPTS TO YOUR EVOLVING NEEDS

Scalable from small operations to complex control centers and geographically dispersed operations, you can depend on the modular MCD 5000 Deskset system to handle your communications and grow with you as your operational needs evolve and change.

OPTIONAL OPERATIONS MANAGEMENT CENTER SERVER

The Operations Management Center (OMC) is an optional main management server for the MCD 5000 Deskset system, enabling system operation, maintenance, provisioning, and control for larger installations as well as for customers with information assurance (IA) needs. This central repository is where all system users, MCD 5000 Desksets and radio resources are registered and where system-wide information including alarms, logs and audits is stored. The OMC server runs on the Red Hat® LINUX® operating system.

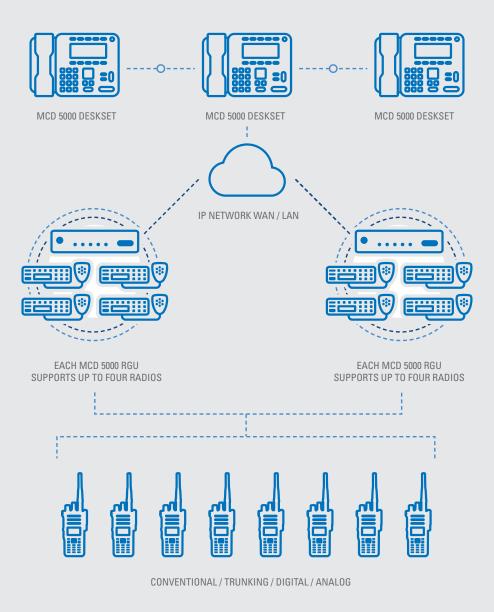
TWO-WAY RADIO SUPPORT

- XPB5550e
- APX All-Band Consolette-05 CH
- APX All-Band Consolette-E5 CH
- APX 7500 Multiband Consolette
- ASTRO CONSOLETTE (W9) •

- ASTRO Spectra Plus
- MTM5400
- MTM800E
- TRC Radios / Base-Stations / Adaptors
- 4-Wire E&M Radios
- ASTRO Spectra

MCD 5000 DESKSET SHOWING 3 OPERATOR POSITIONS CONTROLLING UP TO 8 RADIOS

The MCD 5000 allows multiple desksets to dynamically switch to different MCD 5000 RGUs, giving you access to additional radios for expanded communications. Each MCD 5000 Deskset can connect and monitor up to four radios (channels) at one time.



To learn more about how the MCD 5000 Deskset solution can help you implement a flexible VoIP communications on your network, contact your Motorola Solutions representative or visit www.motorolasolutions.com/dispatch



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, II 60661 U.S.A. motorolasolutions.com

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MCD 5000 DESKSET SYSTEM

POWERFUL AND FLEXIBLE VolP COMMUNICATIONS

Expand your communications with VoIP technology. Scalable from small operations to complex control centers and geographically dispersed operations, you can depend on the new modular MCD 5000 Deskset System with VoIP technology for your conventional and trunked communications. Whether used in dispatch environments, back-up sites, special events or call monitoring, you can easily expand communication capabilities throughout your organization using your IP network. This easy-todeploy solution enables communications across your network when and where you need it most, increasing safety, awareness and coordination.

MCD 5000 DESKSET

A flexible desktop console, the MCD 5000 Deskset provides digital control for a variety of Motorola two-way radios, and can connect directly to a radio or over an IP network using the MCD 5000 Radio Gateway Unit (RGU).

The MCD 5000 Deskset digital control link emulates the buttons and display of the connected radio and performs all the functions of the radio control head.

And with a large and easy-to-read color LCD screen, intuitive layout and an adjustable viewing angle, the MCD 5000 Deskset is ergonomically designed for both occasional and constant everyday use.



MCD 5000 RADIO GATEWAY UNIT

Connect the MCD 5000 Deskset to radios over your IP network using the MCD 5000 RGU. The MCD 5000 Deskset allows users to dynamically switch between MCD 5000 RGUs, giving access to additional radios across the network and expanding communications. Each MCD 5000 RGU can connect up to four radios and each MCD 5000 Deskset can connect and monitor up to four radios (channels) at a time.

DESKSET AUDIO ACCESSORIES

With flexible communication options, you can use the handset, Push-To-Talk (PTT) switch and built-in condenser microphone, or add the optional headset, footswitch and desk microphone accessories for user convenience.

IP NETWORK

Take full advantage of VoIP technology and deploy the MCD 5000 Deskset when and where you need it on your IP network.

CONFIGURATION AND REPORTING TOOLS

Our configuration tool offers the convenience of remote use from anywhere on the network or local use with an Ethernet connection. And you can provide timely support and save travel time when you remotely access your system to configure the MCD 5000 Deskset and MCD 5000 RGU. You can also remotely run reports and perform queries for information you need to make real-time decisions. Additional supervisor reporting tools allow monitoring of each MCD 5000 Deskset System devices (MCD 5000 Deskset/ MCD 5000 RGU) to enhance training and operational efficiencies.



The MCD 5000 RGU connects radios to the MCD 5000 Deskset over your IP network

OPERATIONS MANAGEMENT CENTER (OMC) SERVER

An optional main management server for the MCD 5000 Deskset System, the Operations Management Center (OMC) enables system operation, maintenance, provisioning, and control for larger installations, as well as for customers with information assurance (IA) needs.

This central repository stores registration for all system users, MCD 5000 Desksets and radio resources, along with system-wide information including alarms, logs and audits. The OMC server runs on the Red Hat[®] LINUX[®] operating system.

Providing user-level interface to the OMC, the Administrator Control Panel Client (ACP) PC allows local and remote administration access for system management activities. The ACP Client PC runs on Microsoft Windows® 7 (64bit) OR Windows 10 Professional (64 Bit) OR Windows IoT Enterprise LTSB 2015/2016 (64 Bit) Operating System. The ACP is required for systems with an OMC.

TWO-WAY RADIO DEVICES

The MCD 5000 Deskset lets you control a wide variety of digital radios:

APX All-Band Consolette-05 CH APX All-Band Consolette-E5 CH APX™ 7500 Multiband Consolette

ASTRO[®] Consolette (W9): ASTRO[®] Spectra[™] ASTRO[®] Spectra Plus[™]

Dimetra TETRA Mobile Radios: MTM5400 MTM800E

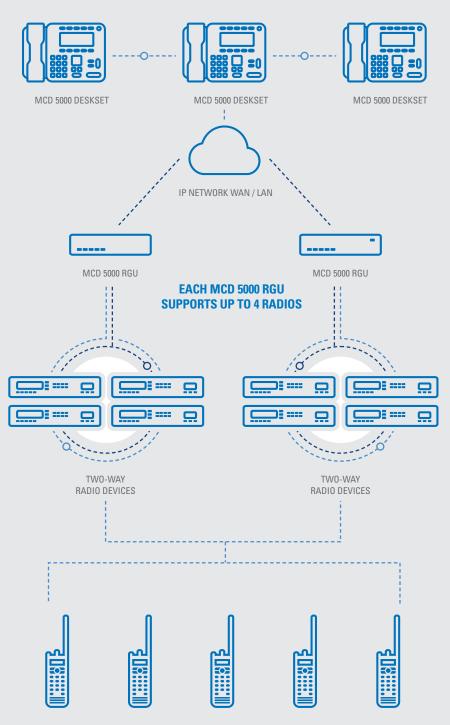
TRC Radios/Base-Stations/Adaptors

4-Wire E&M Radios

EXAMPLE MCD 5000 DESKSET SYSTEM SHOWING 3 OPERATOR POSITIONS CONTROLLING UP TO 8 RADIOS

The MCD 5000 Deskset system allows multiple desksets to dynamically switch to different MCD 5000 RGUs, giving you access to additional radios for expanded communications. Each MCD 5000 Deskset can connect and monitor up to four radios (channels) at one time.

EACH MCD 5000 CAN SELECT UP TO 4 OF THE 8 RADIOS BELOW



SPECIFICATIONS

| MCD 5000 DESKSET | | MCD 5000 RADIO GATEWAY UNIT | | | | | |
|---|---|---|---|--|--|--|--|
| Dimensions | Height: 1.65 in (42 mm) Width: 8.58 in (218 mm) Depth: 10.39 in (264 mm) Weight: 5.73 lbs (2.6 kg) | Dimensions | Height: 1.65 in (42 mm) Width: 8.58 in (218 mm) Depth: 10.39 in (264 mm) Weight: 5.73 lbs (2.6 kg) | | | | |
| Environmental | Operating temperature: -30 °C to 60 °C (-22 °F to 140 °F) Storage temperature: -40 °C to 80 °C (-40 °F to 176 °F) Humidity: 5% to 95% @ +50° C (122° F), Non-Condensing | Environmental | Operating temperature: -30 °C to 60 °C (-22 °F to 140 °F) Storage temperature: -40 °C to 80 °C (-40 °F to 176 °F) Humidity: 5% to 95% @ +50° C (122° F), Non-Condensing | | | | |
| Power | Input power:+10.8 to +14VDC, (+12 V nominal) Dispassion: 9W Max. 37VDC to 57VDC. Powered via POE-PD; meeting 802.3af Standard for Powered Desksets class 0 | Power | Input power:+10.8 to +14VDC, (+12 V nominal) Dispassion: 9W Max. 37VDC to 57VDC. Powered via POE-PD; meeting 802.3af Standard for Powered Desksets class 0 | | | | |
| Audio | The end-to-end distortion is no more than 3% THD The generated audio is no more than -50 dBm of Hum and Noise below the rate audio output The crosstalk between any audio signals is no more than -65 dBm at 0 dBm transmit audio power | Audio | The end-to-end distortion is no more than 3% THD The generated audio is no more than -50 dBm of Hum and Noise below the rate audio output The crosstalk between any audio signals is no more than -65 dBm at 0 dBm transmit audio power | | | | |
| Supported Radio Protocols | RS-232 TTL, SB9600, IP, 4W-E&M, TRC | Supported Radio Protocols | RS-232 TTL, SB9600, IP, 4W-E&M, TRC | | | | |
| Regulatory-EMC | FCC part 15 class A | Regulatory-EMC | FCC part 15 class A | | | | |
| Safety | EN60950-1 | Safety | EN60950-1 | | | | |
| Green Product | RoHS, WEEE Mark | Green Product | RoHS, WEEE Mark | | | | |
| Certified Standard Compliance Requirements | CE Mark, FCC part 15 A Mark, UL Mark (for P.S. only) US federal government Environmentally Preferable Specification (EPP) Program | Certified Standard Compliance Requirements | CE Mark, FCC part 15 A Mark, UL Mark (for P.S. only) US federal government Environmentally Preferable Specification (EPP) Program | | | | |
| Non-certified Standard Compliance Requirements | CSA, UL, MOTOROLA W18 certification, CMM | Non-certified Standard Compliance Requirements | CSA, UL, MOTOROLA W18 certification, CMM | | | | |
| Vocoders | G.711 and G.729 | Vocoders | G.711 and G.729 | | | | |

| MCD 5000 DESKSET SYSTEM CAPACITIES | |
|---|--|
| Maximum Number of Radio Resources | 512 |
| Maximum Number of MCD 5000 Radio Gateway Units (RGUs) | 128 |
| Maximum Number of Radios per MCD 5000 Radio Gateway Unit (RGU) | 4 |
| Maximum Number of MCD 5000 Desksets | 100 |
| Maximum Number of Groups per MCD 5000 Deskset | 20 |
| Maximum Number of Users per MCD 5000 Deskset | 8 (Non-OMC System) 1,000 (OMC System) |

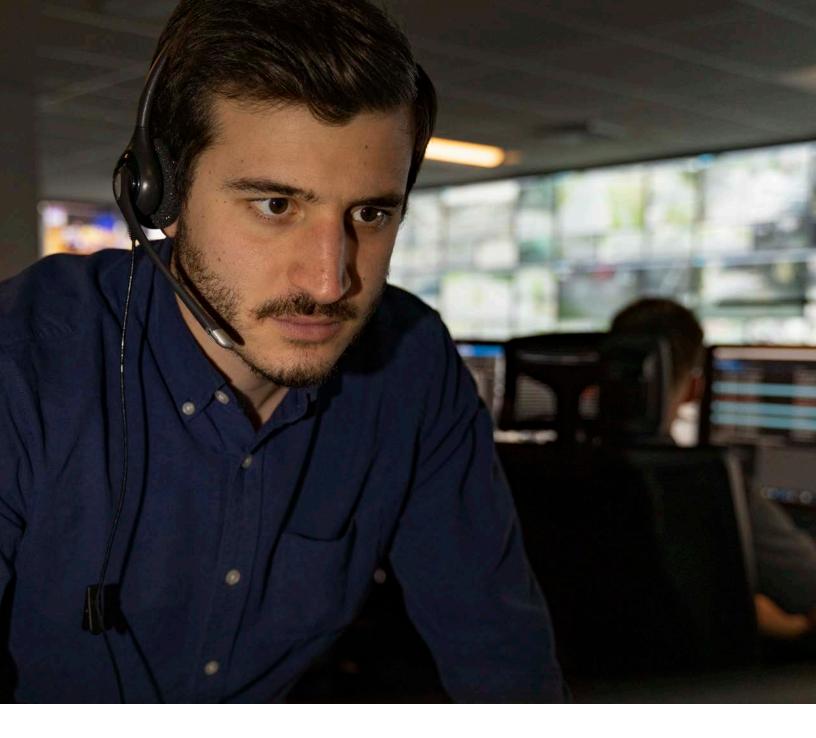
To learn more about how the MCD 5000 Deskset System can help you implement powerful and flexible VoIP communications on your network, contact your Motorola representative or visit **www.motorolasolutions.com/dispatch**



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IMPROVE REAL-TIME SITUATIONAL INTELLIGENCE

COMMANDCENTRAL AWARE REAL-TIME INTELLIGENCE OPERATIONS



REAL-TIME SITUATIONAL INTELLIGENCE

CommandCentral Aware provides a complete operating picture, integrating real-time intelligence in the command center to remotely assist officers in the field. Simplify your operational view by consolidating your resources into one single pane of glass. Support officer safety by monitoring real-time alerts and accessing nearby video feeds when incidents occur.



LOCATION & MAPPING SIMPLIFY INFORMATION. MAKE BETTER DECISIONS.



MONITOR ACTIVITY FROM ANYWHERE

View all of your location-based data together, in real-time, on a single map display. This common operating picture can be accessed anywhere, from any internetconnected device.

ACT WITH THE NECESSARY CONTEXT

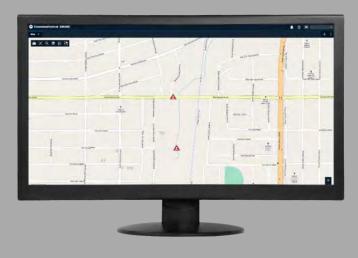
Communicate a more informed response to a critical incident and enhance responder safety for those in the field by accessing a common operating picture through CommandCentral Aware — directly from your agency's map.



COLLABORATE WITHOUT DISTRACTION

Control specific viewing permissions based on groups of users to ensure a focused response from every team member during a critical event. Filter your view to only the datasets you need in the moment.

ACCESS DATA FROM CAD THROUGH COMMANDCENTRAL AWARE, ENHANCING THE COMMON OPERATING PICTURE.



FEATURES:

Unified Mapping: Utilizing a common Esri base map, geographically locate real-time events such as CAD incidents, device and unit location, alert and alarms, tactical decision data and camera locations. Incorporate other Esri-based map layers from your agency for enriched spatial orientation such as property boundaries, landmarks, buildings and asset locations. In addition, streaming and stationary weather layers are provided to enhance visual situational awareness. Organize your devices through group management to further refine ownership to adhere to logical inter agency and intra agency configurations. Manage the content seen by these agencies via groups of users provisioned and authorized to see specific mapping layers.

Desktop & Mobile Accessibility:

Work seamlessly from desktop to mobile. CommandCentral Aware is accessible via web browser on any computer as well as from any tablet or smartphone with an internet connection.

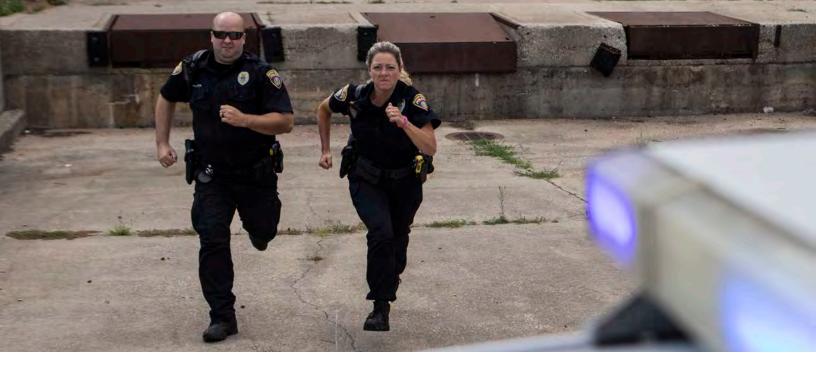
Data Layer Filtering: Show or hide data layers, such as CAD incidents, by selecting or deselecting them in the data layer panel, ensuring your teams are seeing only what they need in that moment. Data layers can also be prioritized to ensure certain information takes visual precedence on the map.

Critical Information Display: Associate critical information with each event or resource on the map display.

Team-Based Permissions: Restrict what personnel see based on what their team needs to be most effective, while still ensuring that consistent and relevant information is being referenced from a shared common operating picture.

"View-Only" Information Access: Ensure workflows are unhindered by access to information in the simplest form possible.





LOCATION, MAPPING & ALERTS KEEP OFFICERS AND CITIZENS SAFE ON THE STREETS





RESPOND QUICKLY TO ESCALATING INCIDENTS

Responder alerts automatically show the command center what's happening to officers during an incident, whether that be an emergency, vest pierce, man down alerts and more. Alerts showing the location and type of incident on the consolidated map help personnel enhance situational awareness and improve officer and citizen safety.





FEATURES:

CommandCentral Aware automatically informs the command center that a situation has escalated without further action by the officer. Alerts indicating weapon fired, vest pierce or other emergency display the location and type of incident in real time on the consolidated map, helping dispatchers provide immediate support and improving officer and citizen safety.

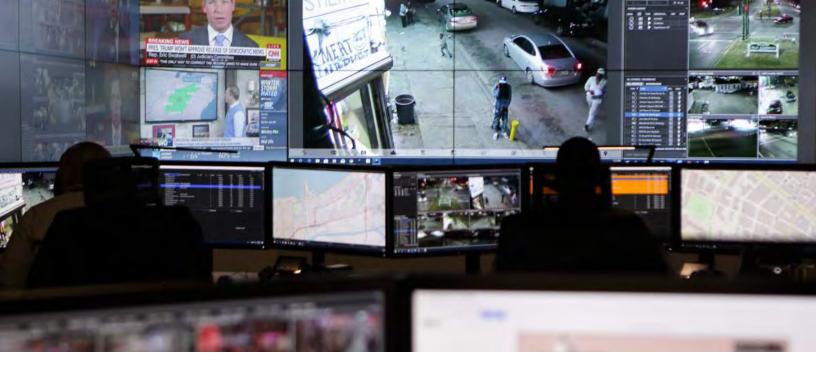
Weapon Fired Alert (Handguns Only): This sensor can be retrofitted to certain handguns to send an alert that the weapon has been discharged. The sensor is located in the grip of the handgun.

Vehicle Impact Alert: When a responder vehicle, equipped with APX radios, experiences significant impact, an emergency alert will notify the command center of the situation and location.

Man Down Alert: A man down emergency alert generated by all enabled APX portable radios appears as a notification when the radio is at an angle and there is no movement based on user parameters.

Vest Pierce Alert: When a piercing event is detected, such as a shot or stab, an emergency alert is transmitted to notify command staff that a responder may be incapacitated and needs help. Insert sensors into existing body armor.

Emergency Button Press: When the emergency button is pressed on an APX radio, an alert will appear on the consolidated map that an emergency needs to be addressed.



VIDEO INTELLIGENCE HAVE EYES ON A SCENE WITHIN SECONDS





ENHANCE RESPONSE THROUGH REAL-TIME VIDEO

Shape your response more appropriately with CommandCentral Aware's real-time video access and notifications, which allow PSAP fusion operators or intelligence analysts to access nearby video feeds from within the consolidated map for greater visibility into an escalating situation. CommandCentral Aware brings users' attention to key video content, enhancing officer safety and boosting productivity.



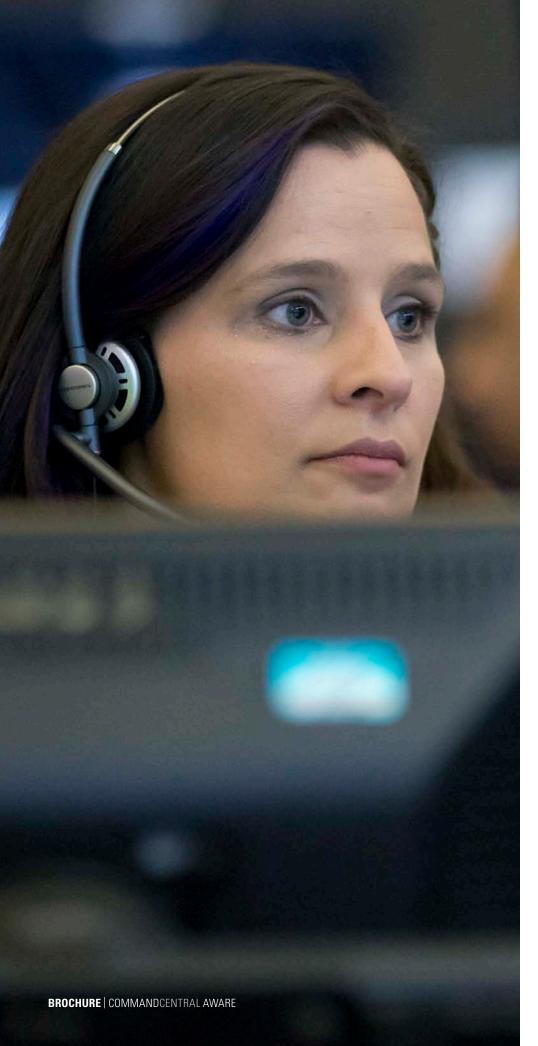
STREAMLINE AGENCY WORKFLOWS

Improve productivity and easily manage evidentiary files by only storing and tagging incident-related video through CommandCentral Vault.



SIMPLIFY VIDEO MANAGEMENT

Simplify your operational view by bringing all disparate video solutions into one single, consolidated screen.



FEATURES:

Geospatial Event Mapping: Include camera locations, CAD incidents, personnel status and location, open-source data alerts, sensors and more on a single map that can be customized with any of your agency's other data layers.

Activity Monitor: View a real-time feed of alerts and incident occurrences as they populate on the map. Each event can be viewed in detail with information drawn from additional data sources pertaining to that specific event.

Workflow Configuration: Automate workflows by associating related data together from disparate systems to get a comprehensive picture of the incident or threat occurrence. This can include video sources, related open-source data alerts, a CAD incident, sensor alarms and more.

Real-Time Video Streaming: Virtually patrol your community and quickly get eyes on the scene of an event by viewing cameras simultaneously from fixed or mobile video feeds via any video management system. Easily reference the video source, date, time and location as well as customize camera groups for quicker access to particular locations.

Security Compliance: Rely on applications secured and compliant to CJIS security standards.

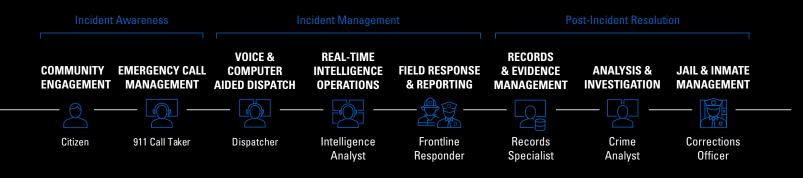
Improve situational awareness by accessing video feeds to nearby alerts on CommandCentral Aware's consolidated map. Save seconds in your response and improve responder safety.

NEXT-GENERATION EVOLUTION WITH A DEDICATED TECHNOLOGY LEADER

We build software for mission-critical environments where every second matters. CommandCentral Aware and other applications in our CommandCentral software suite unify data and streamline workflows from call to case closure in order to put your information to better use, improve safety for critical personnel and restore your focus on the communities you serve. Backed by a trusted, 90-year industry expert with proven public safety leadership, our suite is transforming the public safety experience with a focus on evolution, not revolution, in order to help you digitally transform your operation.

COMMANDCENTRAL

The industry's most integrated public safety software suite from call to case closure.



For more information about CommandCentral Aware, visit www.motorolasolutions.com/aware



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APX RADIO ACCESSORIES

RESILIENCE WITHOUT COMPROMISE



POR

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MISSION CRITICAL PERFORMANCE FOCUSED ON DURABILITY AND FLEXIBILITY TO KEEP YOU SAFER

Motorola P25 APX radios deliver what first responders need to increase their safety and improve their situational awareness. Get the most out of your APX radio by extending its power and reliability with resilient APX accessories. They are the only accessories tested and certified for use with APX radios. Our accessories endure rigorous testing to last longer and help keep you safer. There's simply no substitute for Motorola APX accessories.





APX 8000

APX 7000

MOTOROLA'S EXCLUSIVE ENERGY AND AUDIO FEATURES ARE MADE FOR MISSION CRITICAL MOMENTS

IMPRES[™]2 ENERGY: YOUR RADIO IS YOUR LIFELINE. IF YOUR **BATTERY DIES. IT JEOPARDIZES EVERYTHING.**

That's why we introduced the IMPRES 2 for APX series radios. It's a next-generation energy system that's safer and smarter, while keeping you powered for even longer. With IMPRES 2 chargers, you can charge batteries up to 40% faster. Customize your charging to extend the life of batteries in storage. And manage power more intelligently with enhanced diagnostics, so you get the most from each battery.

IMPRES AUDIO: I HEAR YOU, EVEN WHEN YOU CAN'T HEAR YOURSELF.

Motorola's exclusive IMPRES audio accessories help suppress ambient noise, amplify loudness and improve voice intelligibility. IMPRES audio can virtually block out all background noise in any extreme environment with windporting and noise-cancelling technology. Ensure your voice is heard loud and clear no matter what direction you speak with an advanced microphone system. IMPRES audio will make sure you are heard in any demanding environment.





APX BOODXE El Berl Balle

APX 8000XE

APX 3000



APX 7000XE



APX 6000



APX 1000



APX 900



SRX 2200

DESIGNED FOR THE MISSION. ENGINEERED FOR THE EXTREME.

APX XE500 Remote Speaker Microphones (RSMs) are designed by firefighters for firefighters. Ergonomic, rugged and reliable, the XE500 RSM is built with the user's extreme environment in mind. Designed to withstand heat exposure of 500°F for up to five minutes and an IP68 submersibility rating, it will perform in extreme conditions. Your lifeline needs to be as tough as your radio. That's why the XE500 RSM is the perfect companion to your APX radio.

APX PORTABLE RADIO ACCESSORIES

ACCESSORY

XE500 REMOTE SPEAKER MICROPHONES (RSM)

DESCRIPTION

Multi-Mic XE500 High Impact Green, Channel Knob, = PMMN4106 IP68 UI 75 x 98 x 33 Noise APX 8000 Xtreme Temperature Cable Suppression **APX 8000XE** Multi-Mic XE500 Black Housing, Channel Knob, PMMN4106_BLK 75 x 98 x 33 IP68 111 Noise **Xtreme Temperature Cable** Suppression APX 7000 Programmable Button **APX 7000XE** Multi-Mic XE500 High Impact Green, No Channel = PMMN4107 Noise IP68 75 x 98 x 33 UI Knob, Xtreme Temperature Cable Suppression APX 6000 Multi-Mic XE500 Black Housing, No Channel Knob, **APX 6000XE** PMMN4107 BLK IP68 111 75 x 98 x 33 Noise **Xtreme Temperature Cable** Suppression

FEATURES

+ HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

ENHANCED CONTROLS DESIGNED FOR THE MISSION

COMPATIBILITY

PORTABLE RADIOS

The XE500 RSM is an evolution of the XE RSM platform and like its predecessor was designed with the user's extreme environment in mind. From the exaggerated knobs and controls, that are easy to operate with bulky gloves to the asymmetrical shape that makes it easier to find the controls without looking.



PART NUMBER

ADAPTIVE AUDIO ENGINE HEAR AND BE HEARD

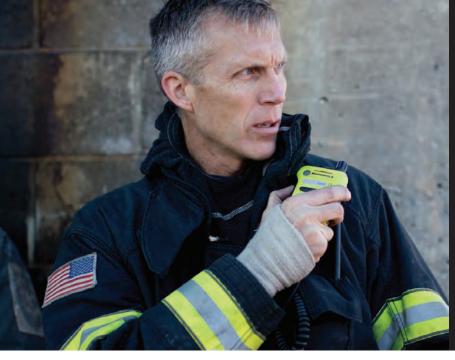
XE500 RSM utilizes 5 integrated microphones and an Adaptive Audio Engine. Similar to the radio, it automatically changes the level of noise suppression, microphone gain, Windporting and speaker equalization to produce clear and loud audio in any environment.



FLEXIBLE WEARING WEAR IT ANYWAY YOU WANT

The strategic placement of the microphones and enhanced water drainage provide users with the flexibility to wear it straight, upside down and even sideways while still delivering loud and clear audio.





Bluetooth LED

Volume Toggle

XE500 RSM KEY FEATURES

- Available With and Without a Channel Knob
- High Visibility Strobe Light
- Adaptive Audio Engine
- IP68, 2 Meters, 4 Hours Submersion
- Heat Resistant Housing and Cable
- Orange Illuminated Emergency Button
- Transmit / Receive LED





EXTREME PERFORMANCE RUGGED. ROBUST. RELIABLE

Whether you are in the heat of a fire or exposed to extreme weather conditions the XE500 will keep you connected to your team. This RSM was designed to withstand heat exposure of 500°F (260°C) for up to 5 minutes. Built as a system, the APX 8000XE and the XE500 have been tested to meet IP68 (2 meter, 4 hours) submersibility specifications.

APX[™] XP REMOTE SPEAKER MICROPHONE

DUAL MIC NOISE SUPPRESSION This Remote Speaker Microphone with its thin design and optimized ergonomics is ideal for police officers and other public safety users. With Dual Mic Noise Suppression, you will be heard despite traffic noise and sirens in the background. When it gets dirty, just wash the microphone head to ensure your communication is not compromised.



WIRELESS REMOTE SPEAKER MICROPHONE

Secure pairing is easier than ever with voice prompts as there is no need to navigate menus or enter codes.

Removing the cord from the RSM makes getting ready for work quicker than ever. No more worrying about getting tangled with the seatbelt or other equipment.

This wireless RSM features large but recessed push-to-talk and emergency buttons to ensure that users have easy access to controls but don't have to worry about accidental activation. Additional features include volume control, an audio jack, 360 degree rotatable clip, as well as a task light that allows you to read in the dark.

APX PORTABLE RADIO ACCESSORIES

| COMPATIBILITY | ACCESSORY | | | FEATURE | S | | | | | | | | | VERTICAL |
|---|---|---|------------------|-----------------|------------------------------------|-------------------|----------------------------------|---------|--------------------|------------------------|-------------|----------------|--------------------------------|--------------|
| REMOTE SPEAKE clearer communication | R MICROPHONES (R ons even in loud environn | SM) Our robust portfolio includes Remote Spe nents. | eaker Microphone | s and secor | ndary audio access | sories engin | eered to give you | | All remo | te speaker micr | ophones are | built with top | quality materia | ls including |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES AUDIO | MICROPHONE NOISE SUPPRESSION | VOLUME CONTROL | ORANGE PROGRAMMABLE BUTTON | DISPLAY | CHANNEL CONTROL | PROGRAMMABLE BUTTON | AUDIO JACK | IP RATING | SIZE (WITHOUT CLIP) (MM) | POLICE |
| APX 8000 APX 80000XE | Ţ | IMPRES XP RSM with Dual Mic Noise Suppression, Volume Control, 1-Programmable Button and Orange Button. Rugged, Submersible (IP68) | NMN6271 | • | Dual-Mic Noise Suppression | Step | ٢ | | | 1 | | lP68 Rugged | 95 x 69 x 27 | • |
| APX 000002E APX 7000 APX 7000XE APX 6000 APX 6000XE | Ţ | IMPRES XP RSM with Dual Mic Noise Suppression, 3.5mm threaded jack, Volume Control, 1-Programmable Button and Orange Button (IP55) | NMN6274 | • | Dual-Mic Noise Suppression | Step | ٢ | | | 1 | 3.5 mm | IP55 | 95 x 69 x 27 | • |
| APX 4000 APX 3000 SRX 2200 | | XP RSM Replacement Cable with Audio Jack | PMKN4222 | | | | | | | | | | | |
| | | XP RSM Replacement Cable without Audio Jack | NKN6611 | | | | | | | | | | | |
| APX 8000 APX8000XE APX 7000 APX 7000XE | (| Wireless RSM with Battery, Clip (RLN6544) and Dual Unit Charger (PMLN7120) | RLN6554 | | Windporting | Step | ٢ | | | 1 | 3.5 mm | IP55 | 88 x 63 x 26 | • |
| APX 6000 APX 6000XE APX 4000 APX 3000 SRX 2200 | | Wireless RSM with Battery and Clip. No Charger. | RLN6544 | | Windporting | Step | ð | | | 1 | 3.5 mm | IP55 | 8 x 63 x 26 | • |

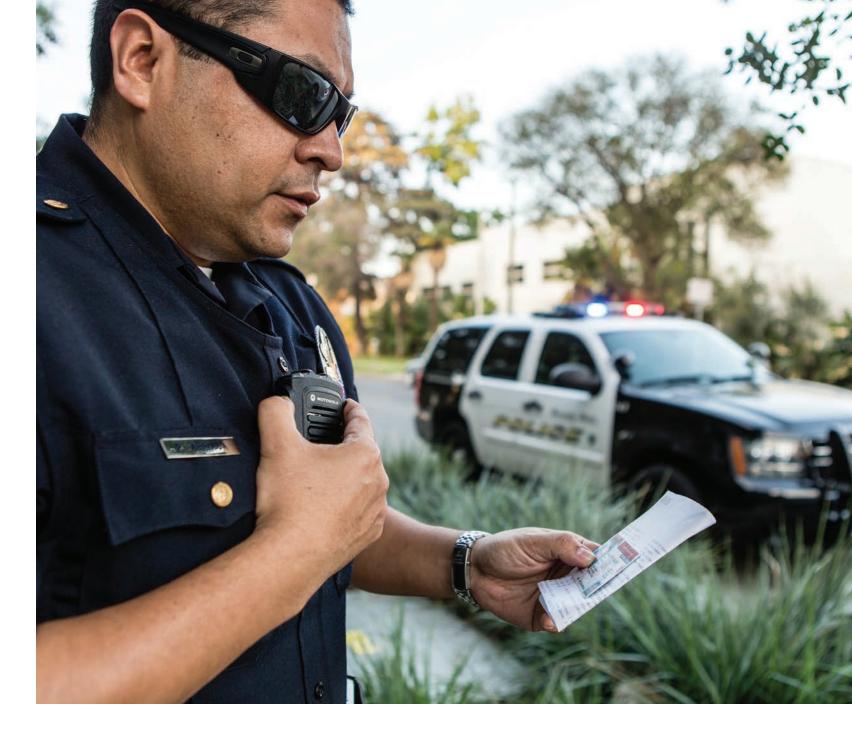


AL MARKETS: Recommendations based on typical use case for each of verticals listed. ling durable **Kevlar®** cables that survive tough working conditions. FEDERAL UTILITIES AND OIL, GAS AND AGENCIES PUBLIC WORKS MINING TRANSPORTATION FIRE EMS MILITARY

| COMPATIBILITY | ACCESSORY | | | FEATURI | ES | | | | | | | | | | VERTIC | AL MARKE | 'S: Recommen | idations base | d on typical use cas | e for each of ver | rticals listed. |
|---|---|---|-------------------|------------|------------------------------------|-------------------|----------------------------------|-----------|--------------------|------------------------|---------------|---|---------------------------------|--------------------------------|-----------------|--------------------|---------------------|---------------------|-------------------------------|------------------------|-----------------|
| REMOTE SPEAKE | R MICROPHONES (R ons even in loud environn | SM) Our robust portfolio includes Remote Speaker Microphones and secor nents. | ndary audio acces | ssories en | gineered to give y | ou | All remo | te speake | er micropł | nones are bu | ilt with | top qualit | ty materia | ls including d | urable K | (evlar ® c | ables that | survive | tough workin | g condition | IS. |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES | MICROPHONE NOISE SUPPRESSION | VOLUME CONTROL | ORANGE PROGRAMMABLE BUTTON | DISPLAY | CHANNEL CONTROL | PROGRAMMABLE BUTTON | AUDIO JACK | IP RATING | HAZLOC- CAPABLE [†] | SIZE (WITHOUT CLIP) (MM) | POLICE | FIRE / EMS | MILITARY | FEDERAL AGENCIES | UTILITIES AND PUBLIC WORKS | OIL, GAS AND MINING | TRANSPORTATION |
| APX 8000 APX 8000XE APX 7000 | ٩ | IMPRES Display RSM with Audio Jack, Channel Selector, Volume Control, 2-Programmable Buttons and Orange Button. Windporting, Rugged, Submersible (IP68) | HMN4104 | • | Windporting | Step | ę | • | ġ | 2 | 8-Pin | IP68 Rugged | FM UL | 68 x 106 x 31 | • | • | • | • | • | • | • |
| APX 7000XE APX 6000 APX 6000XE APX 4000 | 11 | IMPRES Display RSM with Audio Jack, Volume Control, 2-Programmable Buttons and Orange Button. Windporting, Rugged, Submersible (IP68) | HMN4103 | • | Windporting | Step | Ţ | • | | 2 | 8-Pin | ♦ IP68Rugged | FM UL | 68 x 106 x 31 | • | • | • | • | • | • | • |
| APX 3000 APX 900 SRX 2200 | 1 | IMPRES RSM with Audio Jack, Volume Control, 2-Programmable Buttons and Orange Button. Windporting, Rugged, Submersible (IP68) | HMN4101 | • | Windporting | Step | Ŷ | | | 2 | 8-Pin | IP68 Rugged | FM UL | 68 x 106 x 31 | • | • | ٠ | ٠ | • | • | • |
| APX 8000 APX 8000XE APX 7000 APX 7000XE | 911 | IMPRES RSM Windporting, Rugged (IP68) | PMMN4083 | • | Windporting | | | | | | | lP68 Rugged | FM | 60 x 78 x 28 | • | • | • | • | • | • | • |
| APX 6000 APX 6000XE APX 4000 APX 3000 SRX 2200 | 9 / | IMPRES RSM with 3.5mm Threaded and NON-Threaded Audio Jack and Orange Button. Noise-Cancelling (IP54) NOT INTENDED FOR FIRE MARKETS | PMMN4084 | • | Noise- Cancelling | | | | | | 3.5 mm | IP54 | FM | 60 x 78 x 28 | • | | • | • | • | • | • |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 7000XE APX 1000 APX 900 | 1 | IMPRES Windporting RSM with Volume Toggle Switch, Orange Button, 3.5mm NON-Threaded Jack (IP68) | PMMN4099 | • | Windporting | High/Low | P | | | 1 | 3.5 mm | IP68 | UL | 60 x 78 x 28 | • | • | • | • | • | • | • |
| | | Windporting RSM, Coyote Brown, (IP57) | NNTN8235 | | Windporting | | | | | | | ♦ IP57 | FM UL | 55 x 60 x 27 | | | • | | | | |
| SRX 2200 | C | Windporting RSM with NON-Threaded 3.5mm Audio Jack, Coyote Brown, (IP54) | NNTN8236 | | Windporting | | | | | | 3.5 mm | IP54 | FM UL | 55 x 60 x 27 | | | ٠ | | | | |
| APX 7000 APX 7000XE APX 6000 | 717 | IMPRES RSM with NON-Threaded Audio Jack, Orange Button, Noise- Cancelling (IP54) NOT INTENDED FOR FIRE MARKETS | PMMN4062 | • | Noise- Cancelling | | | | | | 3.5 mm | IP54 | FM UL | 60 x 78 x 28 | • | | ٠ | • | • | • | • |
| APX 6000XE APX 4000 APX 3000 | | IMPRES RSM with Volume Toggle Switch, Orange Button and 1-Programmable Button, Windporting (IP57) | PMMN4065 | • | Windporting | High/Low | Ŷ | | | 1 | | ♦ IP57 | FM UL | 60 x 78 x 28 | • | | ٠ | ٠ | • | • | • |
| APX 1000 APX 900 SRX 2200 | 911 | IMPRES RSM with NON-Threaded Audio Jack, Windporting (IP55) | PMMN4069 | • | Windporting | | | | | | 3.5 mm | IP55 | FM UL | 60 x 78 x 28 | • | | • | • | • | • | • |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

| MPATIBILITY ACCESSO | | |
|--------------------------------------|--|----------------------|
| MOTE SPEAKER MICROP | PHONE ACCESSORIES AND REPLACEMENT PARTS | |
| RTABLE RADIOS DESCRIPTI | | PART NUMBER |
| RSM REPLACEMENT PA | IRTS | |
| APX 8000 | Xtreme Temperature Replacement Cable for XE RSM (NNTN8203 and NNTN8575 series) | 30009402002 |
| APX 8000XE | Xtreme Temperature Replacement Cable for XE500 RSM | 30009402007 |
| APX 7000 APX 7000XE | XE RSM Clip Assembly with brass insert designed to work with the Boston Leather Straps (AY000223A01, AY000229A01) requires Clip Button NNTN8749 | NNTN8271 |
| APX 6000 | XE500 RSM Clip Assembly with brass insert designed to work with the Boston Leather Straps (AY000223A01, AY000229A01) requires Clip Button NNTN8749 | PMLN7633 PMLN7633 |
| APX 6000XE | Clip Button | NNTN8749 |
| IRELESS RSM ACCESSOR | RIES AND REPLACEMENT PARTS | |
| | Dual Unit Charger, rapid rate charger, 120V (US Plug) | PMLN7120 |
| APX 8000 APX 8000XE APX 7000 | Vehicular Charger | PMLN6716 |
| APX 7000XE APX 6000 APX 6000XE | Wireless RSM with Battery and Clip, No Charger | RLN6544 |
| APX 4000 APX 3000 SRX 2200 | Wireless RSM Battery, 1750 mA Li-Ion | PMNN4461 |
| | | |



APX WIRELESS RSM

Every feature on this RSM has been purposefully designed. Large, yet recessed push-to-talk and emergency buttons are easy to access and designed to prevent accidental activation. Additional features include a volume control, audio jack and task light that allows you to read items such as a driver's license in the dark. This RSM features all of the advanced capabilities of Mission Critical Wireless including enhanced security, fast push-to-talk and quick touch pairing with voice prompts that confirm pairing actions. This RSM also features a removable and rechargeable battery. Charge the RSM on the go with the vehicular charger or in the office with the dual-unit desk charger.

| IPATIBILITY | ACCESSORY | | | FEATURES | | |
|-------------|-------------------|---|-------------------------------|------------------------|-------------------|----------------|
| NOTE SPEAK | ER MICROPHONE ACC | CESSORIES AND REPLACEMENT PAR | TS | | | |
| ABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | CONNECTOR TYPE | HAZLOC-CAPABLE |
| | 9 | Receive-Only Earpiece with Comfort Eartube, FM and UL approved | RLN4941 | Clear Rubber Eartip | 3.5mm | FM UL |
| APX 8000 | | Receive-Only Earpiece with Comfort Eartube. Extra loud audio output | RLN4941_XL | Clear Rubber Eartip | 3.5mm | |
| APX 8000XE | | Receive-Only Earpiece with Comfort Eartube | PMLN7560 | Clear Rubber Eartip | 3.5mm | |
| APX 7000 | V | Receive-Only Earbud, FM and UL approved | AARLN4885 | Foam Earbud | 3.5mm | FM UL |
| APX 7000XE | Ø. | Receive-Only Earpiece, Loud Version. Required BDN6783 or NMN6274 | RLN5313_XL | Clear Rubber Eartip | 3.5mm | |
| APX 6000 | 3 | EP7 Sonic Defender, use with RLN4941 | RLN6511 RLN6512 RLN6513 | | | |
| APX 6000XE | ÛZ | Adjustable D-Style Earpiece | PMLN7396 | Over-the-Ear | 3.5mm | |
| APX 4000 | | D-Shell Rx-Only Earpiece | PMLN4620 | Over-the-Ear | 3.5mm | FM UL |
| Ar X 4000 | 69 | Receive-Only Flexible Earpiece | WADN4190 | Over-the-Ear | 3.5mm | FM UL |
| APX 3000 | A | Receive and Transmit Boomless Temple Transducer (for HMN4104, HMN4103 and HMN4101 only) | RMN5116 | Over-the- Head | 8-Pin | FM UL |
| APX 1000 | 55 | Receive-Only Extra Loud Earpiece with Translucent Tube and Rubber Eartip (for HMN4104, HMN4103 and HMN4101 only) | RLN6424_XL | Clear Rubber Eartip | 8-Pin | FM UL |
| APX 900 | | Replacement Foam Plugs for RLN5887 and RLN6242. Noise reduction = 25dB.* (Pack of 50 pairs) | 5080384F72 | Foam Eartip | | |
| SRX 2200 | (T | Replacement Rubber Eartip for RLN6424 (Pack of 25) | 5080370E97 | | | |
| | | D Ring Swivel Clip (12 pack). Compatible with all XP RSMs and wireless RSMs | NNTN4990 | | | |

* For High Noise Kit solution - combine RLN6242 Low Noise Kit with translucent tube and clear rubber eartip and RLN6281 Replacement Foam Plugs for RLN6242. Noise reduction = 25dB.

+ HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



WHICH MICROPHONES ARE 50% LOUDER AND CLEARER?

APX Remote Speaker Microphones and Public Safety Microphones deliver audio that is clearer, easier to understand, and up to 50% louder. That's because they have the same speaker found in APX portable radios for the best-in-class accessory audio available.

| COMPATIBILITY | ACCESSORY | | | FEATURES |
|------------------------|-----------------------------|---|-------------|--------------------|
| REMOTE SPEAK | ER MICROPHONE ACCESSORIES / | AND REPLACEMENT PART | S | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | CONNECTOR TYPE |
| APX 8000XE | S | Interface Cable, 5-Pin Nexus Female Receptacle for HMN4104, HMN4103 and HMN4101 | PMKN4107 | 5-Pin Nexus Female |
| APX 7000 APX 7000XE | | Interface Cable 4-Pin Nexus Male Plug for HMN4104, HMN4103 and HMN4101 | PMKN4112 | 4-Pin Nexus Male |
| APX 6000 | | Interface Cable, 12-Pin | | |
| APX 6000XE | | Hirose Male Connector for HMN4104, HMN4103 and HMN4101 | PMKN4113 | 12-Pin Hirose Male |
| APX 4000 | | | | |
| APX 3000 | \Box | Replacement Coil Cord Kit for | 3075336B17 | |
| APX 1000 | | HMN4104, 4103 and 4101 | | |
| APX 900 SRX 2200 | | Replacement Coil Cord Kit for PMMN4062, PMMN4065, PMMN4069, PMMN4083 and PMMN4099. | RLN6075 | |



WHICH MICROPHONE IS RIGHT FOR ME?

WINDPORTING AUDIO: I HEAR YOU, NOT THE WIND

If you work outdoors in demanding weather, a Windporting microphone is right for you. It reduces the effects of wind and other sounds whenever you use the microphone. It also prevents water from clogging the microphone for clear transmissions.

Talking in a crowd or near heavy equipment? A Noise-Cancelling microphone reduces background sounds. To optimize noise reduction, hold the microphone in the correct position directly in front of your mouth, facing the source of the noise.

COMPATIBILITY ACCESSORY

PUBLIC SAFETY MICROPHONES Our robust portfolio includes Public Safety Microphones and secondary audio accessories engineered to give you clearer communications even in loud environments.

| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES AUDIO | MICROPHONE NOISE SUPPRESSION | VOLUME CONTROL | ORANGE PROGRAMMABLE BUTTON | PROGRAMMABLE BUTTON | AUDIO JACK | IP RATING | HAZLOC- CAPABLE [†] | SIZE (MM) | POLICE |
|------------------------|-------------|--|-------------------|-----------------|------------------------------------|-------------------|----------------------------------|------------------------|------------|--------------|---------------------------------|--------------|--------|
| APX 7000 700/800 MH | | Public Safety Microphone (30 inch cable) PSM Antenna required. VHF not supported. | PMMN4061 | • | Windporting | High/Low | | 1 | 3.5 mm | IP55 | FM UL | 60 x 78 x 28 | • |
| APX 6000 700/800 MH | | Public Safety Microphone (24 inch cable) PSM Antenna required. VHF not supported. Recommended for use with UHF radios. | PMMN4060 | • | Windporting | High/Low | | 1 | 3.5 mm | IP55 | FM UL | 60 x 78 x 28 | • |
| only APX 3000 | only | Public Safety Microphone (24 inch cable) PSM Antenna required. VHF not supported. Recommended for use with 7/800MHz radios. | PMMN4060_ SP01 | • | Windporting | High/Low | | 1 | 3.5 mm | IP55 | FM UL | 60 x 78 x 28 | • |
| only | | Public Safety Microphone (18 inch cable) PSM Antenna required. VHF not supported. | PMMN4059 | • | Windporting | High/Low | | 1 | 3.5 mm | IP55 | FM UL | 60 x 78 x 28 | • |

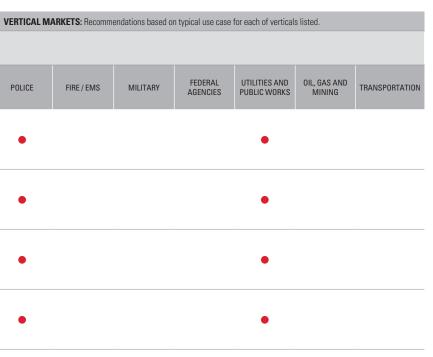
FEATURES

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

NOISE-CANCELLING AUDIO: I HEAR YOU, NOT THE NOISE

DUAL MIC NOISE SUPPRESSION: I HEAR YOU, EVEN WHEN YOU **CAN'T HEAR YOURSELF**

Virtually blocks out all background noise in demanding and extreme noise environments so you can always communicate clearly.

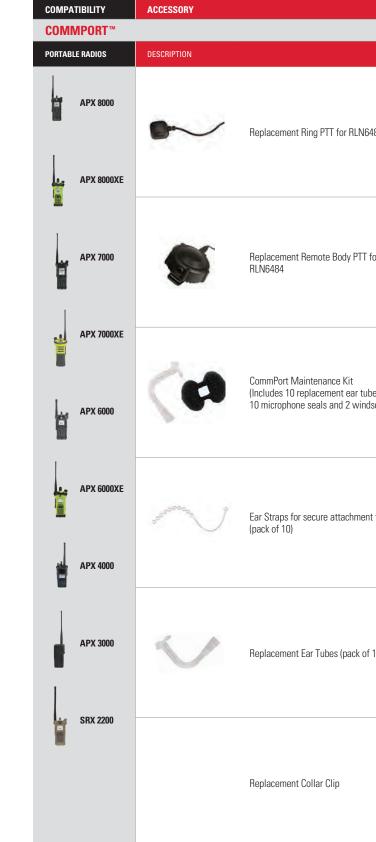




COMPATIBILITY ACCESSORY **COMMPORT[™]** Integrated microphone/receiver lets you talk discreetly and hear clearly and still be aware of everything around you, from traffic noise to other responders. PORTABLE RADIOS DESCRIPTION PART NUMBER APX 8000 Replacement Palm PTT for RLN6480 NKN6510 APX 8000XE APX 7000 APX 7000XE APX 6000 Replacement Cable for RLN6481 NKN6508 APX 6000XE APX 4000 APX 3000 SRX 2200 Replacement Snap-On-Side PTT for RLN6482 NKN6525

HOW DOES COMMPORT[™] WORK?

The miniature microphone and receiver connect to your APX radio and fasten securely and comfortably to your ear. Unlike bone conduction or boom mic technology, the CommPort System picks up sound waves as they cross the face so you hear and can be heard virtually in any environment.



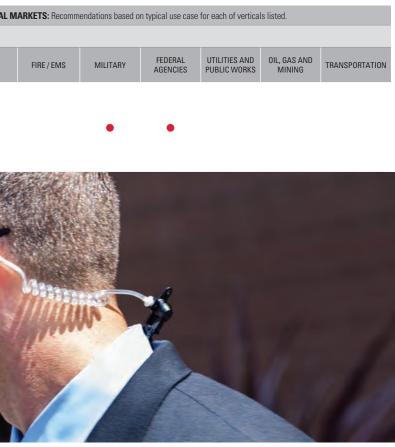
| | PART NUMBER |
|--------------------|-------------|
| 6483 | NKN6512 |
| f for | NNTN4188 |
| ubes, dscreens) | NTN8821 |
| nt to ear | NTN8988 |
| of 10) | RLN5037 |
| | 4285838B01 |



| COMPATIBILITY | ACCESSORY | | FEATURES | | | | | | VERTICAL N |
|--|---|-------------|--|--|---|----------------------------------|------------------------|---|------------|
| EAR MICROPHO | NE SYSTEM | | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | PART NUMBER | IMPRES | EARPIECE TYPE | MICROPHONE | PTT | PROGRAMMABLE BUTTON | HAZLOC- CAPABLE [†] | POLICE |
| | IMPRES Ear Microphone with Bone Conduction and programmable button, black | PMLN5653 | • | In-Ear Mic | In-Ear Mic | Large, Ring-guarded, Recessed | Ø | FM APPROVED FOR APX 7000, APX 7000XE, APX 6000, APX 6000XE | • |
| APX 7000 APX 7000XE APX 6000 APX 6000XE | Earguard with Adjustable Loop | 0180300E25 | AUD | / DOES IMPR IO PERFORM | | The. | | | |
| APX 4000 APX 3000 APX 1000 APX 900 | Earholder, Black, Small | 0180358B32 | quality reduci voice i or nor | r of Motorola acce ng ambient noise ntelligibility. If you nally, but not dired bhone, IMPRES Au | ssories by and improving speak quietly ctly into a | | | | R. |
| SRX 2200 | Earholder, Clear, Large | 0180358B37 | chang adjust listene | es in your voice an s the transmitted v r won't have to ad I down. | nd automatically rolume so your | 1th | | | |

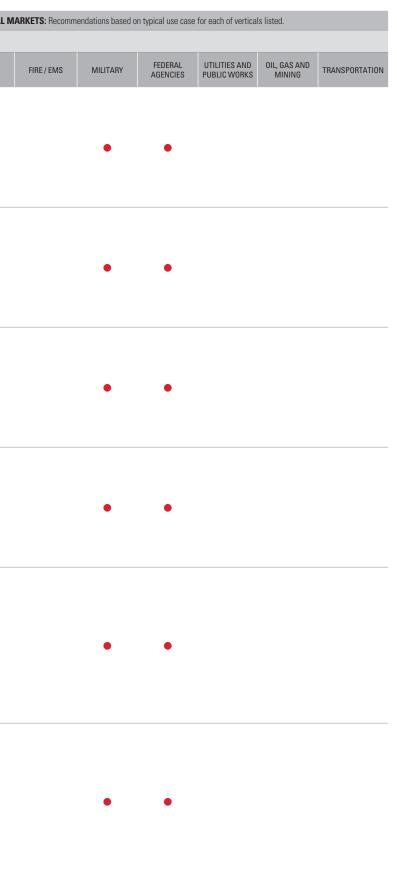
| COMPATIBILITY | ACCESSORY | e discreetly with a variety of surveillance kit | ts that feature a strea | FEATURES treamlined design and rugged Two-wire kits have one wire for receiving transmissions and one wire | | | | | VERTICAL MARKETS: Recommendations based on typical use case for each of verticals listed. | | | | | | | |
|--|----------------------------|---|-------------------------|--|-----------------|---|---|----------------------------|---|-----------------|---------------|----------|---------------------|-------------------------------|------------------------|--------------|
| cables that withstan | nd tough conditions. A qui | ck-disconnect, durable and comfortable trar | nslucent tube enables | easy sharing t | between shifts. | | Three-wire kits fea | ature separate wires for r | eceiving transmissions, p | ush-to-talk and | d microphone. | | tuik. | | | |
| PORTABLE RADIOS | DESCRIPTION PART NUMBER | | | IMPRES | EARPIECE TYPE | MICROPHONE | Р∏ | PROGRAMMABLE BUTTON | HAZLOC- CAPABLE [†] | POLICE | FIRE / EMS | MILITARY | FEDERAL AGENCIES | UTILITIES AND PUBLIC WORKS | OIL, GAS AND MINING | TRANSPORTATI |
| APX 8000 | | 1-Wire Receive-only Earpiece, Black | PMLN6125 | • | Ear Hanger | | | | FM UL | • | | • | • | | | |
| APX 7000 APX 7000XE APX 6000 | 10 | 1-Wire Receive-only Earpiece, Beige | PMLN6126 | • | Ear Hanger | | | | FM UL | • | | • | • | | | |
| APX 6000XE APX 4000 APX 3000 APX 1000 | | IMPRES 2-Wire Surveillance Kit, Programmable Button, Black | PMLN6127 | • | Ear Hanger | Ť | T | 1 | FM UL | • | | • | • | | | |
| APX 1000 SRX 2200 | | IMPRES 2-Wire Surveillance Kit, Programmable Button, Beige | PMLN6128 | • | Ear Hanger | Mic and PTT Combined on a Single Wire | Mic and PTT Combined on a Single Wire | | FM UL | • | | • | • | | | |

1 HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | | VERTICAL N |
|--|---|---|-------------|----------|---------------------|---|---------------------|------------------------|--|------------|
| SURVEILLANCE KI | TS DESCRIPTION | | PART NUMBER | IMPRES | EARPIECE TYPE | MICROPHONE | PTT | PROGRAMMABLE BUTTON | HAZLOC-CAPABLE [†] | POLICE |
| APX 8000 APX 7000 APX 7000XE APX 6000 APX 6000XE APX 4000 | \bigcirc | IMPRES 2-Wire Surveillance Kit with Translucent Tube, Programmable Button, Black | PMLN6129 | • | Clear Rubber Eartip | Ť | Ť | .* | FM UL | • |
| APX 3000 APX 1000 APX 900 SRX 2200 | APX 3000 APX 1000 APX 900 SRX 2200 | IMPRES 2-Wire Surveillance Kit with Translucent Tube, Programmable Button, Beige | PMLN6130 | • | Clear Rubber Eartip | Mic and PTT Combined on a Single Wire | ined on Combined on | | FM UL | • |
| APX 7000 | | IMPRES 3-Wire Surveillance Kit with Translucent Tube, Programmable Button, Black | PMLN6123 | • | Clear Rubber Eartip | BGG | 199 × | | FM UL | • |
| APX 6000 | | IMPRES 3-Wire Surveillance Kit with Translucent Tube, Programmable Button, Beige | PMLN6124 | • | Clear Rubber Eartip | Separate Wire | Separate Wire | A | FM UL | • |
| APX 4000 | 9Ò | 1-Wire Receive-Only Surveillance Kit with Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6726 | | Ear Hanger | | | | FM approved with APX6000/6000XE APX7000/7000XE UL | • |
| APX 1000 | 05 | 1-Wire Receive-Only Surveillance Kit with Extra-Loud Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6727 | | Ear Hanger | | | | FM approved with APX6000/6000XE APX7000/7000XE UL | • |
| SRX 2200 | | | | | | | | | | |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



| PATIBILITY | ACCESSORY | | | | | | | VERTICAL | MARKETS: Recom | mendations based | on typical use ca | ase for each of vertica |
|------------------------|-------------|---|-------------|---------------------------|---|---|--|----------|----------------|------------------|---------------------|-------------------------------|
| ABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT | HAZLOC-CAPABLE [†] | POLICE | FIRE / EMS | MILITARY | FEDERAL AGENCIES | UTILITIES AND PUBLIC WORKS |
| APX 8000 | | 1-Wire Receive-Only Surveillance Kit with Translucent Tube, Black, 3.5mm Threaded. Requires BDN6783. | RLN5313 | Clear Rubber Eartip | | | UL | • | | • | • | |
| APX 8000XE | | 1-Wire Receive-Only Surveillance Kit with Translucent Tube, Black, Loud version, 3.5mm Threaded. Requires BDN6783 or NMN6274. | RLN5313_XL | Clear Rubber Eartip | | | | • | | • | • | |
| APX 7000 APX 7000XE | 9 | 2-Wire Surveillance Kit with Translucent Tube, Black, 3.5mm Threaded. Requires BDN6783. | RLN5312 | Clear Rubber Eartip | Mic and PTT Combined on a Single Wire | Mic and PTT Combined on a Single Wire | | • | | • | • | |
| APX 6000 | | 2-Wire Surveillance Kit with Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6729 | Ear Hanger | Mic and PTT Combined on a Single Wire | Mic and PTT Combined on a Single Wire | UL FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| APX 6000XE | 6 | 2-Wire Surveillance Kit with Extra-Loud Earpiece, Beige, 3.5mm Threaded. Requires BDN6783. | BDN6669 | Ear Hanger | Mic and PTT Combined on a Single Wire | Mic and PTT Combined on a Single Wire | FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| APX 4000 | | 2-Wire Surveillance Kit with Extra-Loud Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6731 | Ear Hanger | Mic and PTT Combined on a Single Wire | Mic and PTT Combined on a Single Wire | UL FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| APX 3000 | | 3-Wire Surveillance Kit with Earpiece, Beige, 3.5mm Threaded. Requires BDN6783. | BDN6668 | Ear Hanger | Separate Wire | Separate Wire | UL FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| APX 1000 APX 900 | | 3-Wire Surveillance Kit with Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6730 | Ear Hanger | Separate Wire | Separate Wire | UL FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| SRX 2200 | Cor | 3-Wire Surveillance Kit with Extra-Loud Earpiece, Beige, 3.5mm Threaded. Requires BDN6783. | BDN6670 | Ear Hanger | Separate Wire | Separate Wire | FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |
| | | 3-Wire Surveillance Kit with Extra-Loud Earpiece, Black, 3.5mm Threaded. Requires BDN6783. | BDN6732 | Ear Hanger | Separate Wire | Separate Wire | UL FM approved with APX6000/6000XE APX7000/7000XE | • | | • | • | |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

| 2 | lc. | listed. |
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| | | |

OIL, GAS AND MINING TRANSPORTATION



| | IBILITY | | ND REPLACEMENT PARTS | | FEATURES | |
|---|------------|-------------|---|-------------|---------------------|--|
| | E RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | COMPATIBLE SURVEILLANCE KITS |
| | | 2 | Completely Discreet Earpiece Kit with Neckloop, Beige, Includes GMLN5261, RLN4920 and RNN4005 | PMLN7696 | | |
| ; | APX 8000XE | D | Phonak Nano Ear Receiver, Beige (Neckloop must be ordered separately) | GMLN5261 | | |
| 1 | APX 7000 | D | Phonak Nano Ear Receiver, Brown (Neckloop must be ordered separately) | GMLN5262 | | |
| | | | Replacement Earwax Guards. 5 per pack. Compatible with PMLN7696 | RLN4919 | | |
| | APX 7000XE | 5 | Optional Retention Hooks, Pack of 10 | NNTN8457 | | |
| | APX 6000 | | Phonak Inductive Neckloop Included in the PMLN7696 | RLN4920 | | |
| ŧ | APX 6000XE | | 1.4 Volt Battery – Pack of 6 | RNN4005 | | |
| | | | Low Noise Kit with Quick Disconnect Translucent Tube and Clear Rubber Eartip | RLN6242 | Clear Rubber Eartip | PMLN6123, PMLN6124, PMLN6129, PMLN6130 |
| 1 | APX 4000 | A D | Replacement Standard Clear Rubber Eartip, Pack of 50 | RLN6282 | Clear Rubber Eartip | PMLN6123, PMLN6124, PMLN6125, PMLN6126, PMLN6127, PMLN6128, PMLN6129, PMLN6130 |
| | APX 3000 | | Replacement Foam Plugs for RLN5887 and RLN6242. Noise reduction = 25dB.* Pack of 50 pairs. | 5080384F72 | Foam Eartip | PMLN6123, PMLN6124, PMLN6129, PMLN6130 |
| | APX 1000 | | Low Noise Kit with 1 Clear Rubber Eartip | RLN5886 | Clear Rubber Eartip | RLN5882, RLN5883, PMLN5111, PMLN5112, |
| | | | High Noise Kit* with 2 Foam Earplugs | RLN5887 | Foam Eartip | PMLN6125, PMLN6126 |
| | APX 900 | 1 | Clear EP7-Small Hearing Protectors [Sonic Defenders] Ultra Earplugs Noise reduction = 28dB | RLN6511 | Comply™ Foam Eartip | RLN5882, RLN5883, |
| | SRX 2200 | | Clear EP7-Medium Hearing Protectors [Sonic Defenders] Ultra Earplugs Noise reduction = 28dB | RLN6512 | Comply™ Foam Eartip | PMLN5111, PMLN5112, PMLN6123, PMLN6124, PMLN6125, PMLN6126, PMLN6127, PMLN6128, |
| | | C | Clear EP7-Large Hearing Protectors [Sonic Defenders] Ultra Earplugs Noise reduction = 28dB | RLN6513 | Comply™ Foam Eartip | PMLN6129, PMLN6130 |





| COMPATIBILITY | ACCESSORY | | | FEATURES |
|---|------------------|--|-------------|---|
| SURVEILLANCE KI | T ACCESSORIES AN | D REPLACEMENT PARTS | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE |
| | N | Small Clear Comfortable Earpiece, Right Ear | RLN4760 | Clear comfortable earpiece |
| APX 8000 APX 8000XE | Ð | Medium Clear Comfortable Earpiece, Right Ear | RLN4761 | Clear comfortable earpiece |
| APX 7000 APX 7000XE APX 6000 APX 6000XE | Ð | Large Clear Comfortable Earpiece, Right Ear | RLN4762 | Clear comfortable earpiece |
| APX 0000AE APX 4000 APX 3000 APX 1000 | | Small Clear Comfortable Earpiece, Left Ear | RLN4763 | Clear comfortable earpiece |
| APX 900 SRX 2200 | S. | Medium Clear Comfortable Earpiece, Left Ear | RLN4764 | Clear comfortable earpiece |
| | C | Large Clear Comfortable Earpiece, Left Ear | RLN4765 | Clear comfortable earpiece |
| SURVEILLANCE KI | T AUDIO ADAPTERS | | | |
| APX 7000 APX 7000XE APX 6000XE APX 6000XE | | 3.5mm Threaded Audio Adapter | BDN6783† | UL Approved: BDN6667, BDN6668, BDN6669, BDN6728, BDN6729, BDN6730, BDN6731, BDN6670 Other: BDN6664, BDN6665, BDN66666, BDN6726, BDN6727, BDN6732 |
| APX 4000 APX 3000 APX 1000 APX 900 SRX 2200 | | 6 Pin Hirose Keyload and Audio Adapter, FM/IS rated | NNTN7869 | ZMN6031, ZMN6032, ZMN6038, ZMN6039 |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



XBT HEAVY-DUTY WIRELESS HEADSET IN USE

It's the middle of a shift and with machinery running at full speed, your workplace is a noisy place to be. You need to communicate on your radio while still being aware of everything around you. XBT heavy-duty headsets connect wirelessly to your radio, suppressing noise for clearer communications. With patented SENS[™] situational awareness technology, these headsets ensure you'll hear critical communications from co-workers in the field with you.

APX PORTABLE RADIO ACCESSORIES

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | | | | VERTICAL N |
|--|-------------|--|-------------|----------|---------------------|-----------------|---------------------------------------|------------|---------------------------------------|-----------------------------|-------------|------------|
| HEADSETS | | | | | | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES | HEADSET TYPE | SPEAKER | NOISE-CANCELLING / NOISE-REDUCTION | MICROPHONE | PTT | HAZLOC-CAPABLE [†] | WEIGHT | POLICE |
| | Ĩ | IMPRES Temple Transducer with Boom Microphone and In-line Push-To-Talk Replacement Rubber Temple Cover (1 Pair) 7580384M19 | PMLN5101 | • | Behind- the-Head | Bone Conduction | | Boom | In-line | FM UL | Lightweight | • |
| APX 8000 APX 8000XE | e s | Earset D-Shell | PMLN5096 | | Over- the-Ear | Single-Ear | | Boom | In-line | UL | Lightweight | |
| APX 7000 APX 7000XE APX 6000 | | Ultra Lite Headset | PMLN5102 | | Over- the-Head | Single-Ear | | Boom | In-line | UL | Lightweight | |
| APX 6000XE APX 4000 APX 3000 | Ω | Heavy-Duty Behind-the-Head Headset with Noise-Cancelling Boom Microphone, Noise Reduction = 24dB | PMLN6852 | | Behind- the-Head | Dual-Ear | • | Boom | On Ear Cup | | Heavy-Duty | |
| APX 3000 APX 1000 APX 900 | 34 | Heavy-Duty Behind-the-Head Headset with Noise-Cancelling Boom Microphone, Noise Reduction = 24dB | PMLN6853 | | Behind- the-Head | Dual-Ear | • | Boom | On Ear Cup | UL | Heavy-Duty | |
| SRX 2200 | | Heavy-Duty Over-the-Head Headset with Noise-Cancelling boom Microphone, Noise Reduction = 24dB | PMLN7466 | | Over- the-Head | Dual-Ear | • | Boom | On Ear Cup | | Heavy-Duty | |
| | | Heavy-Duty Over-the-Head Headset with Noise-Cancelling Boom Microphone, Noise Reduction = 24dB | PMLN7467 | | Over- the-Head | Dual-Ear | • | Boom | On Ear Cup | UL | Heavy-Duty | |
| APX 8000 APX 6000XE APX 8000XE APX 4000 APX 7000 APX 1000 APX 7000XE APX 900 APX 6000 SRX 2200 | CS | Lightweight Over-the-Head Headset Single Muff with in-Line Push-To-Talk & Boom Mic REX4648 - Replacement Foam Earpad and Microphone Cover Kit | RMN5058 | | Over- the-Head | Single-Ear | | Boom | In-line | FM UL | Lightweight | |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 6000 | | XBT Operations Critical Wireless Behind-the-Neck Headset | RLN6490 | | Behind-the- Neck | Dual-Ear | • | Boom | Radio, Headset or Wireless PTT Pod | | Heavy-Duty | |
| APX 6000XE APX 4000 APX 3000 APX 900 SRX 2200 | Q . | XBT Operations Critical Wireless Headband Style Headset | RLN6491 | | Over- the-Head | Dual-Ear | • | Boom | Radio, Headset or Wireless PTT Pod | | Heavy-Duty | |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



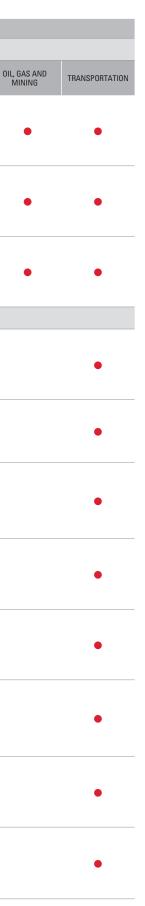
| COMPATIBILITY | ACCESSORY | | | | FEATURES | | | | | | |
|--------------------------------------|------------------------|---|-------------|--------------------|----------------------|-------------------------------|----------|---------------------------------|------------------------------------|---|---------------------------------|
| 3M PELTOR HEAV | Y DUTY HEADSETS | | | | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION AND ADAPTE | ER TYPE | PART NUMBER | PELTOR PART NUMBER | HEADSET TYPE | CONNECTOR TYPE | SPEAKER | NOISE REDUCTION RATING (NRR) | NOISE- CANCELLING MICROPHONE | PTT (APX) | HAZLOC- CAPABLE [†] |
| DIRECT CONNECT | | | | | | | | | | | |
| APX 8000 APX 8000XE APX 7000 | | MT Series Over-the-Head Headset, Direct Radio Connect | RMN5137 | MT7H79A-C5063-34 | Over-the-Head | Connects directly to Radio | Dual-Ear | 25dB | Boom | On Ear Cup | UL |
| APX 7000XE APX 6000 APX 6000XE | | MT Series Neckband Headset, Direct Radio Connect | RMN5138 | MT7H79B-C5063-34 | Neckband | Connects directly to Radio | Dual-Ear | 24dB | Boom | On Ear Cup | UL |
| APX 4000 APX 3000 SRX 2200 | | MT Series Hard Hat Attached Headset, Direct Radio Connect | RMN5139 | MT7H79P3E-C5063-34 | Hard Hat Attached | Connects directly to Radio | Dual-Ear | 21dB | Boom | On Ear Cup | UL |
| PTT ADAPTER CO | NFIGURATIONS | | | | | | | | | | |
| | | MT Series Over-the-Head Headset with Nexus Connector | PMLN6088 | MT7H79A-34 | Over-the-Head | Nexus | Dual-Ear | 25dB | Boom | Requires PTT Adapter PMLN6095 | |
| 4 DV 6000 | | MT Series Neckband Headset with Nexus Connector | RLN6477 | MT7H79B-34 | Neckband | Nexus | Dual-Ear | 24dB | Boom | Requires PTT Adapter PMLN6095 | |
| APX 8000 APX 8000XE APX 7000 | 6 | MT Series Hard Hat Attached with Nexus Connector | RMN4051 | MT7H79P3E-34 | Hard Hat Attached | Nexus | Dual-Ear | 21dB | Boom | Requires PTT Adapter PMLN6095 | |
| APX 7000XE APX 6000 APX 6000XE | | TacticalPro Series Over-the-Head Headset with Nexus Connector | RMN4052 | MT15H7A-34 | Over-the-Head | Nexus | Dual-Ear | 26dB | Boom | Requires PTT Adapter PMLN6095 | |
| APX 4000 APX 3000 SRX 2200 | 6.0 | TacticalPro Series Neckband Headset with Nexus Connector | RMN5135 | MT15H7B-07-34 | Neckband | Nexus | Dual-Ear | 25dB | Boom | Requires PTT Adapter PMLN6095 | |
| 011/ 22:00 | 0 | TacticalPro Series Hard Hat Attached with Nexus Connector | RMN4053 | MT15H7P3E-34 | Hard Hat Attached | Nexus | Dual-Ear | 22dB | Boom | Requires PTT Adapter PMLN6095 | |
| | Q | PTT Nexus Adapter. Requires one of the six headsets listed directly above | PMLN6095 | FL5063-34 | | | | | | | |
| RSM CONFIGURA | TIONS | | | | | | | | | | |
| APX 7000 APX 7000XE | 66 | HT Series Listen Only Over-the-Head Headset with 3.5mm NON Threaded Connector | RMN4055 | HTM79A-34 | Over-the-Head | 3.5mm NON threaded | Dual-Ear | 25dB | (Listen-Only) | APX radio | |
| APX 6000 APX 6000XE APX 4000 | | HT Series Listen Only Neckband Headset with 3.5mm NON Threaded Connector | RMN5132 | HTM79B-34 | Neckband | 3.5mm NON threaded | Dual-Ear | 24dB | (Listen-Only) | requires RSM: PMMN4062, PMMN4069 or | |
| APX 3000 SRX 2200 | ê., | HT Series Listen Only Hard Hat Attached Headset with 3.5mm NON Threaded Connector | RMN5133 | HTM79P3E-34 | Hard Hat Attached | 3.5mm NON threaded | Dual-Ear | 23dB | (Listen-Only) | PMMN4084 | |

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.



| COMPATIBILITY | ACCESSORY | | | | | | | | | | |
|--|-------------|---------------------------------------|----------------|-----------------------|--|--|--|--|--|--|--|
| HEADSET REPLACEMENT PARTS | | | | | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | PELTOR PART NUMBER | | | | | | | |
| APX 7000 APX 7000XE APX 6000 APX 6000XE | | Earmuff Hygiene Kit Black Earseals | RLN4923 | HY79 | | | | | | | |
| APX 4000 APX 3000 SRX 2200 | | Boom Microphone Wind Screen | RLN6543 | M40/1 | | | | | | | |

| MPATIBILITY ARING PROTE | ACCESSORY CTION | | | FEATURES | | | VERTICAL MA | RKETS: Recommend | ations based on typica | I use case for each of | verticals listed. |
|--|--------------------|--|-------------|-------------------------|-----------------|---------------------------------------|-------------|-------------------------|------------------------|------------------------|-------------------------------|
| RTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES HEADSET TYPE | SPEAKER | NOISE-CANCELLING / NOISE-REDUCTION | POLICE | FIRE / EMS | MILITARY | FEDERAL AGENCIES | UTILITIES AND PUBLIC WORKS |
| APX 8000 APX 8000XE APX 7000 APX 7000XE | | Clear EP7-Small Hearing Protectors [Sonic Defenders] Ultra Earplugs, noise reduction = 28dB | RLN6511 | Comply™ Foam Ear tip | | Noise-Reduction | | | | | • |
| APX 6000 APX 6000XE APX 4000 | | Clear EP7-Medium Hearing Protectors [Sonic Defenders] Ultra Earplugs, noise reduction = 28dB | RLN6512 | Comply™ Foam Ear tip | | Noise-Reduction | | | | | • |
| APX 3000 APX 1000 APX 900 SRX 2200 | O | Clear EP7-Large Hearing Protectors [Sonic Defenders] Ultra Earplugs, noise reduction = 28dB | RLN6513 | Comply™ Foam Ear tip | | Noise-Reduction | | | | | • |
| CTICAL SOLUT | FIONS | | | | | | | | | | |
| APX 8000 | \$ D | Tactical PTT/VOX Interface Module | PMLN6765 | | | | • | • | • | • | • |
| APX 8000XE | 9 - S | Tactical PTT Only Interface Module | PMLN6827 | | | | • | • | • | • | • |
| APX 7000 | O and | Tactical Boomless Temple Transducer Requires Interface Module PMLN6765 or PMLN6827. | PMLN6766 | Over- the-Head | Bone Conduction | Noise-Cancelling | • | | • | • | • |
| APX 7000XE | do! | Tactical Throat Microphone Requires Interface Module PMLN6765 or PMLN6827. | PMLN6828 | Neckband | Earbud | Noise-Cancelling | • | | • | • | • |
| APX 6000 | S | Tactical Ear Microphone Requires Interface Module PMLN6765 or PMLN6827. | PMLN6829 | In-Ear | In-Ear | Noise-Cancelling | • | • | | | • |
| APX 6000XE | of the | Tactical Temple Transducer / Boom Mic Requires Interface Module PMLN6765 or PMLN6827. | PMLN6833 | Over- the-Head | Bone Conduction | Noise-Cancelling | • | | | • | • |
| I APX 3000 | 0-10 | Tactical Remote Body PTT For use with Interface Module PMLN6765 or PMLN6827. | PMLN6767 | | | | • | • | • | • | • |
| SRX 2200 | R | Tactical Remote Ring PTT For use with Interface Module PMLN6765 or PMLN6827. | PMLN6830 | | | | | ٠ | | • | |



WHAT ARE THE EP7 SONIC DEFENDERS ULTRA EARPLUGS?

RLN6511, RLN6512, RLN6513

The EP7 Sonic Defenders Ultra Earplugs provide extra comfort and/or noise protection for users wearing surveillance accessories or users wearing heavy duty headsets / helmets. With a foam-tipped stem design and soft memoryfoam Comply[™] Canal Tips, these comfortable earplugs protect your hearing without blocking your ability to hear routine sounds or conversations. Safe sounds are allowed to pass through into the ear canal, while potentially harmful noises (above 85dB) are reduced through a filter.

Filter caps are included and can be inserted for additional hearing protection or removed for use with surveillance kits.* With a patented EarLock[®] technology to hold them in place, all-day comfort, and a low-profile design, these earplugs can be worn while wearing a helmet or mask, or while using a phone or heavy duty headset. Lanyard is included in each earplug kit.

*EP7 earpiece will not provide full 28dB Noise Reduction when the noise-reducing filter is removed.

Motorola's Tactical Solution offers a high performance interface enhanced by high speed DSP (Digital Signal Processor) which only detects the human voice.

Providing steady and trouble free transmission without clipping your message even in the noisiest environments.

Combined with various headsets assures efficient and safer operation in a variety of work environments.

HOW DO MISSION CRITICAL WIRELESS ACCESSORIES HELP ME?

They free you from being physically connected to the radio and are ideal for surveillance operations. They look CONSUMER, but are mission critical in performance and provide exceptional flexibility, high security, superior audio performance and a new dimension of freedom. Carry your radio in a backpack, bag or purse without being constrained by wires. YOUR RADIO, UNLEASHED.

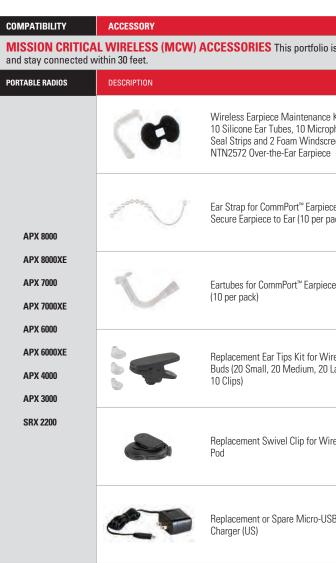


APX PORTABLE RADIO ACCESSORIES

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | | | | | | VERTICAL N | MARKETS: Recom | mendations based o | on typical use case | e for each of vertical | s listed. | |
|--|--------------------------------------|--|----------------------|-----------------------------|---------------------------------------|----------|---|---------------------------|-------------------|--------------|----------------------------------|--------------|---------------------------------|------------|----------------|--------------------|---------------------|-------------------------------|------------------------|----------------|
| MISSION CRITIC and stay connected | AL WIRELESS (MCW) within 30 feet. | ACCESSORIES This portfolio is a game cha | anger, giving you th | ne flexibility to remov | e the radio from yo | our belt | | | | | | | | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT | TALK TIME (HOURS) 5/5/90 DUTY CYCLE | CHARGE TIME (HOURS) | WEIGHT (GRAMS) | SIZE (MM) | RANGE (FEET LINE OF SIGHT) | IP RATING | HAZLOC- CAPABLE [†] | POLICE | FIRE / EMS | MILITARY | FEDERAL AGENCIES | UTILITIES AND PUBLIC WORKS | OIL, GAS AND MINING | TRANSPORTATION |
| APX 8000 APX 8000XE | m | Mission Critical Wireless Earpiece with 12" Cable and Push-To-Talk Pod | NTN2570 | Over-the-Ear (CommPort™) | Directional, above the Earpiece | • | 10 | 3 | 43 | 70 x 41 x 25 | 30 | IP54 | FM | • | • | • | • | • | | • |
| APX 7000 APX 7000XE APX 6000 APX 6000XE APX 4000 | | Mission Critical Wireless Push-To-Talk Pod | NTN2571 | | | • | 10 | 3 | 43 | 70 x 41 x 25 | 30 | IP54 | FM | • | • | • | • | • | | • |
| APX 3000 SRX 2200 | 0000 | Mission Critical Wireless Remote Control Keyfob with Programmable Buttons | NNTN8442 | | | • | 10 | 3 | 26 | 67 x 32 x 16 | 30 | IP54 | | • | | | • | | | |

+ HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

| tay connected v | within 30 feet. | ACCESSORIES This portfolio is a game ch | | | | |
|-----------------|-----------------|---|-------------|---|--|----------------------------------|
| BLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT |
| | - | Single-wire Surveillance Kit With Quick Disconnect Translucent Tube for Wireless Push-to-Talk Pod | PMLN7052 | Clear Rubber Eartip | In-line | On Pod, ordered separately |
| APX 8000 | | Single-wire Earbud with 11.5" Cable for Wireless Push-to-Talk Pod, Black | NNTN8294 | Earbud | In-line | On Pod, ordered separately |
| APX 8000XE | S | Single-wire Earbud with 45" Cable for Wireless Push-to-Talk Pod, Black | NNTN8295 | Earbud | In-line | On Pod, ordered separately |
| APX 7000 | 55 | Covert Audio Kit for Mission Critical Wireless PTT Pod | NNTN8296 | 1 Earbud and 2 Earbud Headsets | In-line | On Pod, ordered separately |
| APX 7000XE | P | Y-Adapter and Retention Hook for Mission Critical Wireless Push-to-Talk Pod | NNTN8385 | | Directional, on Separate Wire | On Pod, ordered separately |
| APX 6000 | | Neckloop for Discreet Earpiece Kit | RLN4920 | | | |
| APX 6000XE | Q. | Accessory Kit for Completely Discreet Wireless Surveillance Kit. Includes: Wireless Neckloop, Y-adapter and Retention Hook (NNTN8385), Completely Discreet Earpiece Kit (PMLN7696) and Mission Critical Wireless Push-To-Talk Pod (NTN2571) | NNTN8434 | | | |
| APX 4000 | | Commercial 3.5mm Earbud Headset Adapter, 10 per pack | NNTN8737 | | | |
| APX 3000 | 5 | Replacement Wireless Earpiece Cable, 12 inch | NTN2572 | Over-the-Ear (CommPort™) | Directional above the Ear CommPort | On Pod, ordered separately |
| SRX 2200 | | Mission Critical Wireless Covert Pack-N-Go Kit, Basic. Kit includes: NNTN8296 Basic Mission Critical Wireless Covert Kit, NTN2571 Mission Critical Wireless Push- to-Talk (PTT) Pod and NNTN8442 Mission Critical Wireless Remote Control Unit | RLN6489 | Earbud and Earbud Headset | On Y-Adapter or In-line on Earbuds | On PTT and MCW Keyfo |
| | 15 · F | Mission Critical Wireless Covert Pack-N-Go Kit, Advanced. Kit includes: All contents of Covert Pack-n-Go Kit plus PMLN7696 Completely Discreet Earpiece Kit and | RLN6501 | Completely Discreet Earpiece, Earbud and | On Y-Adapter or In-line on Earbuds | On PTT and MCW Keyfo |



WHAT MAKES THE COVERT PACK-AND-GO KIT A MUST-HAVE?

Organize and stow all your APX wireless accessories on the go, all in one place. Keep this durable kit in a backpack or messenger bag and you'll always have the right accessories on hand. With a dozen secure straps and deep mesh pockets, you can access exactly what you need when an operation happens.



| | | FEATURES | | |
|---|---------------------|-----------------------------|-----------------------|------|
| o is a game cha | nger, giving you th | e flexibility to remove | e the radio from your | belt |
| | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT |
| e Kit with ophone creens for e | NTN8821 | Over-the-Ear (CommPort™) | | |
| ece to pack) | NTN8988 | Over-the-Ear (CommPort™) | | |
| ece | RLN5037 | Over-the-Ear (CommPort™) | | |
| /ireless Ear) Large and | NNTN8361 | Earbud | | |
| /ireless PTT | PMLN6246 | | | |
| SB Plug-In | PMPN4027 | | | |
| | | | | |



| OMPATIBILITY | ACCESSORY | | | FEATURES | | |
|--|--|--|---------------------|--|---------------------------------------|---|
| DPERATIONS CR and stay connected | ITICAL WIRELESS (OC within 30 feet. | CW) ACCESSORIES This portfolio is a gam | e changer, giving y | ou the flexibility to rem | nove the radio from | your belt |
| ORTABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT |
| | A | EP900W Opertions Critical Wireless Earpiece with PTT | PMLN7851 | Over-the-Ear (Swivel) | In-line | On Pod |
| | (DC | Bluetooth Accessory Kit with Flexible Earpiece, Bluetooth Pod, and Charging Cradle with Power Supply | RLN6500 | Over-the-Ear (Swivel) | Boom | On Earpiece |
| APX 900 | C_ | Flexible Earpiece With Boom Microphone for RLN6500 | PMLN7203 | Over-the-Ear (Swivel) | Boom | On Pod, ordered separately |
| | 5 | Operations Critical Wireless Earpiece with 12 inch Cable | NNTN8125 | Over-the-Ear (CommPort [™]) | Directional, above the Earpiece | On Pod |
| | | Operations Critical Wireless Push-to-Talk Pod with Charger | NNTN8127 | | | On Pod |
| | Ce. | Accessory Kit for Completely Discreet Wireless Surveillance Kit. Includes: Wireless Neckloop, Y-adapter and Retention Hook (NNTN8385), Completely Discreet Earpiece Kit (PMLN7696) and Mission Critical Wireless Push-To-Talk Pod (NTN2571) | NNTN8434 | | | |
| APX 8000 APX 8000XE APX 7000 | | Single-wire Surveillance Kit With Quick Disconnect Translucent Tube for Wireless Push-to-Talk Pod for Pod | PMLN7052 | Clear Rubber Eartip | In-line | On Pod, NNTN8127 ordered separately |
| APX 7000XE APX 6000 APX 6000XE APX 4000 | | Single-wire Earbud with 11.5" Cable for Wireless Push-to-Talk Pod, Black | NNTN8294 | Earbud | In-line | On Pod, NNTN8127 ordered separately |
| APX 3000 APX 900 SRX 2200 | 5 | Single-wire Earbud with 45" Cable for Wireless Push-to-Talk Pod, Black | NNTN8295 | Earbud | In-line | On Pod, NNTN8127 ordered separately |
| | | XBT Operations Critical Wireless Behind-the-Neck Headset | RLN6490 | Headset | Boom | Headset or On Pod NNTN8127 ordered separately |



| COMPATIBILITY | ACCESSORY | | | FEATURES | | |
|---|--|---|-------------|--|--|---|
| OPERATIONS CR | ITICAL WIRELESS (OC | W) ACCESSORIES | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | EARPIECE TYPE | MICROPHONE | PTT |
| | Q. | XBT Operations Critical Wireless Headband Style Headset | RLN6491 | Headset | Boom | Headset or On Pod NNTN8127 ordered separately |
| APX 8000 APX 8000XE | 5 | Replacement Wireless Earpiece Cable, 12 inch | NTN2572 | Over-the-Ear (CommPort [™]) | Directional above the Ear CommPort | On Pod, NNTN8127 ordered separately |
| APX 7000 APX 7000XE APX 6000 | | Covert Audio Kit for Operations Critical Wireless PTT Pod | NNTN8296 | | | |
| APX 6000XE APX 4000 APX 3000 APX 900 | (c) | CommPort Maintenance Kit (Includes 10 replacement ear tubes, 10 microphone seals and 2 windscreens) | NTN8821 | Over-the-Ear (CommPort™) | | |
| SRX 2200 | and the second s | Ear Strap for CommPort [™] Earpiece to Secure Earpiece to Ear (10 per pack) | NTN8988 | Over-the-Ear (CommPort™) | | |
| | V | Eartubes for CommPort [™] Earpiece (10 per pack) | RLN5037 | Over-the-Ear (CommPort™) | | |

| OMPATIBILITY | ACCESSORY | | | FEATURES | | | | | | |
|---|--|---|--|--------------------------------|-----------------------------|------------------------------------|--|---------------------------|-----------------------------|--|
| MOTOROLA IMP Ortable radios | RES 2 BATTERIES | | PART NUMBER | IMPRES | CHEMISTRY | TYPICAL RATED CAPACITY (mAh) | DIMENSIONS (MILLIMETERS) (H x W x D) | WEIGHT (MAX. GRAMS) | HAZLOC-CAPABLE ¹ | IP RATING |
| | | IMPRES 2 Li-Ion 3400 mAh Battery, IP68 Rugged | PMNN4486 | • | Li-Ion | 3400 | 86 x 59 x 42 | 185 | | ♦ IP68 Rugged |
| APX 8000 APX 7000 APX 7000XE | 1 | IMPRES 2 Li-lon 2550 mAh Battery, IP68 Rugged | PMNN4485 | • | Li-Ion | 2550 | 86 x 59 x 37 | 150 | | IP68 Rugged |
| APX 6000 APX 6000XE SRX 2200 | 1 | IMPRES 2 Li-Ion 4850 mAh Battery, IP68 Rugged, -30°C Rated | PMNN4487 | • | Li-Ion | 4850 | 130 x 59 x 42 | 320 | | IP68 Rugged |
| | 1 | IMPRES 2 Li-lon 5100 mAh Battery, IP68 Rugged | PMNN4494 | • | Li-Ion | 5100 | 130 x 59 x 42 | 320 | | IP68 Rugged |
| APX 7000 APX 7000XE APX 6000 | | IMPRES 2 Li-Ion 3100 mAh Battery, IP68 Rugged | PMNN4547 | • | Li-Ion | 3100 | 86 x 59 x 45 | 200 | UL | ♦ IP68 Rugged |
| APX 6000 APX 6000XE SRX 2200 | | IMPRES 2 Li-Ion 4600 mAh Battery, IP68 Rugged | PMNN4573 | • | Li-Ion | 4600 | 130 x 59 x 42 | 320 | UL | ♦ IP68 Rugged |
| | 1 | IMPRES 2 Li-Ion 3400 mAh Battery, IP68 Rugged | PMNN4504 | • | Li-Ion | 3400 | 86 x 59 x 42 | 185 | UL | IP68 Rugged |
| APX 8000XE | 1 | IMPRES 2 Li-Ion 4850 mAh Battery, IP68 Rugged, -30°C Rated | PMNN4505 | • | Li-Ion | 4850 | 130 x 59 x 42 | 320 | UL | IP68 Rugged |
| /IOTOROLA IMP .PX batteries are P | RES BATTERIES The croven Tough, in lab test a | only batteries developed, tested and certifie fter lab test, to withstand shocks, knocks, dr | d for optimal performa ops and shakes and o | nce with your utperform the | APX radio. other brands. | | | | | |
| APX 7000 APX 7000XE APX 6000 | | IMPRES Li-lon 2350 mAh Battery, IP68 Rugged | NNTN8092 | • | Li-Ion | 2350 | 86 x 59 x 42 | 160 | FM | ♦ IP68 Rugged |
| APX 6000 APX 6000XE SRX 2200 | | IMPRES Li-lon 4300 mAh Battery IP68 Rugged | NNTN7033 | • | Li-Ion | 4300 | 130 x 59 x 42 | 285 | FM | IP68 Rugged |



IMPRES 2 – A NEW GENERATION. COMPLETELY RE-ENERGIZED.

With IMPRES 2 chargers, you can charge IMPRES 2 batteries up to 40% faster. Customize your charging to extend the life of batteries in storage. And manage power more intelligently with enhanced diagnostics, so you get the most from each battery. IMPRES 2 batteries have been improved inside and out, so your team can tackle whatever the day brings. With higher capacity, you'll get more talk time. With better water resistance, you'll never think twice about submersion. And with the ability to charge up to 60% more times than standard Lithium Ion batteries, you'll reduce costs.

ACCESSORY

COMPATIBILITY

MOTOROLA IMPRES BATTERIES The only batteries developed, tested and certified for optimal performance with your APX radio. APX betteries are Proven Tough in lab test after lab test to withstand shocks, knocks, drops and shakes and outperform the other brane

| ORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES | CHEMISTRY | TYPICAL RATED CAPACITY (mAh) | DIMENSIONS (MILLIMETERS) (H x W x D) | WEIGHT (MAX. GRAMS) | HAZLOC-CAPABLE [†] | IP RATING |
|------------------------------------|-------------|--|-------------|--------|------------------------|------------------------------------|--|------------------------------|-----------------------------|------------------|
| APX 7000 APX 7000XE APX 6000 | | IMPRES NiMH 2200 mAh Battery IP68 Rugged | NNTN7035 | • | NiMH | 2200 | 136 x 59 x 40 | 335 | FM | ♦ IP68 Rugged |
| APX 6000XE SRX 2200 | | APX Clamshell Battery Pack, IP57 Requires 12 AA Alkaline batteries (not included). | PMNN4439 | | AA Alkaline/ Li-Ion | Alkaline: 2700 Li-Ion: 6100 | 165 x 60 x 60 | Alkaline: 476 Li-Ion: 380 | | ♦ IP57 |
| SRX 2200 | 1 | Military, Li-Ion 3100 mAh, Battery IP68 Rugged, Coyote Brown | NNTN8182 | | Li-Ion | 3100 | 86 x 59 x 42 | 185 | | IP68 Rugged |
| APX 4000 | | IMPRES Li-Ion 2000 mAh Slim Battery, IP67 | NNTN8128 | • | Li-Ion | 2000 | 115 x 52 x 18 | 160 | | ♦ IP67 |
| APX 3000 APX 1000 | | IMPRES Li-Ion 2350 mAh Battery, IP67 | PMNN4424 | • | Li-Ion | 2350 | 115 x 52 x 23 | 170 | | ♦ IP67 |
| APX 900 | | IMPRES Li-Ion 2800 mAh Battery, IP67 | PMNN4448 | • | Li-Ion | 2800 | 115 x 52 x 23 | 170 | | ● IP67 |
| | | IMPRES Li-lon 2900 mAh Battery, IP68 | PMNN4489 | • | Li-Ion | 2900 | 115 x 52 x 23 | 170 | UL | ♦ IP68 |
| APX 900 | | IMPRES Li-lon 2100 mAh Battery, IP68 | PMNN4491 | • | Li-Ion | 2100 | 115 x 52 x 18 | 160 | | ♦ IP68 |
| | | IMPRES Li-Ion 3000 mAh Battery, IP68 | PMNN4493 | • | Li-Ion | 3000 | 115 x 52 x 23 | 170 | | ♦ IP68 |
| APX 4000 | | IMPRES Hi-Cap Li-Ion 2500 mAh Battery, IP57 | NNTN8560 | • | Li-Ion | 2500 | 113 x 52 x 23 | 195 | UL | ♦ IP57 |
| APX 3000 APX 1000 | | IMPRES Li-lon 2350 mAh Battery, IP67 | NNTN8129 | • | Li-Ion | 2350 | 115 x 52 x 23 | 170 | FM | ♦ IP67 |
| APX 3000 | 1 | IMPRES Li-lon 1300 mAh Slim Battery, IP67 | NNTN8305 | • | Li-Ion | 1300 | 115 x 52 x 14 | 98 | | ♦ IP67 |

FEATURES

† HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.







INCREASED CAPACITY

DO MORE WITHOUT THE BULK.

First responders, public works employees, and other professionals know that shifts aren't getting any shorter. Thankfully, you can keep your people connected even longer. IMPRES 2 batteries deliver higher capacity without an increase in size.

DURABLE DESIGN

TACKLE THE TOUGHEST CONDITIONS.

Wherever the job takes you, be confident your battery will be up to the challenge. All IMPRES 2 batteries share the same IP68 rating as APX radios, which means they can be fully submersed in two meters of water for up to four hours. Designed with a rugged housing, they're as tough as the radios they charge. And in test after test, IMPRES 2 batteries continually withstand shocks, knocks, drops and shakes, outperforming the competition every time.

EXTENDED BATTERY LIFE

EXTENDED LIFE. BUILT TO LAST.

You face challenges every day. Battery life shouldn't be one of them. IMPRES 2 batteries, when combined with an IMPRES 2 charger, deliver up to 60% more charging cycles than traditional Lithium Ion batteries, so they're on the job longer. Which means you can stock fewer spares, and replace fewer batteries. We've also extended our capacity warranty from 18 to 24 months*, while backing all IMPRES batteries with a long 48 month workmanship warranty. IMPRES 2 batteries are compatible with all existing IMPRES chargers, so your upgrade will be a smooth one.

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | | | |
|--|---|--|-------------------------|----------------|--------------------|-----------------|--|----------------------|---------------------------|-------------------------------|-----------------------|
| CHARGER SOLUT and be confident you | TIONS Choose from a vari ur radio is charged and rea | iety of solutions including single-unit, unique ady to go the moment you need it. | e dual-unit, multi-unit | , travel and v | vehicular chargers | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES | CHEMISTRY | POWER SOURCE | DIMENSIONS (MILLIMETERS) (H x W x D) | NUMBER OF POCKETS | RECONDITIONING CAPABLE | CHARGING CURRENT (MAX.) | NUMBER OF DISPLAYS |
| SINGLE AND MU | LTI-UNIT CHARGERS | | | | | | | | | | |
| APX 8000 | | IMPRES 2 Single-Unit Fast Charger, 115V | NNTN8860 | • | Li-Ion, NiMH | 115VAC | 60 x 97 x 163 | 1 | • | Fast | |
| APX 8000XE APX 7000 APX 7000XE APX 6000 | | IMPRES 2 Single-Unit Fast Charger, 115V, TAA compliant | NNTN8860_ TAA | • | Li-Ion, NiMH | 115VAC | 60 x 97 x 163 | 1 | • | Fast | |
| APX 6000XE SRX 2200 | | IMPRES 2 Single-Unit Fast Charger, 100-240V | NNTN8863 | • | Li-Ion, NiMH | 100-240VAC | 60 x 97 x 163 | 1 | • | Fast | |
| APX 4000 APX 3000 APX 1000 APX 900 | | IMPRES Single-Unit Charger, 115V | PMPN4174 | • | Li-lon, NiMH | 115VAC | 61 x 97 x 163 | 1 | • | Rapid Rate | |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 6000 APX 6000XE SRX 2200 | | IMPRES 2 Multi-Unit Fast Charger with 6 Displays and 6 Integrated USB Charging Ports, 100-240V | NNTN8844 | • | Li-Ion, NiMH | 100-240VAC | 153 x 445 x 292 | 6 | • | Fast | 6 |
| APX 4000 APX 3000 APX 1000 APX 900 | an and | IMPRES Multi-Unit Charger, 115V | PMPN4284 | • | Li-lon, NiMH | 115VAC | 117 x 444 x 170 | 6 | • | Rapid Rate | 1 |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 6000 APX 6000XE SRX 2200 | P | Wall Mount Bracket for IMPRES Multi-Unit Chargers NNTN8844 | NLN7967 | | | | | | | | |
| APX 4000 APX 3000 APX 1000 APX 900 | | Wall mount bracket for PMPN4284 Charger | BR000272A01 | | | | | | | | |



CHARGE FAST. RESPOND FASTER.

With IMPRES 2 chargers, you can charge IMPRES 2 batteries up to 40% faster. Customize your charging to extend the life of batteries in storage. And manage power more intelligently with enhanced diagnostics, so you get the most from each battery.

Get a detailed look at performance while your batteries charge. A built-in diagnostic tool, integrated in the multi-unit charger, provides important usage data, such as a battery's ability to hold a charge and its time in service. Use the information to manage your fleet more efficiently, and replace low capacity batteries before it's too late.

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | |
|--|---|--|----------------------|----------------|--------------|---------------------------------------|--|----------------------|-------------------------------|
| CHARGER SOLUT and be confident you | IONS Choose from a var ur radio is charged and re | iety of solutions including single-unit, unique dual-unit, mu ady to go the moment you need it. | lti-unit, travel and | vehicular char | gers | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | IMPRES | CHEMISTRY | POWER SOURCE | DIMENSIONS (MILLIMETERS) (H x W x D) | NUMBER OF POCKETS | CHARGING CURRENT (MAX.) |
| VEHICULAR, TRA | VEL CHARGERS AND | VEHICULAR ADAPTER | | | | | | | |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 6000 APX 6000XE SRX 2200 | | IMPRES Single-Unit Rapid Rate Vehicular Charger | NNTN7624 | • | Li-Ion, NiMH | 12VDC Hardwire | 82 x 97 x 200 | 1 | Rapid Rate |
| APX 4000 APX 3000 APX 1000 APX 900 | | IMPRES Single-Unit Rapid Rate Vehicular Charger | NNTN7616 | • | Li-Ion, NiMH | 12VDC Hardwire | 82 x 97 x 200 | 1 | Rapid Rate |
| APX 8000 APX 8000XE APX 7000 APX 7000XE APX 6000 APX 6000XE SRX 2200 | | Travel Charger with Voltage Regulated Vehicular Charger Adapter, Custom Charger Base, Mounting Bracket, and Coil Cord | RLN6434 | | Li-Ion, NiMH | 12VDC Cigarette Lighter Adapter | 67 x 67 x 70 | 1 | |
| APX 4000 APX 3000 APX 1000 APX 900 | - | Travel Charger with Voltage Regulated Vehicular Charger Adapter, Custom Charger Base, Mounting Bracket, and Coil Cord | NNTN8525 | | Li-Ion, NiMH | 12VDC Cigarette Lighter Adapter | 64 x 67 x 57 | 1 | |
| APX 8000 APX 8000XE APX 6000 APX 6000XE | | APX Vehicular Adapter includes Fused Power Cable, 2 Keys for the Lock, Screws for Attaching Vehicular Adapter to the Trunnion Mounting Bracket & Quick Start Guide. Trunnion mounting bracket NTN8940 ordered separately. | NNTN8527 | | Li-Ion | 12VDC Hardwire | 254 x 137 x 84 | 1 | Rapid Rate |
| SRX 2200 | | Trunnion Mounting Bracket | NTN8940 | | | | | | |



| OMPATIBILITY | ACCESSORY | | |
|--|-------------|--|--|
| CHARGER SOLUTI | | | |
| ORTABLE RADIOS | DESCRIPTION | | PART NUMBER |
| APX 8000 APX 8000XE APX 7000 | | MPRES Battery Fleet Management Software | https://www.motorolasolutions.com/en_us/products/two- way-radio-accessories/batteries/impres.html |
| APX 7000XE APX 6000 APX 6000XE APX 4000 APX 3000 | . | IMPRES Battery Fleet Management License Key | HKVN4036 |
| APX 1000 APX 900 SRX 2200 | | IMPRES 2 single unit charger (NNTN8860, NNTN8860_TAA, NNTN8863) reprogramming and Battery Fleet Management interface cable | NNTN8870 |
| EYLOAD CABLES | | | |
| APX 8000 | | Keyload RS-232 Cable | WPLN6905 |
| APX 7000 APX 7000XE APX 6000 APX 6000XE APX 4000 APX 3000 SRX 2200 | | Keyloader Cable, KVL3000 and KVL4000 | WPLN6904 |



HOW DO I KNOW MY BATTERIES WILL LAST AN ENTIRE SHIFT?

With the unique IMPRES Battery Reader and IMPRES Battery Fleet Management systems, you can efficiently manage batteries with real-time data not available from other manufacturers.

These easy-to-use software applications show you if there is enough capacity for a full shift, alert you to low capacity batteries, prevent downtime and eliminate throwing batteries out prematurely.

CARRY SOLUTIONS

Motorola Carry Solutions were developed to meet the demands of public safety and other users who operate in the most rigorous of environments. A variety of carrying accessories are available for comfort and convenience.



LEATHER CARRY CASES

Motorola Leather Carry Cases constructed of top-grain leather are designed to withstand the harsh conditions of public safety users.

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | |
|--------------------------|-------------|--|-------------|------------------|---|-------------------|---------|--|
| | | nd holders are available in sizes desig s-free, so you can concentrate on the | | o and battery ar | nd permit audio 1 | to be heard cle | early. | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | MATERIAL | BELT LOOP/CLIP DIMENSION (INCHES) | SWIVEL / FIXED | D-RINGS | COMPATIBLE BATTERIES |
| APX 7000 | M | Carry Holder for 1.5, 2.5 and 3.5 Model Radios | PMLN5331 | Plastic | 3 | Fixed | | |
| APX 7000XE | | Carry Holder for 1.5, 2.5 and 3.5 Model Radios | PMLN6102 | Plastic | 3 | Fixed | | |
| APX 8000 APX 6000 | L | Carry Holder for 1.5, 2.5 and 3.5 Model Radios | PMLN7901 | Plastic | 2.5 | Fixed | | |
| APX 8000XE APX 6000XE | L | Carry Holder for 1.5, 2.5 and 3.5 Model Radios | PMLN7902 | Plastic | 2.5 | Fixed | | |
| APX 3000 | Ĺ | Covert Carry Holster | PMLN6327 | Plastic | 3 | Fixed | | |
| | Ť | Leather Carry Case with 3" Fixed Belt Loop | PMLN5323 | Hard Leather | 3 | Fixed | • | NNTN7038 NNTN8092 NNTN8930 PMMN4403 PMNN4485 PMNN4486 |
| APX 7000 | 1 | Leather Carry Case with 3" Fixed Belt Loop | PMLN5326 | Hard Leather | 3 | Fixed | • | NNTN7033 NNTN7034 NNTN8921 PMNN4487 PMNN4494 |
| | Ť | Leather Carry Case with 3" Fixed Belt Loop | PMLN5329 | Hard Leather | 3 | Fixed | • | NNTN7035 NNTN7036 NNTN7037 NNTN7573 |





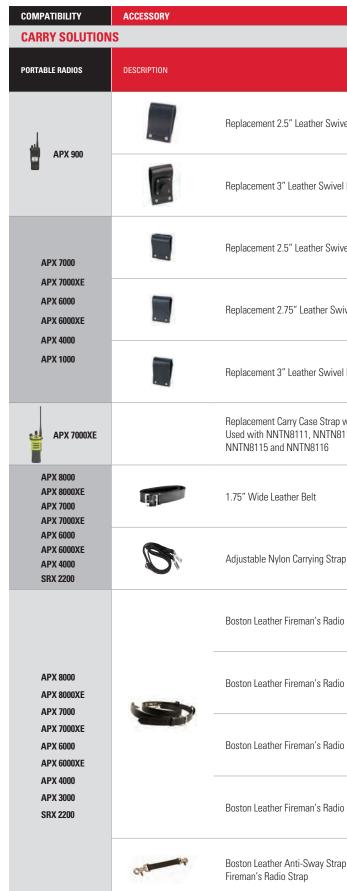
| | FEATURES | | | | |
|-------------|--------------|---|-------------------|---------|--|
| | | | | | |
| PART NUMBER | MATERIAL | BELT LOOP/CLIP DIMENSION (INCHES) | SWIVEL / FIXED | D-RINGS | COMPATIBLE BATTERIES |
| PMLN5324 | Hard Leather | 2.75 | Swivel | • | NNTN7038 NNTN8092 NNTN8930 PMMN4403 PMNN4485 PMNN4485 |
| PMLN5327 | Hard Leather | 2.75 | Swivel | • | NNTN7033 NNTN7034 |
| PMLN5330 | Hard Leather | 2.75 | Swivel | • | NNTN7035 NNTN7036 NNTN7037 NNTN7573 |
| PMLN5560 | Hard Leather | 2.75 | Swivel | • | NNTN7038 NNTN8092 PMMN4403 |
| PMLN6802 | Nylon | | Swivel | | |
| NNTN8112 | Hard Leather | 3 | Fixed | • | NNTN7038 NNTN8092 PMMN4403 |
| NNTN8114 | Hard Leather | 3 | Fixed | ٠ | NNTN7033 NNTN7034 |
| NNTN8116 | Hard Leather | 3 | Fixed | • | NNTN7035 NNTN7036 NNTN7037 NNTN7573 |

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | |
|-----------------|-------------|--|-------------|--------------|---|----------------|---------|--|
| CARRY SOLUTION | S | | | | | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | MATERIAL | BELT LOOP/CLIP DIMENSION (INCHES) | SWIVEL / FIXED | D-RINGS | COMPATIBLE BATTERIES |
| | Ì | Leather Carry Case with 2.75" Swivel Belt Loop | NNTN8111 | Hard Leather | 2.75 | Swivel | | NNTN7038 NNTN8092 PMMN4403 |
| 4 APX 7000XE | 1 | Leather Carry Case with D-Rings and 2.75" Swivel Belt Loop | NNTN8113 | Hard Leather | 2.75 | Swivel | • | NNTN7033 NNTN7034 PMNN4487 PMNN4494 NNTN8921 |
| | T | Leather Carry Case with D-Rings and 2.75" Swivel Belt Loop | NNTN8115 | Hard Leather | 2.75 | Swivel | • | NNTN7035 NNTN7036 NNTN7037 NNTN7573 |
| | ł | Boston Leather Carry Case with D Rings – Requires an Audio Accessory, Radio strap holds down radio by strapping over the Audio Accessory connector, used with Boston Leather radio straps | AY000222A01 | Hard Leather | | | • | |
| | 1 | Leather Carry Case with 3" Fixed Belt Loop | PMLN7903 | Hard Leather | 3 | Fixed | • | NNTN7038 NNTN8092 PMMN4403 PMNN4485 PMNN4486 PMNN4547 NNTN8930 (for APX 6000) |
| APX 8000 | M | Leather Carry Case with 3" Fixed Belt Loop | PMLN5660 | Hard Leather | 3 | Fixed | • | NNTN7033 NNTN7034 PMNN4487 PMNN4494 NNTN8921 (for APX 6000) |
| APX 6000 | Ţ | Leather Carry Case with D-Rings and 2.75" Swivel Belt Loop | PMLN7904 | Hard Leather | 2.75 | Swivel | • | NNTN8092 PMNN4485 PMNN4486 PMNN4547 NNTN8930 (for APX 6000) |
| | 1 | Leather Carry Case with D-Rings and 2.75" Swivel Belt Loop | PMLN5659 | Hard Leather | 2.75 | Swivel | • | NNTN7033 NNTN7034 PMNN4487 PMNN4494 NNTN8921 (for APX 6000) |
| APX 8000XE | | Leather Carry Case with 3" Fixed Belt Loop | PMLN7905 | Hard Leather | 3 | Fixed | • | NNTN7038 NNTN8092 PMMN4503 PMNN4547 PMNN4485 (for APX 6000XE) PMNN4486 (for APX 6000XE) NNTN8930 (for APX 6000XE) PMNN4504 (for APX 8000XE) |



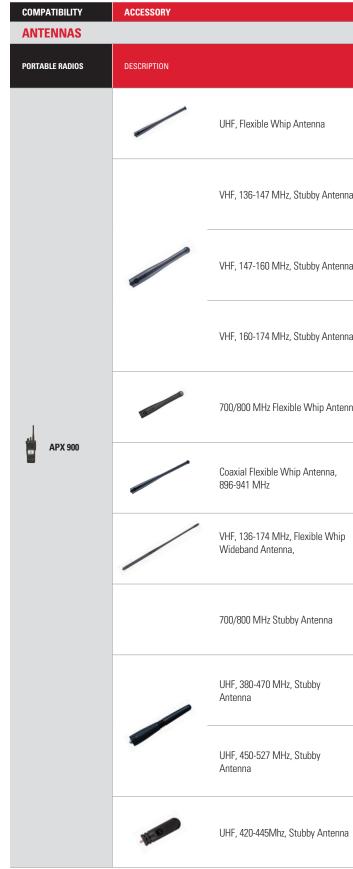
| | FEATURES | | | | |
|-------------|--------------|---|----------------|---------|--|
| | | | | | |
| PART NUMBER | MATERIAL | BELT LOOP/CLIP DIMENSION (INCHES) | SWIVEL / FIXED | D-RINGS | COMPATIBLE BATTERIES |
| PMLN5879 | Hard Leather | 3 | Fixed | • | NNTN7033 NNTN7034 PMIN4487 (for APX 6000XE) PMIN4494 (for APX 6000XE) NNTN8921 (for APX 6000XE) PMIN14505 (for APX 8000XE) |
| PMLN7906 | Hard Leather | 2.75 | Swivel | • | NNTN7038 NNTN8092 PMMN4403 PMNN4547 PMNN4485 (for APX 6000XE) PMNN4486 (for APX 6000XE) NNTN8930 (for APX 6000XE) PMNN4504 (for APX 8000XE) |
| PMLN5877 | Hard Leather | 2.75 | Swivel | • | NNTN7033 NNTN7034 PMNN4487 (for APX 6000XE) PMNN4494 (for APX 6000XE) NNTN8921 (for APX 6000XE) PMNN4505 (for APX 8000XE) |
| PMLN6085 | Hard Leather | 2.5 | Swivel | | |
| PMLN7182 | Hard Leather | 2.5 | Swivel | • | |
| PMLN7229 | | | | | |
| NNTN8269 | Nylon | Up to 5 | Fixed | | |
| RLN6253 | Nylon | Up to 5 | Fixed | | |
| PMLN5322 | Nylon | 3 | Fixed | • | NNTN7038 PMMN4403 NNTN8092 |
| PMLN5325 | Nylon | 3 | Fixed | • | NNTN7033 NNTN7034 |
| PMLN5328 | Nylon | 3 | Fixed | • | NNTN7035 NNTN7036 NNTN7037 NNTN7573 |

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | |
|------------------------|-------------|--|-------------|--------------|--|-------------------|---------|----------------------------------|
| CARRY SOLUTIO | VS | | | | DELT | | | |
| PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | MATERIAL | BELT LOOP/CLIP DIMENSION (INCHES) | SWIVEL / FIXED | D-RINGS | COMPATIBLE BATTERIES |
| | Ċ | Leather Carry Case with 3" Fixed Belt Loop | PMLN5838 | Hard Leather | 3 | Fixed | | |
| APX 900 | ľ | Leather Carry Case with 2.5" Swivel Belt Loop | PMLN5842 | Hard Leather | 2.5 | Swivel | | PMNN4424 PMNN4491 PMNN4493 |
| | ľ | Leather Carry Case with 3" Swivel Belt Loop | PMLN5840 | Hard Leather | 3 | Swivel | | PMNN4489 PMNN4448 NNTN8128 |
| | ľ | Nylon Carry Case with 3" Fixed Belt Loop. | PMLN5844 | Nylon | 3 | Fixed | | |
| APX 8000 APX 7000 | | Carry Case for APX Radio with Clamshell Battery | PMLN6712 | Nylon | Up to 5 | Fixed | • | |
| | | 2.5" Hard Plastic Belt Clip (not compatible with APX 7000 UHF Radios) | NTN8266 | Plastic | 2.5 | | | |
| APX 8000 APX 8000XE | | 3" Hard Plastic Belt Clip | HLN6875 | Plastic | 3 | | | |
| APX 7000 APX 7000XE | M | Universal Chest Pack with Radio Holder, Pen Holder and Velcro Secured Pouch | HLN6602 | Nylon | | | | |
| APX 6000 APX 6000XE | A | Break-a-Way Chest Pack with Radio Holder Pen Holder and Velcro Secured Pouch | RLN4570 | Nylon | | | | |
| | | Replacement Strap for HLN6602 and RLN4570 | 1505596Z02 | Nylon | | | | |
| APX 4000 | • | 2" Hard Plastic Belt Clip | PMLN4651 | Plastic | | | | |
| APX 1000 | | 2.5" Hard Plastic Belt Clip | PMLN7008 | Plastic | | | | |
| APX 900 | | Accessory Connector Dust Cover | 15012157001 | | | | | |



| | FEATURES |
|-------------|--|
| PART NUMBER | MATERIAL |
| PMLN5610 | Hard Leather |
| PMLN5611 | Hard Leather |
| PMLN5407 | Hard Leather |
| PMLN5408 | Hard Leather |
| PMLN5409 | Hard Leather |
| PMLN5800 | Leather |
| 4200865599 | Leather |
| NTN5243 | Nylon |
| RLN6486 | Leather |
| RLN6487 | Leather |
| AY000223A01 | Leather |
| AY000229A01 | Leather |
| RLN6488 | Leather |
| | PMLN5610 PMLN5611 PMLN5401 PMLN5402 PMLN5408 PMLN5409 PMLN5409 PMLN5409 RLN6485599 RLN6486 RLN6487 AY000223A01 AY000229A01 |

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | |
|--|-------------|--|-------------|----------------------------|----------------------------|-------------------|----------------|---------|---------------------------------|
| ANTENNAS PORTABLE RADIOS | DESCRIPTION | | PART NUMBER | UHF / VHF / 700/800 MHz | FREQUENCY BAND (MHz) | INTEGRATED GPS | LENGTH (CM) | ТҮРЕ | HAZLOC- CAPABLE [†] |
| APX 7000 APX 7000XE APX 6000 APX 6000XE | / | 700/800 MHz, GPS Whip Antenna | NAF5085 | 700/800 | 764-870 | • | 20 | Whip | UL |
| APX 4000 APX 3000 APX 1000 SRX 2200 | | UHF, GPS Whip Antenna | PMAE4065 | UHF | 380-520 | • | 14.2 | Whip | UL |
| APX 6000 APX 6000XE APX 4000 APX 3000 APX 1000 SRX 2200 | | VHF, GPS Whip Antenna | NAR6593 | VHF | 136-174 | • | 20 | Whip | UL |
| L | | 900 MHz, GPS Antenna | PMAF4008 | 800/900 | 896-941 | ٠ | 6 | Whip | |
| APX 4000 | | 800/900 MHz, GPS Combination Helical Antenna | PMAF4003 | 800/900 | 806-941 | • | 18 | Helical | UL |
| APX 8000 APX 8000XE APX 7000 APX 6000 APX 6000XE APX 4000 APX 1000 | / | 1/4 Wave, 700/800 MHz, GPS Stubby Antenna | NAR6595 | 700/800 | 764-870 | • | 9.8 | Stubby | UL |
| APX 8000 | | VHF, 700/800, UHF Range 1, UHF Range 2 GPS (radio only) | KT000026A01 | VHF 700/800 | | • | | Whip | UL |
| | | VHF, 700/800 MHz Dual Band, GPS Whip Antenna | NAR6594 | VHF 700/800 | 136-174 764-870 | • | 20 | Whip | UL |
| APX 8000 APX 8000XE APX 7000 APX 7000XE | | VHF, UHF Dual Band, GPS Whip Antenna | PMAT4001 | VHF UHF | 136-174 380-520 | • | 21.8 | Whip | UL |
| | | UHF 700/800 MHz Dual Band, GPS Whip Antenna | PMAS4001 | UHF 700/800 | 380-520 764-870 | • | 19.7 | Whip | UL |



+ HazLoc Details: For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable.

| | | FEATURES | - | - | | | |
|------|-------------|----------------------------|----------------------------|-------------------|----------------|------------------|---------------------------------|
| | PART NUMBER | UHF / VHF / 700/800 MHz | FREQUENCY BAND (MHz) | INTEGRATED GPS | LENGTH (CM) | TYPE | HAZLOC- CAPABLE [†] |
| | PMAE4022 | UHF | 403-470 | | 16 | Flexible Whip | UL |
| nna | PMAD4093 | VHF | 136-147 | | 11 | Stubby | UL |
| na | PMAD4094 | VHF | 147-160 | | 11 | Stubby | UL |
| nna | PMAD4095 | VHF | 160-174 | | 11 | Stubby | UL |
| enna | NAF5080 | 700/800 | 764-870 | | 6.5 | Flexible Whip | |
| | NAF5088 | 900 | 896-941 | | 7 | Flexible Whip | |
| D | PMAD4088 | VHF | 136-174 | | 8.3 | Flexible Whip | UL |
| | PMAF4022 | 700/800 | 764-870 | | 9 | Stubby | |
| | PMAE4100 | UHF | 380-470 | | 9 | Stubby | UL |
| | PMAE4102 | UHF | 450-527 | | 9 | Stubby | UL |
| าล | PMAE4094 | UHF | 420-445 | | 4.5 | Stubby | |

| COMPATIBILITY | ACCESSORY | | | FEATURES | | | | | |
|--|-------------|---|-------------|----------------------------|----------------------------|-------------------|----------------|----------|---------------------------------|
| ANTENNAS Portable radios | DESCRIPTION | | PART NUMBER | UHF / VHF / 700/800 MHz | FREQUENCY BAND (MHz) | INTEGRATED GPS | LENGTH (CM) | ТҮРЕ | HAZLOC- CAPABLE [†] |
| APX 6000 APX 6000XE | | UHF Range 1, GPS Stubby Antenna | FAF5259 | UHF | 380-470 | • | 9.3 | Stubby | UL |
| APX 4000 APX 1000 | | UHF Range 2, GPS Stubby Antenna | FAF5260 | UHF | 470-520 | • | 9.3 | Stubby | UL |
| APX 7000 (700/800 MHz only) | | GPS Antenna (Directly connected to radio when a public safety microphone is used) | NAG4000 | 700/800 | | • | 7 | Stubby | |
| APX 6000 (700/800 MHz only) | 1 | 700/800 Public Safety Microphone Only Stubby Antenna | PMAF4002 | 700/800 | 764-870 | | 9 | Stubby | |
| 1 | | Flexible Antenna with one flexible antenna spacer, 700/800 MHz | PMAF4006 | 700/800 | 764-870 | • | 41 | Flexible | |
| APX 3000 | | Flexible Antenna with three flexible antenna spacers, UHF | PMAE4080 | UHF | 308-470 | • | 77 | Flexible | |
| | | Flexible Antenna with two flexible antenna spacers, VHF | PMAD4125 | VHF | 136-174 | | 44 | Flexible | |
| PROGRAMMING | CABLES | | | 1 | | | | | |
| APX 8000XE APX 7000 APX 7000XE APX 6000 APX 6000XE | Q | Programming and Test Cable | PMKN4013 | | | | | | |
| APX 4000 APX 3000 APX 1000 APX 900 SRX 2200 | Q | Programming Cable (Not compatible with APX 900) | PMKN4012 | | | | | | |

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APX MOBILE RADIOS ACCESSORIES

COMMUNICATE SAFELY AND EASILY WHEREVER YOU GO

You count on your mobile radio to function clearly and easily so you can concentrate on the mission and communicate safely.

Get the most out of your APX radio by extending its power and reliability with APX accessories. Every mobile microphone, speaker, alarm and control station accessory is best-in-class technology, designed and optimized specifically for your APX mobile. There's simply no substitute for APX accessories.





APX 8500 WITH 03 CONTROL HEAD



APX 4500 WITH 02 CONTROL HEAD



APX 7500 WITH **07 CONTROL HEAD**

APX 6500 WITH **05 CONTROL HEAD**



APX 1500 WITH 02 CONTROL HEAD

| OMPATIBILITY | ACCESSORY RELESS get ready in seco | onds without having to worry about the wires getting in the way. No more getting tangled with your seat | belt. Work, safer, |
|---|---------------------------------------|---|-------------------------------|
| marter and more co ORTABLE RADIOS | mfortable in demanding er | nvironments. | PART NUMBER |
| APX 8500 SERIES APX 7500 SERIES APX 6500 SERIES | P | Long Range Wireless Mobile Accessory Kit, includes Wireless Remote Speaker Microphone (RLN6544), Mobile Microphone Bluetooth Gateway (PMMN4097C), Vehicular Charger (PMMN6716) | RLN6551 |
| APX 4500 SERIES APX 1500 SERIES | | Long Range Wireless Mobile Accessory Kit (No Power Charger), includes Wireless Remote Speaker Microphone (RLN6544), Mobile Microphone Bluetooth Gateway (PMMN4097C), Charger must be purchased separately | RLN6552 |
| CCESSORIES AN | ID REPLACEMENT PA | RTS | |
| | - | Dual Unit Charger, Rapid Rate Charger, 120V | PMLN7120 |
| | | Vehicular Charger | PMLN6716 |
| | | Wireless RSM with Battery and Clip | RLN6544 |
| APX 8500 SERIES | P | Mobile Microphone with Bluetooth Gateway | PMMN4097 |
| APX 7500 SERIES | Ø | Wireless RSM Battery, 1750 mA Li-Ion | PMNN4461 |
| APX 6500 SERIES | | D Ring Swivel Clip (12 pack) | NNTN4990 |
| APX 4500 SERIES | 0127 | Receive-Only Earpiece with Comfort Eartube, FM and UL approved [†] | RLN4941 |
| s | | Receive-Only Earpiece with Comfort Eartube | PMLN7560 |
| APX 1500 SERIES | 0 | Receive-Only Earbud, FM and UL approved | AARLN4885 |
| | 1 | EP7 Sonic Defender, use with RLN4941 | RLN6511 RLN6512 RLN6513 |

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LONG RANGE WIRELESS REMOTE SPEAKER MICROPHONE (RSM)

The Long Range Wireless Remote Speaker Microphone (RSM) pairs instantly with touch pairing to the mobile microphone with Bluetooth gateway. The Long Range Wireless RSM works up to 100 meters away line-of-sight from the mobile radio, keeping you in communication where you never thought possible. Plug and play – Just attach the mobile gateway microphone to your radio, align the two devices where indicated by the blue dot and you are ready to go. Voice prompts will walk you through pairing quickly.



| COMPATIBILITY | ACCESSORY | | | FEATURES | |
|------------------------------------|---|--|---|-------------------------------------|------------------------|
| MICROPHONES A numbers and send tex | ccess critical features di xt messages. Three prog | rectly on the Keypad microphone. Navigatic rammable buttons are available for addition | onal buttons and a ful al customization. | l keypad allow users to navigate ra | adio menus, dial phone |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER | MICROPHONE STYLE | IMPRES |
| APX 8500 SERIES APX 7500 SERIES | G | Water Resistant Palm Microphone for Motorcycle Mounted Mobiles | HMN1079 | Standard | |
| | C | Keypad Microphone | HMN4079 | Keypad + Navigation | |
| | Go | Standard Palm Microphone | HMN1090 | Standard | |
| APX 8500 SERIES | 6 | Water Resistant Palm Microphone | HMN1089 | Standard | |
| APX 7500 SERIES | ŋ | Telephone Keypad Handset with Hang-Up Cup | HMN4097 | Telephone + Keypad | |
| APX 6500 SERIES | 7 | Hang-Up Handset with Armored Cable | HKN1018 | Telephone | |
| APX 4500 SERIES | 7 | Handset with Hang-Up Cup | HLN1457 | Telephone | |
| | 4 | Desktop Microphone | RMN5070 | Desktop | |
| | 10 | IMPRES Visor Microphone, requires PTT Switch GLN7278 or RLN5926 | RMN5054 | Visor | • |



IMPRES AUDIO ACCESSORIES

Mission critical voice transmissions have to be heard over engine, siren, road and wind noise. Fortunately, Motorola's exclusive IMPRES audio accessories are designed to optimize its output based on the accessory in use. IMPRES Visor Microphones are able to pick up and transmit the user's voice consistently to the receiving user regardless of how close they are speaking into the microphone.

| COMPATIBILITY | ACCESSORY | | |
|--|------------------|--|------------|
| MOBILE MICROF | PHONE ACCESSORIE | S | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBE |
| | - | Microphone Hang-Up Clip | HLN5391 |
| | | Microphone Extension Cable, 2-Feet. Not compatible with HMN4097 handset or HMN4079 Keypad | PMKN4093 |
| APX 8500 SERIES | k | Microphone Extension Cable, 10-Feet. Not compatible with HMN4097 handset or HMN4079 Keypad | PMKN4033 |
| APX 7500 SERIES | | Microphone Extension Cable, 20-Feet. Not compatible with HMN4097 handset or HMN4079 Keypad | PMKN4034 |
| APX 6500 SERIES | | Emergency Push Button, can be used with the Visor Microphone | HLN5131 |
| APX 4500 SERIES | 0.0 | Emergency Footswitch, can be used with the Visor Microphone | HLN5113 |
| APX 1500 SERIES | 9 | Footswitch Push-To-Talk, can be used with the Visor Microphone | GLN7278 |
| A A 100 OLNEO | B | Push Button Push-To-Talk, can be used with the Visor Microphone | RLN5926 |
| | | Replacement Cable for HMN4079 | 3075336B1 |
| CONTROL STATI | ON ACCESSORIES | | |
| APX 8500 SERIES | | Power Supply for APX 8500 Mid Power Mobile Radio | KT000254A |
| APX 7500 SERIES APX 6500 SERIES APX 4500 SERIES APX 1500 SERIES | | Power Supply for APX Mid Power Mobile Radios | HPN4007 |
| APX 8500 SERIES APX 7500 SERIES | | Desktop Tray with Speaker | HLN6042 |
| APX 6500 SERIES APX 4500 SERIES APX 1500 SERIES | 00 | 110V Line Cord, Replacement Cable for HPN4007 | 3060665A0 |



| COMPATIBILITY | ACCESSORY | | |
|---|---|---|---------------------|
| compromising safety | ND MOUNTING ACCE . Trunnion kits give you th | ESSORIES Mount your radio in your vehic e flexibility to mount the radio under your c unt kits allow the radio to be mounted in the | lash, in your dash, |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| | - | High Power Trunnion Kit; Quick Release with Lock- | HLN7003 |
| | | Mid Power Trunnion Kit; Standard Installation Bracket APX 6500 Enhanced requires KT000053A01 screws | HLN7002 |
| APX 8500 SERIES | | Mid Power Trunnion Lock | HLN6372 |
| APX 7500 SERIES | | Remote Mount Control Head Trunnion Compatible with 02/05 and 07 control heads | HKN6186 |
| APX 4500 SERIES | Sector Sector | Low Profile Remote Mount Control Head Trunnion Kit | HLN7031 |
| APX 1500 SERIES | | Dual Trunnion To be used with APX 8500 MP, APX 6500 and APX 6500 Enhanced | HLN7045B |
| | | Motorcycle Enclosure, Black | HLN7022 |
| COMPATIBILITY | ACCESSORY | | |
| EXTERNAL ALARI | | rnal alarm accessories enable additional s d | witching |
| MOBILE RADIOS | DESCRIPTION | u | PART NUMBER |
| APX 8500 SERIES APX 7500 SERIES APX 6500 SERIES APX 4500 SERIES APX 1500 SERIES | | External Alarm Relays | HLN6969 |



| | ACCESSORY | | |
|---|-------------|--|-------------|
| MOBILE RADIOS | DESCRIPTION | n on your desk or in your vehicle with exter | PART NUMBER |
| | | Remote Mount, Water Resistant Speaker, 7.5 Watt Rated Audio | HSN4038 |
| | | Remote Mount, Water Resistant Speaker, 15 Watt Rated Audio | HSN4040 |
| APX 8500 SERIES | | Non-Water Resistant Speaker, 13 Watt Rated Audio | HSN4032 |
| APX 7500 SERIES | | Covert 10 Watt Rated Audio Speaker | HSN4042 |
| APX 6500 SERIES | | Siren Speaker, Round with Chrome Finish | TDN6251 |
| APX 4500 SERIES | | Siren Speaker, Rectangular with White Finish | TDN6252 |
| APX 1500 SERIES | S | Siren Speaker, Round with Grey Finish | TDN6254 |
| | | Siren Speaker, Under Hood with Grey Finish | TDN6253 |
| COMPATIBILITY | ACCESSORY | | |
| UNIVERSAL RELA | | | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| APX 8500 SERIES APX 7500 SERIES APX 6500 SERIES | | Universal Relay Controller for 09 Control Head, 10 DC Outputs, 15 Amps per Channel | PMUN1046 |

Universal Relay Controller to Transceiver Cable

APX 4500 SERIES APX 1500 SERIES

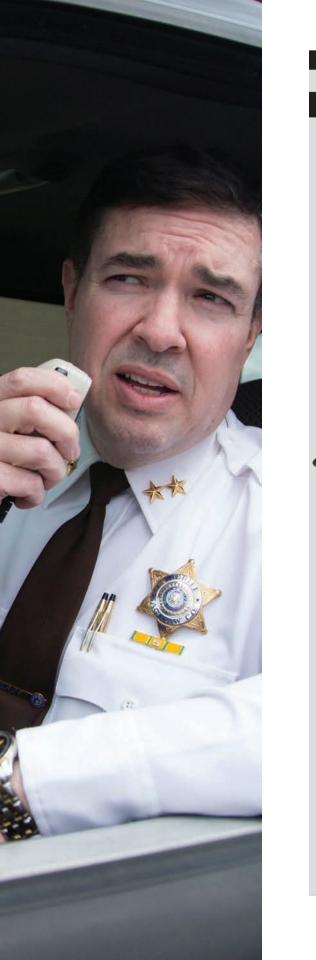
sceiver 30641

3064153H05

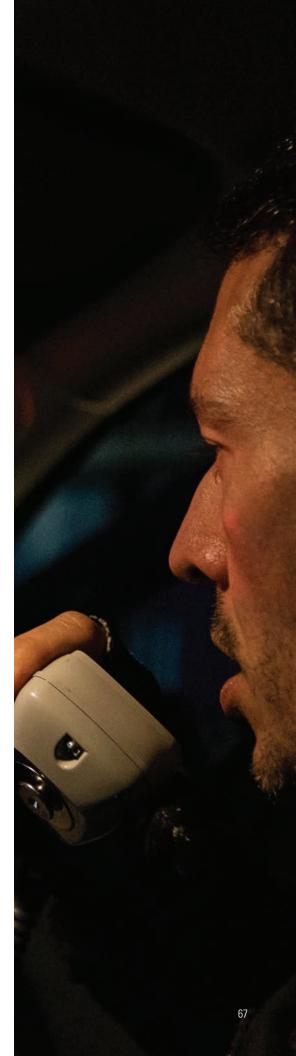


| COMPATIBILITY | ACCESSORY | | |
|------------------------------------|-------------|------------------------|-------------|
| MOBILE SIREN | | | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| | | Siren | DDN1542 |
| APX 7500 SERIES APX 6500 SERIES | | Siren Install Hardware | DDN1543 |
| APX 4500 SERIES APX 1500 SERIES | | Siren to Radio Cable | DDN1883 |
| | | O3 Siren to DEK Cable | DDN1545 |

| COMPATIBILITY SIREN ACCESSOF | ACCESSORY | | |
|---------------------------------|-------------|---|-------------|
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| | 1000 | Siren Switchbox | HLN6819 |
| | | Wire Harness for Siren Switchbox. Needed to connect HLN6819 to DDN1774 | DDN1886 |
| APX 7500 SERIES | Repapar | Mode Direct Entry Keypad, 8-Buttons | H1835 |
| APX 4500 SERIES | | Siren Cable, 03 Siren to Switchbox | HKN6146 |
| APX 1500 SERIES | | Siren Cable, 05 Siren to Switchbox | HKN4363 |
| | Ö | Siren Cable, Direct Keypad for O3 Control Head | HKN6145 |



| COMPATIBILITY | ACCESSORY | | |
|-----------------|-----------------|-------------------------------------|-------------|
| SLIM (SIREN LIG | HT INTERFACE MO | DULE) | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| | | SLIM (Siren Light Interface Module) | DDN1774 |
| | | Power Harness for SLIM | DDN1775 |
| | | Radio to SLIM Cable | DDN1776 |
| | | Programming Kit for SLIM | DDN1777 |
| | | Interface Kit IK-A1 | DDN1778 |
| APX 7500 SERIES | | Interface Kit IK-A4 | DDN1779 |
| | | Interface Kit IK-C1 | DDN1780 |
| APX 6500 SERIES | | Interface Kit IK-D3 | DDN1781 |
| APX 4500 SERIES | | Interface Kit IK-E2 | DDN1782 |
| APX 1500 SERIES | | Interface Kit IK-F5 | DDN1783 |
| | | Interface Kit IK-A1WA | DDN1896 |
| | | Interface Kit IK-A1WB | DDN1897 |
| | | Interface Kit IK-C1F | DDN1898 |
| | | Interface Kit IK-C1C | DDN1899 |
| | | Interface Kit IK-A4WC | DDN1937 |



| | ACCESSORY | | |
|------------------------------------|-------------|---|-------------|
| CABLES MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| CONTROL HEAD C | | | |
| | O | O3 Handheld Control Head Extension Cable, 17-Feet | PMLN4958 |
| APX 7500 SERIES APX 6500 SERIES | Q | 03 Handheld Control Head Accessory Cable | PMLN4959 |
| APX 4500 SERIES APX 1500 SERIES | Ç | Control Head Cable with Connections for Power, Speaker and Headset Jack | HKN6187 |
| | Ó | Control Head Cable with Connections for Power and Speaker | HKN6188 |
| REMOTE MOUNT | CABLES | | |
| | | Remote Mount Cable, 131-Feet | HKN6164 |
| ar 1110 a | | Remote Mount Cable, 115-Feet | HKN6165 |
| | 0 | Remote Mount Cable, 75-Feet | HKN6166 |
| APX 7500 SERIES | | Remote Mount Cable, 50-Feet | HKN6167 |
| | | Remote Mount Cable, 30-Feet | HKN6168 |
| APX 6500 SERIES | | Remote Mount Cable, 17-Feet | HKN6169 |
| | | Remote Mount Cable, 10-Feet | HKN6170 |
| APX 4500 SERIES | \cap | Cable, Remote Control Head Vehicular Interface Port Connector for 05 Control Head | HKN6196 |
| APX 1500 SERIES | | Cable, Remote Control Head Mobile Accessory Port Connector for O5 Control Head | HKN6961 |
| APX 7500 SERIES | Q | Motorcycle Remote Cable for 05 Control Head | 3075217A02 |
| KEYLOAD CABLES | ; ; | | |
| APX 7500 SERIES APX 6500 SERIES | Ð | Keyloader Cable, KVL3000 and KVL4000 | TKN8531 |
| APX 4500 SERIES APX 1500 SERIES | | Keyload Adapter for Mobile Microphone Port | HKN6182 |



| CABLES | | | |
|--|-------------|--|------------|
| MOBILE RADIOS | DESCRIPTION | | PART NUMBE |
| POWER CABLES | | | |
| | -0 | Mid Power, Dash Mount Power Cable, 10-Feet | HKN4191 |
| APX 7500 SERIES | Ø | Mid Power, Remote Mount Power Cable, 20-Feet | HKN4192 |
| APX 6500 SERIES | • | Mid Power, Rear Ignition Cable, Dash Mount | HLN6863 |
| APX 4500 SERIES | Ò | High Power, Remote Mount Power Cable 20-Feet | HKN6110 |
| APX 1500 SERIES | V | Motorcycle Power Cable | HKN6032 |
| DATA CABLES | | | |
| APX 8500 SERIES | | Data Cable connects APX 8500 to Siren and DVRS MSU support with J600 port adapter | CB000409A |
| APX 8500 SERIES APX 7500 SERIES APX 6500 SERIES APX 4500 SERIES | | Data Tethering Cable, required to connect to VML or certified data modem | KT000252A |
| | | RS232 Cable for Rear Accessory Port, Dash Mount Only, 6-Feet | HKN6160 |
| | | RS232 Cable for Rear Accessory Port, Remote Mount Only, 20-Feet | HKN6161 |
| APX 7500 SERIES APX 6500 SERIES APX 4500 SERIES APX 1500 SERIES | 0 | RS232 Cable for Mobile Microphone Port | HKN6183 |
| | O | RS232 Cable for J600 Transceiver Interconnect Board, 22-Feet | HKN6122 |
| PROGRAMMING | CABLES | | |
| APX 7500 SERIES APX 6500 SERIES | ~ /~ | USB Cable, Rear Accessory Port, Remote Mount, 15-Feet (for use with customer program software) | HKN6172 |
| APX 4500 SERIES APX 1500 SERIES | | USB Cable, Rear Accessory Port, Dash Mount, 6-Feet (for use with customer program software) | HKN6163 |
| APX 7500 SERIES APX 6500 SERIES | 0 | Programming Cable | HKN6184 |



ANTENNAS

For optimum range and quality, it is important to match the mobile radio's frequency with the proper Motorola antenna. These are available as standard 1/4 wave models or can include 3dB, 3.5dB or 5dB signal gain.



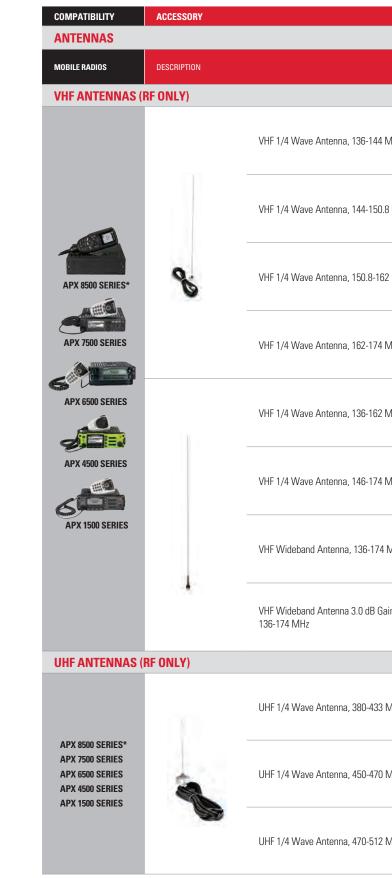
APX MOBILE RADIO ACCESSORIES

| COMPATIBILITY ANTENNAS A va | ACCESSORY | e best possible reception wherever you ope | rate. Choose from ar | FEATURES | ed GPS to standalo | ne RF antennas. |
|--------------------------------|-----------------|---|----------------------|----------------------------|-------------------------|-------------------|
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER | UHF / VHF / 800/900 MHz | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| APX 8500 MOTO | RCYCLE ANTENNAS | | | | | |
| | | All Band Mobile Antenna | AN000131A01 | | | Through-hole |
| APX 8500 SERIES | | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 136-144 MHz, No Tuning Required | AN000197A01 | VHF | 136-144 | Motorcycle |
| | | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector,144-150.8 MHz, No Tuning Required | | VHF | 144-150.8 | Motorcycle |
| | | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 150.8-162 MHz, No Tuning Required | AN000197A03 | VHF | 150.8-162 | Motorcycle |

| COMPATIBILITY | ACCESSORY | | FEATURES | | |
|---------------------------|---|-------------|----------------------------|-------------------------|-------------------|
| ANTENNAS MOBILE RADIOS | DESCRIPTION | PART NUMBER | UHF / VHF / 800/900 MHz | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| APX 8500 MOTO | RCYCLE ANTENNAS | | | | |
| | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 162-174 MHz, No Tuning Required | AN000197A04 | VHF | 162-174 | Motorcycle |
| | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 380-433 MHz, No Tuning Required | AN000197A05 | UHF | 380-433 | Motorcycle |
| APX 8500 SERIES | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 425-470 MHz, No Tuning Required | AN000197A06 | UHF | 425-470 | Motorcycle |
| | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 450-482 MHz, No Tuning Required | AN000197A07 | UHF | 450-482 | Motorcycle |

| COMPATIBILITY | ACCESSORY | | FEATURES | | |
|-----------------|---|-------------|----------------------------|-------------------------|-------------------|
| ANTENNAS | | | | | |
| MOBILE RADIOS | DESCRIPTION | PART NUMBER | UHF / VHF / 800/900 MHz | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| APX 8500 MOTOR | CYCLE ANTENNAS | | | | |
| | Motorcycle Mount, 1/4 Wave Whip Antenna with QMA Connector, 482-520 MHz, No Tuning Required | AN000197A08 | UHF | 482-520 | Motorcycle |
| | Motorcycle Mount, Low Profile, Unity Gain Antenna with QMA Connector, 450-512 MHz, No Tuning Required | AN000197A09 | UHF | 450-512 | Motorcycle |
| APX 8500 SERIES | Motorcycle Mount Antenna with ΩMA Connector, 3dB Gain, 762-870 MHz | AN000197A10 | 800/900 | 762-870 | Motorcycle |
| | Motorcycle Mount, Low Profile Antenna with QMA Connector, 3dB Gain, 762-870 MHz | AN000197A11 | 800/900 | 762-870 | Motorcycle |

| COMPATIBILITY | ACCESSORY | | |
|-----------------|--------------------|------------------------------------|-------------|
| APX 8500 ANTEN | NA MULTIPLEXERS AN | D ADAPTERS | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER |
| | | Vehicle Multiplexer (supports HP) | EQ000103A02 |
| | | Motorcycle Multiplexer (low power) | EQ000103A01 |
| APX 8500 SERIES | | Mini U To QMA Adapter 12" | CB000091A03 |
| AFX 6000 SERIES | | QMA to QMA Adapter 12" | CB000091A02 |
| | | SMA to QMA Adapter 12" | CB000091A04 |



*CB000091A03 - Mini-U to QMA adapter required for APX 8500 to antenna connection.

| | | FEATURES | | |
|----------|-------------|----------------------------|-------------------------|-------------------|
| | PART NUMBER | UHF / VHF / 800/900 MHz | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| 44 MHz | HAD4006 | VHF | 136-144 | Through-hole |
| 50.8 MHz | HAD4007 | VHF | 144-150.8 | Through-hole |
| -162 MHz | HAD4008 | VHF | 150.8-162 | Through-hole |
| 74 MHz | HAD4009 | VHF | 162-174 | Through-hole |
| 62 MHz | HAD4016 | VHF | 136-162 | Through-hole |
| 74 MHz | HAD4017 | VHF | 146-174 | Through-hole |
| 74 MHz | HAD4021 | VHF | 136-174 | Through-hole |
| Gain, | HAD4022 | VHF | 136-174 | Through-hole |
| | | | | |
| 33 MHz | HAE6012 | UHF | 380-433 | Through-hole |
| 70 MHz | HAE4003 | UHF | 450-470 | Through-hole |
| 12 MHz | HAE4004 | UHF | 470-512 | Through-hole |

| COMPATIBILITY ANTENNAS | ACCESSORY | | | FEATURES | | |
|---------------------------|-------------|--|-------------|----------------------------|-------------------------|-------------------|
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER | UHF / VHF / 700/800 MHz | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| UHF ANTENNAS | (RF ONLY) | | | | | |
| | 1.1 | UHF 3 dB Gain Antenna, 494-512 MHz | HAE4013 | UHF | 494-512 | Through-hole |
| | | UHF 3.5 dB Gain Antenna, 380-420 MHz MAXRAD | HAE6010 | UHF | 380-420 | Through-hole |
| | | UHF 3.5 dB Gain Antenna, 470-495 MHz | HAE4011 | UHF | 470-495 | Through-hole |
| | | UHF 3.5 dB Gain Antenna, 450-470 MHz | HAE4012 | UHF | 450-470 | Through-hole |
| | | UHF 5 dB Gain Antenna, 380-420 MHz MAXRAD | HAE6011 | UHF | 380-420 | Through-hole |
| APX 8500 SERIES* | | UHF 5 dB Gain Antenna, 455-470 MHz | RAE4014 | UHF | 455-470 | Through-hole |
| APX 7500 SERIES | | UHF 5 dB Gain Antenna, 470-494 MHz | RAE4015 | UHF | 470-494 | Through-hole |
| APX 6500 SERIES | | UHF 5 dB Gain Antenna, 494-512 MHz | RAE4016 | UHF | 494-512 | Through-hole |
| APX 4500 SERIES | T | UHF 2 dB Gain Wideband Antenna, 380-470 MHz, MAXRAD | HAE6013 | UHF | 380-470 | Through-hole |
| APX 1500 SERIES | | UHF 2 dB Gain Wideband Antenna, 450-512 MHz | HAE6015 | UHF | 450-512 | Through-hole |
| | | UHF 2 dB Gain Wideband Antenna, 380-520 MHz | HAE6031 | UHF | 380-520 | Through-hole |
| | | UHF Wideband Low Profile Antenna, 450-512 MHz | HAE6016 | UHF | 450-512 | Through-hole |

*CB000091A03 - Mini-U to QMA adapter required for APX 8500 to antenna connection.

| COMPATIBILITY | ACCESSORY | | | FEATURES | _ | |
|------------------------------------|------------------|---|-------------|----------------------------|-------------------------|------------------|
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER | UHF / VHF / 700/800 MHz | FREQUENCY BAND (MHz) | MOUNTIN STYLE |
| 700/800 MHZ AN | TENNAS (RF ONLY) | | | | | |
| | | 1/4 Wave Antenna, 762-870 MHz | HAF4016 | 700/800 | 762-870 | Through-h |
| APX 8500 SERIES* | | 3 dB Gain Low Profile Antenna, 762-870 MHz | HAF4013 | 700/800 | 762-870 | Through-h |
| APX 6500 SERIES APX 4500 SERIES | | 3 dB Gain Elevated Feed Antenna, 762-870 MHz | HAF4014 | 700/800 | 762-870 | Through-h |
| APX 1500 SERIES | | 3 dB Gain Collinear Antenna, 762-870 MHz | HAF4017 | 700/800 | 762-870 | Through-h |

*CB000091A03 - Mini-U to QMA adapter required for APX 8500 to antenna connection.



| COMPATIBILITY | ACCESSORY | | | FEATURES | | |
|------------------------------------|-------------|---|-------------|--------------|-------------------------|-------------------|
| ANTENNAS | | | | | | |
| MOBILE RADIOS | DESCRIPTION | | PART NUMBER | GPS/WI-FI | FREQUENCY BAND (MHz) | MOUNTING STYLE |
| GPS / WI-FI ANTE | NNAS | | | | | |
| APX 7500 SERIES APX 6500 SERIES | | GPS Roof Mount Antenna SMA Male connector with RG-174 17ft cable | HAG4000 | GPS Only | | Roof Mount |
| APX 4500 SERIES APX 1500 SERIES | | GPS Glass Mount Antenna SMA Male connector with RG-174 17ft cable | PMAN4001 | GPS Only | | Glass Mount |
| | | Convert glass-mount motorcycle antenna with Wi-Fi 5GHz | PMAN5101 | Wi-Fi Only | | Glass Mount |
| APX 8500 SERIES* | | Convert glass-mount motorcycle antenna with GPS GNSS | PMAN4109 | GPS Only | | Glass Mount |
| APX 6500 SERIES APX 4500 SERIES | | Wi-Fi/GPS Combination Vehicle Antenna | AN000163A01 | GPS Wi-Fi | | Through-hole |
| APX 1500 SERIES | | Wi-Fi/GPS Combination Motorcycle Antenna | AN000163A02 | GPS Wi-Fi | | Motorcycle |
| APX 7500 SERIES | 990 | GPS Motorcycle Antenna | HAG4001 | GPS Only | | Motorcycle |

*CB000091A03 - Mini-U to QMA adapter required for APX 8500 to antenna connection.



GLOSSARY

HAZLOC-CAPABLE

For more information on which accessories are approved by Factory Mutual (FM) or Underwriters' Laboratory (UL) with certain APX models, please consult the manual provided with each FM- or UL-approved APX portable. Motorola-approved accessories are a critical part of the overall radio system intrinsic safety certification. Non-Motorola approved accessories may not be certified for APX and if used, could result in equipment that is NOT approved and unsafe in a hazardous environment.

IP RATING

International Protection (IP) is a global standard for rating dust and water protection. The first digit IP5x or IP6x represents increased levels of dust protection. The second digit, IPx7 or IPx8 represents increased levels of water protection.

• **IPx7** represents withstanding submersion in 1 meter of fresh water for 30 minutes.

• **IPx8** represents heating accessory to 27°C higher than the water temperature for 2 hours then immediately immersing it to a depth of 1 meter for another 2 hours.

• **IPx8+Rugged** represents exceeding industry specs by heating accessory to 27°C higher than the water temperature for 2 hours then immediately immersing it to a depth of 2 meters for another 4 hours.

MICROPHONE NOISE SUPPRESSION Multi Mic Noise Suppression: Five

integrated microphones and Adaptive Audio Engine automatically change the level of noise suppression, microphone gain, Windporting and speaker equalization to produce clear and loud audio in any environment.

Dual Mic Noise Suppression: Dualmicrophone design tracks your voice so that you can keep your eye on what's in front of you while speaking. A digital signal processor (DSP) algorithm helps suppress background noise so you can be heard clearly regardless of the noise around you.

Windporting (Motorola Exclusive): Windporting reduces the effect of wind and other outdoor noises on your microphone performance and prevents water from clogging the microphone and distorting your transmission.

Noise-cancelling microphones negate crowd or machinery noise so your voice comes through loud and clear anytime you speak directly into the microphone.

SWIVEL OR FIXED LOOP

Secure to a belt loop and the case swings freely from side to side. The swivel latch system also allows the radio and case to be removed from the belt loop by simply inverting, lifting it up and out of the belt loop. Fixed loops provide a sturdy attachment to your belt.





For more information on Motorola mission critical accessories, visit **motorolasolutions.com/apx**.



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. motorolasolutions.com

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RELIABILITY MEETS P25 PORTABILITY

APX[™] 1000 PROJECT 25 PORTABLE RADIO

If you are racing to respond to an electrical outage or monitor a highway construction build, you need a radio that keeps you connected, instantly and continuously no matter the situation, background noise, weather, or duration. You expect a reliable radio where every word is heard and every message understood when it counts most.

Public safety, utilities, and government service users require a P25 radio that can stand up to the toughest tasks while keeping them connected to surrounding agencies and first responders. The APX 1000 is engineered to give you the capabilities you need at the budget you can afford. It combines uncompromising durability, simplified controls and excellent audio quality in a compact P25 TDMA capable portable radio.

EVERYTHING YOU WANT IN A RADIO, FOR LESS

With the APX 1000, you pay for only the functionality you need at the level you can afford without giving up the exceptional quality and reliability you expect from APX. The APX 1000 provides you with a radio that meets and fits your budget needs.

MISSION READY VOICE TECHNOLOGY

The APX 1000 is P25 TDMA capable for twice the voice capacity so you can add more users without adding more frequencies or infrastructure. And it's backwards and forwards compatible with all Motorola mission critical radio systems, so you can interoperate with surrounding agencies and first responders with confidence.

POWER UP WITH APX 1000 ACCESSORIES

- Designed, tested and certified for optimum performance with your radio
- Complete portfolio of remote speaker microphones, headsets
- High-powered IMPRES[™] batteries that have a slim design to fit the compact radio size

APX 1000 PROJECT 25 PORTABLE RADIO

FEATURES AND BENEFITS

- Available in 700/800 MHz, 900 MHz, VHF, UHF R1 and UHF R2 bands
- Trunking standards supported:
 Clear or digital ASTRO[®] 25 Trunked Operation Analog MDC-1200 and Digital APCO P25 Conventional System Configurations
- Narrow and wide bandwidth digital receiver (6.25 kHz equivalent / 12.5 kHz / 20 kHz / 25 kHz)¹
- Embedded digital signaling (ASTRO and ASTRO 25)
- Available in models 1.5, 2 and 3
- Lightbar with Intelligent Lighting
- Radio Profiles
- Unified Call List
- User programmable Voice Announcement
- Meets Applicable MIL-STD-810C, D, E, F and G

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

- Meets IP54 Environmental Specifications
- Superior Audio Features:
 0.5 W high audio speaker
 2-mic noise canceling technology
- Utilizes Windows 7 Customer Programming Software (CPS)
 Supports USB communications
 - Built in FLASHport[™] support
- Full portfolio of accessories including IMPRES batteries, chargers and audio devices²

OPTIONAL FEATURES

- ASTRO 25 Integrated Voice & Data
- Programming Over Project 25
- P25 Link Layer Authentication



| | | VHF | UHF Range 1 | UHF Range 2 | 700/800 MHz | 900 MHz |
|--|--------------------|-------------------------------|-------------------------------|-------------------------------|--|----------------------------|
| Frequency Range/Bandsplits | | 136-174 MHz | 380-470 MHz | 450-520 MHz | 764-776 MHz 794-806 MHz 806-824 MHz 851-870 MHz | 896-901 MHz 935-940 MHz |
| Channel Spacing | | 25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 12.5 kHz |
| Maximum Frequency Separation | | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power Adj ³ | | 1-5 Watts Max | 1-5 Watts | 1-5 Watts Max | 1-2.5 Watts 1-3 Watts | 1-2.5 Watts |
| Frequency Stability ³ (-30°C to +60°C; +25°C Ref.) | | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % |
| Modulation Limiting ³ | | ±5 kHz / ±4 kHz / ±2.5 kHz | ±2.5 kHz |
| Emissions (Conducted and Radiated) | 3 | —75 dB | —75 dB | —75 dB | —75 dB | —75 dB |
| Audio Response ³ | | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB | +1, -3 dB |
| FM Hum and Noise | 25 kHz 12.5 kHz | -47 dB -45 dB | -47 dB -45 dB | -47 dB -45 dB | -47 dB -45 dB | -45dB |
| Audio Distortion ³ | | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |

BATTERIES FOR APX 1000

| BATTERY CAPACITY / TYPE | DIMENSIONS (H X W X D) | WEIGHT | BATTERY PART NUMBER | BATTERY CAPACITY |
|-----------------------------|------------------------|-----------|---------------------|------------------|
| Li-Ion IMPRES 1900 mAh IP54 | 114.5 x 55.04 x 17.85 | 150 grams | NNTN8128B | 1900 mAh |
| Li-Ion IMPRES 2300 mAh IP54 | 114.5 x 55.04 x 23.15 | 160 grams | PMNN4424AR | 2300 mAh |
| Li-Ion IMPRES 2700 mAh IP54 | 114.5 x 55.04 x 23.15 | 160 grams | PMNN4448AR | 2700 mAh |

¹ Per the FCC Narrowbanding rules, new products (APX 1000 UHFR1) submitted for FCC certification after January 1, 2011

are restricted from being granted certification at 25 KHz for United States - State and Local Markets only.

² Chargers and batteries for the APX 1000 radios will interoperate with APX 4000 radios.

³ Measured in the analog mode per TIA / EIA 603 under nominal conditions.

PRODUCT SPEC SHEET APX[™] 1000 PROJECT 25 PORTABLE RADIO

RADIO MODEL







| | MODEL 1.5 | MODEL 2 | MODEL 3 | | | | |
|---------------------------------|---|--|---|--|--|--|--|
| Display | Full bitmap color LCD display, 3 lines | Full bitmap color LCD display, 3 lines of text x 14 characters, 1 line of icons, 1 menu line x 3 menus, White backli | | | | | |
| Keypad | Backlight keypad 3 soft keys | Backlight keypad, 3 soft keys, 4 direction navigation key, Home and Data buttons | Backlight keypad, 3 soft keys, 4 direction navigation key, 4x3 keypad Home and Data buttons | | | | |
| Channel Capacity | | 512 | | | | | |
| FLASHport Memory | | 64 MB | | | | | |
| VHF (136-174 MHz) | H84KDD9PW5AN | H84KDF9PW6AN | H84KDH9PW7AN | | | | |
| UHF Range 1 (380-470 MHz) | H84QDD9PW5AN | H84QDF9PW6AN | H84QDH9PW7AN | | | | |
| UHF Range 2 (450-520 MHz) | H84SDD9PW5AN | H84SDF9PW6AN | H84SDH9PW7AN | | | | |
| 700/800 MHz (763-870 MHz) | H84UCD9PW5AN | H84UCF9PW6AN | H84UCH9PW7AN | | | | |
| 900 MHz (896-940 MHz) | | H84WCF9PW6AN | | | | | |
| Buttons and Switches | Large PTT button • Multi-fur | nction knob • Orange emergency button • | 3 programmable side buttons | | | | |
| TRANSMITTER CERTIFICATION | | | | | | | |
| VHF (136-174 MHz) | AZ489FT3834 | | | | | | |
| UHF Range 1 (380-470 MHz) | AZ489FT4917 | | | | | | |
| UHF Range 2 (450-520 MHz) | AZ489FT4920 | | | | | | |
| 700/800 MHz (764-869 MHz) | AZ489FT7057 | | | | | | |
| 900 MHz (896- 901, 935-940 MHz) | AZ489FT5861 | | | | | | |
| FCC EMISSION DESIGNATORS | | | | | | | |
| FCC Emissions Designators | 11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K | 10F1W | | | | | |
| POWER SUPPLY | | | | | | | |
| Power Supply | One rechargeable Li-Ion 1900 mAh batter cap Li-Ion. | One rechargeable Li-Ion 1900 mAh battery standard, or 2300 and 2700 mAh high cap Li-Ion. | | | | | |
| | | | | | | | |

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

| | | VHF | UHF Range 1 | UHF Range 2 | 700/800 MHz | 900 MHz |
|---|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| Frequency Range/Bandsplits | | 136-174 MHz | 380-470 MHz | 450-520 MHz | 763-776 MHz 851-870 MHz | 935-940 MHz |
| Channel Spacing | | 25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 25/12.5 kHz | 12.5 kHz |
| Maximum Frequency Separation | ı | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated ³ | | 500mW | 500mW | 500mW | 500mW | 500mW |
| Frequency Stability³ (–30°C to +60°C; +25°C Ref.) | | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % | ±0.00010 % |
| Analog Sensitivity ⁴ Digital Sensitivity ⁵ | 12 dB SINAD 1% BER (800 MHz) 5% BER | 0.216μV 0.277μV 0.188μV | 0.234µV 0.307µV 0.207µV | 0.234µV 0.307µV 0.207µV | 0.250µV 0.400µV 0.250µV | 0.236µV 0.33µV 0.222µV |
| Selectivity ³ | 25 kHz channel 12.5 kHz channel | -76 dB -70 dB | -76 dB -67 dB | -76 dB -67 dB | -76 dB -67 dB | -67 dB |
| Intermodulation | | -79.5 dB | -77 dB | -77 dB | -75 dB | -75 dB |
| Spurious Rejection | | -79.3 dB | -80.3 dB | -80.3 dB | -76.6 dB | -80 dB |
| FM Hum and Noise | 25 kHz 12.5 kHz | -51 dB -45 dB | -50 dB -45 dB | -50 dB -45 dB | -53 dB -47 dB | -47 dB |
| Audio Distortion ³ | | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |

 4 Measured conductively in analog mode per TIA / EIA 603 under nominal conditions. 5 Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.

PRODUCT SPEC SHEET APX[™] 1000 PROJECT 25 PORTABLE RADIO

PORTABLE MILITARY STANDARDS 810 C, D, E, F AND G

| | MIL-S | TD 810C | MIL-S | TD 810D | MIL-S | TD 810E | MIL-S | TD 810F | MIL-S | TD 810G |
|-------------------|--------|--------------------|--------|-------------|--------|-------------|--------|-------------------------|--------|--------------|
| | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat | Method | Proc./Cat |
| Low Pressure | 500.1 | 1 | 500.2 | II | 500.3 | 11 | 500.4 | 11 | 500.5 | 11 |
| High Temperature | 501.1 | 1, 11 | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/ Basic Hot | 501.5 | I/A1, II/A2 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I/C3, II/C1 | 502.4 | I/C3, II/C1 | 502.5 | I/C3, II/C1 |
| Temperature Shock | 503.1 | 1 | 503.2 | I/A1C3 | 503.3 | I/A1C3 | 503.4 | I | 503.5 | I/C |
| Solar Radiation | 505.1 | 11 | 505.2 | I | 505.3 | I | 505.4 | 1 | 505.5 | I/A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | 1, 111 | 506.5 | 1, 111 |
| Humidity | 507.1 | 11 | 507.2 | 11 | 507.3 | 11 | 507.4 | 1 Proc | 507.5 | II/Aggravate |
| Salt Fog | 509.1 | I | 509.2 | 1 | 509.3 | I | 509.4 | 1 Proc | 509.5 | 1 Proc |
| Blowing Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.5 | 1 |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | II | 510.3 | 11 | 510.4 | 11 | 510.5 | I |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | 1/24 | 514.6 | 1/24 |
| Shock | 516.2 | I, III | 516.3 | I, VI | 516.4 | I, VI | 516.5 | I, VI | 516.6 | I, VI |
| Shock (Drop) | 516.2 | | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |

DIMENSIONS OF THE RADIOS WITHOUT BATTERY

| | INCHES | MILLIMETERS |
|--------------------------------------|---------|-------------|
| Length | 5.26 | 133 |
| Width Push-To-Talk button | 2.37 | 60.2 |
| Depth Push-To-Talk button | 1.72 | 43.6 |
| Width Top | 2.56 | 65 |
| Depth Top | 2.13 | 43 |
| Weight of the Radios Without Battery | 8.47 oz | 240 g |

ENVIRONMENTAL SPECIFICATIONS

| ENVIRONMENTAL ST LONIGATIO | 5143 | | |
|------------------------------------|--|--|--|
| Operating Temperature ⁶ | -30°C / +60°C | | |
| Storage Temperature ⁶ | -40°C/+85°C | | |
| Humidity | Per MIL-STD | | |
| ESD | IEC 801-2 KV | | |
| Water and Dust Intrusion | IP54 | | |
| Housing Availability | Black only | | |
| ENCRYPTION | | | |
| Supported Encryption Algorithms | ADP SW | | |
| Key Storage | Tamper protected volatile or non-volatile memory | | |
| Key Erasure Keyboard command | | | |
| | | | |

⁵ Accuracy specs are for long-term tracking (95th percentile values >5 satellites visible at a nominal -130 dBm signal strength)
 ⁶ Temperatures listed are for radio specifications. Battery storage is recommended at 25°C, ±5°C to ensure best performance. Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

To learn more about the APX 1000 P25 portable radio contact your Motorola representative or visit **motorolasolutions.com/apx1000**.

Motorola Solutions, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. motorolasolutions.com

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