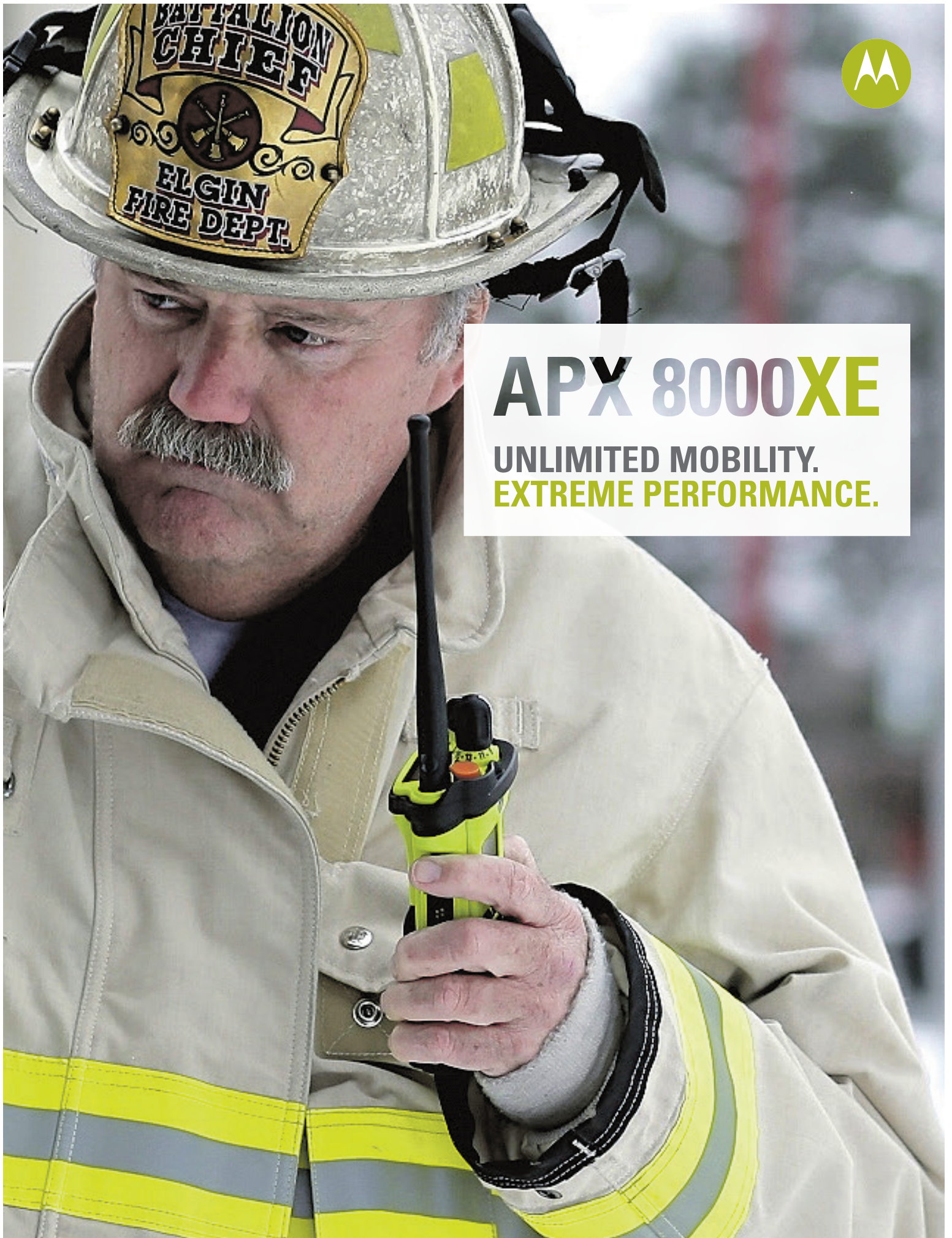




APX 8000XE

UNLIMITED MOBILITY.
EXTREME PERFORMANCE.



APX™ 8000XE ALL-BAND P25 PORTABLE RADIO

Working together with firefighters around the world, we designed the APX™ Extreme Series, a safe, and easy and efficient to use portfolio of ergonomically advanced, ultra-rugged radios and accessories. With over eighty years of experience in ergonomics, design and technology for public safety, the APX XE Series is the culmination of cross-disciplines and user input.

Firefighters said they wanted equivalent extreme features as the APX Extreme Series including a larger display, exaggerated control knobs, and the capability to communicate with surrounding municipalities within an all-band radio solution. The APX 8000XE brings together not only these requirements, but also the integration of Wi-Fi® for programming flexibility.

The APX 8000XE is redefining mission critical communications by delivering an ultra-durable radio that combines unlimited interoperability, loud audio, and secure Wi-Fi connectivity. With a dedicated channel knob and ability to withstand 500 degrees heat exposure, the APX XE500 Remote Speaker Microphone is the perfect companion to the APX 8000XE. When combined, the APX 8000XE All-Band Portable Radio and XE500 Remote Speaker Microphone create the ultimate mission critical solution designed for safety personnel in extreme environments.

KEY FEATURES

- Unlimited interoperability with one device
- Secure Wi-Fi for seamless software updates
- Extra-large buttons for glove use
- IP68 submersion (2 meters, 4 hours)
- ANSI/ISA-12.12.01-2015 CAN/CSA C22.2 NO. 213-15, Nonincendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 2
- Integrated GPS/GLONASS for outdoor location tracking
- Equipped with FIPS-certified encryption hardware
- RFID volume knob for asset tracking (optional)
- Bluetooth-enabled APX radios capable of transmitting SCBA voice and data





MODEL 1.5
NO KEYPAD



MODEL 2.5
LIMITED KEYPAD



MODEL 3.5
FULL KEYPAD

UNLIMITED MOBILITY.
EXTREME PERFORMANCE.



ALL-BAND

Unlimited mobility

With a 4-in-1 radio, you now have the ability to stay connected and expand voice and data communications across multiple agencies with one device. Improve response time by instantly operating on digital or analog networks, in 7/800, VHF, UHF Range 1 and 2 bands at any given time.



ADAPTIVE AUDIO ENGINE

Hear and be heard

The APX 8000XE is equipped with a 3-Watt speaker, 3 integrated microphones and 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.



SECURE WI-FI

Voice and data, all at once

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

LARGE YET PROTECTED
EMERGENCY BUTTON

TOP DISPLAY



MODEL 1.5

MODEL 2.5

LARGE CHANNEL KNOB

LARGE VOLUME KNOB

WATER RESISTANT SPEAKER



TACTILE KEYPAD

TEXTURED PTT BUTON

HIGH-IMPACT
GREEN HOUSING

MODEL 3.5



**ENHANCED
CONTROLS**

Designed for the mission

The ergonomic design of the APX 8000XE is a well-thought out solution. Whether you're putting out fires, defending your country's coastline or working in other extreme conditions that require heavy gloves, the exaggerated control knobs are easy to grip and locate in even the most stressful moments. From display size to button positioning, this radio is easy to access and operate.



FAST, SIMPLE, SECURE

Greater mobility

APX Personnel Accountability allows Incident Commanders to quickly and accurately account for first responders through radio roll call and an interactive GUI. Real-time accountability allows incident commanders to focus on maintaining control of a chaotic fireground.

With BT standard on all APX XE radios, we are able to partner with SCBA industry leaders to provide clear in-mask communications so you can hear and be heard. Collaborations with both MSA and Scott Safety allow us to deliver clear voice and data communications.

PRODUCT DATA SHEET

APX™ 8000XE



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®, 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
- Intelligent Priority Scan
- Software Key
- Text-Messaging
- Voice Announcements
- Instant Recall
- ISSI 8000 Roaming
- Radio Profiles, Dynamic Zone
- Intelligent Lighting
- Single-key ADP Encryption
- IP68 submersion (2 meters, 4 hours)

- IMPRES Battery
- ANSI/ISA-12.12.01-2015 CAN/CSA C22.2 NO. 213-15, Nonincendive Electrical Equipment for Use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 2

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
- Data Modem Tethering
- RFID Volume Knob
- Multikey for 128 keys and multi-algorithm
- Programming Over Project 25 (OTAP)
- Over the Air Rekey (OTAR)
- Digital Tone Signaling
- P25 Authentication
- Man Down Sensor

* Compatible with BT 4.0, BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf BT accessories

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

| | 700/800 | VHF | UHF Range 1 | UHF Range 2 |
|--|--|----------------------------|----------------------------|----------------------------|
| Frequency Range/Bandsplits | 764-776, 794-806 MHz 806-825, 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 | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power Adj ¹ | 700 MHz: 1-2.5 Watts 800 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 kHz |
| Emissions (Conducted and Radiated) 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: -49 dB / -47 dB 800 MHz: -49 dB / -46 dB | -51 dB / -51 dB | -51 dB / -51 dB | -51 dB / -47 dB |
| Audio Distortion (25kHz / 12.5kHz) ¹ | 700 MHz: 0.90 % / 0.90 % 800 MHz: 0.60 % / 0.90 % | 0.50 % / 0.90 % | 0.50 % / 0.90 % | 0.60 % / 0.90 % |

BATTERIES FOR APX 8000XE

| Battery Capacity / Type | Dimensions (HxWxD) | Weight | Battery Part Number | Battery Capacity |
|---|--------------------|--------|---------------------|------------------|
| Li-Ion IMPRES UL2054 DIV 2 Rugged 3400 mAh IP68** | 3.4" x 2.3" x 1.7" | 6.5 oz | PMNN4504A | 3400 mAh |
| Li-Ion IMPRES UL2054 DIV 2 Rugged 4850 mAh IP68 | 5" x 2.3" x 1.7" | 10 oz | PMNN4505A | 4850 mAh |

KEY AUDIO ACCESSORIES****

| Name | Type | Part Number | Features |
|------------------------|-------|--------------|--|
| IMPRES Display RSM | Wired | HMN4104 | Windporting, Audio Jack, Channel Knob, Volume Control, Orange Button, IP68 |
| IMPRES XE RSM BLACK | Wired | NNTN8575ABLK | Windporting, Audio Jack, Strobe Light, Volume Control, Orange Button, IP68 |
| IMPRES XE RSM GREEN | Wired | NNTN8575 | Windporting, Audio Jack, Strobe Light, Volume Control, Orange Button, IP68 |
| IMPRES XE500 RSM BLACK | Wired | PMMN4106ABLK | Adaptive Audio Engine, Audio Jack, Strobe Light, Volume Control, Channel Knob, Orange Button, IP68 |
| IMPRES XE500 RSM GREEN | Wired | PMMN4106 | Adaptive Audio Engine, Audio Jack, Strobe Light, Volume Control, Channel Knob, Orange Button, IP68 |

** Ships standard with radio
**** Pending Hazardous Certification

PRODUCT DATA SHEET
APX™ 8000XE



MODEL 1.5



MODEL 2.5



MODEL 3.5

RADIO MODELS

| | | | |
|---------------------------|--|--|--|
| 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 | 1200 | 3000 | 3000 |
| FLASHport Memory | 2 GB | 2 GB | 2 GB |
| 700/800 MHz (764-870 MHz) | H91TGD9PW5AN | H91TGD9PW6AN | H91TGD9PW7AN |
| VHF (136-174 MHz) | | | |
| UHF Range 1 (380-470 MHz) | | | |
| UHF Range 2 (450-520 MHz) | | | |

Buttons & Switches Large PTT button • Angled On/Off volume control • X-large orange emergency button • 16 position top-mounted rotary switch
2-position concentric switch • Glove accessible 3-position switch • 3 programmable side buttons

| | |
|-------------------------------|--|
| Regulatory Information | |
| FCC ID | AZ489FT7061 |
| Industry Canada | 109U-89FT7061 |
| Emission Designators | LMR: 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E***, 20K0F1E*** Bluetooth®: 852KF1D, 1M17F1D, 1M19F1D, 1M04F1D WLAN (Wi-Fi): 13M7G1D, 17M0D1D, 18M1D1D |

*** In accordance with FCC mandate, the APX 8000XE 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.

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

| | 700 | 800 | VHF | UHF |
|--|-------------------------|-----------------|-----------------|-----------------|
| Frequency Range/Bandsplits | 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 Separation | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Speech Loudness at 30cm | 105 Phons | 105 Phons | 105 Phons | 105 Phons |
| Audio Output Power at Rated/Max | 3 Watt/5 Watt | 3 Watt/5 Watt | 3 Watt/5 Watt | 3 Watt/5 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 | 12 dB SINAD 0.224 uV | 0.224 uV | 0.168 uV | 0.199 uV |
| Digital Sensitivity ² | 1% BER 0.316 uV | 0.316 uV | 0.251 uV | 0.282 uV |
| | 5% BER 0.211 uV | 0.211 uV | 0.149 uV | 0.158 uV |
| | 5% BER Faded 0.562uV | 0.562 uV | 0.562 uV | 0.530 uV |
| Selectivity (25 kHz / 12.5 kHz) ^{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 at Rated | 1.2% | 1.3% | 1.3% | 1.2% |

PORTABLE 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 | 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 | I | 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 | II | 507.3 | II | 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 | I | 510.4 | I | 510.5 | I |
| Explosive Atmosphere | - | - | - | - | - | - | 511.4 | I | 511.5, 511.6 | I |
| Blowing Sand | 1 Proc | 1 Proc | 510.2 | II | 510.3 | II | 510.4 | II | 510.5 | II |
| 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 | II | 516.2 | IV | 516.4 | IV | 516.5 | IV | 516.6 | IV |

PRODUCT DATA SHEET

APX™ 8000XE

DIMENSIONS OF THE RADIOS WITHOUT BATTERY

| | Inches | Millimeters |
|--------------------------------------|---------|-------------|
| Length | 6.15 | 156.2 |
| Width Push-To-Talk button | 2.39 | 60.7 |
| Depth Push-To-Talk button | 1.40 | 35.5 |
| Width Top | 3.32 | 84.3 |
| Depth Top | 2.13 | 54.1 |
| Depth Bottom of Battery | 1.24 | 31.5 |
| Weight of the radios without battery | 13.9 oz | 394.1 g |

ENCRYPTION

| | |
|-----------------------------------|--|
| Supported Encryption Algorithms | ADP, AES, DES, DES-XL, DES-OFB, DVP-XL, Localized Algorithm |
| 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 360 mSec |
| Encryption Keying | Key Loader and Over the Air Rekeying (OTAR) |
| Synchronization | XL – Counter Addressing OFB – Output Feedback |
| Vector Generator | National Institute of Standards and Technology (NIST) approved random number generator |
| Encryption Type | Digital and SecureNet |
| Key Storage | Tamper protected volatile or non-volatile memory |
| Key Erasure | Keyboard command and tamper detection |
| Standards | FIPS 140-2 Level 3 FIPS 197 |

GPS/GNSS SPECIFICATIONS

| | |
|-------------------------|---------------------------|
| 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) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|------------------------------------|--------------------------|
| Operating Temperature ⁴ | -30°C / +60°C |
| Storage Temperature ⁴ | -50°C / +85°C |
| Humidity | Per MIL-STD |
| ESD | IEC 801-2 KV |
| Water and Dust Intrusion | IP68 (2 meters, 4 hours) |

RUGGED SPECIFICATIONS

| | |
|----------------------|---|
| 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 Safety Yellow, and High Impact Green

WIRELESS CONNECTIVITY & 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 ⁶ |
| 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 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 ensure best performance.

⁵ Measured using the TIA-603 single-tone method.

⁶ 2400 - 2483.5 MHz for EMEA region and includes guardband. Channels 1 - 11 used for FCC/IC region. Specifications subject to change without notice.

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

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APX™ XE500 REMOTE SPEAKER MICROPHONE

With its ultimate usability and extreme performance, the APX XE500 Remote Speaker Microphone (RSM) is the perfect companion to the APX 8000XE.

**ULTIMATE USABILITY.
EXTREME PERFORMANCE.**



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