

APX N30

Single-band P25 portable two-way radio

Easy. Efficient. Essential.

Seamless communication from a sleek radio. Easy to use and simple to manage. The APX N30 single-band P25 portable radio connects your teams to reliable P25 radio networks with all the essential features they need and nothing that they don't. The radio solution for mobile workers in public works, government services, education teams and other municipal roles looking for APX performance in a pared down, cost effective package.

Small and sleek, it's a radio that's easy to carry while being tough enough for use in harsh environments. ViQi Basic Voice Control, large controls and display make it simple to use on the go. And with loud and clear audio, crucial messages get through, even in noisy environments.

The APX N30 works reliably and securely across a variety of frequencies, modes and protocols. It connects seamlessly with accessories and other devices via Bluetooth or Wi-Fi. With SmartConnect, it can even switch between radio coverage and Wi-Fi connections. Choose whether to program offline or optimize fleet management by programming them in batches to save valuable time and resources. With a portfolio of services and tech support, radios stay safe and reliable throughout their lifetime.





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 via Wi-Fi¹

FREQUENCY BANDS

7/800 MHz

VHF

UHF

Up to 512 channels

Up to 50 Zones

ADDITIONAL CONNECTIVITY

Bluetooth (Version 4.2)

Wi-Fi 802.11 a/b/g/n/ac, 2.4 and 5 GHz Bands¹

AUDIO FEATURES

2 High Dynamic Range (HDR) Microphones

Adaptive Dual-sided Operation

Adaptive Equalization

Adaptive Gain Control

IMPRES Audio Accessory Compatibility

MANAGEMENT

Customer Programming Software (CPS)

Radio Management (RM)

LOCATION-TRACKING

Built-in GNSS (GPS, GLONASS)

SENSORS

Accelerometer (Man Down/Fall Alert)¹

SECURITY

256-bit AES Software Encryption¹

Single-key ADP encryption

Software Key

P25 Authentication¹

Multikey for 48 keys and Multi-algorithm¹

HAZLOC (WHEN USED WITH DIV1 BATTERY)

Class I - Division 1 Groups C, D; Division 2 Groups A, B, C, D

Class II - Division 1 Groups E, F, G; Division 2 Groups F, G

Class III - Hazardous Locations

MESSAGING

Canned Messages

VOICE INTERACTION

Customizable Voice Announcements

ViQi Basic Voice Control: Actions with Predetermined Commands¹

ENERGY

Standard 2850 mAh Battery

Optional UL Div 1 3200 mAh Battery

IMPRES 2 Smart Battery Technology

OTHER FEATURES

Radio Profiles

Enhanced Data¹

Multicast Voting Scan¹

Man Down/Fall Alert¹

DVRS PSU¹

Digital Tone Signaling¹

APX Personnel Accountability¹

Instant Recall

Geofence¹

Data Modem Tethering¹

Group Services¹

INGRESS PROTECTION

IP6x Dust

IPx8 submersion (2 m, 2 hr)

USER INTERFACE

2.4" Mission-critical Display: 240x320 TFT 65k Color Transflective Display

PTT Button: 1.22 x 0.47 in (31 x 12 mm)

16-position Channel Selector

Power/Volume Knob

Orange Emergency Button

3 Programmable Side Buttons (1-dot, 2-dot, purple/3-dot)

2 Programmable Front Buttons

DIMENSIONS (RADIO WITH STANDARD BATTERY, NO ANTENNA)

Height: 5.3 in (135 mm)

Width: 2.2 in (55 mm)

Depth: 1.3 in (33 mm)

Weight: 13.1 oz (370 g)

¹ Optional feature





Performance

| TRANSMITTER | | | | | |
|---|------|----------------------|----------------------|--------------------|--------------------|
| | NOTE | 700 MHz | 800 MHz | VHF | UHF |
| Frequency Range / Bandsplits | - | 762-776, 792-806 MHz | 806-825, 851-870 MHz | 136-174 MHz | 380-520 MHz |
| Channel Spacing | - | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz |
| Maximum Frequency Separation | - | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Rated RF Output Power (Adjustable) | 1 | 1-2.5 W | 1-3 W | 1-5 W | 1-5 W |
| Frequency Stability (-30 °C to +60 °C; +25 °C Ref.) | 1 | ±1.0 ppm | ±1.0 ppm | ±1.0 ppm | ±1.0 ppm |
| Modulation Limiting (12.5 / 20 / 25 kHz Channel) | 1 | ±2.5 / ±4 / ±5 kHz | ±2.5 / ±4 / ±5 kHz | ±2.5 / ±4 / ±5 kHz | ±2.5 / ±4 / ±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 and Noise (12.5 / 25 kHz Channel) | - | -45 / -47 dB | -45 / -47 dB | -47 / -47 dB | -49 / -50 dB |
| Audio Distortion (12.5 / 25 kHz Channel) | 1 | 1.00% | 1.00% | 1.00% | 1.00% |

| RECEIVER | | | | | |
|--|------|----------------------|--------------------|--------------------|--------------------|
| | NOTE | 700 MHz | 800 MHz | VHF | UHF |
| Frequency Range / Bandsplits | - | 762-776, 799-806 MHz | 851-870 MHz | 136-174 MHz | 380-520 MHz |
| Channel Spacing | - | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz | 12.5 / 20 / 25 kHz |
| Maximum Frequency Separation | - | Full Bandsplit | Full Bandsplit | Full Bandsplit | Full Bandsplit |
| Audio Output Power at Rated | 1 | 0.5 W | 0.5 W | 0.5 W | 0.5 W |
| Analog Sensitivity (12 dB SINAD) | 2 | 0.25 µV | 0.25 µV | 0.216 µV | .199 uV |
| Digital Sensitivity (1% BER) | 3 | 0.4 µV | 0.4 µV | 0.277 µV | .265 µV |
| Digital Sensitivity (5% BER) | 3 | 0.25 µV | 0.25 µV | 0.188 µV | .177 uV |
| Selectivity (12.5 / 25 kHz Channel) | 1 | -61.3 / -75.2 dB | -61.3 / -75.2 dB | -62.3 / -78.2 dB | -62 / -76 dB |
| Intermodulation Rejection | - | -75 dB | -75 dB | -79.0 dB | -80 dB |
| Spurious Rejection | - | -76.6 dB | -76.6 dB | -80.5 dB | -88db |
| FM Hum and Noise (12.5 / 25 kHz Channel) | - | -47 / -53 dB | -47 / -53 dB | -45 / -51 dB | -50 / -55 dB |
| Audio Distortion | 1 | 1.00% | 1.00% | 1.00% | 1.00% |



IMPRES™ 2 BATTERIES

| | FOOTNOTE | PART NO | CAPACITY | AVAILABILITY |
|----------|----------|----------|----------|--------------|
| Standard | - | PMNN4813 | 2850mAh | Included |
| HAZLOC | 4 | PMNN4815 | 3200mAh | Optional |

ENCRYPTION

| | |
|---------------------------------|---|
| Supported Encryption Algorithms | AES 256-bit Software Encryption (AES-256), DES-OFB |
| Encryption Keys per Radio | 1024 Keys, Programmable for 48 Common Key References (CKR) or 16 Physical Identifiers (PID) |
| Encryption Keying | Local Key Loader |
| Vector Generator | NIST-Approved Random Number Generator |
| Synchronization | OFB - Output Feedback |
| Encryption Type | Digital, TLS1.2, SRTP |
| Key Storage | Non-volatile Memory |
| Key Erasure | Keyboard Command Detection |
| Standards | FIPS 140-3 Level 1, FIPS 197 |
| Device Certificates | x.509v3 ECC-P384 x.509v3 RSA-2048 |
| Cipher Suites FIPS 140-2 | TLS_RSA_WITH_AES_256_GCM_SHA384 SRTP_AEAD_AES_256_GCM1 |

LOCATION TRACKING

| | FOOTNOTE | |
|----------------------|----------|----------------------------------|
| Constellations | - | GPS and GLONASS |
| Tracking Sensitivity | - | -154 dBm |
| Accuracy | 5 | <10m (95%) |
| Cold Start | 5 | <60 Seconds (95%) |
| Hot Start | 5 | <5 Seconds (95%) |
| Mode | - | Autonomous (non-assisted) GPS |

WIRELESS

| WIFI | FOOTNOTE | |
|---------------------|----------|--|
| 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 | - | 4.2 (LE) |
| Frequency Range | - | 2402 - 2480 MHz |
| | | SSP Pairing |
| Security | - | 128-bit AES-CDM Encryption for voice, data and signaling |

AUDIO

| | |
|-----------------------------------|---|
| Audio Output Power at Rated | 0.5 W |
| Audio Output Power at Max | 2 W |
| Audio Response (EIA) | +1, -3 dB |
| Speech Loudness at 12 in (300 mm) | 98 phon |
| Audio Features | Adaptive Equalization Adaptive Dual-sided Operation Adaptive Gain Control IMPRES Audio |



Environmental and Regulatory

| MIL-STD 810 | | | | | | | | | | |
|-------------------|--------------|-----------------|--------------|-------------|--------------|-------------|--------------|--------------------|----------------|---------------|
| | MIL-STD 810C | | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 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 | II |
| High Temperature | 501.1 | I, II | 501.2 | I/A1, II/A1 | 501.3 | I/A1, II/A1 | 501.4 | I/Hot, II/BasicHot | 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 | 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 |
| 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 | 516.3 | 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 61000-4-2 |
| Dust Resistance | - | IP6X |
| Water Resistance (Submersion) | - | IPX8 (2 meters, 2 hours) |

| REGULATORY | | | | |
|-------------------------|---------|---|-------------|---------------|
| | NOTE | MODEL NUMBER | FCC ID | IC ID |
| 7/800 MHz | - | H15UCF9PW6AN | AZ489FT7161 | 109U-89FT7161 |
| VHF | - | H15KDF9PW6AN | AZ489FT7162 | 109U-89FT7162 |
| UHF | - | H15XDF9PW6AN | AZ489FT7175 | 109U-89FT7175 |
| LMR | - | 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E | | |
| Bluetooth | - | 860KF1D, 1M15G1D, 1M19G1D, 1M05F1D | | |
| Wi-Fi (VHF, UHF, 7/800) | 2.4 GHz | 13M5G1D, 16M9D1D, 17M8D1D | | |
| | 5.0 GHz | 16M8D1D, 16M9D1D, 17M0D1D, 17M7D1D, 17M8D1D | | |

1. Measured in the analog mode per TIA / EIA 603 under nominal conditions. Selectivity reflects newer 2-tone test method as defined in revision D TIA603-D issued in 2010.
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.
4. 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. PMNN4815B or later revision required for UHF band.
5. Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength. Specs provided are 95th percentile values.
6. Temperatures listed are for radio specifications. For battery, please refer to motorolasolutions.com/batterycare to ensure best or optimum battery operation.

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





To learn more, visit: www.motorolasolutions.com/apxn30



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Available in North America.

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