

# APX NEXT

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

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

New antenna technology improves comfort and wearability

Large color top screen, for glanceable status updates

Intuitive hard controls, protected against accidental activation

Mission-critical touchscreen: rugged, usable with gloves, readable in all lighting conditions

Digital microphones, for outstanding audio capture

Large, distinctive buttons for PTT, emergency and ViQi, and two additional programmable side buttons

Standard 4400 mAh battery, with 5650 mAh high-capacity option



# 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

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 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

## 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\*

## 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	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	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	±1.0 ppm	±1.0 ppm	±1.0 ppm	±1.0 ppm
Modulation Limiting (12.5 / 20 / 25 kHz Channel)	2	±2.5 / ±4 / ±5 kHz	±2.5 / ±4 / ±5 kHz	±2.5 / ±4 / ±5 kHz	±2.5 / ±4 / ±5 kHz	±2.5 / ±4 / ±5 kHz
Emissions (Conducted and Radiated)	2	-75 dBc	-75 dBc	-75 dBc	-75 dBc	-75 dBc
Audio Response	2	+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB	+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	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	Full Bandsplit
Frequency Stability (-30 °C to +60 °C; +25 °C Ref.)	2	±1.0 ppm	±1.0 ppm	±1.0 ppm	±1.0 ppm	±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 µV (-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

### ENCRIPTION

Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL, Localized Algorithm
Encryption Algorithm Capacity	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	Digital and SecureNet, TLS1.2, SRTP
Key Storage	Tamper-protected Volatile or Non-volatile Memory
Key Erasure	Keyboard Command and Tamper Detection
Standards	FIPS 140-2 Level 1 and Level 3, FIPS 197
Device Certificates	x.509v3 ECC-P384, x.509v3 RSA-2048
Cipher Suites	ECDHE_ECDSA_WITH_AES256_GCM_SHA384 TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA TLS_RSA_WITH_AES_256_GCM_SHA384 SRTP_AEAD_AES_256_GCM1

### COLOR

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 Class	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-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/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	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 801 - 2 kV
Dust Resistance	-	IP6X
Water Resistance (Submersion)	-	IPX8 (2 meters, 4 hours) MIL-STD Delta-T, 512.X Procedure 1

## 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
OM Model Number	H55TGT9PW8AN

### FOOTNOTES:

1. Please refer to local regulations for available channel bandwidths.
2. 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.
3. Measured conductively in digital mode per TIA / EIA IS 102.
4. 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.
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/batterycafe](https://motorolasolutions.com/batterycafe)

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
- Four digital microphones
- Enhanced windporting
- New adaptive noise suppression
- Dedicated ViQi button

## ANTENNAS

DESIGNED FOR WEARABILITY



**7/800 MHz Stubby  
Antenna 65 mm  
(760-870 MHz)**

AN000296A01



**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   |  32012144004 Blue   |
|  32012144002 Yellow |  32012144005 Purple |
|  32012144003 Green  |  |

## CARRY

SECURE, EASY ACCESS



### Classic Holster

PMLN7947



### Hybrid Leather Carry Case

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](https://motorolasolutions.com/apxnext)

# MANAGED AND SUPPORT SERVICES

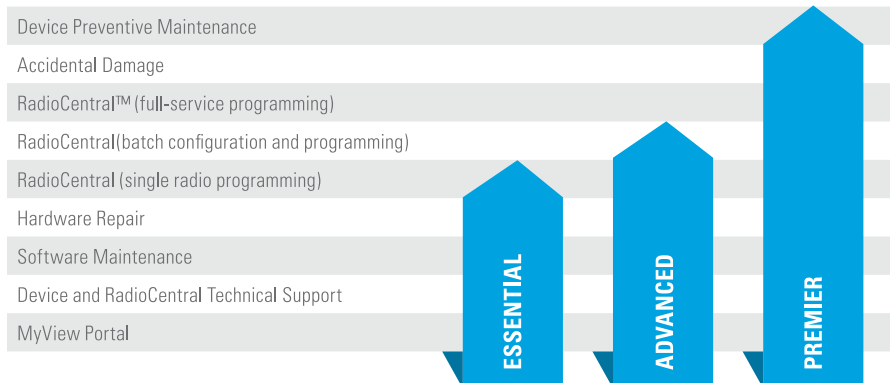
## ACHIEVE MISSION CRITICAL PERFORMANCE

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](https://motorolasolutions.com/apxnext)



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. 800-367-2346 [motorolasolutions.com](https://motorolasolutions.com)

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