



# APX™ RADIO SOFTWARE CATALOG



# ADDING MORE VALUE TO YOUR COMMUNICATIONS

THIS CATALOG PROVIDES AN OVERVIEW OF COMMON SOFTWARE OPTIONS AVAILABLE FOR MOTOROLA SOLUTIONS APX™ P25 TWO-WAY RADIOS.

For full details on software option compatibility by APX radio series or software release, contact your sales representative.







# OPERATION MODE

Give your network the right reach and efficiency.

# OPERATION MODE

## Analog Conventional

Provides analog audio transmission with non-trunked, channel operation. Channels are defined by fixed radio frequencies. The radio user manually selects a channel to transmit on.

### DEPENDENCIES

<b>Portables</b>	Q241 & H35
<b>Mobiles</b>	G241 & G48
<b>Notes</b>	All APX radios are capable of analog conventional operation

## Analog Trunking (SMARTNET/SMARTZONE)

Provides Type II Motorola Analog Trunking in 3600 baud. Designed to address the APCO-16 standard, analog SmartNet/SmartZone trunking enables features like PTT ID, Emergency Calls, and Voice Encryption.

### DEPENDENCIES

<b>Portables</b>	Q241 & H38, Q443
<b>Mobiles</b>	G241 & G51, Q443
<b>Notes</b>	-

## Digital Conventional (P25)

Provides P25 Talkaround (simplex or direct) and Repeater (half-duplex or indirect) operation that enables interoperable conventional digital coverage. P25 Conventional Operation supports data features like Integrated Voice and Data (IV&D) that enables GPS location services, text messaging, and Programming over P25 (POP25).

### DEPENDENCIES

<b>Portables</b>	Q806 & H35, Q811, QA02593, QA04097
<b>Mobiles</b>	G806 & G48, Q811
<b>Notes</b>	-



# OPERATION MODE

## Digital Trunking (SMARTNET/SMARTZONE)

Provides Phase 1 FDMA digital trunking on narrowband (12.5 kHz) channels with a control channel at 3600 baud, as described in the TIA-102 standard.

### DEPENDENCIES

<b>Portables</b>	Q806 & H38
<b>Mobiles</b>	G806 & G51
<b>Notes</b>	-

## Digital Trunking (SMARTNET/SMARTZONE P25 Phase I Interoperability)

Provides P25 Phase 1 FDMA digital trunking on narrowband (12.5 kHz) channels with a control channel at 9600 and 3600 baud, as described in the TIA-102 standard. Compliance to Project 25 standards for trunked voice systems enables seamless inter-agency communications and enhanced system capabilities.

### DEPENDENCIES

<b>Portables</b>	Q806 & H38 & Q361, QA02812, QA02592
<b>Mobiles</b>	G806 & G51 & G361, QA02812
<b>Notes</b>	-





# SECURE

Protect yourself from unauthorized access and malicious disruption.

# SECURE: ADVANCED SYSTEM KEY

## Hardware Key

Provides the highest security for programming an APX radio onto an ASTRO 25 system by requiring a hardware-based Advanced System Key to be present in the programming tool upon programming. This restricts legacy software keys from being used to program any system on the radio. When the radio is ordered with this option the customer must provide a System ID that will be set in the radio and is known as the Owner System ID. For flexibility purposes, the Owner System ID ASK can be used to disable the hardware restriction, thereby supporting legacy software keys.

Hardware-based Advanced System Keys are more secure since they cannot be electronically shared, they cannot be copied due to unique serial numbers, they can be set to expire, and they can be setup limits and ranges for some system fields like Unit and Talkgroup IDs.

### DEPENDENCIES

<b>Portables</b>	QA01648
<b>Mobiles</b>	QA01648
<b>Notes</b>	Radio must be operating in a P25 trunked system. Replaces the standard legacy software key that now ships standard with all APX Radios.



# SECURE: ENCRYPTION TYPE

## ADP Encryption

Advanced Digital Privacy Encryption (ADP) algorithm is a non-P25 standard, 40 bit RSA encryption solution implemented by Motorola to offer a low cost digital voice encryption on Motorola's digital radios.

### DEPENDENCIES

<b>Portables</b>	G193, Q806
<b>Mobiles</b>	Q667, G806
<b>Notes</b>	Requires digital operation. Mutually exclusive with QA05751. ADP is not CAP and SAFECOM compliant.

## ADP and AES Encryption

AES was adopted by APCO as the P25 encryption standard in 2002. AES offers 256-bit encryption and is defined in Federal Information Processing Standard 197 (FIPS-197). AES is currently the recommended and most robust type of digital encryption. Also includes ADP.

### DEPENDENCIES

<b>Portables</b>	Q629
<b>Mobiles</b>	Q629
<b>Notes</b>	Radio must be operating in a digital system. AES 256 is the only approved encryption algorithm by P25 CAP and SAFECOM.



# SECURE: ENCRYPTION TYPE

## ADP, AES, DES-XL, DES-OFB Encryption

AES was adopted by APCO as the P25 encryption standard in 2002. AES offers 256-bit encryption and is defined in Federal Information Processing Standard 197 (FIPS-197). AES is currently the recommended and most robust type of digital encryption. DES provides 56-bit encryption for analog-only channels. DES-XL provides 56-bit encryption for analog and digital channels. DES-OFB provides 56-bit encryption for digital-only channels. Also includes ADP.

### DEPENDENCIES

<b>Portables</b>	Q15
<b>Mobiles</b>	Q15
<b>Notes</b>	Radio must be operating in a digital system. Requires Multikey.

## ADP, DES, DES-XL, DES-OFB Encryption

DES provides 56-bit encryption for analog-only channels. DES-XL provides 56-bit encryption for analog and digital channels. DES-OFB provides 56-bit encryption for digital-only channels. Also includes ADP.

### DEPENDENCIES

<b>Portables</b>	Q625
<b>Mobiles</b>	Q625
<b>Notes</b>	-



# SECURE: MULTIKEY TYPE

## Multikey

Allows multiple encryption keys and multiple encryption algorithms to be loaded into a radio. These keys could be for different types of encryption algorithms or different keys associated with different talk-groups, personalities, or channels. Using multiple keys increases the security level of the system, making it more difficult to eavesdrop, intercept, or hack communications.

### DEPENDENCIES

<b>Portables</b>	H869
<b>Mobiles</b>	W969
<b>Notes</b>	–

## P25 OTAR with Multikey

Provides encrypted systems with the ability to quickly deliver new encryption keys to secure radios over-the-air via a radio channel from a centralized key management server using a P25 standards-based interoperable solution. This allows system security administrators to efficiently and securely redistribute encryption keys on systems with highly sensitive voice and data communications, making it more difficult to eavesdrop, intercept, or hack communications. This feature requires a central Key Management Facility (KMF) and a Key Variable Loader (KVL) to deliver encryption keys to the radios. Tactical Rekey is included with the purchase of this feature.

### DEPENDENCIES

<b>Portables</b>	Q498 & Q629 or Q15 or Q625
<b>Mobiles</b>	G298 & G843 or G851 or G625
<b>Notes</b>	–

## Multisystem OTAR Capability

Multi-System Over-the-air Rekeying (OTAR) extends MSI Radio OTAR functionality from a Single Key Management Facility (KMF) server OTAR solution to Multiple KMF Servers (up to 19 KMF Servers). MS-OTAR enables users to avoid costly reprogramming when moving between Multiple Systems and their KMF Servers in order to get the latest unique key encryption keys (UKEK) and Traffic Encryption Keys (TEK) to operate on that system.

### DEPENDENCIES

<b>Portables</b>	QA07680
<b>Mobiles</b>	GA01620
<b>Notes</b>	Requires OTAR with Multikey.



# SECURE: MULTIKEY TYPE

## Tactical Rekey with Multikey

Loads encryption keys into radios over the air on a digital talk-around (simplex) channel using a Key Variable Loader. The key loader must be connected to a gateway radio via an RS232 cable. For smaller fleets, this feature allows administrators to efficiently and securely redistribute encryption keys in order to better protect the integrity of the system. Multikey is included with the purchase of this feature.

### DEPENDENCIES

<b>Portables</b>	H04
<b>Mobiles</b>	H04
<b>Notes</b>	Mutually exclusive with QA05751.

## Touchless Key Provisioning

This feature allows APX NEXT radios the option to be provisioned for encryption over-the-air without a Key Variable Loader (KVL) when APX NEXT hardware is shipped from the factory.

### DEPENDENCIES

<b>Portables</b>	Q806 & Q498 & Q29 or Q15 or Q625
<b>Mobiles</b>	N/A
<b>Notes</b>	Requires RadioCentral, KMF version R10.00.0510 and later, KMF CryptR, AES-256 algorithm on KMF CryptR, TKP License CA03643.





# SYSTEM ENHANCEMENTS

Get the most from your investment.

# SYSTEM ENHANCEMENTS

## Adaptive Noise Suppression

Based on the ambient noise level, the noise suppression algorithm dynamically adapts to balance maximum noise cancellation with optimum voice clarity.

### DEPENDENCIES

<b>Portables</b>	QA09006
<b>Mobiles</b>	N/A
<b>Notes</b>	Included as standard with APX NEXT and APX8000 radios.

## Data Modem Tethering

This feature allows APX radios to support collaboration with external data modems (i.e. Motorola VML750, Sierra Wireless Airlink GX450, MG90, MP70, RV55) through a high speed LTE connection, allowing the radio to leverage the data pipeline provided by these data modems. Users can do radio programming, flashport upgrades, re-keying, text messaging, and use other data applications while simultaneously using the LMR voice channel.

### DEPENDENCIES

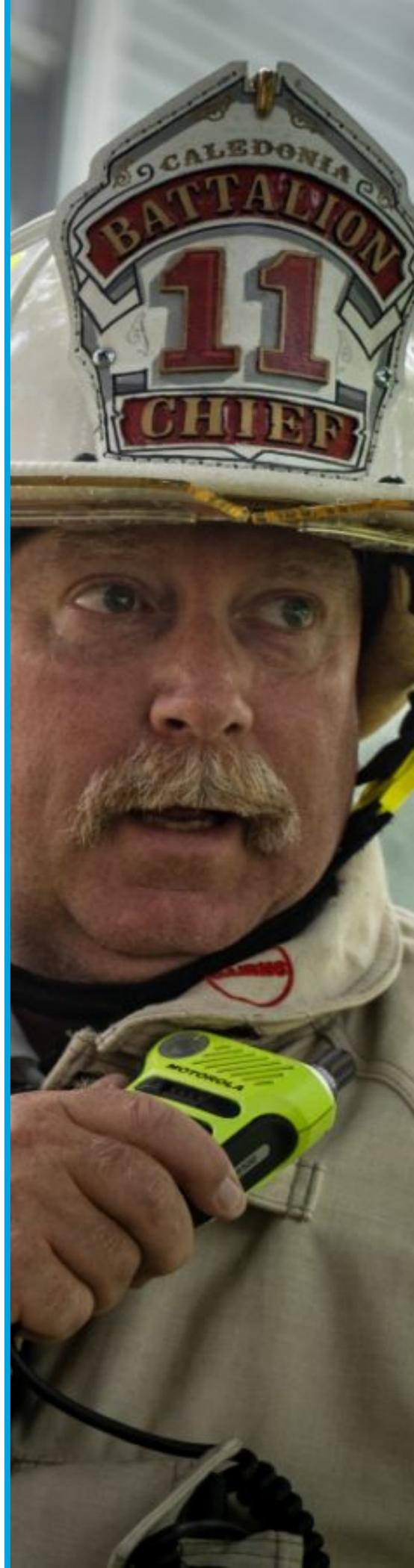
<b>Portables</b>	N/A
<b>Mobiles</b>	GA09011
<b>Notes</b>	Requires KT000259A01-USB Ethernet HUB Cable Assembly. APX 8500 MP with Sierra Wireless MG90 compatible with ethernet faceplate (GA01787) and remote mount G67. The retrofit kit upgrades with HN001998A01.

## Data Modem Tethering Over WiFi

This feature allows APX radios to support collaboration with external data modems (i.e. Motorola VML750, Sierra Wireless Airlink GX450, MG90, MP70, RV55) through a WiFi connection, allowing the radio to leverage the data pipeline provided by these data modems. Users can do radio programming, flashport upgrades, re-keying, text messaging and use other data applications while simultaneously using the LMR voice channel.

### DEPENDENCIES

<b>Portables</b>	GA09011
<b>Mobiles</b>	GA01545, GA09011
<b>Notes</b>	Incompatible with DVRS. Requires WiFi GA09001 or QA09001.



# SYSTEM ENHANCEMENTS

## Digital Tone Signaling

Reduces response time by alerting entire groups of responders simultaneously. Commonly used in Fire Rescue to alert first responders to an incident by broadcasting a series of distinct, recognizable tones followed by a voice transmission from dispatch. This allows an entire fire department to be simultaneously alerted to an emergency situation, as opposed to unit-to-unit dispatch (Call Alert). Responders can keep their radios in a quiet or silent mode until an alarm is raised. This feature works on P25 conventional or trunked systems, providing digital Quik-Call II operation (identical in operation to the legacy analog version). The feature supports encode from an APX portable or mobile with a DTMF keypad.

### DEPENDENCIES

<b>Portables</b>	QA09000
<b>Mobiles</b>	QA09000
<b>Notes</b>	Radio must be operating in a digital system.

## DVRS MSU Activation

Allows an APX mobile radio acting as a Mobile Subscriber Unit (MSU) in a Digital Vehicular Repeater System (DVRS) environment to extend the system coverage to surrounding Portable Subscriber Unit (PSU) units. The MSU can be used in Local mode when only portable to portable communications are required, or it can be used in System mode which will enable full DVRS repeat locally and back into the system.

### DEPENDENCIES

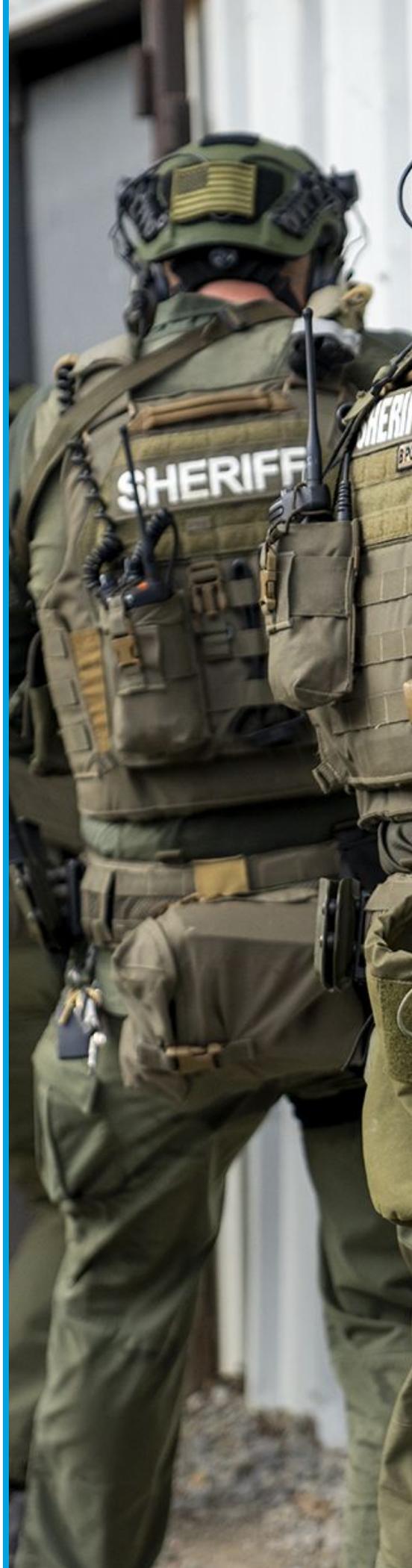
<b>Portables</b>	N/A
<b>Mobiles</b>	GA00631
<b>Notes</b>	-

## DVRS PSU Activation

Allows an APX portable or mobile radio acting as a Portable Subscriber Unit (PSU) in a Digital Vehicular Repeater System (DVRS) environment to be used in areas where only Mobile Subscriber Unit (MSU) coverage is available and PSU coverage is either intermittent or non-existent. The PSU Activation provides access to a suite of system features that would otherwise not be available in DVRS mode. Some examples are PSU Registration and Deregistration, AES/DES Encryption, Private Call, Call Alert / Page, Failsafe / Out of Range / Site Trunking Indicator, Single- Unit OTAR, Phone Interconnect, Dynamic Regrouping, Single-Unit GPS, Remote DVR Activation, and Phase 2 TDMA operation. PSU Data is encrypted while MSU is on a P25 trunked system.

### DEPENDENCIES

<b>Portables</b>	QA00631
<b>Mobiles</b>	QA00631
<b>Notes</b>	Mutually exclusive with GA00631.



# SYSTEM ENHANCEMENTS

## DVRS PSU Conventional Scan

This feature allows a scan list to be attached to a PSU that is configured with DVRS as its system type. This enables an Enhanced PSU to support the conventional scan feature.

### DEPENDENCIES

<b>Portables</b>	N/A
<b>Mobiles</b>	HA00677
<b>Notes</b>	Mutually exclusive to GA00631. Requires DVRS PSU Activation option QA00631.

## Enhanced Data

Enhanced Data offers 12x greater throughput of data by using a more efficient scheduling method. Data such as Supervisory Control and Data Acquisition (SCADA), machine telemetry and personnel biometrics can be sent at a faster rate, providing faster updates of electronic sensors, crash notifications, maintenance needs, vehicle speeds, environmental conditions and weather updates.

### DEPENDENCIES

<b>Portables</b>	QA03399
<b>Mobiles</b>	QA03399
<b>Notes</b>	Radio must be operating in a P25 trunked system and have Integrated Voice and Data enabled. Enhanced Data with GPS location requires radio to be enabled with Integrated Voice and Data, Enhanced Data, and GPS activation.

## Enhanced Zone Bank

Allows APX Model 1.5 portable radios without a keypad to increase capacity from 96 to 1,200 channels by increasing the number of zone banks from 2 to 75. This feature ensures complete interoperability for chiefs or administrators who need to communicate with more users and agencies from the simplified user interface of a Model 1.5 radio.

### DEPENDENCIES

<b>Portables</b>	QA01768
<b>Mobiles</b>	N/A
<b>Notes</b>	For Model 1.5 radios (with no keypad) only.



# SYSTEM ENHANCEMENTS

## Enhancement Level 1

The Level 1 feature enhances APX 4000 and APX 4500 radios from 50 to 75 zones, from 512 to 1000 channels, from 30 to 40 conventional systems, 20 to 35 trunked systems, trunked personalities 100 to 200, from 500 to 1000 voice announcements, and from 48 to 64 encryption keys. This enables the radio to grow as the customer's requirements grow.

### DEPENDENCIES

<b>Portables</b>	QA01770
<b>Mobiles</b>	GA01770
<b>Notes</b>	APX 4000 and APX 4500 radios only.

## Enhancement Level 2

The Level 2 feature enhances APX 6000 and APX 6500 radios from 65 to 200 zones, from 1000 to 3000 channels, 40 to 50 conventional systems and 35 to 70 trunked systems, from 1000 to 2000 voice announcements, and from 64 to 128 encryption keys. This enables the radio to grow as the customer's requirements grow.

### DEPENDENCIES

<b>Portables</b>	QA01771
<b>Mobiles</b>	GA01771
<b>Notes</b>	APX 6000 and APX 6500 radios only.

## Extended Dispatch

This option enables Extended Dispatch functionality from a Console via a Consolette configured for ACIM control.

### Decoded Functionality:

A subscriber unit can send emergency alarm, status, and message updates over-the-air at any time. The consolette will send any received these updates to the console. With the Extended Dispatch option the corresponding ACK from the console is transmitted by the consolette over-the-air to the specified subscriber on conventional channels only.

### Encoded Functionality:

Allows the console user to remotely determine a specific subscriber's status, ping a specific subscriber, and put a specific subscriber into transmit mode, also to make a specific subscriber unusable and correspondingly restore a unit to normal operation via the consolette on conventional channels only. The corresponding ACK from the console is transmitted by the consolette over-the-air to the specified subscriber on conventional channels only.

### DEPENDENCIES

<b>Portables</b>	N/A
<b>Mobiles</b>	GA00469
<b>Notes</b>	APX Consolette only. Extended Dispatch functions are only supported on conventional channels.



# SYSTEM ENHANCEMENTS

## Extreme 1-Sided Noise Reduction

Created for extremely loud environments, this feature uses the secondary microphone on the display/belt-clip side of APX portable radios as the primary noise-canceling microphone.

### DEPENDENCIES

<b>Portables</b>	QA01833
<b>Mobiles</b>	N/A
<b>Notes</b>	-

## Front Panel Programming

Allows users to change radio parameters (channels/zones) using the front panel controls of the radio. Users also have the ability to clone the radio zone and channel information for one or more zones by copying zone and channel information from one radio to another. This feature is ideal for Wildland Fire, or Urban Search and Rescue operations, during large-scale disasters that require disparate agencies to communicate quickly and effectively.

### DEPENDENCIES

<b>Portables</b>	Q53
<b>Mobiles</b>	G53
<b>Notes</b>	Requires portable radio with full keypad and 4 digit PIN number is now required by the FCC. Mobiles require O7 or Keypad mic. The keypad can only change radio parameters for mobiles. Radio to radio zone cloning is only supported on portable radios.

## Group Services

Group Services delivers data to a whole talkgroup. This is a quick and efficient way to disseminate data to many radios at once. The feature offers Conventional Alias updates, Trunking Alias updates, Trunking Group Messaging and Over the Air Firmware Updates. Unlike voice transmissions, the radio receives broadcast data, but cannot send. Normal voice traffic has priority, so Group Services pauses whenever there is a voice transmission.

### DEPENDENCIES

<b>Portables</b>	QA09008
<b>Mobiles</b>	GA09008
<b>Notes</b>	Requires digital operation for conventional capabilities and SmartNet/SmartZone P25 Interoperability for trunking capabilities. Alias Updates are supported on APX NEXT without Group Services.



# SYSTEM ENHANCEMENTS

## Mandown Operation / Impact Detection

Allows APX portable radios to automatically send an Emergency Alarm or Emergency Call when the radio is motionless and horizontal. This feature is ideal for any lone-worker situation such as police officers, fire rescue personnel, corrections officers, petro-chemical industry workers, military personnel, and utility workers. For the safety and security of Man Down users, the feature will alert the on-scene supervisor or dispatcher of an emergency event. If a user becomes incapacitated, and is lying down and motionless, an automatic Man Down alarm will be sent out on the programmed talk group. Capable of adding flags to differentiate the source of emergencies between a mandown or emergency button press.

Allows APX Mobile radios to detect the G-force impact or the Orientation changes on the vehicle. Once the detected G-force impact or the changes in the degree of orientation meets or exceeds the predefined threshold, the impact is considered detected. This will trigger or activate the Emergency feature on the APX Mobile radio immediately or after a certain duration (which is programmable). During the emergency state, this feature will also send the location based information if the GPS feature is enabled.

### DEPENDENCIES

<b>Portables</b>	QA01843
<b>Mobiles</b>	QA01843
<b>Notes</b>	-

## Mission-Critical Geofencing

This feature instructs the radio to take an action whenever it senses that it has crossed a geographical boundary. For example the radio could be programmed to roam to the Mutual Aid channel whenever it leaves the county, change the display backlight color whenever the radio is outside the jurisdictional area, or join a new talkgroup whenever it is close to a major incident. The parameters (including boundary coordinates of all geo-fenced areas) are programmed into the radio codeplug using radio programming software.

### DEPENDENCIES

<b>Portables</b>	QA09012
<b>Mobiles</b>	GA09012
<b>Notes</b>	Requires GPS Activation and Integrated Voice and Data.



# SYSTEM ENHANCEMENTS

## Multicast Vote Scan

Allows radios to scan up to 10 frequencies from multiple transmission towers and select the strongest received signal using a voting process. The feature is designed to provide wide area connectivity in areas where spectrum is abundant, giving seamless coverage and enhanced access to critical communications.

### DEPENDENCIES

<b>Portables</b>	Q387
<b>Mobiles</b>	G387
<b>Notes</b>	-

## One Touch / Status Message

Allows the user to immediately transmit a pre-programmed status, message, radio ID, Enhanced Private Conversation™, or telephone interconnect message on the selected channel with the touch of one button. This reduces the time it takes to complete these radio functions so that the user can focus on the task at hand.

### DEPENDENCIES

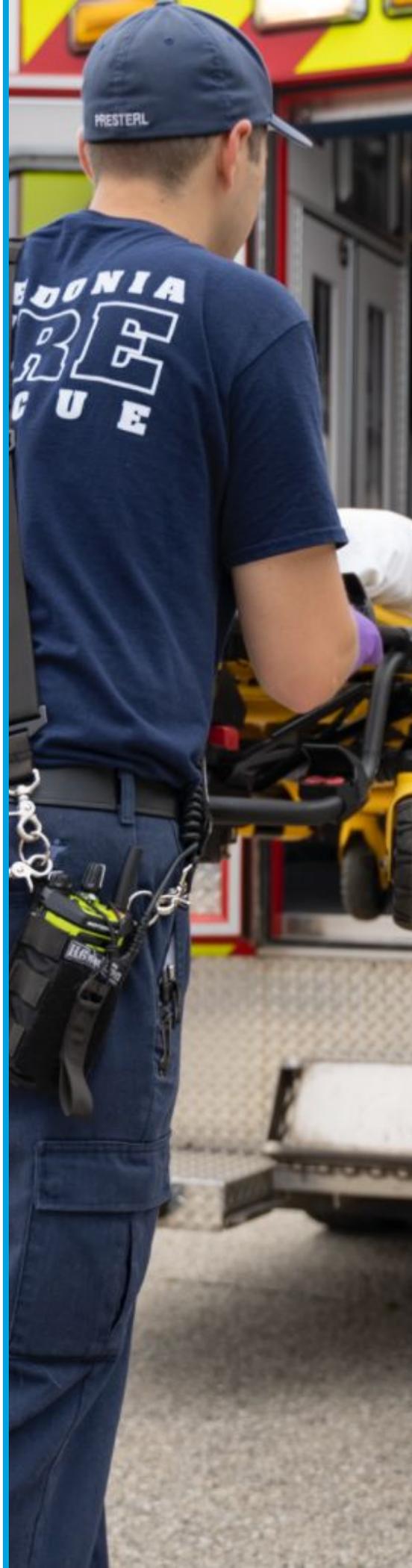
<b>Portables</b>	H46
<b>Mobiles</b>	G683
<b>Notes</b>	-

## Out-of-the-box WiFi Provisioning

This option will pre-provision your APX radio with WiFi access information like SSIDs and passwords, making it quicker and easier for you to get up and running. Additional information is supplied in a manual.

### DEPENDENCIES

<b>Portables</b>	QA09007
<b>Mobiles</b>	GA09007
<b>Notes</b>	Radio must have WiFi Capability enabled.



# SYSTEM ENHANCEMENTS

## P25 Radio Authentication (Link Layer)

Provides an extra level of verification every time a radio registers on the system. This enhances protection from cloned radios by requiring authentication before a radio can utilize the system. Radios must be pre-provisioned with an authentication key via the Key Variable Loader. This feature offers peace-of-mind to system administrators and maximum grade-of-service to end users.

### DEPENDENCIES

<b>Portables</b>	QA01767
<b>Mobiles</b>	GA01767
<b>Notes</b>	Radio must be operating in a P25 trunked system on ASTRO 25 release 7.9 or later.

## Personnel Accountability

Provides visibility of status of on-scene personnel to the Incident Commander. This NIMS-compliant application provides automatic user/ company registration with PTT ID and alias, emergency alarm indication, channel-left indication, low battery indication, power down indication, roll call, evacuation tones, manual and automatic polling.

Additional enhancements to APX Personnel Accountability Added support of signaling combo (ASTRO PDU + MDC) encode/decode and display for PTT ID of dispatch and emergency call. Supports emergency alarm combo with TSBK and MDC format. Also, enables coexistence of PA + Conventional Scan and PA + Vote Scan.

### DEPENDENCIES

<b>Portables</b>	Q445
<b>Mobiles</b>	G445
<b>Notes</b>	Requires Q625. For additional requirements to view on the MDT, contact your sales representative.



# SYSTEM ENHANCEMENTS

## Programming Over P25 (OTAP / POP25)

Provides radio configuration over-the-air using a P25 Integrated Voice and Data channel. This enables system administrators to update the radio remotely, avoiding the downtime associated with pulling radios from the field.

With one product from the device management portfolio, radios can be programmed over the air and enable the programming of more than one radio over the air at a time. Updates can be batched for multiple radios, and partial codeplugs if a complete update is not required.

### DEPENDENCIES

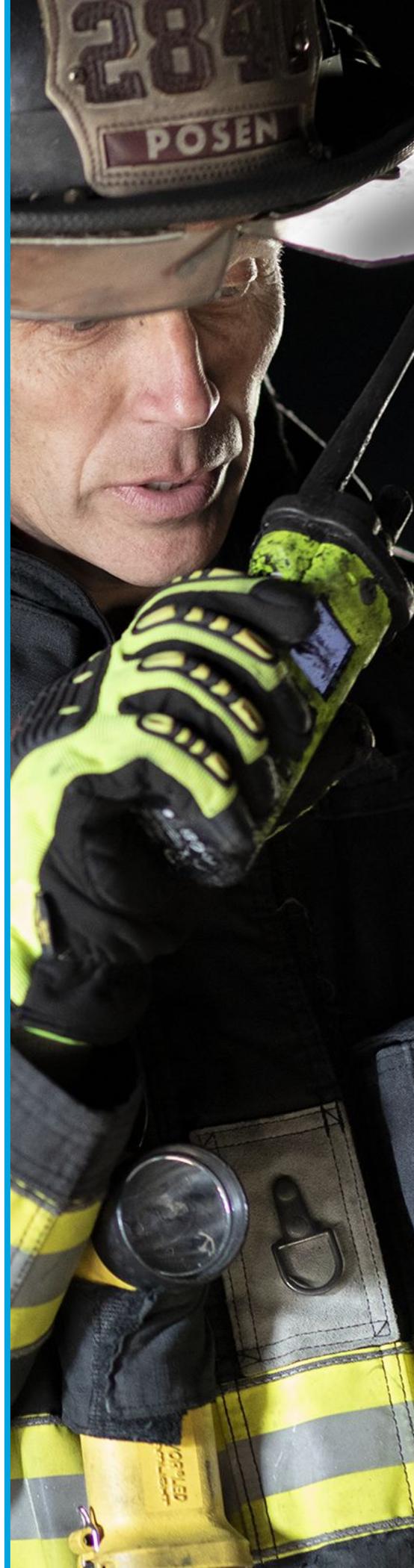
<b>Portables</b>	G996
<b>Mobiles</b>	G996, GA00631
<b>Notes</b>	Requires SmartZone, APCO Packet Data, IMBE digital operations, and IMW version 5.2 or higher. OTAP for DVRS and its MSU for user transition from Smartzone and able to perform Firmware Download over LMR on DVRS channel. Radio must be operating on a P25 conventional or trunked system, Integrated Voice and Data, and Group Services.

## Radio Trace

Instructs a radio to automatically key-up on a time-interval, making it easier to find a lost or stolen radio. Remote Monitor allows the dispatcher to remotely activate a radio's microphone, letting the dispatcher hear any audio the microphone picks up. This feature can help a dispatcher discreetly monitor and support a potentially dangerous situation after an officer has initiated a silent emergency alarm.

### DEPENDENCIES

<b>Portables</b>	H43
<b>Mobiles</b>	G170
<b>Notes</b>	Requires digital operation on Motorola Type II 4.1 system or ASTRO 25, release 7.4 or later.



# SYSTEM ENHANCEMENTS

## Responder Alert

Protect a responder during a quickly escalating event. A series of sensors are connected to your portable radio via bluetooth and can report on events such as vest piercing, weapon drawn, Glock weapon fire, Si500 activation, vehicle impact, and mandown alert. Weapon fire applies to Gen 4 Glocks 17, 22, 34 and 35 and Radios with Bluetooth LE.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	N/A
<b>Notes</b>	Requires Aware Standard Package solution.

## Site Selectable Alert for P25 Trunking

Enhances the safety of responders on scene by instantly alerting them of critical situations. Alert all APX radio users at a site, notifying the users when there is a special or hazardous situation such as an evacuation from a burning building that's about to collapse or mine that is about to be blasted.

### DEPENDENCIES

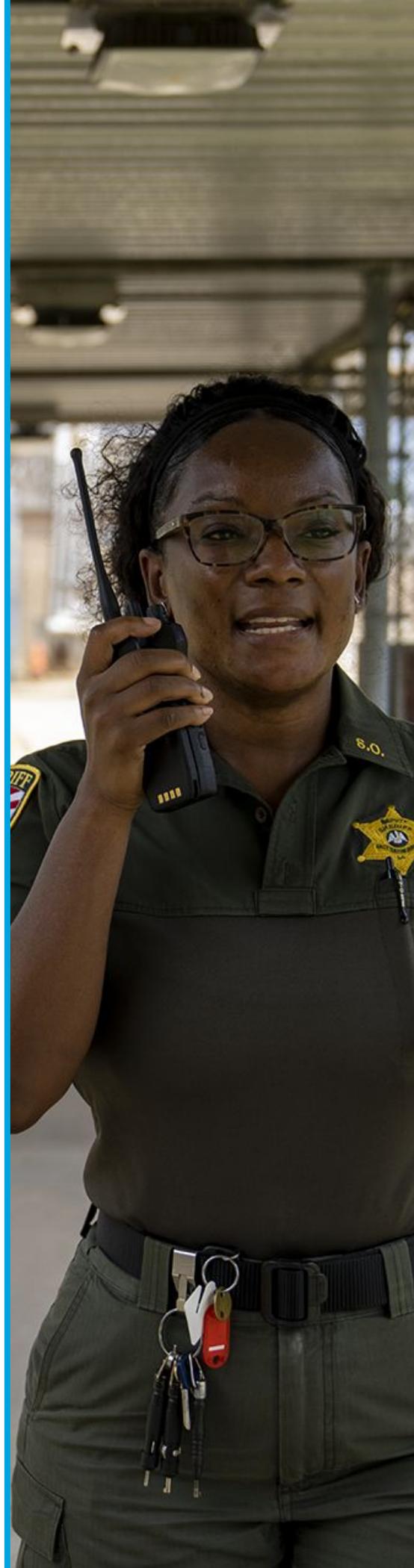
<b>Portables</b>	QA00982
<b>Mobiles</b>	QA00982
<b>Notes</b>	Radio must be operating in a P25 trunking system.

## Tactical Stun / Kill

Allows a radio administrator to remotely disable a potentially compromised radio via a talkaround (simplex) channel. This provides a reactive security tactic against cloned or stolen radios attempting to eavesdrop or interrupt critical communications.

### DEPENDENCIES

<b>Portables</b>	H02
<b>Mobiles</b>	H02
<b>Notes</b>	Recommend ordering encryption (non-ADP) to avoid susceptibility to remote STUN/KILL from adversaries. Not compatible with DVRS MSU GA00631.



# SYSTEM ENHANCEMENTS

## TDMA Operation (P25 Phase II)

Provides P25 TDMA (2-slot on 12.5 kHz channel) digital voice trunking. With P25 TDMA, agencies can double their voice capacity within their fixed allocation of frequencies. Additional channel capacity can be used for improved voice service or for integrating data applications such as GPS, OTAP, and text messaging. P25 TDMA operation will meet the 2017 FCC regulatory requirement for 6.25e operation.

### DEPENDENCIES

<b>Portables</b>	QA00580
<b>Mobiles</b>	GA00580
<b>Notes</b>	Radio must be operating in a P25 trunked system with Interoperability on ASTRO 25, release 7.11 or later.

## V300 Emergency Mode Video Recording

V300 Body camera is triggered to start recording automatically whenever the APX radio enters Emergency mode.

### DEPENDENCIES

<b>Portables</b>	QA00583, QA01843 optional
<b>Mobiles</b>	N/A
<b>Notes</b>	Hazloc models not supported. Requires radio model 2.5 or 3.5 and V300 FW version 2.0.4.38 (APX radio firmware R24.00.00), V300 FW version 3.0.0 (APX NEXT series firmware R26.00.00) and above. Feature flag must be enabled through Evidence Library.



# SYSTEM ENHANCEMENTS

## ViQi Voice Control for APX NEXT

Maintain situational awareness while using simple voice commands to operate your radio (i.e. channel changes, volume changes, etc.) in English or French Canadian.

### DEPENDENCIES

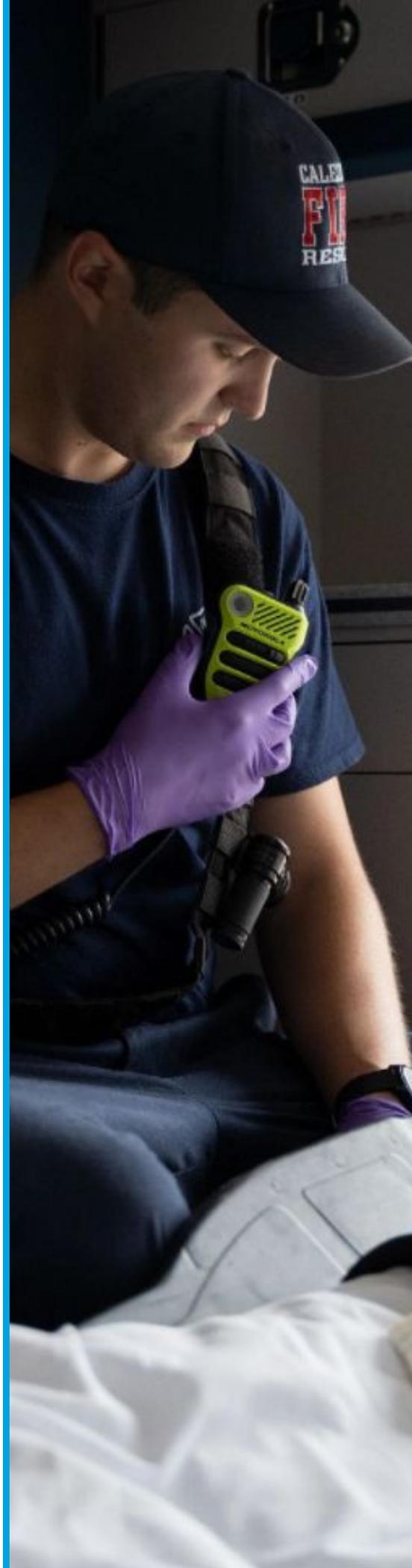
<b>Portables</b>	QA09028
<b>Mobiles</b>	N/A
<b>Notes</b>	Available for APX NEXT only.

## WiFi Capability

This feature enables the WiFi capability on your radio that allows you to update radios more efficiently by eliminating the downtime associated with workshop reprogramming. Quickly update codeplug, firmware and FLASHport features using WiFi 802.11n with WEP, WPA and WPA-2 security. Use APX Radio Management to automatically download update to a radio as soon as it connects to a pre-provisioned WiFi access point or mobile hotspot. All radio communications are maintained while the update is downloaded.

### DEPENDENCIES

<b>Portables</b>	QA09001
<b>Mobiles</b>	GA09001
<b>Notes</b>	Requires Radio Management or RadioCentral.





# SMART APPLICATIONS

Bring new intelligence into the field.

# SMART APPLICATIONS

## SMARTCONNECT for APX

When P25 is unavailable, SmartConnect automatically switches your voice channel to available broadband networks and then back again as soon as you return to P25 coverage. P25 voice information is sent over broadband unchanged, so radio functionality and voice quality are maintained. APX radios and all-band consolettes can use SmartConnect when connected directly to Wi-Fi hotspots or through an in-vehicle modem LTE or satellite connection.

### DEPENDENCIES

<b>Portables</b>	QA07682
<b>Mobiles</b>	GA01630
<b>Notes</b>	Application Service number SSV01S01663A. For additional requirements on your radio or infrastructure, contact your sales representative.

## SMARTCONNECT for APX NEXT

Stay connected to your P25 radio system even when outside of P25 coverage. SmartConnect maintains your P25 voice and data communications by automatically switching between P25 and broadband. The feature automatically switches your voice channel to an LTE broadband network or satellite whenever LMR is unavailable or falls below RSSI, then back again when you return coverage on your APX NEXT family of radios.

### DEPENDENCIES

<b>Portables</b>	QA07682
<b>Mobiles</b>	N/A
<b>Notes</b>	SmartConnect on APX NEXT is available over LTE, not WiFi. Application Service number SSV01S01406A. For additional requirements on your radio or infrastructure, contact your sales representative.

## SMARTCONNECT IN-VEHICLE RANGE EXTENSION

Stay connected to your P25 radio system even when outside of P25 coverage. Enables the use of SmartConnect and the Digital Vehicular Repeater System (DVRS) at the same time. A portable radio will communicate through an in-vehicle mobile that is providing a LTE/SAT/Wi-Fi connection.

### DEPENDENCIES

<b>Portables</b>	QA07682
<b>Mobiles</b>	GA01630
<b>Notes</b>	GA01779- New Range Extension Y cable ( CB000409A04), DVR FW 1.64 or later, DVR Feature License: SmartConnect In-Vehicle Range Extension. For additional requirements contact your sales representative.



# SMART APPLICATIONS

## SMARTLOCATE for APX NEXT

SmartLocate delivers high-speed location-tracking over public safety LTE, for fast, accurate resource deployment. Carefully integrated into CommandCentral Aware, SmartLocate ensures you always have a complete, up-to-date picture of the situation. WiFi/Cell ID-triangulates its location to enhance accuracy, particularly when the radio is unable to access GPS.

When the user radio is configured to report location over "Broadband Preferred", the radio can fallback from Broadband to data-capable LMR channel or viceversa for reporting location, when either of the location reporting technology roams out of coverage.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	N/A
<b>Notes</b>	Available for APX NEXT only. Application Service number SSV01S01476A. For additional requirements contact your sales representative.

## SMARTMAPPING for APX NEXT

SmartMapping provides enhanced situational awareness by showing a user a map of their surroundings, the location of other first responders, and by providing a means to initiate communication with those first responders.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	N/A
<b>Notes</b>	Available for APX NEXT only. Application Service number SSV01S01907A. For additional requirements contact your sales representative.

## SMARTMESSAGING for APX NEXT

Allows for broadband enabled messaging. Share texts, voicenotes, photos, and videos with other APX NEXT radios. Receive multimedia messages from dispatch broadcasts.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	N/A
<b>Notes</b>	Available for APX NEXT only. Application Service number SSV01S01906A. WAVE dispatch console client or WAVE smartphone app are also available for sharing multimedia with APX NEXT. For additional requirements contact your sales representative.



# SMART APPLICATIONS

## SMARTPROGRAMMING for APX NEXT

Coupled with RadioCentral, SmartProgramming allows initial programming, software and security updates to be sent over LTE. Radio updates can be accepted anytime, anywhere utilizing the higher speed bandwidth and extended coverage of the LTE network.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	N/A
<b>Notes</b>	Available for APX NEXT only. Application Service number SSV01S01407A. For additional requirements contact your sales representative.

## ViQi Virtual Partner for APX

Allows user to communicate with a cloud based virtual assistant to query information from back-end databases (i.e. license plates, driver's licenses, unit locations, etc.) via a dynamically assigned talkgroup assigned to a programmable button on a portable radio, remote speaker mic with a programmable button or O3 mobile control head.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	–
<b>Notes</b>	Application Subscription number SSV01S01662A. For additional requirements contact your sales representative.

## ViQi Virtual Partner for APX NEXT

Communicate with a cloud based virtual assistant to query information from back-end databases (i.e. license plates, driver's licenses, unit locations, etc.) over a broadband connection by pressing the dedicated ViQi button on your APX NEXT radio.

### DEPENDENCIES

<b>Portables</b>	–
<b>Mobiles</b>	–
<b>Notes</b>	Application Subscription number SSV01S01408B. For additional requirements contact your sales representative.





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