

Section 1

APX N50 Portable Radio Solution Description

1.1 Overview

The APX N50 offers affordable, next generation communications for {{CustomerNameLong}}, without compromising P25 interoperability or voice and data quality. It offers a durable design with “pick-up-and-go” functionality, optimizing ease-of-use and focused communications in almost all environments.

Durable and Easy to Use

The APX N50 enhances operations with a front display with an upgraded user interface for better readability and loud and clear audio for reliable, everyday use. Additionally, it offers extended battery life, a shorter antenna, and Bluetooth compatibility with audio accessories, promoting efficient communications between first responders.

Adaptive Audio

For first responders in loud environments, the APX N50 offers adaptive audio that enhances voice quality and minimizes background noise. The APX N50 includes two High Dynamic Range (“HDR”) microphones with high overload point pickup that reproduces voice with clarity and reduces audio clipping and distortion, even when shouting. The radio has custom speakers that use noise cancellation technology to amplify loud and clear audio, and help make every syllable intelligible.

An enhanced audio engine dynamically adjusts the N50 in any environment by using algorithms to filter out unpredictable background noise and wind while using multiple microphones to track voice from every angle, allowing first responders to speak into the radio without compromising voice quality. Additional environmentally aware audio features receive volume leveling and noise sensing volume control—the radio will automatically adjust for loud or soft talkers and the changing ambient noise levels. These features allow first responders to keep their eyes forward and remain focused on situations as they unfold.

Essential and Secure P25 Communications

The APX N50 is certified compliant with P25 standards and supports digital and analog trunking, FDMA and TDMA, and Integrated Voice and Data. All P25 communications over the N50 are safe and secure—it offers software and hardware encryption, single- and multi key encryption, and P25 Authentication, protecting communications during daily operations.



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Reliable Connectivity

Using the APX N50 lets first responders stay connected across disparate networks. It is equipped with Wi-Fi®, Bluetooth®, and GPS features, bringing future-ready applications, services, and best-in-class connectivity to everyday use. APX N50 radios support 7/800 MHz frequency bands across radio systems, with minimal intervention by the radio user.

SmartConnect over Wi-Fi

SmartConnect is a subscription service that allows first responders to access critical intelligence no matter where the mission takes them. When P25 networks are unavailable, the APX N50 will maintain functionality and voice quality by automatically switching to an available broadband network, enabling connectivity outside of {{CustomerName Possessive}} radio system coverage. Voice information and signals between radios and control are encrypted, ensuring that all transmissions are secure.

The APX N50 can use SmartConnect when directly connected to Wi-Fi hotspots, through an in-vehicle LTE modem, or over a satellite connection. Additionally, the radio will indicate to users when SmartConnect is active by displaying a blue bar on-screen.

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1.2 Managing and Provisioning Devices

APX N50 can be programmed in two ways: one-at-a-time through Customer Programming Service ("CPS") or through a combination of CPS and batch programming over Wi-Fi available with the radio management ("RM") software.

CPS is a proprietary, Windows-based application, used to configure APX subscriber radios in offline situations that include provisioning, networking, and monitoring tools that provide greater awareness and faster radio management. The CPS application offers drag-and-drop, clone-wizard, and basic import/export functions that allow the addition of new software and feature enhancements. APX N radios can be programmed one-at-a-time on a local PC, via secure USB port connection, with TLS-PSK based encryption. Once loaded, subscriber radios are read and edited, and codeplugs and templates can be saved and duplicated to program other fleet radios.

Batch Programming is available through the RM software for simultaneous programming and upgrading throughout the radio fleet. With Batch Programming, up to 16 radios can be programmed at once over a Wi-Fi connection. This reduces programming time and ensures that the radio fleet is always up-to-date and ready-to-use in the field.

Device Management Services

Device Management Services ("DMS") packages provide programming, management, and maintenance services to maximize the effectiveness of this APX N50 solution, while reducing maintenance risk, workload, and total cost of ownership. DMS tackles a range of customer needs, whether the solution is self-maintained or managed by Motorola Solutions.

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