



# MOTOTRBO BUYING GUIDE

COMMUNICATIONS SOLUTIONS FIT FOR YOUR OPERATIONS



# TABLE OF CONTENTS

- Purchasing for Professional Communications .....3
- Capabilities..... 4-6
- Connectivity..... 7
- Coverage.....8
- Device Comparison Chart.....9
- What’s Next? ..... 10

# PURCHASING FOR PROFESSIONAL COMMUNICATIONS

The demands of today's workforce and the nature of business communications have made it increasingly complicated to equip your teams with devices adequate for the challenges of their environment, while delivering long-term value. Communications now span across several types of networks and devices for voice and data, but the main focus is still keeping your teams and customers safe, while making your operations more efficient and connected.

In order to achieve these goals, your teams are monitoring video, access control, and more. Those technologies should not be siloed — you are stronger, more, proactive and responsive when everything under your technology stack is connected and works together. So where do you start when evaluating different commutation options? It's a lot to consider, but it starts with the devices that your teams use daily, and rely on as their lifeline.

## MOTOTRBO RADIOS

<p><b>COMMERCIAL</b></p>  <p>CP 100d CP 100d CP 100d CP 200d SL 300 R2</p>  <p>CM300d CM200d</p> <p><b>VOICE</b></p>	<p><b>SPECIALIZED (CANADA)</b></p>  <p>XPR 7550 I.S. XPR 7580e I.S.</p> <p><b>HAZARDOUS LOCATION</b></p>
<p><b>ENTRY PROFESSIONAL</b></p>  <p>XPR 3300e XPR 3500e SL3500e</p>  <p>XPR 2500</p> <p><b>VOICE, BASIC SYSTEMS</b></p>	<p><b>PREMIUM</b></p>  <p>ION</p> <p><b>VOICE, BROADBAND DATA, ANDROID OS</b></p>
<p><b>PROFESSIONAL ENHANCED</b></p>  <p>R7 R7</p>  <p>XPR 5550e XPR 5580e XPR 5550e XPR 5580e XPR 5000E HCH</p> <p><b>SUPERB VOICE, ENHANCED DATA, SYSTEMS, FEATURES</b></p>	

# CAPABILITIES

## DATA

Data communications are now at the forefront of day-to-day business operations. Much of what was previously be radio traffic is now consumed as data, on a number of different applications, programs and devices. As a result, many teams are carrying multiple devices. The challenge is that many of the data devices available — and the networks they operate on — are not built for business and may compromise on durability, security and control.

Voice remains a critical communication need for businesses. There is no true substitute for one-to-many voice communication on rugged, purpose-built devices that operate on private custom-built networks — when it matters most. That's why Motorola Solutions now offers converged and collaborative communication devices.

## CONVERGED VS COLLABORATIVE

Converged devices, like MOTOTRBO Ion, can offer the best of both worlds in data and voice. The Ion smart radio brings together renowned Push-to-Talk (PTT) performance, an open app ecosystem on the Android platform, and access to Motorola Solutions' unified technology ecosystem — from video security and analytics solutions, to best-in-class network security, to powerful new software and technology services.

Collaborative devices, like R7, are designed to complement more data-intensive devices in your fleet, and also collaborate with other tools like video, sensors, etc. More on that in the next section.

## AUDIO

Clear audio is among the most prominent radio features for both the end-user and the buyer. The ability to hear and be heard the first time is crucial for staff productivity and the safety of your team and your customers. All MOTOTRBO radios have basic noise-canceling features, but more advanced features are available with higher-tier radios, with the newest Dual Microphone Noise Suppression available only on MOTOTRBO Ion and R7.



# CAPABILITIES

## INTEGRATION

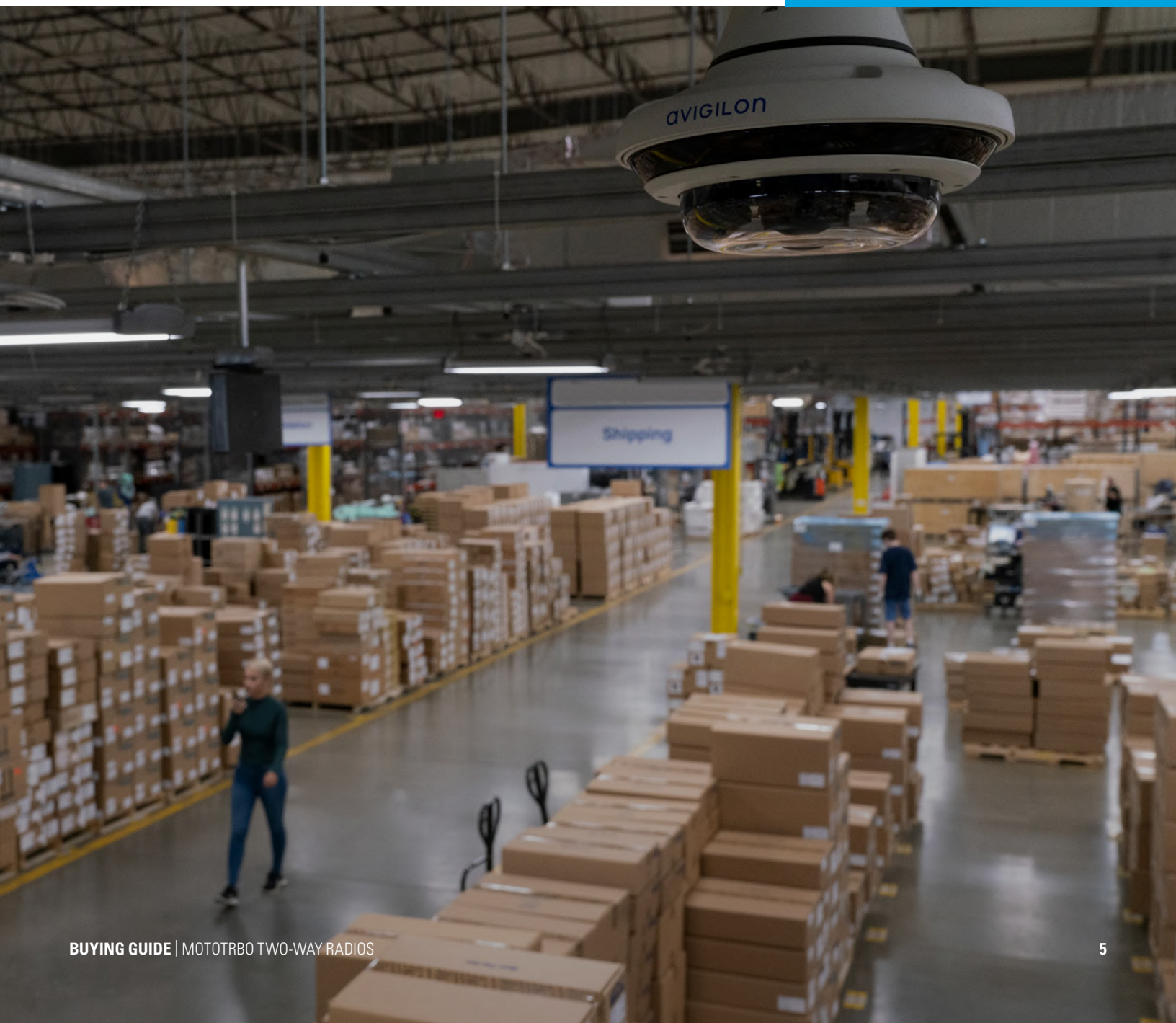
Motorola Solutions has developed the first and only technology ecosystem that unifies voice, video, data, and analytics in a single platform, enabling individuals, businesses and communities to work together in more powerful ways. We call it [Safety Reimagined](#).

Our MOTOTRBO portfolio is built within this ecosystem so you can get more out of your communications investment. Keep your teams aware and streamline critical communications by receiving automatic notifications from your video security and access control systems, sensors and more — directly on your device, using [Orchestrate](#). Control and consolidate instant voice communications from your desktop using innovative computer-aided dispatch solutions. And extend communications beyond your radio network with interoperability with flexible broadband push-to-talk solutions



## ORCHESTRATE

[Orchestrate](#) is a simple-to-configure, cloud-based interface tool that gives administrators the ability to configure and automate security workflows that control their integrated technology ecosystem.





**HAZLOC CERTIFIED MODELS ARE AVAILABLE STARTING AT THE ENTRY PROFESSIONAL TIER AND UP.**

**INTRINSICALLY SAFE\* MODELS ARE PROFESSIONAL ENHANCED TIER AND UP.**



# CAPABILITIES

## DURABILITY

Business communications devices must be built ready to withstand harsh and unpredictable environments. Ingress/International Protection (IP ratings) are industry-standard durability ratings. The first number in the rating refers to protection against solid objects, and the second refers to protection against liquids. MOTOTRBO radios start at IP54 and top out at IP68.

#	OBJECT SIZE	EXAMPLE
0	–	No protection against contact and ingress of objects
1	>50 mm	Protected against large objects
2	>12.5 mm	Protected against fingers
3	>2.5 mm	Protected against tools
4	>1 mm	Protected against wires
5	Dust	Dustproof: Dust may enter, but not enough to interfere with product operation
6	Dust	Dust-tight. No dust may enter

#	PROTECTION
0	Not protected against liquid intrusion
1	Protected against vertical dripping water
2	Protected against water dripping at an angle
3	Protected against spraying water
4	Protected against splashing water
5	Protected against water jets
6	Protected against powerful water jets
7	Protected against immersion (up to 1m / 3ft for 30 mins)
8	Protected against immersion (beyond 1m / 3ft - Motorola tests to 2m / 6.6 ft for 2 hrs)

Hazardous location certifications are sought after for environments where flammable or explosive gases, liquids, dust, or “flyings” may be encountered. Health and safety regulations often mandate that products used in these areas must be HazLoc-certified.

\*Intrinsically Safe is an equipment design protection method for Division 1 which encompasses hazards that may be present under normal operating conditions or frequently present during maintenance and repair work.

# CONNECTIVITY









## DIRECT MODE/SINGLE SITE CONVENTIONAL

Every MOTOTRBO radio is capable of direct radio-to-radio communication without repeaters or radio systems, and used with Single Site Conventional systems. A conventional system is a step up from basic radio-to-radio communications, where radios communicate via a high-power repeater, giving better coverage and more centralized control. Our Commercial radios are designed for direct mode or single-site conventional systems.

## MOTOTRBO DMR SYSTEMS

MOTOTRBO systems offer several advantages over conventional systems and direct mode, such as more user capacity, customized coverage and increased control. Systems can be deployed for single- or multi-site, employing dynamic trunking to increase capacity, for up to 3000 users per site, and up to 250 configurations. MOTOTRBO systems are the backhaul for not only voice but also data for a network of applications developed specifically by and for users. Our Entry-Level Professional radios are designed for use on our Capacity Plus Systems, and Professional Enhanced for Capacity Max systems.

## SYSTEMS

SINGLE SITE CONVENTIONAL	IP SITE CONNECT	CAPACITY PLUS (SINGLE & MULTI)	CAPACITY MAX
CONVENTIONAL		TRUNKING	
			
1 SITE	1-5 SITES	1 - 15 SITES	1 - 250 SITES
			
UP TO 200 USERS	UP TO 200 USERS	UP TO 1600 USERS/SITE	UP TO 3000 USERS/SITE
BASILINE COVERAGE	EXTENDED COVERAGE	COST-EFFECTIVE COVERAGE AND CAPACITY	COVERAGE, CAPACITY AND CONTROL

## WI-FI

Wi-Fi connectivity can provide radio managers with the opportunity to remotely program radios faster than over DMR, without taking them out of the field. Wi-Fi connectivity is available for programming and for PTT over Wi-Fi via WAVE PTX, for the Professional Enhanced tier radios. PTT through WAVE PTX allows for dead spot mitigation for places where MOTOTRBO systems were not designed to reach. Full Wi-Fi data is available on the Premium tier with MOTOTRBO Ion.



## LTE

PTT over LTE is available exclusively for MOTOTRBO radios in the Professional Enhanced tier and up, enabling nationwide PTT, a unique value-add thanks to our WAVE PTX service. Full Wi-Fi broadband data is available on the Premium tier, MOTOTRBO Ion, allowing for carrier-network LTE and private LTE with our Nitro network and also quicker updating, programming and provisioning over LTE.

## BLUETOOTH

Bluetooth connectivity allows for MOTOTRBO devices to connect to audio and data applications. Bluetooth accessories are an attractive option to enhance the audio experience, such as remote speaker microphones and headsets. Bluetooth also provides a way for MOTOTRBO radios to connect to devices such as Honeywell Gas Sensors.

# COVERAGE

## CUSTOMIZED COVERAGE WITH MOTOTRBO

MOTOTRBO systems empower teams with custom voice coverage to keep you connected when it counts, anywhere you do business. MOTOTRBO systems combine superior signal strength with the flexibility to customize site coverage, a predictable cost structure built around your needs, the control to decide which features and which devices go on your network, capacity for as many devices as your team needs, and the capabilities to ensure that your team is only a button's push away.

## INTEROPERABILITY

While all DMR radios are designed to a standard that enables interoperability between different brands — both systems and devices — MOTOTRBO radios have the ability to work in conjunction with a number of different devices over broadband data networks thanks to WAVE PTX. Our WAVE PTX application gives the ability for smartphones, tablets, and other devices to connect with MOTOTRBO over LTE and Wi-Fi.

## DEVICE HANDOVER

DMR, Wi-Fi, and LTE all provide the option for voice interoperability through MOTOTRBO, but handover between these devices requires manual intervention from the end-user. MOTOTRBO's Seamless Voice Handover maintains your voice communications by automatically switching to broadband when your radio signal fades. Authentication, status, talkgroups, and encryption are all preserved, without interruptions or resets.





# THE LATEST MOTOTRBO DEVICES



## MOTOTRBO ION

The [MOTOTRBO ION](#) smart radio is the first business-ready communication device with all-on voice and broadband data capabilities. It brings together renowned PTT performance, an open app ecosystem on the Android platform, and access to Motorola Solutions' unified technology ecosystem—from video security and analytics solutions, to best-in-class network security, to powerful new software and technology services like smart virtual assistants.



## MOTOTRBO R7

[MOTOTRBO R7](#) is a digital portable two-way radio that offers game-changing audio capabilities in a rugged, future-ready device. Its advanced audio processing ensures that your communications are loud and clear, while its rugged construction is ready for harsh environments, and advanced connectivity options get your workforce ready for tomorrow.



## MOTOTRBO R2

The [MOTOTRBO R2](#) is a next-level commercial two-way radio that marries durability and ergonomics to ensure confident, easy handling. And with superior range, configurable audio and seamless integration, the R2 is a reliable addition to an uninterrupted workday.





# RADIO COMPARISON



	COMMERCIAL	ENTRY PROFESSIONAL	PROFESSIONAL ENHANCED	PREMIUM
Adaptive Dual Microphone Noise Suppression	X	X	✓	✓
Automatic Acoustic Feedback Suppression	X	X	✓	✓
Color Display	X	X	✓	✓
Broadband (LTE/Wi-Fi) Data	X	X	X	✓
Bluetooth	X	X	✓	✓
Android OS / Google Play Store	X	X	X	✓
Video Streaming	X	X	X	✓
Automated Analytic Alerting (Orchestrate)	X	X	✓	✓
IP Rating	IP54	IP67	IP68 & IP66	IP68
Fall Alert	X	X	✓	✓
Lone Worker	X	✓	✓	✓
HazLoc Certified	X	✓	✓	✓
Intrinsically Safe	X	X	✓	✓
Direct Mode	✓	✓	✓	✓
Single Site Conventional	✓	✓	✓	✓
Capacity Plus	X	✓	✓	✓
Capacity Max	X	X	✓	✓
Seamless Voice Handover	X	X	X	✓

# WHATS NEXT?

## BRING MOTOTRBO TO YOUR FACILITY

Motorola Solutions and our extensive network of partners are here to help. Get started by reaching out to our team at Motorola Solutions. Our team of experts will work with you to understand the unique needs of your business and help you uncover the best options to maximize your technology investment.

[Contact us](#) today to get in touch with a Motorola Solutions representative.



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

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2023 Motorola Solutions, Inc. All rights reserved. 03-2023 [CK07]