

# MOTOTRBO™ MAKE YOUR ORGANIZATION MORE EFFICIENT AND BETTER CONNECTED

PROFESSIONAL DIGITAL TWO-WAY PORTABLE RADIOS



# ACCELERATE YOUR PERFORMANCE AND ADVANCE YOUR PRODUCTIVITY

WHAT THEY NEED, WHEREVER THEY ARE



Your people are on the job, in the field, on the factory floor, moving across campus or throughout the city. Whether they're moving freight or providing security, repairing roads or restoring power lines, you need to keep them all connected, everywhere they go.

How do you equip them with technology that is easy to use? Improve their performance and increase productivity? The answer is as simple, seamless and scalable as MOTOTRBO™.

Our robust, future-ready, standards-based solution is so flexible and versatile, it can be customized to fit your unique business, coverage and application needs. MOTOTRBO is the complete business-essential solution with portable radios, mobile radios, repeaters, accessories, data applications and services.

A construction worker wearing a high-visibility yellow safety vest, blue jeans, and safety glasses is standing next to a yellow truck. He is holding a black handheld radio with a long antenna. The truck's door is open, and there are several warning labels on the door, including one that says "NOTICE" and another that says "CAUTION". The background shows a clear blue sky and some greenery.

# ANALOG HAS HIT ITS LIMITS

Digital opens up a world of possibilities including clearer audio, integrated voice and data on one device, applications such as text messaging, GPS location tracking, telephony, work order ticket management, dispatch and more. Expect 40% longer battery life and greater capacity than analog – twice the number of users for the price of one frequency license.

## TRANSFORM YOUR WORKPLACE WITH DIGITAL TECHNOLOGY

Two-way radio has been a successful analog communication solution for generations. But in today's technologically advanced environment a new platform is at the forefront – a digital platform that breaks through to higher levels of performance and productivity and is revolutionizing the way mobile professionals communicate.

### DIGITAL DELIVERS WHAT ANALOG CANNOT

Analog has reached its limitations, whether it's issues with coverage or the inability to handle data. Digital technology opens up a world of possibilities, from exceptional audio clarity to integrated voice and data, that analog simply cannot deliver. With digital, you get:

#### Clearer audio quality

So messages are heard and understood without background noise or static.

#### Voice and data on one device

With integrated applications such as text messaging, GPS-based location tracking, work order ticket management, email gateways, dispatch consoles, network management, telephony integration and much more.

#### Longer battery life

Up to 40% longer than analog so it's ideal for extended work shifts where continuous communication is essential.

#### Greater capacity

Twice the number of users for the price of one frequency license.

### TDMA GIVES YOU TWICE AS MUCH FOR LESS

Today, there are two primary digital radio technologies – Time-Division Multiple-Access (TDMA) and Frequency-Division Multiple-Access (FDMA). While both offer significant benefits over analog, here's why TDMA is best:

#### Double your capacity per channel with less than half the infrastructure

TDMA divides your existing channels into two time slots so you can double the number of users on your system or use data applications in conjunction with voice communication. Two calls can occur simultaneously on the same repeater so a second call does not require a second repeater. This lowers your costs because there's no need to purchase, install and maintain additional infrastructure equipment.

#### Double your capacity without a hassle

TDMA doubles your capacity because it provides two time slots on your existing licensed channels. There is no increased risk of interference and no need for new licenses – simply amend them to specify digital. Plus, TDMA is compatible with all legacy radios working on 12.5 kHz analog channels.

#### Get long battery life for long work shifts

Because TDMA uses only half of the transmitter's capacity, it extends battery life. This is invaluable during long work shifts or where data applications that enhance productivity require more power from your radio.

#### Benefit from business-critical features

TDMA makes smart control features like "transmit interrupt" possible. This interrupts lower priority communication so critical instructions can be delivered right when they're needed. And to help you maximize your infrastructure investment, TDMA transmits voice and data on the same channel.

#### BE READY FOR THE FUTURE WITH THE RIGHT STANDARD

MOTOTRBO™ complies with the globally-recognized European Telecommunications Standard Institute (ETSI) Digital Mobile Radio (DMR) Tier 2 standard for professional two-way radio users.

DMR is widely supported by the leading two-way manufacturers in the industry and the most widely deployed digital mobile radio technology worldwide. This open standard assures long-term sustainability and creates a community of manufacturers who build interchangeable equipment that can compete on features, benefits and price.



### MAKE THE MOVE SMOOTHLY

It's easy to migrate to digital with MOTOTRBO. Whether you have a conventional or SMARTNET®/ Privacy Plus™ analog trunking system, migrate with a simple software upgrade – no additional hardware required. Our dynamic mixed mode repeater automatically switches between analog and digital calls on the same repeater. So you can use MOTOTRBO radios and repeaters on your analog system and move to digital when time and budget allow.



## PUT THE POSSIBILITIES OF DIGITAL DATA TO WORK

### Get voice and data in one device

MOTOTRBO™ supports both voice and data – including text messaging, GPS location tracking capability, and custom applications from Motorola's Application Developer Program such as telephony, dispatch, work order ticket solutions, email gateways, network monitoring, man-down and much more. So you can keep employees connected to the information they need to be more efficient, with the remarkable convenience of one device.

### Send text messages when voice isn't practical

Make sure your employees can quickly and easily share information when voice communication isn't an option. Text messaging is ideal for sending messages that don't need an immediate response, or when voice conversation could be disrupting to guests, students, customers, or patients. MOTOTRBO streamlines communication with text messaging between radios, radios and dispatch systems and radios to any email-capable device.

## STRENGTHEN YOUR BUSINESS WITH A SMARTER BUSINESS TOOL

### High-powered performance

By integrating voice and data into one device, you increase operating efficiency with business-essential applications like text messaging, GPS-based location tracking, work order ticket management, email gateways and more.

And when it comes to battery performance, MOTOTRBO digital radios operate 40 percent longer between recharges compared to analog. In fact, the leading-edge IMPRES™ technology in our batteries, chargers and audio accessories helps enable longer talk time and clearer audio.

### Added functionality

MOTOTRBO offers added functionality, including dispatch capability with the MIP 5000 VoIP console, enhanced call signaling, basic and enhanced privacy-scrambling, option board expandability and compatibility with SCADA solutions for utility and public service monitoring and alarms. Plus digital telephone interconnect capability to enable communication between radios and landline or mobile phones as well as a transmit interrupt suite – with voice interrupt, emergency voice interrupt or data over voice interrupt – to prioritize critical communication the moment you need it.

### Track vehicles and people with integrated GPS

MOTOTRBO radios have an integrated GPS module so you can track vehicles and people. Unlike other GPS-capable radios, the MOTOTRBO module is integrated into the handset so there's no clumsy equipment to attach, carry or maintain.

You can manage your mobile workforce more effectively and respond quickly to incidents by locating the nearest employees and dispatching them to the scene. The GPS module makes it easier to manage your fleet, make deliveries and drive routes expeditiously.

If you have a utility crew on repair or a dispatcher sending taxicabs across the city, the ability to see where your employees and vehicles are at a glance is invaluable. With GPS tracking, your response time is more efficient, your customer service is more effective, and your operation is far more productive.

### Migrate at your own pace

Keeping operations running smoothly during a change in communication systems is vital to your business. It's easy to migrate to digital with MOTOTRBO because radios operate in analog and digital mode. You can use MOTOTRBO radios in analog mode with your existing analog system and begin migrating work teams over to digital mode – one talk group or department at a time – while still maintaining communication across your entire workforce.

The dynamic mixed mode repeater on MOTOTRBO streamlines automatic switching between analog and digital calls. This means you only need one repeater to operate both modes. So when your time and budget allows you can migrate to the benefits of digital technology at your own pace.

### Reliable durability

MOTOTRBO meets the most demanding specs, including IP57 for water submersibility (portables) and U.S. Military 810 C, D, E and F. It's "intrinsically safe" when purchased and equipped with an FM/CSA certified battery, for use where flammable gas, vapors or combustible dust may be present. And it's backed by a two-year Standard Warranty, one-year Repair Service Advantage (US)/Extended Warranty (Canada) and minimum 1-year warranty for accessories.

### MOTOROLA'S APPLICATION DEVELOPER PROGRAM: BUILT FOR YOUR BUSINESS

Powerful and flexible, MOTOTRBO is a business-critical communication tool that adapts to your work force, your customers and your business.

With the industry's largest Application Developer Program, MOTOTRBO offers a wide array of data applications to expand your business communication beyond voice. What's more, you can work directly with third-party developers or your own IT staff to create customized applications designed for your unique needs.

### Keep business running smoothly with business applications:

Location tracking to see vehicles and personnel at a glance

Work order tickets for faster customer response

Dispatch consoles for centralized communication

Email gateways to connect to email from your radio

Network monitoring to maximize system utilization

Man-down applications, so when workers can't call for help their radios will

Telephony for communication between radios and landline phones



**REACH EVERYONE, EVERYWHERE THEY GO WITH MOTOTRBO™**

Whether you want to increase the number of users on your system, extend coverage, connect workers in different locations or deliver voice and data without adding new frequencies, MOTOTRBO features a scalable communication solution that fits your facilities, your workforce and your objectives.

**MOTOTRBO SYSTEMS COMPARISON**

	CONVENTIONAL	IP SITE CONNECT	CAPACITY PLUS TRUNKING	CONNECT PLUS TRUNKING
Number of Sites	1	15	1	20
Number of Users*	100	100	up to 1200	up to 2900 per site
Voice & Data Capacity	2 talk paths	2 talk paths	12 talk paths plus 24 additional data paths	29 talk paths per site
Architecture	Conventional	Conventional-based	Conventional-based	Controller-based
Transmit Interrupt Capability	✓	✓	✓	
Priority Calling Capability				✓
Call Queuing Capability				✓
Dynamic Roaming Capability		✓		✓
3rd Party Data Applications	✓	✓	✓	✓
Frequency Bands	UHF, VHF, 800 / 900 MHz	UHF, VHF, 800 / 900 MHz	UHF, VHF, 800 / 900 MHz	UHF, VHF, 800 / 900 MHz

\*Actual results may vary depending on system configuration and usage.

- **Conventional** systems combine the best of two-way radio with digital technology to deliver integrated voice and data communication, increased capacity, enhanced features, exceptional voice quality and extended battery performance for your business.
- **IP™ Site Connect** is a digital solution that uses the Internet to extend the voice and data capabilities of MOTOTRBO. Use it to link up to 15 sites for communication among geographically dispersed locations, to create wide-area coverage or to enhance coverage at a single site with physical barriers.
- **Capacity Plus** is the single site digital trunking solution that maximizes the capacity of your MOTOTRBO system. Use it to enable a high volume of voice and data communication for over a thousand users at a single site, without adding new frequencies.
- **Connect Plus** is the scalable, multi site digital trunking solution that helps keep your mobile workforce connected. With this scalable, high capacity MOTOTRBO system, calls can be queued during busy times until an open channel is available, important users can be assigned priority status when the system is in high demand, and a wire-line console can be used for centralized dispatch.

**KEEP THEM ALL CONNECTED**

Give your employees the information they need to be more efficient with the remarkable convenience of one device. Experience clear and reliable voice communication with background noise suppression, the flexibility of group or private calls, quick access to contacts with keypad shortcuts and communication with landline or mobile phone users via digital telephone interconnect. MOTOTRBO also supports data – including text messaging, GPS location tracking capability, dispatch and custom applications from Motorola’s Application Developer Program such as work order ticket solutions, email gateways, man-down, network monitoring and more.



**KEEP YOUR TECHNOLOGY IN TOP CONDITION**

Managing in-house repairs and maintenance of your radios takes a dedicated staff of technicians and an ongoing investment in diagnostic equipment, repair tools and technical training to keep up to speed on the latest technology.

We've made that investment for you so you can easily and cost-effectively keep radios in top operating condition. Subscriber repair services help you budget for repairs and prevent unexpected costs.



**SUBSCRIBER REPAIR SERVICES**

Repair Service Advantage (RSA ) and Repair Service Advantage Comprehensive (RSA Comprehensive) repairs receive priority service and meet committed cycle times.

**Repair Service Advantage (RSA)**

This post-warranty service extends the service coverage of your Motorola portable or mobile subscriber radios. RSA can be purchased as an option with new radios and is available in 1, 2 or 3-year increments. (U.S. only)

**Repair Service Advantage**

Comprehensive (RSA Comprehensive) We design our portable and mobile radios to take a lot of abuse. But even the best radios are subject to “above and beyond” wear and tear. That’s why we’ve introduced RSA Comprehensive.

RSA Comprehensive offers all the protection of a standard RSA support plan with even more coverage. This includes chemical, liquid and other physical damage to your portable and mobile subscriber radios. RSA Comprehensive is available as an option to your radio purchase for 3 years of coverage. (U.S. only, not available on repeaters)

**Extended Warranty**

In addition to our 2-year standard warranty, Extended Warranty is available for a total of 3 or 5 years of coverage. (Canada only)

# XPR™ 6550 / XPR 6580

## DISPLAY PORTABLE RADIO

### FEATURES AT-A-GLANCE

- 1 Flexible, menu-driven interface with user-friendly icons or two lines of text for ease of reading text messages\* and navigating through the menus.
- 2 Tri-color LED indicator for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 3 Emergency button alerts supervisor or dispatcher in an emergency situation.
- 4 Accessory connector meets IP57 submersibility specifications and incorporates RF, USB and IMPRES™ audio capability.
- 5 Integrated GPS module enables the use of location-tracking data applications.\*
- 6 Large, easy-to-use navigation buttons allow easy access to intuitive menu-driven interfaces.
- 7 Radio housing meets IP57 specifications; submersible in 1 meter of fresh water up to 30 minutes. Offers intrinsically safe options for use in locations where flammable gas, vapors or combustible dust may be present.
- 8 Powerful, front projecting speaker.
- 9 Three side and two front programmable buttons for easy access to favorite features.
- 10 Large, textured push-to-talk button provides good tactile response and easy access, even when wearing gloves.
- 11 Up to 1,000 channels.

### ADDITIONAL FEATURES

- Enhanced call management  
Digital calling features\*  
Encode/Decode: call alert, emergency, push-to-talk ID, radio check, remote monitor, private call, all call, transmit interrupt (voice interrupt, remote voice dekey, emergency voice interrupt or data over voice interrupt), radio disable
- MDC 1200 analog calling features  
Encode/Decode: push-to-talk ID, emergency, call alert
- Quik-Call II™ analog calling features  
Encode/Decode: call alert, call alert with voice, select call
- Dual-mode analog and/or digital scan and mixed mode priority scan\*— facilitates a smooth migration from analog to digital
- Optional Expansion Card for added capabilities
- 6.25e Compliant\*
- Basic or Enhanced privacy – built-in scrambling for increased security\*
- Free-form and quick text messaging\*
- Contacts list accommodates up to 1,000 contacts
- Voice Activated Transmit (VOX) hands-free communication
- Operates in UHF, VHF or 800/900 MHz frequency bands



### STANDARD PACKAGE

- Display Portable Digital/Analog Radio
- Antenna – Standard whip with GPS
- IMPRES Li-Ion Submersible 2150 mAh Battery
- IMPRES Single Unit Charger
- 2.5" Belt Clip
- Dust Cover for Accessory Connector
- Built-In Expansion Card\* (XPR 6580 only)
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only) / Extended Warranty (Canada only)

\*Digital feature

# XPR™ 6350 / XPR 6380

## NON-DISPLAY PORTABLE RADIO

### FEATURES AT-A-GLANCE

- 1 Tri-color LED indicator for clear, visible feedback of calling, scanning, roaming and monitoring features.
- 2 Emergency button to alert supervisor or dispatcher in an emergency situation.
- 3 Accessory connector meets IP57 submersibility specifications and incorporates RF, USB and IMPRES™ audio capability.
- 4 Integrated GPS module enables the use of location-tracking data applications.\*
- 5 Radio housing meets IP57 specifications; submersible in 1 meter of fresh water up to 30 minutes. Offers intrinsically safe options for use in locations where flammable gas, vapors or combustible dust may be present.
- 6 Powerful, front projecting speaker.
- 7 Three side programmable buttons for easy access to favorite features.
- 8 Large, textured push-to-talk button provides good tactile response and easy access, even when wearing gloves.
- 9 32 channels

### ADDITIONAL FEATURES

- Enhanced call management  
Digital calling features\*
  - Encode/Decode: private call, call alert, all call, transmit interrupt (voice interrupt, remote voice dekey, emergency voice interrupt or data over voice interrupt)
  - Encode only: emergency, push-to-talk ID
  - Decode only: radio check, remote monitor, radio disable
- MDC 1200 analog calling features
  - Encode/Decode: call alert
  - Encode only: push-to-talk ID, emergency
- Quik-Call II™ analog calling features
  - Encode/Decode: call alert, call alert with voice, select call
- Dual-mode analog and/or digital scan and mixed mode priority scan\*— facilitates a smooth migration from analog to digital
- Optional Expansion Card for added capabilities
- 6.25e Compliant\*
- Basic or Enhanced privacy – built-in scrambling for increased security\*
- Send quick text messages via programmable buttons\*
- Voice Activated Transmit (VOX) hands-free communication
- Operates in UHF, VHF or 800/900 MHz frequency bands



### STANDARD PACKAGE

- Non-Display Portable Digital/Analog Radio
- Antenna – Standard whip with GPS
- IMPRES Li-Ion Submersible 2150 mAh Battery
- IMPRES Single Unit Charger
- 2.5" Belt Clip
- Built-In Expansion Card\* (XPR 6380 only)
- Two-year Standard Warranty plus one-year Repair Service Advantage (US only) / Extended Warranty (Canada only)

## HEAR CLEARER. TALK LONGER. WORK SMARTER WITH IMPRES™ TECHNOLOGY.

We created our patented IMPRES technology as an integral part of our two-way radio audio accessories, batteries and chargers. Users who rely on IMPRES Smart Audio and Smart Energy systems call them innovative and indispensable. We call IMPRES the intelligent way to communicate – offering enhanced performance and exceptional capabilities between your radio and accessories, your battery and charger, your workforce and workplace.

### IMPRES SMART AUDIO ACCESSORIES

Our IMPRES Smart Audio is a Motorola-exclusive solution that provides exactly what businesses and agencies seek: two-way audio quality that's loud, clear and intelligible in digital and analog modes.

#### EXCEPTIONALLY CLEAR AUDIO

IMPRES audio accessories communicate with the radio to help suppress ambient noise, improve voice intelligibility and amplify loudness – even in noisy situations and difficult weather. So if you're a security officer with an IMPRES remote speaker microphone clipped to a lapel or a hospitality manager wearing an earpiece, you can carry on a conversation with clarity, simplicity and certainty.

#### STOP ADJUSTING VOLUME

Are your employees on surveillance and discreet conversation is expected? Trying to talk above the roar of the crowd in a stadium? When they need to speak quietly or at normal volume but not directly into the microphone, enhanced Audio Gain Capability (AGC) can make all the difference. This IMPRES feature detects changes in voice levels and automatically increases or decreases microphone gain so the receive end doesn't have to adjust volume levels repeatedly.

#### CUSTOMIZE TO YOUR WORKSTYLE

IMPRES accessory buttons can be programmed with "shortcuts" in addition to the programmable buttons available on your radio. You can use your accessory to access additional important features, such as private calls, with just a touch.

### IMPRES SMART ENERGY SYSTEM

For the line worker on a long shift or the public works officer laboring overtime to restore power, the job stops when their radio stops operating. Our innovative IMPRES battery charging and reconditioning system streamlines and automates battery maintenance. It draws on our exclusive technology to communicate between your battery and charger to help lengthen battery life and extend talk time.

#### AUTOMATES BATTERY MAINTENANCE

You want to be sure you get the most out of every battery by maximizing its life. With IMPRES you can, because it automates battery maintenance. IMPRES integrates

reconditioning capability into the charger along with the means to evaluate battery usage and determine the best time to recondition it. By automating maintenance, IMPRES optimizes your battery's life.

#### ELIMINATES OVERCHARGING

IMPRES batteries can be left in their IMPRES chargers for extended periods without heat damage from the charger. If radios are accidentally left in the charger – overnight, over a weekend or longer – there's no worry about shortening your battery's life. Because the IMPRES charger automatically monitors battery capacity batteries are safely charged to the right capacity and always ready to go.

#### BETTER DATA FOR BETTER DECISIONS

IMPRES batteries store critical usage information so you don't have to. Each two-line IMPRES charger display presents key data at a glance, so you can make informed decisions about battery replacement. Data includes key information such as: actual battery capacity, time remaining to complete charging, and each battery's unique serial number. If you're operating a large fleet of batteries, IMPRES battery data reader is a valuable diagnostic tool to evaluate individual IMPRES batteries. IMPRES Battery Fleet Management collects and consolidates that data automatically, so you can quickly and easily identify when batteries need to be replaced.

#### EXTENDED WARRANTY

When you use MOTOTRBO™ IMPRES batteries exclusively with IMPRES chargers, you can count on an 18-month capacity warranty coverage – six months longer than Motorola standard batteries.

#### TESTED TOUGH AND PROVEN TOUGH

IMPRES or any other Motorola batteries are Proven Tough. Time after time, in lab test after test – for Drop, Vibration and ESD (Electrostatic Discharge) – they withstand shocks, knocks, drops and shakes and outperform the leading brands. If your radio gets banged on a ride, rattled by heavy equipment or shocked by static electricity, you can depend on IMPRES batteries to stay true and stand tough.

**MOTOTRBO™ RADIO ACCESSORIES. PERFORMANCE THAT LIVES UP TO ITS PROMISE**

Whether you're working in harsh conditions, noisy environments, long shifts or looking for discreet communication, MOTOTRBO accessories and batteries stand up to the task and stand out in the field. We designed and developed a complete portfolio of solutions with this proprietary, leading-edge technology. Our accessories and batteries are specially designed to perform optimally with our portable and mobile radios.



**PORTABLE RADIO ACCESSORIES**

Our IMPRES™ Smart Audio is a Motorola-exclusive solution that provides exactly what businesses and agencies seek: two-way audio quality that's loud, clear and intelligible in digital and analog modes.

**FLEXIBLE, FEATURE-RICH AUDIO SOLUTIONS**

Our diverse portfolio of Remote Speaker Microphones and Public Safety Microphones are designed with many unique features, including IMPRES, Windporting, noise-canceling acoustics and IP57 submersibility.



A wide range of additional audio accessories are available to create a custom radio solution – whether it's heavy-duty headsets for noisy crowds, discreet earpieces for covert conversations or a complete selection of temple transducers, headsets and earpieces.

In addition, our Operations Critical Wireless earpiece is a unique Bluetooth® accessory that's comfortable to wear for long shifts and features leading-edge audio and exceptional clarity.

**ROAD-TESTED CARRYING SOLUTIONS**

Your people want durable, dependable carrying solutions that withstand wear and tear to keep them connected on the job. MOTOTRBO's complete portfolio of carry solutions includes nylon and leather carry cases, belt clips, shoulder straps and chest packs. They are designed to be very comfortable and functional, yet still resist water and dust and endure rugged conditions.

## **Spectrum Telecom Group Ltd.**

505 FROOD RD  
Sudbury, ON P3C 5A2  
705-673-6661  
705-673-0957

[www.spectrumtelecom.ca](http://www.spectrumtelecom.ca)



For more information on how to make your business more efficient  
and better connected, visit .

Motorola Solutions, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. [motorolasolutions.com](http://motorolasolutions.com)

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