



YOUR VOICE JUST GOT STRONGER

MOTOTRBO™ XiR™ P8600 SERIES DIGITAL TWO-WAY PORTABLE RADIOS

From factory floors to road crews, the **MOTOTRBO XiR P8600 Series** transforms enterprises by enabling smarter and safer communication. With industry-leading audio quality and unmatched data capabilities, these radios empower teams like never before.

Versatile and Powerful Communication

The **XiR P8600 Series** blends the best of two-way radio functionality with advanced digital technology. These radios seamlessly integrate voice and data, offering intuitive features such as **Bluetooth® connectivity** and **Intelligent Audio**, making them simple to use while delivering critical communication benefits.

Enhanced Collaboration and Efficiency

The **XiR P8600 Series** redefines workplace communication and teamwork. Whether you're enhancing operational efficiency or improving employee collaboration, these radios are built to meet the demands of your business and drive greater productivity.

Let the **MOTOTRBO XiR P8600 Series** take your enterprise communication to the next level.

PRODUCT SPEC SHEET

MOTOTRBO™ XiR P8600 SERIES PORTABLE RADIOS

AUDIO BEYOND EXPECTATIONS

Experience the exceptional clarity of digital audio with the XiR P8600 Series. These radios deliver superior performance across your entire coverage area, coupled with unique features designed to enhance communication in any environment.

- **Intelligent Audio:** Automatically adjusts volume to compensate for background noise, ensuring workers can hear and speak clearly without manual adjustments—whether in loud or quiet areas.
- **Enhanced Noise Suppression:** Filters out unwanted sounds, from heavy machinery to engine noise, for clearer conversations.
- **Embedded Bluetooth® Audio:** Wireless accessories connect seamlessly without the need for adapters.
- **IMPRES™ Audio Accessories:** Provide advanced noise suppression and improved voice clarity, delivering a smarter communication experience.

INDUSTRY-LEADING DATA

The XiR P8600 Series integrates innovative data features to improve operational efficiency:

- **Bluetooth® Data:** Enables real-time data sharing, reducing downtime and improving decision-making.
- **Integrated GPS:** Tracks mobile teams for better resource management.
- **Text Messaging:** Offers a communication option when voice isn't practical.
- **Full-Color, 5-Line Display:** Provides easy visibility for messages and work orders in all lighting conditions, with day and night modes.
- **Application Developer Program:** Offers tailored data solutions, from work order management to telephony integration, ensuring the radios adapt to your business needs.

HIGH-POWERED PERFORMANCE

The XiR P8600 Series maximizes efficiency with:

- **TDMA Digital Technology:** Delivers integrated voice and data, double the call capacity, and enhanced audio clarity.
- **Extended Battery Life:** Operates up to 40% longer between charges compared to analog radios.

RICH FUNCTIONALITY

Packed with features, the XiR P8600 Series includes:

- **Advanced Call Signaling:** Ensures clear and prioritized communication.
- **Enhanced Privacy Options:** Includes both basic and advanced privacy-scrambling features.
- **Expandability:** Option board capability for additional functionalities.
- **Transmit Interrupt Suite:** Prioritizes critical communications instantly.
- **Customizable Voice Announcements:** Audibly confirm channel and zone changes or button functions, minimizing distractions.

The XiR P8600 Series combines cutting-edge audio, data capabilities, and robust functionality, making it the ultimate tool for smarter, more efficient communication in demanding business environments.

EXPANDED CAPACITY AND COVERAGE

Your workforce operates tirelessly every day – managing logistics, repairing infrastructure, providing security, responding to guest needs, or restoring power after natural events. MOTOTRBO's advanced solutions ensure they stay connected and efficient:

- **IP Site Connect:** Leverages the Internet to extend communication coverage, creating a wide area network, enhancing single-site coverage, or linking dispersed locations.
- **Capacity Plus:** Expands single-site trunking capacity to over 1,000 users without additional frequencies.
- **Linked Capacity Plus:** Combines Capacity Plus's user expansion with IP Site Connect's wide-area networking, delivering a high-capacity, wide-area, cost-efficient trunking solution.

Whether you require coverage at a single location or across multiple sites, MOTOTRBO is scalable to fit your operational needs and budget.

MIGRATE AT YOUR OWN PACE

Transitioning to a digital communication system doesn't have to disrupt your business. With the XiR P8600 Series, migration is seamless:

- Operates in both **analog** and **digital modes** for gradual implementation.
 - **Dynamic Mixed Mode Repeater:** Automatically switches between analog and digital calls, simplifying communication during the transition.
- Start using MOTOTRBO radios with your existing analog infrastructure and move to digital when it's convenient for your timeline and budget.

DAY-IN, DAY-OUT DURABILITY

Built for the toughest environments, the XiR P8600 Series delivers reliable performance:

- **P57 Water Submersibility:** Protects against immersion in water.
- Meets rigorous **U.S. Military 810 C, D, E, F, & G standards** for durability.
- **Intrinsically Safe Design:** Equipped with an FM-certified battery, the radio is safe for use in environments with flammable gases, vapors, or combustible dust.

Backed by a two-year standard warranty and a one-year warranty for batteries and accessories, the XiR P8600 Series is built to endure, ensuring your communication stays strong in even the most challenging conditions.



KEEP YOUR BUSINESS RUNNING SMOOTHLY WITH BUSINESS APPLICATIONS:

- **Location tracking:** Monitor the whereabouts of mobile workers, enabling quick response times. In case of emergencies, pinpoint security personnel and direct the nearest to the scene.

- **Integrated Bluetooth®** Wirelessly share data instantly between devices for seamless communication.

- **Dispatch consoles** Facilitate centralized communication for efficient coordination across teams.

- **Email gateways** Stay connected to email from your radio, ensuring no important messages are missed.

- **Network monitoring** Maximize system utilization to keep your network performing optimally.

- **Man-down applications** Automatically send alerts if a worker is incapacitated, ensuring quick assistance.

- **Telephony** Communicate effortlessly between radios and landline or mobile phones for broader reach.

- **Text messaging** Send quick, discreet messages to streamline communication without disruption.

- **Work order tickets** Manage and process customer requests faster with integrated work order functionality.

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MOTOTRBO™ XiR P8600 SERIES PORTABLE RADIOS

XiR P8600 SERIES SPECIFICATIONS

GENERAL SPECIFICATIONS					
		DISPLAY XiR P8668/P8660/P8628/P8620		NON DISPLAY XiR P8608/P8600	
		VHF	UHF	VHF	UHF
Channel Capacity		1000		32	
Frequency		136-174 MHz	403-527 MHz	136-174 MHz	403-527 MHz
IMPRES Hi-Cap Li-ion 2150 mAh Battery (PMNN4409)	(HxWxL)	5.13 inch / 2.17 inch / 1.62 inch (130.3 mm / 55.2 mm / 41.1 mm)		5.13 inch / 2.17 inch / 1.56 inch (130.3 mm / 55.2 mm / 39.6 mm)	
	Weight	12.54 oz (355.5 g)		11.39 oz (323 g)	
Slim IMPRES Li-ion 1500 mAh Battery (PMNN4407)	(HxWxL)	5.13 inch / 2.17 inch / 1.41 inch (130.3 mm / 55.2 mm / 35.8 mm)		5.13 inch / 2.17 inch / 1.35 inch (130.3 mm / 55.2 mm / 34.3 mm)	
	Weight	11.83 oz (335.5 g)		10.69 oz (303 g)	
IMPRES Hi-Cap Li-ion FM 2300 mAh Battery (NNTN8129)	(HxWxL)	5.13 inch / 2.17 inch / 1.62 inch (130.3 mm / 55.2 mm / 41.1 mm)		5.13 inch / 2.17 inch / 1.56 inch (130.3 mm / 55.2 mm / 39.6 mm)	
	Weight	12.89 oz (365.5 g)		11.75 oz (333 g)	
Power Supply		7.5 V (Nominal)			
Operating Temperature		-30 ~ +60 °C ¹			
FCC Description		ABZ99FT3085	ABZ99FT4086	ABZ99FT3085	ABZ99FT4086
IC Description		109AB-99FT3085	109AB-99FT4086	109AB-99FT3085	109AB-99FT4086

BATTERY			
Average Battery Life	5/5/90 duty cycle with carrier squelch and transmitter in high power ²		
Slim IMPRES Li-ion 1500 mAh Battery	Analog: 7.7 hrs/ Digital: 11.3 hrs	Analog: 8 hrs/ Digital: 11.8 hrs	
IMPRES Hi-Cap Li-ion 2150 mAh Battery	Analog: 11.1 hrs/Digital: 16.2 hrs	Analog: 11.5 hrs/Digital: 17 hrs	
IMPRES Hi-Cap Li-ion FM 2300 mAh Battery	Analog: 11.9 hrs/Digital: 17.3 hrs	Analog: 12.3 hrs/Digital: 18.1 hrs	

RECEIVER		
	VHF	UHF
Frequencies	136-174 MHz	403-527 MHz
Channel Spacing	12.5/25kHz	
Frequency Stability (-30°C, +60°C, +25°C Ref)	± .5 ppm	
Analog Sensitivity (12dB SINAD)	0.3uV (0.22uV typical)	
Digital Sensitivity	0.25 uV (0.19 uV typical)	
Intermodulation (TIA603D)	70 dB	
Adjacent Channel Selectivity (TIA603A)-1T	60dB @ 12.5 kHz / 70dB @ 25 kHz ³	
Adjacent Channel Selectivity (TIA603D)-2T	45dB @ 12.5 kHz / 70dB @ 25 kHz ³	
Spurious Rejection (TIA603D)	70 dB	
Rated Audio	0.5W	
Audio Distortion @ Rated Audio	5% (3% typical)	
Hum and Noise	-40dB @ 12.5 kHz / -45dB @ 25 kHz ³	
Audio Response	TIA603D	
Conducted Spurious Emission (TIA603D)	-57dBm	

TRANSMITTER		
	VHF	UHF
Frequencies	136-174 MHz	403-527 MHz
Channel Spacing	12.5/25 kHz	
Frequency Stability	± 1.5 ppm	
Low Power Output	1W	1W
High Power Output	5W	4W
Modulation Limiting	± 2.5kHz @ 12.5 kHz / ± 5.0kHz @ 25 kHz ³	
FM Hum and Noise	-40dB @ 12.5 kHz / -45dB @ 25 kHz ³	
Conducted/Radiated Emission	-36 dBm < 1GHz / -30 dBm > 1GHz	
Adjacent Channel Power	60dB @ 12.5 kHz / 70dB @ 25 kHz ³	
Audio Response	TIA603D	
Audio Distortion	3%	
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D & 7K60FXD	
	12.5 kHz Voice: 7K60F1E & 7K60FXE	
	Combination of 12.5 kHz Voice & Data: 7K60F1W	
Digital Vocoder Type	AMBE+2™	
Digital Protocol	ETSI TS 102 361-1, -2, -3	

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GPS

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at nominal -130 dBm signal strength)

TTFF (Time To First Fix) - Cold Start < 60 seconds

TTFF (Time To First Fix) - Hot Start < 10 seconds

Horizontal Accuracy < 5 meters

BLUETOOTH

Version Supports Bluetooth® 2.1 + EDR Specification

Range Class 2, 10 meters

FACTORY MUTUAL APPROVALS

MOTOTRBO XiR P8600 Series portable radios have been certified by FM in accordance with U.S. Codes as intrinsically safe for use in Class I, II, III, Division 1, Groups C, D, E, F, G, when properly equipped with a Motorola FM approved battery option. They are also approved for use in Class I, Division 2, Groups A, B, C, D.

MILITARY STANDARDS

APPLICABLE MIL-STD	810C		810D		810E		810F		810G	
	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES
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
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, II
Temperature Shock	503.1	-	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	-	507.5	II
Salt fog	509.1	-	509.2	-	509.3	-	509.4	-	509.5	-
Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	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	II/5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV, VI

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -30° C / +60° C

Storage Temperature -40° C / +85° C

Thermal Shock Per MIL-STD

Humidity Per MIL-STD

ESD IEC 61000-4-2 Level 3

Dust and Water Intrusion IEC 60529 - IP57

Packaging test MIL-STD 810D and E

Testing completed using portable radio with attached battery and antenna.

¹ Radio only - Li-Ion battery -10C

² Actual battery runtime observed may vary based on the use of certain features such as GPS, Bluetooth, and Expansion Card based applications.

Please contact your Motorola sales representative for battery runtime expectations based on your specific radio configuration.

For more information on how to strengthen your portable voice, visit motorolasolutions.com/mototrbo

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements.

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DIGITAL
REMASTERED.

