



MOTOTRBO™ XPR™ 2500 MOBILE RADIO

DIGITAL, NOW WITHIN REACH



Picking up cargo or re-routing school buses, how do you make sure your people stay connected and safe? MOTOTRBO™ can help by putting the power of digital communications within reach. Versatile and powerful, the MOTOTRBO XPR™ 2500 combines the best of two-way radio functionality with the latest digital technology for enhanced voice communications.

MOTOTRBO XPR™ 2500 mobile radios are compact and capable for the busy mobile worker who needs digital technology at an affordable cost. You get all the advantages of digital – including systems capability, twice the calling capacity and clearer voice communications.

The MOTOTRBO XPR 2500 has systems capability, so when you need the flexible coverage of IP Site Connect or the traffic-handling capability of Capacity Plus, the XPR 2500 can deliver.

XPR 2500 is the perfect fit for your analog system, as well. With easy scalability and analog interoperability, you can move to digital at your own pace and budget. The XPR 2500 can help you achieve even greater productivity, safety and cost-efficiency.

Empower your teams to communicate more effectively with the MOTOTRBO XPR 2500.

FEATURES

- Analog / Digital
- Voice Communications
- Alphanumeric Display
- Intelligent Audio
- Basic Privacy
- Dual Capacity Direct Mode
- Voice Announcement
- Digital Mobile Radio (DMR) Standards Compliant
- Narrowbanding Compliant
- Transmit Interrupt (Decode)
- IP54 Rated

OPTIONS

- Enhanced Privacy
- Radio Management Suite
- Transmit Interrupt (Encode)

COMPATIBILITY

- Over The Air Programming (OTAP)
- IP Site Connect
- Capacity Plus
- Linked Capacity Plus

AFFORDABLE VOICE COMMUNICATIONS FOR THE BUSY PROFESSIONAL
WHO WANTS BETTER CONNECTIVITY

PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 2500 MOBILE RADIOS

HEAR AND BE HEARD CLEARLY ON THE MOVE

When it comes to exceptional audio quality, digital technology can't be beaten. The XPR 2500 delivers clarity throughout your coverage area plus unique features to help employees hear and be heard clearly. With its Intelligent Audio, for example, drivers don't need to adjust their radio volume when there is a lot of background road noise, as the radio adjusts itself.

Unleash the power of your XPR 2500 mobiles with Motorola Original® accessories. They're the only accessories designed, built and tested with your radio to optimize its performance. (See separate accessory fact sheet for full portfolio.)

MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to your operation. Now you can transition to digital with great confidence and low risk at a price you can afford. It's easy to migrate because the XPR 2500 operates in both analog and digital modes. Analog and digital channels can be configured concurrently on the same radio, and scanning can be digital, analog or dual-mode. So you can use your existing analog system and move to digital when time and budget allow.

CONNECT MORE PEOPLE, MORE PRODUCTIVELY

Whether your people are delivering packages or transporting students, you'll appreciate our mobile's easy scalability. All it takes is a simple software upgrade to add key features like enhanced scrambling for increased voice privacy or the transmit interrupt suite to prioritize critical communication.

And when you want to expand capacity or coverage, rely on IP Site Connect which uses the Internet to extend coverage

to employees anywhere in the world. Use single-site Capacity Plus to reach many more workers without adding new frequencies, and count on Linked Capacity Plus for affordable wide area trunking.

IMPROVE THEIR EFFECTIVENESS

With enhanced features and integrated systems capability, the XPR 2500 helps your workers be more effective at what they do. Voice announcement, for example, calls out channel and zone changes so they don't have to look at the radio while they're on the go. And convenient one-touch programmable buttons provide fast access to their favorite radio features.

INTEGRATE YOUR DEVICES SEAMLESSLY

Make sure your new MOTOTRBO system is ready when you are. We can bring together the right experts and processes to help you integrate MOTOTRBO mobile radios into your existing system, quickly and cost-effectively. Motorola's Implementation Services include Coverage Mapping, Site Integration, Device Programming and IP Networking Services.

GET DURABILITY THAT ENDURES

The XPR 2500 is made to last. It is rated IP54 (splashproof, dustproof), so it can be used even in harsh environments. The radio is backed by a two-year Standard Warranty (US and Canada) with a minimum one-year warranty on Motorola-branded accessories. Because accidents happen, Motorola recommends Service from the Start Comprehensive, which delivers accelerated turnaround on radio repairs (including physical, chemical and liquid damage) and even covers shipping costs. By reducing your downtime, Service from the Start Comprehensive helps you to lower your total cost of ownership and focus on your business operations, not your technology.



PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 2500 MOBILE RADIOS



GENERAL SPECIFICATIONS

	XPR 2500	
	VHF	UHF BAND 1
Channel Capacity	128	
Typical RF Output		
Low Power	1-25 W	1-25 W
High Power	25-45 W	25-40 W
Frequency	136-174 MHz	403-470 MHz
Dimensions (H x W x L)	1.7 x 6.7 x 5.3 in (44 x 169 x 134 mm)	
Weight	2.9 lbs (1.3 kg)	
Current Drain		
Standby	0.81 A max	0.81 A max
Rx @ Rated Audio	2 A max	2 A max
Transmit	1-25 W: 11.0 A max / 25-45 W: 14.5 A max	1-25 W: 11.0 A max / 25-40 W: 14.5 A max
FCC Description	1-25 W: ABZ99FT3090 25-45 W: ABZ99FT3091	1-25 W: ABZ99FT4092 25-40 W: ABZ99FT4093
IC Description	1-25 W: 109AB-99FT3090 25-45 W: 109AB-99FT3091	1-25 W: 109AB-99FT4092 25-40 W: 109AB-99FT4093

RECEIVER

Frequency	136-174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz ¹	
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm	
Analog Sensitivity (12 dB SINAD)	0.3 uV 0.22 uV (typical)	
Digital Sensitivity (5% BER)	0.25 uV 0.19 uV (typical)	
Intermodulation (TIA603D)	75 dB	70 dB
Adjacent Channel Selectivity (TIA603D)	50 dB @ 12.5 kHz 75 dB @ 25 kHz ¹	50 dB @ 12.5 kHz 70 dB @ 25 kHz ¹
Spurious Rejection (TIA603D)	75 dB	70 dB
Rated Audio	4 W (Internal) 7.5 W (External - 8 ohms) 13 W (External - 4 ohms)	
Audio Distortion @ Rated Audio	3% (typical)	
Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz ¹	
Audio Response	TIA603D	
Conducted Spurious Emissions (TIA603D)	-57 dBm	

TRANSMITTER

Frequency	136-174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz ¹	
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm	
Low Power Output	1-25 W	1-25 W
High Power Output	25-45 W	25-40 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz ± 5.0 kHz @ 25 kHz ¹	
FM Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz ¹	
Conducted / Radiated Emission	-36 dBm < 1 GHz -30 dBm > 1 GHz	
Adjacent Channel Power	60 dB @ 12.5 kHz 70 dB @ 25 kHz ¹	
Audio Response	TIA603D	
Audio Distortion	3%	
FM Modulation	12.5 kHz: 11K0F3E 25 kHz ¹ : 16K0F3E	
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data: 7K60F1W	
Digital Vocoder Type	AMBE +2™	
Digital Protocol	ETSI TS 102 361-1, -2, -3	

¹ 25 kHz may not be available in the U.S. for Part 90 operation due to the FCC's Narrowbanding requirements. Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

PRODUCT SPEC SHEET

MOTOTRBO™ XPR™ 2500 MOBILE RADIOS

MILITARY STANDARDS										
	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/C3, 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 - Aggravated
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	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV, V, 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	IP54, MIL-STD ²
Packaging Test	Per MIL-STD

² Radio meets IP54 and MIL-STD rating with microphone sealing boot and rear accessory connector cover properly installed. Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

For more information on the MOTOTRBO™ XPR™ 2500, visit motorolasolutions.com/mototrbo.

To find your nearest Motorola Channel Partner, go to motorolasolutions.com/contactus.

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