

## PRODUCT SPEC SHEET

MOTOTRBO™ XiR M3188™ AND XiR M3688™ MOBILE RADIOS



# MOTOTRBO™ XiR M3188™ AND XiR M3688™ MOBILE RADIO

YOU'RE SIMPLY MORE EFFICIENT



Your people are on the move, delivering cargo, picking up consignments, driving children to and from school. You need to keep them in touch and on track efficiently. And you want to make sure the radios they use are as affordable and adaptable as possible.

Now there are flexible mobiles that give you great voice communications today, and a path to crisp and clear digital voice communications when you're ready. Versatile and powerful, MOTOTRBO™ combines the best of two-way radio functionality with the latest analog and digital technology. The MOTOTRBO portfolio offers the right device for the right user, from voice-only portables to feature-rich voice and data radios.

The rugged MOTOTRBO XiR M3188 and XiR M3688 are available as analog/digital mobile radios that offer all the benefits of the latest technology – from superior audio to greater coverage. These affordable performers are compatible with advanced MOTOTRBO features you'll find are business-essential, for example a transmission can be interrupted to prioritize critical communications.

With its bright, high contrast alphanumeric screen, the XiR M3688 allows drivers to see important information such as caller ID at a glance. The XiR M3188 offers lower capacity and a simpler numeric display.

The XiR M3188 and XiR M3688 are so easy to use and deliver such clear voice communications, you'll be amazed how efficient your operation can be.

## FEATURES

- Analogue / Digital
- Voice Communications
- Canned Text Message
- Dual Capacity Direct Mode
- Transmit Interrupt (decode only)
- Voice Announcement
- Numeric Display (XiR M3188)
- Alphanumeric Display (XiR M3688)
- Digital Mobile Radio (DMR) Standards Compliant
- IP54 Rated

## OPTIONS

- Radio Management Suite

**SIMPLE VOICE COMMUNICATIONS  
FOR THE EVERYDAY USER WHO WANTS TO STAY CONNECTED**

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### CONNECT YOUR CREWS EASILY AND EFFICIENTLY

XiR M3188 and XiR M3688 mobile radios are ideal for keeping your people reliably and cost-effectively connected so they can communicate, coordinate and collaborate – whether they're delivering packages or transporting passengers. With easy-to-use ergonomics and crisp, clear audio, now your teams can work more efficiently.

Unleash the power of your XiR M3188 and XiR M3688 mobile radios 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.)

### KEEP THEM IN CONTACT AND ON COURSE

A lost delivery driver uses his XiR M3188 mobile radio installation to call the office. The visor microphone and steering wheel-mounted push-to-talk button allow him to communicate safely while driving, and the digital noisecancelling software filters out the road noise so he can be heard clearly. Soon he's safely back on track.

The school bus driver relies on his XiR M3688 to keep his passengers safe. The digital technology gives excellent coverage throughout the district, and now they're running the MOTOTRBO Dual Capacity Direct Mode, he has no problem getting a channel. The clear, bright alphanumeric screen gives him all the information he needs, and if there's an incident, he can use one of the programmable buttons to call for help – with one touch.

### COMMUNICATE WITHOUT DISTRACTING THEM

The XiR M3188 and XiR M3688 are designed for the everyday driver and let you connect to your mobile workforce without distracting them. So while they improve efficiency, they also enhance safety.

### INTEGRATE YOUR DEVICES SEAMLESSLY

Make sure your new MOTOTRBO radios are ready when you are. We can bring together the right experts and processes to help you integrate MOTOTRBO mobile radios into your business, quickly and cost-effectively. This includes Coverage Mapping, Site Integration and Device Programming.

### GET DURABILITY THAT ENDURES

The XiR M3188 and XiR M3688 are made to last. They are backed by a two-year standard warranty and a minimum one-year warranty for Motorola-branded accessories. They are rated IP54 (splashproof, virtually dustproof), so they can be used even in harsh environments. Moreover, the design has been proven tough in Motorola's grueling Accelerated Life Test program, in which the radios must survive a simulated 5 years of hard service before they are accepted. You can be confident in the durability of your XiR M3188 and XiR M3688 radios.



XiR M3688



XiR M3188



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GENERAL SPECIFICATIONS				
	XiR M3688		XiR M3188	
	VHF	UHF	VHF	UHF
Channel Capacity	160		16	
Typical RF Output				
Low Power	1-25 W	1-25 W	1-25 W	1-25 W
High Power	25-45 W	25-40 W	25-45 W	25-40 W
Frequency	136-174 MHz	403-438 MHz / 403-470 MHz	136-174 MHz	403-438 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)		1.7 x 6.7 x 5.3 in (44 x 169 x 134 mm)	
Weight	2.9 lbs (1.3 kg)		2.9 lbs (1.3 kg)	
Current Drain				
Standby	0.81 A max	0.81 A max	0.81 A max	0.81 A max
Rx @ Rated	2 A max	2 A max	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	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	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	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	403-438 MHz / 403-470 MHz	136-174 MHz	403-438 MHz / 403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz			
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm			
Analogue Sensitivity (12 dB SINAD) Typical	0.3 uV (0.22 uV typical)			
Digital Sensitivity (5% BER)	0.25 uV (0.19 uV typical)			
Intermodulation (TIA603D)	75 dB	70 dB	75 dB	70 dB
Adjacent Channel Selectivity (TIA603D)	50 dB @ 12.5 kHz 75 dB @ 25 kHz	50 dB @ 12.5 kHz 70 dB @ 25 kHz	50 dB @ 12.5 kHz 75 dB @ 25 kHz	50 dB @ 12.5 kHz 70 dB @ 25 kHz
Spurious Rejection (TIA603D)	75 dB	70 dB	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			
Audio Response	TIA603D			
Conducted Spurious Emissions (TIA603D)	-57 dBm			
TRANSMITTER				
Frequency	136-174 MHz	403-438 MHz / 403-470 MHz	136-174 MHz	403-438 MHz / 403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz			
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm			
Low Power Output	1-25 W			
High Power Output	25-45 W	25-40 W	25-45 W	25-40 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz / ± 5.0 kHz @ 25 kHz			
FM Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 25 kHz			
Conducted / Radiated Emission	-36 dBm < 1 GHz / -30 dBm > 1 GHz			
Adjacent Channel Power	60 dB @ 12.5 kHz / 70 dB @ 25 kHz			
Audio Response	TIA603D			
Audio Distortion	3%			
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E			
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60PXE Combination of 12.5 kHz Voice and Data: 7K60F1W			
Digital Vocoder Type	AMBE+2™			
Digital Protocol	ETSI TS 102 361-1, -2, -3			

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

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MILITARY STANDARDS										
	810C		810D		810E		810F		810G	
Applicable MIL-STD	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 - 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, II/5
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*
Packaging Test	Per MIL-STD

\*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. All specifications shown are typical. Radio meets applicable regulatory requirements.

**AUTHORIZED DEALER**

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**MOTOTRBO™**  
 DIGITAL REMASTERED.

