MOTOTRBO™ XiR P3688™ PORTABLE RADIO

YOU'RE SIMPLY MORE EFFICIENT



You want to connect your workforce as efficiently as possible. You expect your radios to be affordable but flexible, so they can evolve with you. Now there's a portable that gives 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 P3688™ is available as an analog/digital radio that offers all the benefits of the latest technology – from superior audio to greater coverage to longer battery life. This affordable portable is compatible with advanced MOTOTRBO features you'll find are business-essential, for example a transmission can be interrupted to prioritize critical communications.

Now you can improve the efficiency of your operation with easy-to-use voice communication that's right for you.

FEATURES

- Analog / Digital
- Voice Communications
- Dual Capacity Direct Mode
- Digital Mobile Radio (DMR) Standards Compliant
- Narrowbanding Compliant
- IP54 Rated

OPTIONS

- Radio Management Suite
- Transmit Interrupt (decode only)

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

CONNECT AND COORDINATE CREWS

When you need a simple, reliable, cost-effective communication solution to help multiple work crews connect, coordinate and collaborate, XiR P3688 two-way portable radios are made to get the job done right. With their easy-to-use ergonomics and crisp, clear audio, now your teams can work more efficiently.

Unleash the power of your XiR P3688 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).

IMPROVE THE WAY THEY WORK

A construction worker carries his XiR P3688 as an essential part of his toolkit. The digital technology gives him excellent coverage across the entire site. And it has significantly better battery life too, so he knows he'll have reliable voice communications all day long.

The manufacturing team in a parts factory relies on XiR P3688 portables to coordinate operations. The digital noise-cancelling software filters out the worst of the background noise, allowing them to hear clearly over loud machinery. Factory capacity is expanding, so they're running MOTOTRBO Dual Capacity Direct Mode, which can fit twice as many calls into the same spectrum.

A security guard uses his XiR P3688 to alert the control room to some suspicious activity. The radio's intuitive design is easy to use in the dark, and even when he speaks softly, he knows that the digital AGC (Automatic Gain Control) will automatically boost the volume so he's heard clearly back in the office. And if it comes to the worst, he can use one of the programmable side buttons to call for help – with one touch.

MANAGE YOUR FLEET MORE EFFICIENTLY

We've designed the XiR P3688 to be as efficient to operate as it is cost-effective to buy. That's why we've integrated the powerful fleet management capabilities of Motorola's Radio Management solution into every radio.

Gain even greater efficiency when you migrate to digital. Your radio will operate up to 40% longer than analog on the same battery – and you get twice the capacity from the same 12.5 kHz channel, using our Dual Capacity Direct Mode feature.

INTEGRATE YOUR DEVICES SEAMLESSLY

Make sure your new XiR P3688 radios are ready when you are. We can bring together the right experts and processes to help you integrate XiR P3688 radios into your business, quickly and cost-effectively. This includes Site Survey and Device Programming.

GET DURABILITY THAT ENDURES

The XiR P3688 is made to last. It is backed by a two-year standard warranty and a minimum one-year warranty for Motorola-branded accessories. It is rated IP54 (splashproof, virtually dustproof), so it 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 radio must survive a simulated 5 years of hard service before it is accepted. You can be confident in the durability of your XiR P3688.



PRODUCT SPEC SHEET
MOTOTRBO™ XiR P3688™ PORTABLE RADIOS



GENERAL SPECIFICATIONS

	XiR P3688		
	VHF	**UHF BAND 1**	**350**
Channel Capacity	32		
Typical RF Output Low Power High Power	 1 W 5 W	 1 W 4 W	
Frequency	136-174 MHz	403-470 MHz	350-400 MHz
Radio Dimensions (H x W x D) with battery: NiMH 1480mAH Slim Li-Ion 1600mAH Li-Ion 2250mAH	 5.0 x 2.4 x 1.7 in (127.7 x 61.5 x 42.0 mm) 5.0 x 2.4 x 1.5 in (127.7 x 61.5 x 39.0 mm) 5.0 x 2.4 x 1.8 in (127.7 x 61.5 x 44.0 mm)		
Weight with battery: NiMH 1480mAH Slim Li-Ion 1600mAH Li-Ion 2250mAH	 14.3 oz (406 g) 12.1 oz (341 g) 12.2 oz (346 g)		
Power Supply	7.5V (Nominal) ± 20%		
FCC Description	ABZ99FT3092	ABZ99FT4094	N/A
IC Description	109AB-99FT3092	109AB-99FT4094	N/A

BATTERY

Average battery life at 5/5/90 duty cycle with carrier squelch and transmitter in high power.[1]	
NiMH (1480mAh) Battery	Analog: 9 hrs / Digital: 11.5 hrs
Li-Ion Slim (1600mAH) Battery	Analog: 10.5 hrs / Digital: 13.5 hrs
High Cap Li-ion (2250mAH) Battery	Analog: 14.5 hrs / Digital: 18.5 hrs

RECEIVER

Frequency	136-174 MHz	403-470 MHz	350-400 MHz
Channel Spacing	12.5 kHz / 20 kHz / 25 kHz[2]		
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)	0.3 uV / 0.19 uV (typical)		
Intermodulation (TIA603D)	-70 dB		
Adjacent Channel Selectivity (TIA603D)	45 dB @ 12.5 kHz / 70 dB @ 20/25 kHz[2]		
Spurious Rejection (TIA603D)	-70 dB		
Rated Audio	0.5 W		
Audio Distortion @ Rated Audio	5% (3% typical)		
Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 20/25 kHz[2]		
Audio Response	TIA603D		
Conducted Spurious Emissions (TIA603D)	-57 dBm		



TRANSMITTER

Frequency	136-174 MHz	403-470 MHz	350-400 MHz
Channel Spacing	12.5 kHz / 20 kHz / 25 kHz[2]		
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm		
Low Power Output	1 W	1 W	
High Power Output	5 W	4 W	
Modulation Limiting	± 2.5 kHz @ 12.5 kHz / ± 4.0 kHz @ 20 kHz / ± 5.0 kHz @ 25 kHz[2]		
FM Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 20/25 kHz[2]		
Conducted / Radiated Emission	-36 dBm < 1 GHz / -30 dBm > 1 GHz		
Adjacent Channel Power	60 dB @ 12.5 kHz / 70 dB @ 20/25 kHz[2]		
Audio Response	TIA603D		
Audio Distortion	< 3% (typical)		
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] Actual battery runtime observed may vary.
[2] 25 kHz is NOT applicable for FCC 47 CFR Part 90
Specifications subject to change without notice. All specifications shown are typical.

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/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	III	507.5	II - Aggravated
Salt fog	509.1	II	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-cat.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[1]	-30°C / +60°C
Storage Temperature[1]	-40°C / +85°C
Thermal Shock	Per MIL-STD
Humidity	Per MIL-STD
ESD	IEC 61000-4-2 Level 3
Dust and Water Intrusion	IEC60529 - IP54
Packaging Test	MIL-STD 810D and E

[1] Radio only - Li-Ion battery -10ºC
Specifications subject to change without notice.
Testing completed using portable radio with attached battery and antenna.
All specifications shown are typical.

For more information on the MOTOTRBO™ XiR P3688™, visit **motorolasolutions.com/mototrbo**.

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

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MOTOTRBO™ DIGITAL REMASTERED.

MOTOROLA