

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)

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.



	XiR P	3688				
	VHF UHF BAND 1 350					
Channel Capacity		16				
Typical RF Output						
Low Power	1 W	1 W				
High Power	5 W	4 W	050 400 1411			
Frequency	136-174 MHz	403-470 MHz	350-400 MHz			
Radio Dimensions (H x W x D) with battery: NiMH 1400mAH	5.0) x 2.4 x 1.7 in (127.7 x 61.5 x 42.0 mm)				
Slim Li-Ion 1600mAH	5.0 x 2.4 x 1.5 in (127.7 x 61.5 x 39.0 mm)					
Li-Ion 2200mAH	5.0 x 2.4 x 1.8 in (127.7 x 61.5 x 44.0 mm)					
Weight with battery: NiMH 1400mAH		14 3 oz (406 a)				
Slim Li-Ion 1600mAH	14.3 oz (406 g) 12.1 oz (341 g)					
Li-Ion 2200mAH	12.2 oz (346 g)					
Power Supply	7.5V (Nominal) ± 20%					
FCC Description	ABZ99FT3092	N/A				
IC Description	109AB-99FT3092	109AB-99FT4094	N/A			
BATTERY						
	qualch and transmitter in high pour	-1				
Average battery life at 5/5/90 duty cycle with carrier s NiMH (1400mAh) Battery	iqueion anu transmitter in myn powe					
Li-lon Slim (1600mAH) Battery	Analog: 9 hrs / Digital: 11.5 hrs					
	Analog: 10.5 hrs / Digital: 13.5 hrs Analog: 14.5 hrs / Digital: 18.5 hrs					
High Cap Li-ion (2200mAH) Battery		Analog. 14.0 nfs / Digital: 18.5 nfs				
RECEIVER						
Frequency	136-174 MHz	403-470 MHz	350-400 MHz			
Channel Spacing	12.5 kHz / 20 kHz / 25 kHz²					
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 kHz²					
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 kHz²					
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 kHz²				
Frequency Stability (-30°C, +60°C, +25°C Ref)		± 0.5 ppm				
Low Power Output	1 W	1 W 1 W				
High Power Output	5 W	4 W				
Modulation Limiting		2.5 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 kHz²					
Audio Response	TIA603D					
Audio Distortion		< 3% (typical)				
4FSK Digital Modulation		2.5 kHz Data: 7K60F1D and 7K60FXD				
		2.5 kHz Voice: 7K60F1E and 7K60FXE ation of 12.5 kHz Voice and Data: 7K60F1	W			
Digital Vocoder Type	COIIIDIII	AMBE +2 TM	**			
Digital Protocol						
Digital Flotocol	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.

PRODUCT SPEC SHEET

MOTOTRBO™ XIR P3688™ PORTABLE RADIOS

MILITARY STANDARDS										
	81	OC	81	0D	81	0E	81	OF .	81	0G
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	1, 11	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	1/24	514.6	I-cat.24
Shock	516.2	1, 11	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-lon battery -10°C

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

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

Motorola Solutions Singapore Pte Ltd

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Specifications subject to change without notice.
Testing completed using portable radio with attached battery and antenna.
All specifications shown are typical.