

MOTOTRBO™ XiR M8600i Series

Mobile two-way radios

The XiR M8600i Series is designed for the skilled professional who refuses to compromise. With high performance integrated voice and data, and advanced features for efficient operation, these mobile radios deliver complete connectivity to your teams.



Key features

- VHF, 350 MHz, UHF and 800 MHz
- Analogue and digital
- Voice and data
- Alphanumeric and numeric display models
- Canned text messaging
- Freeform text messaging¹ (requires keypad mic)
- Work order ticketing
- Integrated Wi-Fi
- GNSS location tracking
- Indoor location tracking
- Event-driven location update
- Bluetooth audio and data
- Voice announcement
- Text to speech
- Option board
- Home channel reminder
- Intelligent Audio
- IMPRES™ audio
- Background noise cancellation
- Acoustic feedback suppressor
- Microphone distortion control
- User-selectable audio profiles
- Trill enhancement
- Four programmable buttons
- Over-the-air software update
- Lone worker
- Enhanced privacy
- Transmit interrupt
- Digital emergency
- Emergency search tone
- Remote monitor
- Radio disable / enable
- Splashproof to IP54
- Rugged to MIL-STD 810
- Wide range of accessories

GENERAL SPECIFICATIONS

	ALPHANUMERIC MODEL					NUMERIC MODEL			
Model name	XiR M8668i / XiR M8660i ²					XiR M8628i / XiR M8620i ³			
Band	VHF	350	UHF band 1	UHF band 2	800	VHF	350	UHF band 1	800
Frequency	136-174 MHz	350-400 MHz	403-470 MHz	450-527 MHz	806-825 MHz, 851-870 MHz	136-174 MHz	350-400 MHz	403-470 MHz	806-825 MHz, 851-870 MHz
High Power Output	25-45 W	1-40 W	25-40 W	1-40 W	10-35 W	25-45 W	1-40 W	25-40 W	10-35 W
Low Power Output	1-25 W	1-25 W	1-25 W	-	-	1-25 W	1-25 W	1-25 W	-
Channel Spacing	12.5, 25 kHz								
Channel Capacity	1000					99			
Dimensions (H x W x D)	53 x 175 x 206 mm								
Weight	1.8 kg								
Power Supply (Nominal)	12 V								
Max Current Drain, Standby	0.8 A								
Max Current Drain, Receive	2 A								
Transmit Current Draw, Low Power	11 A	-	11 A	-	-	11 A	-	11 A	-
Transmit Current Draw, High Power	14.5 A	14.5 A	14.5 A	14.5 A	12A	14.5 A	14.5 A	14.5 A	12A



TRANSMITTER SPECIFICATIONS

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 protocol	ETSI TS 102 361-1, -2, -3, -4 DMR Tier II and DMR Tier III
Conducted / radiated spurious emissions (TIA603D)	-36 dBm < 1 GHz, -30 dBm > 1 GHz
Adjacent channel power	60 dB (12.5 kHz channel) 70 dB (25 kHz channel)
Frequency stability	±0.5 ppm

AUDIO SPECIFICATIONS

Digital vocoder type	AMBE+2™
Audio response	TIA603D
Rated audio	3 W (internal speaker) 7.5 W (external 8 ohm speaker) 13 W (external 4 ohm speaker)
Audio distortion at rated audio	3%
Hum and noise	-40 dB (12.5 kHz channel) -45 dB (25 kHz channel)
Conducted spurious emissions (TIA603D)	-57 dBm

BLUETOOTH SPECIFICATIONS

Version	4.0
Range	Class 2, 10 m (33 ft)
Supported profiles	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola Solutions fast push-to-talk
Simultaneous connections	1 x audio accessory and 1 x data device
Permanent discoverable mode	Optional

MILITARY STANDARDS

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G		MIL-STD 810H	
	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category	Method	Procedure/ category
Low pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.6	II	500.6	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	501.6	I/A1, II/A1	501.7	I/A1, II/A1
Low temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.6	I/C3, II/C1	502.7	I/C3, II/C1
Temp shock	503.1	I	503.2	I/A1/C3	503.3	I/A1/C3	503.4	I	503.6	I-C	503.7	1-C
Solar radiation	505.1	II	505.2	I	505.3	I/A1	505.4	I/A1	505.6	I/A1	505.7	I/A1
Rain	506.1	I	506.2	I	506.3	I	506.4	I	506.6	I	506.6	I
Humidity	507.1	II	507.2	II	507.3	II	507.4	-	507.6	II/Aggravated	507.6	II/Aggravated
Salt fog	509.1	I	509.2	I	509.3	-	509.4	-	509.6	-	509.7	-
Blowing dust	510.1	I	510.2	I	510.3	I	510.4	I	510.6	I	510.7	I
Blowing sand	-	-	510.2	II	510.3	II	510.4	II	510.6	II	510.7	II
Vibration	514.2	VIII/CatF, XI	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24, II/5	514.7	I/24, II/5	514.8	I/24, II/5
Shock	516.2	I, II, III, V	516.3	I, IV, V, VI	516.4	I, IV, V, VI	516.5	I, IV, V, VI	516.7	I, IV, V, VI	516.8	I, IV, V, VI

RECEIVER SPECIFICATIONS

Analogue sensitivity (12dB SINAD)	0.22 µV
Digital sensitivity (5% BER)	0.19 µV
Intermodulation (TIA603D)	78 dB (VHF) 75 dB (UHF1, UHF2, 350, 800)
Adjacent channel Selectivity, (TIA603A)-1T	VHF: 65 dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1, UHF2, 350, 800: 65 dB (12.5 kHz channel) 75 dB (25 kHz channel)
Adjacent channel Selectivity, (TIA603D)-2T	VHF: 50 dB (12.5 kHz channel) 80 dB (25 kHz channel) UHF1, UHF2, 350, 800: 50 dB (12.5 kHz channel) 75 dB (25 kHz channel)
Spurious rejection (TIA603D)	80 dB (VHF) 75 dB (UHF1, UHF2, 350, 800)

GNSS SPECIFICATION

Constellation support	GPS, BeiDou, GLONASS
Time to first fix, cold start	<60 seconds
Time to first fix, hot start	<10 seconds
Horizontal accuracy	< 5 m

WI-FI SPECIFICATIONS

Standards supported	IEEE 802.11b, 802.11g, 802.11n
Security protocol supported	WPA, WPA2, WEP
Maximum number of SSIDs	128 (64 for numeric models)

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-30 °C to 60 °C
Storage temperature	-40 °C to 85 °C
Electrostatic discharge	IEC 61000-4-2 level 4
Dust and water intrusion	IEC 60529 - IP54
Packaging test	MIL-STD 810C, D, E, F, G and H



Features

	XiR M8668i	XiR M8660i	XiR M8628i	XiR M8620i
GENERAL				
Four line colour display	●	●	—	—
Numeric display	—	—	●	●
Analogue and digital	●	●	●	●
Voice and data	●	●	●	●
Canned text messaging	●	●	●	●
Freeform text messaging ¹	●	●	—	—
Text to speech	●	●	●	●
Work order ticketing	●	●	—	—
Integrated Wi-Fi	●	—	●	—
Indoor location tracking	○	—	○	—
Outdoor location tracking (GNSS)	●	—	●	—
Event-driven location updates	●	—	●	—
Bluetooth audio	●	—	●	—
Bluetooth data	●	—	●	—
Voice announcement	●	●	●	●
Home channel reminder	●	●	●	●
Late entry	●	●	●	●
Priority scan	●	●	●	●
IP54	●	●	●	●
Rugged to MIL-STD 810	●	●	●	●
AUDIO				
Intelligent Audio	●	●	●	●
IMPRES audio	●	●	●	●
Background noise cancellation				●
Acoustic feedback suppressor	●	●	●	●
User-selectable audio profile	●	●	●	●
Trill enhancement	●	●	●	●
Microphone distortion control	●	●	●	●
Received audio levelling	●	●	●	●
Voice operated transmit (VOX)	●	●	●	●

	XiR M8668i	XiR M8660i	XiR M8628i	XiR M8620i
MANAGEMENT				
CPS 2.0 and Radio Management	●	●	●	●
Over-the-air programming (via DMR)	●	●	●	●
Over-the-air software update (via Wi-Fi)	●	—	●	—
Preventive maintenance	●	●	●	●
Rental timer	●	●	●	●
SAFETY				
Emergency alert	●	●	●	●
Lone worker	●	●	●	●
Transmit Interrupt	●	●	●	●
Enhanced privacy	○	○	○	○
AES256 encryption	○	○	○	○
Remote monitor	●	●	●	●
Digital emergency	●	●	●	●
Emergency search tone	●	●	●	●
Radio disable / enable	●	●	●	●
CUSTOMISATION				
Programmable buttons	4	4	4	4
Option board	●	●	●	●
SYSTEMS				
Dual Capacity Direct Mode	●	●	●	●
Conventional	●	●	●	●
IP Site Connect	●	●	●	●
Capacity Plus single site	●	●	●	●
Capacity Plus multi-site	●	●	●	●
Capacity Max	○	○	○	○

● Included ○ Optional — Not Included

¹ Alphanumeric models only. Requires keypad mic.

² XiR M8660i models available: VHF low power and high power, UHF band 1 low power and high power.

³ XiR M8620i models available: VHF low power, UHF band 1 low power.

To learn more, visit: www.motorolasolutions.com/motrbo



These models available in Motorola Solutions APAC region only. Availability varies and is subject to individual country law and regulations. All specifications shown are typical unless otherwise stated and are subject to change without notice

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