MOTOROLA SOLUTIONS

MOTOTRBO™ XiR M8600i SERIES

YOU'RE COMPLETELY CONNECTED

With this dynamic evolution of MOTOTRBO digital two-way radios, you're better connected, safer and more productive. 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 next-generation radios deliver complete connectivity to your organisation.

CONNECTED

The MOTOTRBO XiR M8600i Series is a family of DMR-standard digital radios that delivers operations-critical voice and data communications. Bluetooth® audio lets you talk without wires, integrated Wi-Fi enables remote software updates, and indoor and outdoor location-tracking capabilities give you total visibility of your resources. With support for trunking as well as legacy analogue technology, you can keep your organisation connected as it grows.

SAFE

Safeguard your staff with responsive push-to-talk technology. The quick access buttons on XiR M8600i Series radios can summon help with one touch, using Transmit Interrupt to clear a channel when necessary. A range of safe driving accessories allow your workers to communicate hands-free, and Text-to-Speech technology helps your drivers keep their eyes on the road.

PRODUCTIVE

Text messaging and Work Order Ticketing simplify complex communications, and data capabilities support advanced applications. Featuring a high power audio amplifier, these radios deliver loud, clear speech, with background noise cancellation for better intelligibility. XiR M8600i Series radios are also ideal as a dispatch solution, with desktop microphones and a rugged, durable design for everyday use.

WHAT'S NEW IN THESE NEXT GENERATION RADIOS

- Integrated Wi-Fi
- Over-the-air software updates
- Bluetooth 4.0
- Indoor location tracking
- Multi-constellation GNSS for increased location accuracy

	Alphanumeric Model					Numeric Model			
Model Number	XiR M8668i / XiR M8660i*					XiR M8628i / XiR M8620i*			
Band	VHF	350	UHF Band 1	UHF Band 2^	800	VHF	350	UHF Band 1	800
GENERAL SPECIFICATIONS									
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
Low Power Output	1-25 W	-	1-25 W	-	-	1-25 W	-	1-25 W	-
High Power Output	25-45W	1-40W	25-40W	1-40W	10-35W	25-45W	1-40W	25-40W	10-35W
Channel Spacing	12.5, 25 kHz								
Channel Capacity	1000					32			
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								
Max Current Drain, Transmit (Low Power)	11 A	-	11 A	-	-	11 A	-	11A	
Max Current Drain, Transmit (High Power)	14.5 A	14.5 A	14.5 A	14.5 A	12 A	14.5 A	14.5 A	14.5 A	12 A

BLUETOOTH 4.0 STANDARD	
Frequency Range	2400 - 2483.5 MHz
Channel BT ver < 4 BT ver 4	 0 ~ 78 0 ~ 39
Max power	Class 1 - 100 mW (20 dBm) ~ 1m W (0 dBm)
Max Bandwidth BT ver < 4 BT ver 4	 1 MHz 2 MHz
Technology	FHSS
WIFI STANDARD	
Frequency Range	2400 - 2483.5 MHz
Channel	1 ~ 13
Max Bandwidth Range Frequency: (5 GHz) Max Channel Frequency: (149 - 161)	20 MHz b/g/n No No
Max Bandwidth	20 MHz
Max Power	Rated 14 dBm, max 16 dBm
Technology	b/g/n

^ Only applicable to M8668i model.

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
Conducted/Radiated Emissions (TIA603D)	-36 dBm < 1GHz, -30 dBm > 1GHz
Adjacent Channel Power	60 dB (12.5 kHz channel), 70 dB (25 kHz channel)
Frequency Stability	± 0.5 ppm
RECEIVER SPECIFICATIONS	
Analogue Sensitivity (12dB SINAD)	0.3 uV (0.22 uV typical)
Digital Sensitivity (5% BER)	0.25 uV (0.19 uV typical)
Intermodulation (TIA603D)	VHF : 78dB UHF1, UHF2, 350, 800 : 75dB
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 & (TIA603C)-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)	VHF : 80 dB UHF1, UHF2, 350, 800 : 75 dB
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
Supported Profiles	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola fast push-to-talk.
Simultaneous Connections	1 x audio accessory and 1 x data device
Permanent Discoverable Mode	Optional
***GNSS SPECIFICATIONS**	
Constellation Support	GPS, BEIDOU
Time To First Fix, Cold Start	< 60 s
Time To First Fix, Hot Start	< 10 s
Horizontal Accuracy	< 5 m
***Wi-Fi SPECIFICATIONS**	
Standards Supported	IEEE 802.11b, 802.11g, 802.11n
Security Protocol Supported	WPA, WPA-2, 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 and G

NOTES
Specifications are subject to change without notice. All specifications shown are typical values

* XiR M8668i and XiR M8628i models include GNSS and Bluetooth as standard.
Feature support for Bluetooth/Wi-Fi/GNSS will vary depending on the model support.

MILITARY STANDARDS

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temp	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/A1
Low Temp	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/C1
Temp Shock	503.1	I	503.2	A1/C3	503.3	A1/C3	503.4	I	503.5	I-C
Solar Radiation	505.1	II	505.2	I/Hot-Dry	505.3	I/Hot-Dry	505.4	I/Hot-Dry	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/Hot-Humid	507.3	II/Hot-Humid	507.4	-	507.5	I/Hot-Humid
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	-	509.5	-
Dust	510.1	I, II	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.2	VIII/CatF/ CurveW, XI	514.3	I/Cat10, II/ Cat3	514.4	I/Cat10, III/ Cat3	514.5	I/Cat24, II/ Cat5	514.6	I/Cat24, II/ Cat5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, V, VI

CONNECTION
- VHF Band, 45 W
- 350 Band, 40 W
- UHF Band, 40 W
- Alphanumeric Model: Colour Screen, 1000 Channels
- Numeric Model: Numeric Display, 32 Channels
- Analogue and Digital
- Voice and Data
- ○ Integrated Wi-Fi
- Canned Text Messaging
- Freeform Text Messaging (Requires Keypad Mic)
- Multi-Constellation GNSS
- High Efficiency GNSS
- Event-Driven Location Update
- Bluetooth Audio
- ○ Bluetooth Data
- Voice Announcement
- ○ Bluetooth Permanent Discoverable Mode
- ○ Bluetooth Indoor Location Tracking
- ○ Text to Speech
- ○ Option Board
- Home Channel Reminder

AUDIO
- Intelligent Audio
- IMPRES Audio
- Acoustic Feedback Suppressor
- Microphone Distortion Control
- User-Selectable Audio Profiles
- Trill Enhancement
- ○ SINC+ Noise Cancellation

PERSONALISATION
- Wide Range of Accessories
- ○ Multi-Button PTT
- 4 Programmable Buttons

MANAGEMENT
- ○ Radio Management
- ○ Over-the-Air Programming
- ○ Over-the-Air Software Update

SAFETY
- Lone Worker
- ○ AES 256 Encryption
- Transmit Interrupt
- Digital Emergency
- Emergency Search Tone
- Remote Monitor
- Radio Disable / Enable
- Waterproof to IP54
- Rugged to MIL-STD 810

SYSTEMS
- Dual Capacity Direct Mode
- Conventional
- IP Site Connect
- ○ Capacity Plus Single Site
- ○ Capacity Plus Multi Site (formerly known as Linked Capacity Plus)
- ○ Capacity Max
- ○ Connect Plus

○ Optional

LONG RANGE WIRELESS MOBILE MICROPHONE

Designed for customers who depend on their high power mobile radio but must work outside of their vehicle, the Long Range Wireless Mobile Microphone keeps you connected and communicating up to 100m (330 ft) from your vehicle. With instant touch pairing and in-vehicle charging cradles, you can maintain critical communications even on remote job sites.

HANDHELD CONTROL HEAD

When space is tight, and you need the flexibility to operate your radio from anywhere in the vehicle, opt for the Handheld Control Head. Its colour screen, full keypad and extendable cord gives you complete control within 8 m (26 ft) of the radio.

BLUETOOTH AUDIO

Improve the mobility of your work teams without wires getting tangled. Your delivery driver can sort through packages on the back of the delivery truck, your bus driver can check students in the back of the bus, and your limousine driver can open the door for their passengers and stay connected.

CONNECT AND COORDINATE EFFORTLESSLY

IMPRES™ Smart Audio accessories communicate with the radio to suppress ambient noise, improve voice intelligibility and amplify loudness. Choose from a range of standard and heavy duty microphones, with or without keypads and navigation buttons.

INTERACT SAFELY WITHOUT DISTRACTIONS

To help your drivers keep their eyes on the road, you can customiset your installation with the IMPRES Visor Microphone and Remote Push-to-Talk.

For more details on XiR M8600i accessories, please download the MOTOTRBO Professional Accessories Catalogue.

To get connected with MOTOTRBO, please contact your local Motorola representative or visit motorolasolutions.com/MOTOTRBO

MOTOROLA SOLUTIONS

MOTOTRBO™ DIGITAL REMASTERED.

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