

# MOTOTRBO™ XiR P8600i 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 P8600i 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 P8600i Series is a family of DMR-standard digital radios that delivers operations-critical voice and 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 prominent orange emergency button on XiR P8600i Series radios summons help with one touch, using Transmit Interrupt to clear a channel when necessary. An integrated accelerometer senses if you've fallen, and can initiate a call for assistance. The radio is tested tough to military standards and is waterproof (IP68 Capable). It won't let you down.

### PRODUCTIVE

Text messaging and Work Order Ticketing simplify complex communications, and data capabilities support advanced applications. Featuring a powerful audio amplifier, these radios deliver loud, clear speech, with industrial noise cancellation for better intelligibility. The latest energy technology provides the battery option which delivers up to 27 hours of battery life for 3-shift working, and an improved receiver boosts range further.



### WHAT'S NEW IN THESE NEXT GENERATION RADIOS

- Integrated accelerometer for optional Man Down
- Bluetooth® 4.0
- Indoor location tracking
- Multi-constellation GPS for increased location accuracy
- Integrated Wi-Fi
- Over-the-air software updates
- Enhanced audio quality
- Improved expandability
- Better battery life (up to 28 hrs)
- Better range
- Better waterproofing (IP68 Capable)

**PRODUCT DATA SHEET**  
**MOTOTRBO™ XiR P8600i SERIES**  
**DIGITAL TWO-WAY RADIOS**



	Full Keypad (FKP) Model				Limited Keypad (LKP) Model		No Keypad (NKP) Model			
Model Number	XiR P8668i, XiR P8660i*				XiR P8628i		XiR P8608i, XiR P8600i*			
Band	VHF	UHF	350	800	VHF	UHF	VHF	UHF	350	800

**GENERAL SPECIFICATIONS**

Frequency	136-174 MHz	403-527 MHz	350-400 MHz	806-825 MHz, 851-870 MHz	136-174 MHz	403-527 MHz	136-174 MHz	403-527 MHz	350-400 MHz	806-825 MHz, 851-870 MHz
High Power Output	5 W	4 W	4 W	2.5 W	5 W	4 W	5 W	4 W	4 W	2.5 W
Low Power Output	1 W	1 W	1 W	1 W	1 W	1 W	1 W	1 W	1 W	1 W
Channel Spacing	12.5, 25 kHz									
Channel Capacity	1000				1000		32			
Dimensions (H x W x D), Radio + Standard 1600 mAh Battery	130 x 55 x 36 mm				130 x 55 x 36 mm		130 x 55 x 34 mm			
Weight, Radio + Standard 1600 mAh Battery	315 g				315 g		290 g			
Dimensions (H x W x D), Radio + Slim 2050 mAh Battery	130 x 55 x 36 mm				130 x 55 x 36 mm		130 x 55 x 34 mm			
Weight, Radio + Slim 2050 mAh Battery	325 g				325 g		300 g			
Dimensions (H x W x D), Radio + High Cap 3000 mAh Battery	130 x 55 x 41 mm				130 x 55 x 41 mm		130 x 55 x 40 mm			
Weight, Radio + High Cap 3000 mAh Battery	347 g				347 g		322 g			
Digital / Analogue Battery Life <sup>2</sup> , Standard 1600 mAh Battery	16.0 / 12.0 hrs	15.5 / 11.5 hrs	15.5 / 12.0 hrs	16.0 / 12.0 hrs	15.5 / 11.5 hrs	16.0 / 12.0 hrs	15.5 / 11.5 hrs	15.5 / 12.0 hrs		
Digital / Analogue Battery Life <sup>2</sup> , Slim 2050 mAh Battery	20.0 / 15.0 hrs	19.0 / 14.5 hrs	19.0 / 15.5 hrs	20.0 / 15.0 hrs	19.0 / 14.5 hrs	20.0 / 15.0 hrs	19.0 / 14.5 hrs	19.0 / 15.5 hrs		
Digital / Analogue Battery Life <sup>2</sup> , High Capacity 3000 mAh Battery	29.0 / 22.0 hrs	28.0 / 21.5 hrs	28.0 / 23.0 hrs	29.0 / 22.0 hrs	28.0 / 21.5 hrs	29.0 / 22.0 hrs	28.0 / 21.5 hrs	28.0 / 23.0 hrs		
Power Supply (Nominal)	7.5 V									



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**DIGITAL TWO-WAY RADIOS**

TRANSMITTER SPECIFICATIONS	
Channel Spacing	12.5, 25 kHz
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	60dB (12.5 kHz channel), 70dB (25 kHz channel)
Frequency Stability	± 0.5 ppm

RECEIVER SPECIFICATIONS	
Analogue Sensitivity (12dB SINAD)	0.21 uV (0.16 uV typical)
Digital Sensitivity (5% BER)	0.18 uV (0.14 uV typical)
Intermodulation (TIA603D)	70 dB
Adjacent Channel Selectivity, (TIA603A)-1T	60 dB (12.5 kHz channel), 70 dB (25 kHz channel)
Adjacent Channel Selectivity, (TIA603D)-2T & (TIA603C)-2T	45 dB (12.5 kHz channel), 70 dB (25 kHz channel)
Spurious Rejection (TIA603D)	70 dB

AUDIO SPECIFICATIONS	
Digital Vocoder Type	AMBE+2™
Audio Response	TIA603D
Rated Audio	0.5 W
Audio Distortion at Rated Audio	3% (Typical: Tx: 1%, Rx: 1%)
Hum and Noise	-40 dB (12.5 kHz channel), -45 dB (25* kHz channel)
Conducted Spurious Emissions (TIA603D)	-57 dBm

NOTES

- <sup>2</sup> Typical battery life, 5/5/90 profile at maximum transmitter power with GNSS, Bluetooth, Wi-Fi and Option Board applications disabled. Actual observed runtimes may vary.  
<sup>3</sup> Radio only. Specialised low-temperature battery required for operation below -10 °C.  
 Specifications are subject to change without notice. All specifications shown are typical values.  
 \* Feature support for Bluetooth/Wi-Fi/GNSS/Hazloc Certification 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	II/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/F, W, XI	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24, II/5	514.6	I/24, II/5
Shock	516.2	II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV

*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
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 LKP and NKP models)

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature <sup>3</sup>	-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 - IP68 Capable
Packaging Test	MIL-STD 810D and E

*HAZLOC CERTIFICATION	
UL-Approved to TIA-4950 for use in Hazardous Locations, Division 1, Class I, II, III, Groups C,D,E, F, G; Division 2, Class1, Groups A,B,C,D when properly equipped with Motorola UL-Approved battery.	

**CONNECTION**

- VHF Band, 5 W
- UHF Band, 4 W
- 350 Band, 4 W
- FKP Models: Colour screen, full keypad, 1000 channels
- LKP Models: Colour screen, limited keypad, 1000 channels
- NKP models: No screen or keypad, 32 channels
- Analogue and Digital
- Voice and Data
- Integrated Wi-Fi
- Canned Text Messaging
- Freeform Text Messaging (FKP models)
- Multi-constellation GNSS
- High Efficiency GNSS
- Event-Driven Location Update
- Bluetooth Audio
- Bluetooth Data
- Bluetooth Permanent Discovery Mode
- Bluetooth Indoor Location Tracking
- Voice Announcement
- Text to Speech
- Option Board
- Home Channel Reminder

**AUDIO**

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

**CUSTOMISATION**

- Wide Range of Accessories
- Multi-Button PTT
- 5 Programmable Buttons (3 for NKP model)
- Emergency Button

**MANAGEMENT**

- Radio Management
- Over-the-Air Programming
- Over-the-Air Software Update
- IMPRES Battery Management
- Over-the-Air Battery Management

**SAFETY**

- Integrated Accelerometer
- Man Down
- Lone Worker
- AES Encryption
- Transmit Interrupt
- Emergency
- Emergency Search Tone
- Remote Monitor
- Radio Disable / Enable
- HazLoc Certification
- IP68 Capable
- 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

## BLUETOOTH

Connect to your radio without wires, for extra comfort and safety. A full portfolio of Bluetooth headsets and earpieces is available.



## REMOTE SPEAKER MICROPHONE

Improve usability with a Remote Speaker Microphone (RSM). Choose from standard, heavy duty and noise-cancelling models, with or without secondary earpiece connector.



## SMART ENERGY

Motorola's patented IMPRES™ Energy technology gives you smart batteries to keep your radio powered for longer. Choose from a range of batteries, chargers, and management tools.



## EARPIECES

For all-day comfort, choose from our range of earpieces. Lightweight or heavy duty, discreet or rugged, with or without built-in hearing protection.



## CARRY SOLUTIONS

However you choose to wear or carry your radio, we have a solution for you. From leather cases to belts and belt clips to bags, straps and pouches.



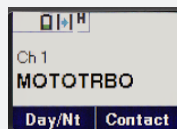
## HEADSETS

In a noisy workplace, you need to protect your workers' hearing. Whether it's heavy duty noise reduction or innovative temple transducer technology, our headsets can help.



## SCREEN PROTECTORS

In ultra-harsh environments, your radio's screen can get scratched and abraded. Keep it clear and readable with these durable pre-cut screen protectors.



## VIBRATING BELTCLIP

When it's unacceptable to miss calls in a noisy environment, equip your radios with a powerful vibrating belt clip for an extra physical alert.



For more details on XiR P8600i accessories, please download the MOTOTRBO Professional Accessories Catalogue.

To get connected with MOTOTRBO, please contact your local Motorola representative or visit [motorolasolutions.com/MOTOTRBO](http://motorolasolutions.com/MOTOTRBO)

### Motorola Solutions Singapore Pte Ltd

80 Pasir Panjang Road #18-81 Mapletree Business City Singapore 117372

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**MOTOTRBO™**  
DIGITAL REMASTERED.