

MOTOTRBO™ XiR P6600i Series

You're more productive, connected

With this dynamic evolution of MOTOTRBO digital two-way radios, you're better connected, safer and more efficient. The XiR P6600i Series is designed for the everyday worker who needs effective communications. With systems support and loud, clear audio, these next-generation radios deliver cost-effective connectivity to your organisation.



Connected

The MOTOTRBO XiR P6600i Series is a family of DMR-standard digital radios that delivers operations-critical voice communications. With support for basic trunking as well as legacy analogue technology, you can keep your organisation connected as it grows.

Safe

The XiR P6600i Series is designed to improve safety in your organisation, with the rapid response capability of instant push-to-talk communications. Even if a worker is unresponsive, you can remotely activate the radio to check that your worker is safe. Radios can be remotely disabled if they are misplaced. New HazLoc models are available for use in areas where flammable or explosive materials are present.

Efficient

With new noise cancellation technology and enhanced clarity, the XiR P6600i Series delivers excellent audio quality to make your workplace communications clearly intelligible. The latest energy technology provides the battery option which delivers up to 28.5 hours of digital battery life for 3-shift working, and the optional IMPRES Over-the-Air Battery Management tool helps you maximise battery lifetime. An improved receiver boosts range, allowing you to reach further than ever.

What's new in these next generation radios

- Over-the-air software
- Enhanced audio quality
- Improved expandability
- Better battery life (up to 28hrs)
- Better range
- Better waterproofing (IP67)
- HazLoc models available



	Limited Keypad (LKP) Model			No Keypad (NKP) Model		
Model Number	XiR P6620i			XiR P6600i		
Band	VHF	350	UHF	VHF	350	UHF
GENERAL SPECIFICATIONS						
Frequency	136 - 174 MHz	350 - 400 MHz	403 - 527 MHz	136 - 174 MHz	350 - 400 MHz	403 - 527 MHz
High power output	5 W	4 W	4 W	5 W	4 W	4 W
Low power output	1 W	1 W	1 W	1 W	1 W	1 W
Channel spacing	12.5, 25 kHz					
Channel capacity	256			64		
Dimensions (H x W X D) Radio + Standard 2450 mAh battery	122 x 56 x 42 mm			122 x 56 x 42 mm		
Weight Radio + Standard 2450 mAh battery	302 g			285 g		
Dimensions (H x W X D) Radio + Slim 2100 mAh battery	122 x 56 x 36 mm			122 x 56 x 36 mm		
Weight Radio + Slim 2100 mAh battery	287 g			270 g		
Dimensions (H x W X D) Radio + High Capacity 3000 mAh battery	122 x 56 x 42 mm			122 x 56 x 42 mm		
Weight Radio + High Capacity 3000 mAh battery	309 g			292 g		
Digital / Analogue Battery Life ¹ , Standard 2450 mAh Battery	22 / 17 hrs	21.5 / 16.5 hrs		22 / 17 hrs	21.5 / 16.5 hrs	
Digital / Analogue Battery Life ¹ , Slim 2100 mAh Battery	19.5 / 14 hrs	18.5 / 14 hrs		19.5 / 14 hrs	18.5 / 14 hrs	
Digital / Analogue Battery Life ¹ , High Capacity 3000 mAh Battery	28.5 / 21 hrs	27.5 / 21 hrs		28.5 / 21 hrs	27.5 / 21 hrs	
Power Supply (Nominal)	7.5 V					



All models

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
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)	0.16uV
Digital Sensitivity (5% BER)	0.14uV
Intermodulation (TIA603D)	70 dB
Adjacent Channel Sensitivity (TIA603A)-1T	60 dB (12.5 kHz channel) 70 dB (25 kHz channel)
Adjacent Channel Sensitivity (TIA603D)-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%
Hum and noise	-40 dB (12.5 kHz channel) -45 dB (25 kHz channel)
Conducted spurious emissions (TIA603D)	-57 dBm

ENVIRONMENTAL SPECIFICATIONS

Operating temperature ²	-30°C to +60°C
Storage temperature	-45°C to +85°C
Electrostatic discharge	IEC 61000-4-2 Level 4
Dust and water intrusion	IEC 60529 - IP67
Packaging test	MIL-STD 810D and E

HAZLOC CERTIFICATION

XiR P6600i Series radios are UL-Approved to TIA-4950 for use in hazardous locations, Division 1, Class I, II, III, Groups C,D,E, F, G; Division 2, Class 1, Groups A,B,C,D when properly equipped with Motorola UL-Approved battery.

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	1/C3, II/C1	502.3	1/C3, II/C1	502.4	1/C3, II/C1	502.5	1/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

Connection

- VHF Band, 5 W
- UHF Band, 4 W
- 350 Band, 4 W
- LKP Models: Mono screen, limited keypad, 256 channels
- NKP Model: No screen or keypad, 64 channels
- Analogue and digital
- Voice and text only
- Canned text messaging
- Voice announcement
- Home channel reminder

Customisation

- Wide range of accessories
- 4 Programmable buttons (2 for NKP model)

Audio

- Intelligent audio
- IMPRES audio
- SINC+ noise cancellation
- Acoustic feedback suppressor
- User-selectable audio profiles
- Trill enhancement
- Switch speaker

Management

- Radio management
- Over-the-Air programming
- Over-the-Air software update
- IMPRES Energy
- IMPRES Battery management
- Over-the-Air Battery management

Safety

- Lone worker
- Transmit interrupt (Decode only)
- Digital emergency
- Emergency search tone
- Remote monitor (Decode only)
- Radio disable / enable (decode)
- HazLoc certification
- Waterproof to IP67
- Rugged to MIL-STD 810

Systems

- Dual capacity direct mode
- Conventional
- IP site connect
- Capacity Plus optional

NOTES

1. Typical battery life, 5/5/90 profile at maximum transmitter power. Actual observed runtimes may vary.

2. Specialized low-temperature battery required for operation below -10 °C

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



Accessories



Remote speaker microphones

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



Energy solutions

Make sure your radio is powered and charged properly, with our range of energy solutions. Choose from single and multi-unit chargers, and slim and high capacity batteries.



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.



Covert accessories

When you need to stay in touch discreetly, choose from our range of covert audio accessories. From clear tube earpieces to virtually invisible wireless in-ear units.



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 details on these and other XiR P6600i Series 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 Singapore Pte Ltd. 80 Pasir Panjang Road #18-81 Mapletree Business City Singapore 117372.

Availability is subject to individual country law and regulations. All specifications shown are typical unless otherwise stated and are subject to change without notice.

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. ©2025 Motorola Solutions, Inc. All rights reserved. (02-25)



MOTOROLA SOLUTIONS