

MOTOTRBO™ XiR E8600i Series

YOU'RE READY FOR ANYTHING

With this dynamic evolution of MOTOTRBO digital two-way radios, you're more agile, better connected and safer. The XiR E8600i Series is designed for the mobile professional who needs effective communications. With a compact design and high performance integrated voice and data, these next-generation radios deliver comprehensive connectivity to your organisation.

AGILE

The MOTOTRBO XiR E8600i Series is a tough and compact DMR-standard digital radio. Its small form factor makes it conveniently portable, with an efficient short antenna that won't get in your way. It's tested to military standards for extreme ruggedness, and is IP68 capable for almost complete immunity to dust and water. It won't let you down even in harsh environments.

CONNECTED

The XiR E8600i Series delivers operations-critical voice and data communications. Bluetooth® audio lets you talk without wires, 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 the XiR E8600i Series 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.



WHAT'S NEW IN THESE NEXT GENERATION RADIOS

- New Limited Keypad and Color Display Option
- Integrated accelerometer for optional Man Down feature
- Bluetooth® 4.0
- Indoor location tracking
- Multi-constellation GNSS for increased location accuracy
- Over-the-air software updates
- Enhanced audio quality
- Improved expandability
- Better range
- Better waterproofing IP68 capable

PRODUCT DATA SHEET
MOTOTRBO™ XiR E8600i Series



	Limited Keypad (LKP)			No Keypad (NKP)		
Model Number	XiR E8628i			XiR E8600i, XiR E8608i		
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, 20, 25 kHz					
Channel Capacity	1000			64		
Dimensions (H x W x D), Radio + Standard Battery	100 x 56 x 36 mm			100 x 56 x 30 mm		
Weight, Radio + Standard Battery	290 g			254 g		
Dimensions (H x W x D), Radio + High Capacity Battery	100 x 55 x 45 mm			100 x 55 x 39 mm		
Weight, Radio + Standard Battery	341 g			305 g		
Digital / Analogue Battery Life ¹	16 / 12 hrs	15.5 / 11.5Hrs	16 / 12 hrs	16 / 12 hrs	15.7 / 11.8 Hrs	16 / 12 hrs
Digital / Analogue Battery Life ¹ , High Capacity 3000 mAh Battery	27.5 / 20.5 Hrs			27.5 / 20.5 Hrs	26.0 / 20 Hrs	27.5 / 20.5 Hrs
Power Supply (Nominal)	7.5 V					
Frequency Stability	± 0.5 ppm					



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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: 7K60F1 W
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 (20 and 25 kHz channel)
Hum and Noise	-40 dB (12.5 kHz channel), -45 dB (25 kHz channel)
Modulation Limiting	±2.5 kHz (12.5 kHz channel), ±4.0 kHz (20 kHz channel), ±5.0 kHz (25 kHz channel)

RECEIVER SPECIFICATIONS	
Analogue Sensitivity (12dB SINAD)	0.16 µV
Digital Sensitivity (5% BER)	0.14 µV
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	45 dB (12.5 kHz channel), 70 dB (25 kHz channel)
Spurious Rejection (TIA603D)	70 dB
Hum and Noise	-40 dB (12.5 kHz channel), -45 dB (25 kHz channel)

AUDIO SPECIFICATIONS	
Digital Vocoder Type	AMBE+2™
Audio Response	TIA603D
Rated Audio	0.5 W
Audio Distortion at Rated Audio	3%

NOTES
¹ 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.
² Radio only. Battery operation down to -10 °C only.
 *Specifications subject to change without notice. All specifications shown are typical values

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

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature ²	-30 °C to +60 °C
Storage Temperature	-40 °C to +85 °C
Electrostatic Discharge	IEC 61000-4-2 Level 3
Dust and Water Intrusion	IEC 60529 - IP68, 2 m for 2 hrs
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, Class I, 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
- Analogue and Digital
- Voice and Data
- LKP: Limited Keypad and Color Display, 1000 channels
- NKP: No Display or Keypad, 64 channels
- Canned Text Messaging
- Multi-constellation GNSS
- Indoor Location Tracking
- Multi-constellation
- Event-Driven Location Update
- Bluetooth 4.0
- Voice Announcement
- Text to Speech
- Option Board
- Home Channel Reminder

AUDIO

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

CUSTOMISATION

- Wide Range of Accessories
- Slim GCAI Accessory Connector
- LKP: 4 Programmable Buttons
- NKP: 2 Programmable Buttons
- Emergency Button

MANAGEMENT

- Radio Management
- Over-the-Air Programming
- Over-the-Air Software Update
- IMPRES Energy
- 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
- Waterproof IP68
- Rugged to MIL-STD 810

SYSTEMS

- Dual Capacity Direct Mode
- Conventional
- IP Site Connect
- Capacity Plus (Single Site)
- Capacity Plus (Multi Site)
- Capacity Max

◦ Optional

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

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.



ENERGY SOLUTIONS

Make sure your radio is powered and charged properly, with our range of energy solutions. Includes custom insert for IMPRES chargers.



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.



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.



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.



SURVEILLANCE ACCESSORIES

Transmit and receive discreetly with a variety of surveillance kits that feature a streamlined design and rugged cables that withstand tough conditions.



CARRYING SOLUTIONS

However you choose to carry your XiR E8600i Series, we have a solution available to keep your radio protected and close at hand.



For details on these and other XiR E8600i accessories, please download the [MOTOTRBO Professional Accessories Catalogue](#).

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

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