

# 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,<br>851-870 MHz | 136-174 MHz      | 403-527 MHz     | 136-174 MHz      | 403-527 MHz     | 350-400 MHz | 806-825 MHz,<br>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),<br>Radio + Standard 1600 mAh<br>Battery                     | 130 x 55 x 36 mm |                 |                 |                             | 130 x 55 x 36 mm |                 | 130 x 55 x 34 mm |                 |             |                             |
| Weight, Radio + Standard<br>1600 mAh Battery  | 315 g            |                 |                 |                             | 315 g            |                 | 290 g            |                 |             |                             |
| Dimensions (H x W x D),<br>Radio + Slim 2050 mAh<br>Battery                         | 130 x 55 x 36 mm |                 |                 |                             | 130 x 55 x 36 mm |                 | 130 x 55 x 34 mm |                 |             |                             |
| Weight, Radio + Slim 2050<br>mAh Battery  | 325 g            |                 |                 |                             | 325 g            |                 | 300 g            |                 |             |                             |
| Dimensions (H x W x D),<br>Radio + High Cap 3000 mAh<br>Battery                     | 130 x 55 x 41 mm |                 |                 |                             | 130 x 55 x 41 mm |                 | 130 x 55 x 40 mm |                 |             |                             |
| Weight, Radio + High Cap<br>3000 mAh Battery  | 347 g            |                 |                 |                             | 347 g            |                 | 322 g            |                 |             |                             |
| Digital / Analogue Battery<br>Life <sup>2</sup> , Standard 1600 mAh<br>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<br>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<br>Life <sup>2</sup> , High Capacity 3000<br>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   |

| *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

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.

|                 | 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.



## 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.



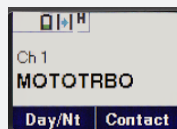
## HEADSETS

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)

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**MOTOTRBO™**  
DIGITAL REMASTERED.