



***XPR™ 8300 Repeater***

**MOTOTRBO™**



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# ACCELERATE PERFORMANCE.



## ***Introducing MOTOTRBO™ Professional Digital Two-Way Radio System. The future of two-way radio.***

MOTOTRBO combines the best in two-way radio functionality with digital technology to deliver increased capacity and spectrum efficiency, integrated data communications and enhanced voice communications. MOTOTRBO is ideal for professional organizations that need a customizable, business-critical communication solution.

### **Unique MOTOTRBO System Benefits for Enhanced Productivity**

MOTOTRBO offers a private, standards-based, cost-effective solution with a complete system of portable radios, mobile radios, repeaters, accessories, data applications and services. It:

- Provides **twice the calling capacity** (as compared to analog radios) for the price of one license. A second call doesn't require a second repeater.
- Supports **integrated applications** including MOTOTRBO Text Messaging Services and MOTOTRBO Location Services (GPS location tracking).
- Provides **clearer voice communications** throughout the coverage area as compared to analog radios.
- Offers **enhanced battery life**.
- Enables **additional functionality** including dispatch data, and enhanced call signaling.
- Provides **easy migration** from analog to digital, as the repeater can be programmed to operate in analog or digital mode.
- Is **fully backed** by a limited two-year warranty.

# MOTOTRBO™ System Components and Benefits



## XPR™ 8300 Repeater

- 1 100% continuous full duty cycle at 40 W.
- 2 Supports two simultaneous voice or data paths in digital TDMA mode.
- 3 Integrated power supply.
- 4 Operates in analog or digital mode—bright, clear, colored LEDs indicate mode.
- 5 LEDs clearly indicate transmit and receive modes in both channel slots.
- 6 Rack- or wall-mountable—compatible with desktop housing as well.
- 7 Sturdy handles make installation and handling easier.
- 8 Automated battery back-up (battery sold separately).

### Repeater Standard Package

- Repeater
- 120V AC Power Cord
- Installation Guide
- Two-year Standard Warranty

## Accessories

Part Number	Description	Benefits
<b>Duplexers</b>		
HFE8400	UHF Untuned Duplexer, 406-450MHz	Allows the use of just one antenna that both transmits and receives.
RFE4000	UHF Untuned Duplexer, 450-470MHz	
<b>Antennas</b>		
RDE4556	UHF 3.8dB Gain Antenna	
<b>Mounting</b>		
PMLE4476	Wall Mount Kit for XPR 8300	Includes brackets and screws to easily mount XPR 8300 to the wall.
<b>Preselector</b>		
HFE8459	UHF Preselector, 440-474MHz	Provides additional isolation for the receiver in RF dense sites.
<b>Lightening Protection</b>		
RRX4025	Lightening Arrestor	Provides lightning and grounding protection to the repeaters.
RRX4032	Tower Mounting Hardware	
RRX4038	Surge Suppressor	

# MOTOTRBO™ Repeater Specifications



UHF XPR™ 8300

## General Specifications

	UHF – XPR 8300
Channel Capacity	1
Technical RF Output	25-40 W
Frequency	403-470 MHz
Dimensions (HxWxL)	5.22 x 19 x 11.67 in (132.6 x 482.6 x 296.5 mm)
Weight	31 lbs (14 kg)
Voltage Requirements	100-240 V AC (13.6 V DC)
Current Drain: Standby	1 A (1 A DC typical)
Transmit	3.8 A (11 A DC typical)
Operating Temperature Range	-30°C to +60°C
Max Duty Cycle	100%
FCC Description	ABZ99FT4025
IC Description	109AB-99FT4025

## Receiver

	UHF – XPR 8300
Frequencies	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz
Frequency Stability (-30° C, +60° C, +25° C)	+/- 0.5 ppm
Analog Sensitivity (12 dB SINAD)	0.30 uV 0.22 uV (typical)
Digital Sensitivity	5% BER: 0.3 uV
Intermodulation (TIA603C)	75 dB
Adjacent Channel Selectivity TIA603 TIA603C	65 dB @ 12.5 kHz, 75 dB @ 25 kHz 50 dB @ 12.5 kHz, 75 dB @ 25 kHz
Spurious Rejection	75 dB
Audio Distortion @ Rated Audio	3% (typical)
Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz
Audio Response	TIA603C
Conducted Spurious Emission	-57 dBm

## Transmitter

	UHF – XPR 8300
Frequencies	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz
Frequency Stability (-30° C, +60° C, +25° C)	+/- 0.5 ppm
Power Output	25-40 W
Modulation Limiting	+/- 2.5 kHz @ 12.5 kHz +/- 5.0 kHz @ 25 kHz
FM Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25 kHz
Conducted / Radiated Emission	-36 dBm < 1 GHz -30 dBm > 1 GHz
Adjacent Channel Power (TIA603C)	60 dB @ 12.5 kHz 70 dB @ 25 kHz
Audio Response	TIA603C
Audio Distortion	3%
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE
Digital Vocoder Type	AMBE++
Digital Protocol	ETSI-TS102 361-1

Specifications subject to change without notice. All specifications shown are typical.  
Radio meets applicable regulatory requirements. Version 4 03/07



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