THE FUTURE OF BUSINESS COMMUNICATION, DELIVERED TODAY

MOTOTRBO™ DIGITAL TWO-WAY MOBILE RADIOS

Make technology more productive and personal. You asked for a forward-thinking way to connect your people to their work, wherever they go. An innovative business tool that increases their efficiency while lowering your costs. Versatile and powerful, MOTOTRBO combines the best of two-way radio functionality with the latest digital technology. It integrates voice and data seamlessly, offers enhanced features that are easy to use and delivers increased capacity to meet your communication needs from the field to the factory floor. With exceptional voice quality and long battery life, MOTOTRBO keeps your work teams connected when communication is a must.

HIGH-POWERED PERFORMANCE

Because MOTOTRBO uses TDMA digital technology, it delivers integrated voice and data, twice the calling capacity plus clearer voice communications. In fact, the leading-edge IMPRES™ technology in our audio accessories also ensures clearer audio delivery.

INDUSTRY-LEADING APPLICATIONS

Motorola's Application Developer Program offers customized data applications so you can adapt your radios to your unique business needs. Because we've created the largest developer program in the industry, we can provide nimble applications that address your challenges and answer your objectives – from work order ticket management to network management, email gateways to location tracking, dispatch consoles to telephony integration, and beyond.

Whether you want to send text messages or track work order information, pinpoint work crew locations with integrated GPS or manage your fleet from a central dispatch location, MOTOTRBO paves the way – with customizable data applications on one convenient device.

ADDED FUNCTIONALITY

MOTOTRBO offers added functionality, including dispatch capability with the MIP 5000 VoIP console, enhanced call signaling, basic and enhanced privacy-scrambling, option board expandability and compatibility with SCADA solutions for utility and public service monitoring and alarms. Plus digital telephone interconnect capability to enable communication between radios and landline or mobile phones as well as a transmit interrupt suite – with voice interrupt, emergency voice interrupt or data over voice interrupt – to prioritize critical communication the moment you need it.

EXPANDED CAPACITY AND COVERAGE

Your workforce is hard at work every day – picking up loads, making road repairs, providing security, responding to guest requests or restoring power after a storm. That's why you need the proven performance of MOTOTRBO radio systems for non-stop communication no matter the size of your work force, no matter where they go.

MOTOTRBO's IP Site Connect dramatically improves customer service and productivity by using the Internet to extend coverage to users anywhere in the world. Our scalable, single-site Capacity Plus solution expands capacity to over 1,000 users without adding new frequencies. Connect Plus multi-site digital trunking enables you to accommodate the high volume, wide area communication your business requires. Whether you need coverage at a single site or across multiple sites, MOTOTRBO can be scaled to meet your needs.

MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to your business. It's easy to migrate to digital with MOTOTRBO because radios operate in analog and digital mode while the dynamic mixed mode repeater functionality streamlines automatic switching between analog and digital calls. So you can begin using MOTOTRBO radios and repeaters on your existing analog system, and when your time and budget allow you can begin migrating to digital at your own pace.

RELIABLE DURABILITY

MOTOTRBO mobile radios are backed by a two-year Standard Warranty, one-year Repair Service Advantage (US)/Extended Warranty (Canada) and minimum 1-year warranty for accessories.

XPR™ 4550 / XPR 4580
Display Mobile Radios

XPR 4350 / XPR 4380
Numeric Display Mobile Radios

PRODUCT SPEC SHEET
MOTOTRBO™ XPR™ 4550/XPR 4350 MOBILE RADIOS

GENERAL SPECIFICATIONS

	DISPLAY XPR 4550			NUMERIC DISPLAY XPR 4350		
	VHF	**UHF Band I**	**UHF Band II**	**VHF**	**UHF Band I**	**UHF Band II**
Channel Capacity		Up to 1,000			32	
Typical RF Output						
Low Power	1-25 W	1-25 W	—	1-25 W	1-25 W	—
High Power	25-45 W	25-40 W	1-40 W	25-45 W	25-40 W	1-40 W
Frequency	136-174 MHz	403-470 MHz	450-512 MHz	136-174 MHz	403-470 MHz	450-512 MHz
Dimensions		2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L)			2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L)	
Weight		4.0 lbs (1.8 kg)			4.0 lbs (1.8 kg	
Current Drain:						
Standby	0.81 A max	0.81 A max	0.81 A max	0.81 A max	0.81 A max	0.81 A max
Rx @ Rated Audio	2 A max	2 A max	2 A max	2 A max	2 A max	2 A max
Transmit	1-25 W: 11.0 A max 25-45 W: 14.5 A max	1-25 W: 11.0 A max 25-40 W: 14.5 A max	1-40 W: 14.5 A max (11.0 A max < 25 W)	1-25 W: 11.0 A max 25-45 W: 14.5 A max	1-25 W: 11.0 A max 25-40 W: 14.5 A max	1-40 W: 14.5 A max (11.0 A max < 25 W)
FCC Description	1-25 W: ABZ99FT3083 25-45 W: ABZ99FT3082	1-25 W: ABZ99FT4081 25-40 W: ABZ99FT4080	1-40 W: ABZ99FT4083	1-25 W: ABZ99FT3083 25-45 W: ABZ99FT3082	1-25 W: ABZ99FT4081 25-40 W: ABZ99FT4080	1-40 W: ABZ99FT4083
IC Description	1-25 W: 109AB-99FT3083 25-45 W: 109AB-99FT3082	1-25 W: 109AB-99FT4081 25-40 W: 109AB-99FT4080	1-40 W: 109AB-99FT40830	1-25 W: 109AB-99FT3083 25-45 W: 109AB-99FT3082	1-25 W: 109AB-99FT4081 25-40 W: 109AB-99FT4080	1-40 W: 109AB-99FT4083

RECEIVER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

Frequencies	136-174 MHz	403-470 MHz	450-512 MHz
Channel Spacing		12.5 kHz / 25 kHz*	
Frequency Stability (-30° C, +60° C, +25° C)		+/- 0.5 ppm	
Analog Sensitivity (12dB SINAD)		0.3 uV 0.22 uV (typical)	
Digital Sensitivity		5% BER: 0.3 uV	
Intermodulation (TIA603C)	78 dB	75 dB	
Adjacent Channel Selectivity			
TIA603	65 dB @12.5 kHz, 80 dB @25 kHz*	65 dB @ 12.5 kHz, 75 dB @ 25 kHz*	
TIA603C	50 dB @12.5 kHz, 80 dB @25 kHz*	50 dB @ 12.5 kHz, 75 dB @ 25 kHz*	
Spurious Rejection (TIA603C)	80 dB	75 dB	
Rated Audio		3 W (Internal) 7.5 W (External - 8 ohms) 13 W (External - 4 ohms)	
Audio Distortion @ Rated Audio		3% (typical)	
Hum and Noise		-40 dB @ 12.5 kHz -45 dB @ 25 kHz*	
Audio Response		TIA603C	
Conducted Spurious Emission (TIA603C)		-57 dBm	

TRANSMITTER: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

Frequencies	136-174 MHz	403-470 MHz	450-512 MHz
Channel Spacing		12.5 kHz / 25 kHz*	
Frequency Stability (-30° C, +60° C, +25° C Ref.)		+/- 0.5 ppm	
Low Power Output	1-25 W	1-25 W	—
High Power Output	25-45 W	25-40 W	1-40 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		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 +2™	
Digital Protocol		ETSI TS 102 361-1, -2, -3	

GPS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength)	
TTFF (Time To First Fix) Cold Start	< 1 minute
TTFF (Time To First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 10 meters

MILITARY STANDARDS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

	810E		**810F**	
Applicable MIL–STD	Methods	Procedures	Methods	Procedures
Low Pressure	500.3	II	500.4	II
High Temperature	501.3	I/A, II/A1	501.4	I/Hot, II/Hot
Low Temperature	502.3	I/C3, II/C1	502.4	I/C3, II/C1
Temperature Shock	503.3	I/A1C3	503.4	I
Solar Radiation	505.3	I	505.4	I
Rain	506.3	I, II	506.4	I, III
Humidity	507.3	II	507.4	—
Salt Fog	509.3	I	509.4	I
Dust	510.3	I	510.4	I
Vibration	514.4	I/10, II/3	514.5	I/24
Shock	516.4	I, IV	516.5	I, IV

ENVIRONMENTAL SPECIFICATIONS: DISPLAY XPR 4550 & NUMERIC DISPLAY XPR 4350

Operating Temperature	-30° C / +60° C
Storage Temperature	-40° C / +85° C
Thermal Shock	Per MIL-STD
Humidity	Per MIL-STD
ESD	IEC-801-2KV
Dust and Water Intrusion	IEC 60529 - IP54
Packaging Test	MIL-STD 810D and E

*25 kHz will not be available on new equipment in the U.S. after 1/1/2013.
Specifications subject to change without notice. All specifications shown are typical.
Radio meets applicable regulatory requirements. Version 9 03/10

PRODUCT SPEC SHEET
MOTOTRBO™ XPR™ 4580/XPR 4380 MOBILE RADIOS

GENERAL SPECIFICATIONS

	DISPLAY XPR 4580	NUMERIC DISPLAY XPR 4380
Channel Capacity	Up to 1,000	Up to 32
Typical RF Output	806-870 MHz 10-35 W 896-941 MHz* 10-30 W	806-870 MHz 10-35 W 896-941 MHz* 10-30 W
Frequency Bamd	800 and 900 MHz	800 and 900 MHz
Dimensions	2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L)	2.01 in H x 6.89 in W x 8.11 in L (51 mm H x 175 mm W x 206 mm L)
Weight	4.0 lbs (1.8 kg)	4.0 lbs (1.8 kg)
Current Drain:		
Standby	0.81 A max	0.81 A max
Rx @ Rated Audio	2 A max	2 A max
Transmit	12.0 A max	12.0 A max
Power Supply	12 V dc Negative Ground	12 V dc Negative Ground
FCC Description	ABZ99FT5010	ABZ99FT5010
IC Description	109AB-99FT5010	109AB-99FT5010

RECEIVER

Frequencies	800 MHz: 854-866 MHz and 869-870 MHz 900 MHz: 935-941 MHz
Channel Spacing	800 MHz: 12.5 and 25 kHz / 900 MHz: 12.5 kHz
Frequency Stability (-30° C, +60° C, +25° C)	+/- 0.5 ppm
Analog Sensitivity (12dB SINAD)	0.22 uV
Digital Sensitivity	5% BER: 0.28 uV
Intermodulation (TIA603C)	78 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 (TIA603C)	75 dB
Rated Audio	3 W (Internal)
Audio Distortion @ Rated Audio	3% (typical)
Hum and Noise	-45 dB @ 12.5 kHz / -45 dB @ 25 kHz
Audio Response	TIA603C
Conducted Spurious Emission (TIA603C)	-57 dBm

TRANSMITTER

Frequencies	800 MHz: 809-821 MHz, 824-825 MHz, 854-866 MHz and 869-870 MHz 900 MHz: 896-902 MHz and 935-941 MHz
Channel Spacing	800 MHz: 12.5 and 25 kHz / 900 MHz: 12.5 kHz
Frequency Stability (-30° C, +60° C, +25° C Ref.)	+/- 0.5 ppm
Low Power Output	10 W
High Power Output	800 MHz: 35W / 900 MHz: 30W
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	-50 dB @ 12.5 kHz / -60 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 +2™
Digital Protocol	ETSI TS 102 361-1, -2, -3

GPS

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength)	
TTFF (Time To First Fix) Cold Start	< 1 minute
TTFF (Time To First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 10 meters

MILITARY STANDARDS

	810E		810F	
Applicable MIL–STD	Methods	Procedures	Methods	Procedures
Low Pressure	500.3	II	500.4	II
High Temperature	501.3	I/A, II/A1	501.4	I/Hot, II/Hot
Low Temperature	502.3	I/C3, II/C1	502.4	I/C3, II/C1
Temperature Shock	503.3	I/A1C3	503.4	I
Solar Radiation	505.3	I	505.4	I
Rain	506.3	I, II	506.4	I, III
Humidity	507.3	II	507.4	—
Salt Fog	509.3	I	509.4	I
Dust	510.3	I	510.4	I
Vibration	514.4	I/10, II/3	514.5	I/24
Shock	516.4	I, IV	516.5	I, IV

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30° C / +60° C
Storage Temperature	-40° C / +85° C
Thermal Shock	Per MIL-STD
Humidity	Per MIL-STD
ESD	IEC-801-2KV
Dust and Water Intrusion	IEC 60529 - IP54
Packaging Test	MIL-STD 810D and E

ONLY THE FOLLOWING FREQUENCIES ARE SUPPORTED BY THE XPR 4580 / XPR 4380

Band	Receive	Transmit	
800 MHz	851.0125	806.0125	851.0125
	851.5125	806.5125	851.5125
	852.0125	807.0125	852.0125
	852.5125	807.5125	852.5125
	853.0125	808.0125	853.0125
	854.000 - 865.9875	809.000 - 820.9875	854.000 - 865.9875
	866.0125	821.0125	866.0125
	866.5125	821.5125	866.5125
	867.0125	822.0125	867.0125
	867.5125	822.5125	867.5125
	868.0125	823.0125	868.0125
	869.000 - 870.000	824.000 - 825.000	869.000 - 870.000
900 MHz	935.000 - 941.000	896.000 - 902.000	935.000 - 941.000

*For frequencies 901–902, 940–941 MHz, FCC Rule Part 24 limits power to 7W ERP.
Specifications subject to change without notice. All specifications shown are typical.
Radio meets applicable regulatory requirements. Version 1 03/10

For more information on how to make your business more efficient and better connected, visit **www.motorola.com/mototrbo**

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