

MOTOTRBO™ FEATURE COMPARISON CHART



GENERAL SPECIFICATIONS

Protocol	DMR or analogue communications	GENERAL SPECIFICATIONS																																			
Frequency	Capable of operating in the following frequency ranges	Analogue/Digital or Analogue Only		Analogue/Digital				Analogue/Digital				Analogue/Digital		Analogue/Digital		Analogue/Digital		Analogue/Digital		Analogue/Digital																	
Max. Power Output	Radio's full power rating	4W UHF/SW VHF		4W 300MHz/UHF / 5W VHF				1W UHF/VHF				4W UHF/SW VHF		2W(an) / 3W(dig)		2W(an) / 3W(dig)		3W		25W or 40/45W ¹⁴		25W or 40/45W ¹⁴		25W or 40/45W ¹⁴													
Max. Channel Capacity	Programmable channel capacity	16		16				1000				32		1000		99		256		1000		16		160		256		99		1000							
Channel Spacing	Programmable channel spacing	12.5 / 20 / 25 kHz		12.5 / 20 ¹⁵ / 25 kHz				12.5 / 20 / 25 kHz				12.5 / 20 / 25 kHz		12.5 / 20 / 25 kHz		12.5 / 20 / 25 kHz		12.5 kHz		12.5 / 20 / 25 kHz		12.5 / 20 / 25 kHz		12.5 / 20 ¹⁵ / 25 kHz		12.5 / 20 ¹⁵ / 25 kHz											
Display	Displays provide easy access to advanced features	No		No				No				No		No		No		No		No		No		No		No		No									
Keypad	Keypads provide access to radio controls, texting and telephony	No		No				No				No		No		No		No		No		No		No		No		No									
Integrated GPS	Embedded GPS receiver for location monitoring	No		No				No				No		No		No		No		No		No		No		No		No									
Integrated GLONASS	Embedded GLONASS receiver for location monitoring	No		No				No				No		No		No		No		No		No		No		No		No									
Event Driven Location Updates	Location update based on input from external device (eg door sensor)	No		No				No				No		No		No		No		No		No		No		No		No									
Distance Driven Location Updates	Location update transmission based on distance travelled	No		No				No				No		No		No		No		No		No		No		No		No									
Integrated Bluetooth 2.1	Wireless connection for audio accessories or data comms	No		No				No				No		No		No		No		No		No		No		No		No									
Integrated Bluetooth 4.0	Energy efficient Bluetooth for greater battery life	No		No				No				No		No		No		No		No		No		No		No		No									
Permanent Bluetooth Discovery	Bluetooth "always on" mode used by some applications	No		No				No				No		No		No		No		No		No		No		No		No									
Dedicated Emergency Button	Orange programmable button for one-touch emergency calling	No		No				No				No		No		No		No		No		No		No		No		No									
Programmable Buttons	Allow access to most often used features with one press	2		2				3				2		2		1*		2		2		2		2		2		2									
Digital DMR Signalling	DMR standard digital voice communications	Yes ⁶		Yes				Yes				Yes		Yes		Yes		Yes		Yes ⁶		Yes ⁶		Yes ⁶		Yes ⁶		Yes ⁶									
PL / DPL Signalling	Analogue Private Line / Digital Private Line compatible	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes									
Quick Call II Signalling	Analogue Quick Call II compatible	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes									
MDC Signalling	Analogue MDC compatible	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes									
5 Tone Signalling	Analogue 5 tone compatible	No		Yes				Yes				Yes		Yes		Option		Yes		No		Yes		Yes		Yes		Yes									
DTMF Hot Keypad	DTMF tone compatible	No		No				Yes				No		No		No		No		Yes ⁶		Yes ⁶		Yes ⁶		Yes ⁶		Yes ⁶									
MPT1327 Signalling	Analogue MPT1327 compatible (requires option board)	No		No				Option ⁷				No		No		No		No		No		No		No		Option		Option									
Option Board Capability	Supports option boards for third party applications	No		No				Yes				No		No		No		No		No		No		No		Yes ⁴		Yes									
IMPRES Audio Compatible	IMPRES audio ensures your voice is heard clearer and louder	No		Yes				Yes				Yes		Yes		No		No		No		No		No		No		No									
SINC+ Noise Cancellation	Integrated, advanced noise cancellation for noisy environments	No		Option				Option				Option		Option		Option		Option		Option		Option		Option		Option		Option									
Automatic Gain Control	Modifies microphone performance to produce the best voice quality	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes									
Microphone Distortion Control	Automatic microphone gain adjustment to reduce distortion	No		No				Yes				No		Yes		No		No		No		No		No		No		No									
Trill Enhancement	Additional processing to enhance rolling "r" sound so speech is clearer	Yes		Yes				Yes				Yes		Yes		No		Yes		Yes		Yes		Yes		Yes		Yes									
IMPRES Energy Compatible	Use IMPRES batteries for longer life and optimal performance	No		Yes				Yes				Yes		No		No		No		No		No		No		No		No									
IMPRES OTA Battery Management	Automatic collection of battery data over the air with radios still in use	No		Yes ¹⁰				Yes ¹⁰				Yes ¹⁰		Yes ¹⁰		No		No		No		No		No		No		No									
ATEX Certified	ATEX certified for use in potentially explosive environments	No		No				No				No		No		No		No		No		No		No		No		No									
IEC Ex Certified	IEC Ex certified for use in potentially explosive environments	No		No				No				No		No		No		No		No		No		No		No		No									
FM Intrinsically Safe	Factory Mutual (FM) approved for intrinsically safe use	No		No				Factory Mutual (FM)				No		No		No		No		No		No		No		No		No									
TIA4950 Intrinsically Safe	Telecommunications Industry Association (TIA) approved for IS use	No		TIA4950				TIA4950				TIA4950		TIA4950		TIA4950		TIA4950		TIA4950		TIA4950		TIA4950		TIA4950		TIA4950									
IP Rating	Rated sealing for dust and water ingress	IP54		IP67				IP68				IP67		IP68		IP68		IP68		IP68		IP68		IP68		IP68		IP68									
MIL-STD 810	Rated to withstand environmental conditions	C, D, E, F & G		C, D, E, F & G				C, D, E, F & G				C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G		C, D, E, F & G									
Dimensions (HxWxL) mm	Physical size	128 x 62 x 39 ³		122 x 56 x 36 ³		122 x 56 x 36 ³		130 x 55 x 34 ³		130 x 55 x 36 ³		130 x 55 x 36 ³		138 x 57 x 38 ³		138 x 57 x 40 ³		138 x 57 x 38 ³		138 x 57 x 40 ³		100 x 55 x 30 ³		100 x 55 x 36 ³		126 x 55 x 22 ³		126 x 55 x 23 ³		121 x 55 x 17 ³		44 x 169 x 134		44 x 169 x 134		53 x 175 x 206	
Dimensions (Weight)	Physical weight	341g ³		265g ³		282g ³		295g ³		330g ³		330g ³		456g ³		482g ³		456g ³		482g ³		254g ³		290g ³		U:166g ³ V:169g ³		190g ³		154g ³		1.3kg		1.3kg		1.8kg	

FEATURES AND FUNCTIONS

Intelligent Audio	Automatic volume control based on background noise levels	No		Yes				Yes				Yes		No		Yes		Yes		No		Yes		Yes		Yes		Yes		Yes			
User Selectable Audio Profiles	Optimises audio for specific environments and personal preferences	No		Yes				Yes				Yes		Yes		No		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Emergency Alarm	Radio can initiate an Emergency call process	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Lone Worker	Initiates emergency if user does not respond to periodic alerts	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Remote Monitor	Radio can remotely activate another radio's microphone	Decode Only		Decode Only				Yes				Yes		Yes		Decode Only		Yes		Yes		Decode Only		Yes		Yes		Yes		Yes			
VOX (supported on radio)	Voice activated calling allows handsfree operation	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Audio Feedback Suppressor	Blocks feedback from other radios to eliminate "howling"	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Freeform Text Messaging	User can enter and send free-form text messages	No		No				Yes				No		No		No		No		Yes		No		No		Yes ⁵		Yes ⁵		Yes ⁵			
Pre-programmed Text Messaging	Radio can send pre-programmed text messages	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Extended Texting	Maximum text message length is 280 character	No		Yes				Yes				Yes		No		Yes		Yes		No		Yes		No		Yes		Yes		Yes			
Vibrate Alert	Vibrate silently alerts the user to an incoming call	No		Option				Option				No		No		No		No		No		No		No		No		No		No			
Covert Mode	Disable display, LEDs and audible tones for ultimate discretion	No		No				No				No		No		No		No		No		No		No		No		No		No		No	
All Call	One-way call to all radios on a logical channel	Decode Only		Yes				Yes				Yes		Yes		Decode Only		Yes		Yes		Decode Only		Decode Only		Yes		Yes		Yes			
Radio Check	Check if another radio is active on a system without notifying the user	Decode Only		Decode Only				Yes				Decode Only		Yes		Decode Only		Yes		Yes		Decode Only		Decode Only		Yes		Yes		Yes			
Digital Telephone Patch	Ability to connect to telephone system (requires additional hardware)	No		Option				Yes				Yes		No		Option		Yes		No		Option		Option		Yes		Yes		Yes			
Transmit Interrupt Encode	Radio can interrupt transmissions from other radios	Decode Only		Option				Yes				Yes		Decode Only		Option		Yes		Decode Only		Option		Option		Yes		Yes		Yes			
Basic Privacy	MOTOTRBO 16-bit encryption for protection against eavesdropping	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Enhanced Privacy	MOTOTRBO 40-bit encryption for more robust protection	No		Option				Yes				Yes		No		Option		Yes		No		Option		Option		Yes		Yes		Yes			
AES256 Encryption	Advanced Encryption Standard (AES) 256-bit encryption	No		Option				Option				Option		No		No		Option		No		Option		No		Option		Option		Option			
Default Voice Announcement	Audible confirmation of selected operations of the radio	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Programmable Voice Announcement	Ability to use customised recordings for voice announcements	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Text-to-Speech Voice Announcement	Radio "reads out" Channel, Zone, Functions, Text Messages, Job Tickets	No		No				Option				Option		No		No		Option		No		No		No		Option		Option		Option			
Radio Management	Centralised radio configuration and code plug management	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Over the Air Programming (OTAP)	Remote, over-air programming using Radio Management	No		Yes				Yes				Yes		Yes		No		Yes		No		Yes		No		Yes		Yes		Yes			
Integrated Wi-Fi	Enables remote software updates for easier radio management	No		No				Option ¹				No		Option		No		Yes		Option		No		No		Option ¹		Option ¹		Option ¹			
Indoor Location Tracking	Use built-in Bluetooth with iBeacons and suitable apps to locate and track radios	No		No				Option ¹				No		Option		No		Option		No		No		No		Option ¹		Option ¹		Option ¹			
Restricted Access to System	Prevents unauthorised users from communicating through the repeater	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Radio Enable/Disable	Radio can remotely disable and re-enable another radio	Decode Only		Decode Only				Yes				Decode Only		Yes		Decode Only		Yes		Yes		Decode Only		Yes		Yes		Yes		Yes			
Integrated Mandown	Built-in accelerometer enhances personnel safety by monitoring movement	No		No				Yes ¹³				Yes		No		No		Yes		No		No		No		No		No		No			
Dual Capacity Direct Mode	Use both TDMA time slots to double system capacity without a repeater	Yes		Yes				Yes				Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes			
Telemetry Supported	Integrated basic telemetry capability	No		No				Yes				Yes		No																			