

# MOTOTRBO™ FEATURE COMPARISON CHART



## GENERAL SPECIFICATIONS

	DP1000 SERIES	DP2000e SERIES	DP4000e SERIES	MOTOTRBO PORTABLE RADIOS	DP3000e SERIES	SL SERIES	DM1000 SERIES	DM2000 SERIES	DM4000e SERIES
<b>Protocol</b>	DMR or analogue communications	Analogue/Digital or Analogue Only	Analogue/Digital	Analogue/Digital	Analogue/Digital	Analogue/Digital	Analogue/Digital	Analogue/Digital	Analogue/Digital
<b>Frequency</b>	Capable of operating in the following frequency ranges	VHF: 136-174MHz UHF: 403-470MHz	VHF: 136-174MHz UHF: 403-527MHz 300 <sup>1)</sup> : 300-360, 350-400MHz	VHF: 136-174MHz UHF: 403-527MHz 300 <sup>1)</sup> : 300-360, 350-400MHz	VHF: 136-174MHz UHF: 403-470MHz	VHF: 136-174MHz UHF: 403-470MHz	VHF: 136-174MHz UHF: 403-470MHz	VHF: 136-174MHz UHF: 403-470MHz	VHF: 136-174MHz UHF: 403-470MHz
<b>Max. Power Output</b>	Radio's full power rating	4W UHF/SW VHF	4W 300MHz/UHF / 5W VHF	4W 300MHz/UHF / 5W VHF	4W UHF/VHF	2W(an) / 3W(dig)	2W(an) / 3W(dig)	2W(an) / 3W(dig)	2W(an) / 3W(dig)
<b>Max. Channel Capacity</b>	Programmable channel capacity	16	16 128	32 1000 1000	32 1000 32 1000	32 1000	99 256	99 256	99 256
<b>Channel Spacing</b>	Programmable channel spacing	12.5 / 20 / 25 kHz	12.5 / 20 <sup>1)</sup> / 25 kHz	12.5 / 20 <sup>1)</sup> / 25 kHz	12.5 / 20 / 25 kHz	12.5 / 20 / 25 kHz	12.5 / 20 / 25 kHz	12.5 / 20 / 25 kHz	12.5 / 20 <sup>1)</sup> / 25 kHz
<b>Display</b>	Displays provide easy access to advanced features	No	No 2 line monochrome	No	No 5 line colour	No	No 5 line colour	No	No 5 line colour
<b>Keypad</b>	Keypads provide access to radio controls, texting and telemetry	No	No Menu buttons	No	No Full Keypad	No	No Menu buttons	No	No Full Keypad
<b>Integrated GPS</b>	Embedded GPS receiver for location monitoring	No	No	Yes <sup>1)</sup>	No	Yes	No	No	Yes <sup>1)</sup>
<b>Integrated GLONASS</b>	Embedded GLONASS receiver for location monitoring	No	No	Yes <sup>1)</sup>	No	Yes	No	No	Yes <sup>1)</sup>
<b>Event Driven Location Updates</b>	Location update based on input from external device (eg door sensor)	No	No	Yes <sup>1)</sup>	No	No	No	No	Yes <sup>1)</sup>
<b>Distance Driven Location Updates</b>	Location update transmission based on distance travelled	No	No	Yes <sup>1)</sup>	No	Yes	No	No	Yes <sup>1)</sup>
<b>Integrated Bluetooth 2.1</b>	Wireless connection for audio accessories or data comms	No	No	n/a	No	n/a	No	No	n/a
<b>Integrated Bluetooth 4.0</b>	Energy efficient Bluetooth for greater battery life	No	No	Audio and Data <sup>1)</sup>	No	Audio and Data	Audio and Data	Audio and Data	Audio and Data <sup>1)</sup>
<b>Permanent Bluetooth Discovery</b>	Bluetooth "always on" mode used by some applications	No	No	Option (Bluetooth models only)	No	Option	Option	Option	No
<b>Dedicated Emergency Button</b>	Orange programmable button for one-touch emergency calling	No	No	Yes	Yes	Yes	No	Yes	No
<b>Programmable Buttons</b>	Allow access to most often used features with one press	2	2 4	3 5 5	3 5 3 5	2 4	1 <sup>1)</sup> 1	2	4
<b>Digital DMR Signalling</b>	DMR standard digital voice communications	Yes <sup>1)</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>PL / DPL Signalling</b>	Analogue Private Line / Digital Private Line compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Quick Call II Signalling</b>	Analogue Quick Call II compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>MDC Signalling</b>	Analogue MDC compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>5 Tone Signalling</b>	Analogue 5 tone compatible	No	Yes	Yes	Yes	Yes	Option	Yes	Yes
<b>DTMF Hot Keypad</b>	DTMF tone compatible	No	No	No	Yes	No	No	No	Yes
<b>MPT1327 Signalling</b>	Analogue MPT1327 compatible (requires option board)	No	No	Option <sup>7)</sup>	No	Option <sup>7)</sup>	No	No	Option
<b>Option Board Capability</b>	Supports option boards for third party applications	No	No	Yes	No	Yes	No	Yes <sup>4)</sup>	No
<b>IMPRES Audio Compatible</b>	IMPRES audio ensures your voice is heard clearer and louder	No	Yes	Yes	Yes	Yes	No	No	Yes
<b>SINCR+ Noise Cancellation</b>	Integrated, advanced noise cancellation for noisy environments	No	Option	Option	Option	Option	No	Option	Option
<b>Automatic Gain Control</b>	Modifies microphone performance to produce the best voice quality	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Microphone Distortion Control</b>	Automatic microphone gain adjustment to reduce distortion	No	No	Yes	Yes	No	No	No	No
<b>Trill Enhancement</b>	Additional processing to enhance rolling "r" sound so speech is clearer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IMPRES Energy Compatible</b>	Use IMPRES batteries for longer life and optimal performance	Yes	Yes	Yes	Yes	Yes	No	n/a	n/a
<b>IMPRES OTA Battery Management</b>	Automatic collection of battery data over the air with radios still in use	Yes <sup>10)</sup>	Yes <sup>10)</sup>	Yes <sup>10)</sup>	Yes <sup>10)</sup>	No	No	n/a	
<b>ATEX Certified</b>	ATEX certified for use in potentially explosive environments	No	No	No	Gas: Class II 2G Ex ib IIC T4 Gb, Dust: Class II 2D Ex ib IIC T130 °C Db Mining: I M2 Ex ib I Mb	No	No	No	No
<b>IEC Ex Certified</b>	IEC Ex certified for use in potentially explosive environments	No	No	No	Gas: Ex ib IIC T4 Gb, Dust: Ex ib IIC T130 °C Db Mining: Ex ib I Mb	No	No	No	No
<b>FM Intrinsically Safe</b>	Factory Mutual (FM) approved for intrinsically safe use	No	No	Factory Mutual (FM)	No	No	No	No	No
<b>TIA4950 Intrinsically Safe</b>	Telecommunications Industry Association (TIA) approved for IS use	No	TIA4950	TIA4950	No	TIA4950	No	No	No
<b>IP Rating</b>	Rated sealing for dust and water ingress	IP54	IP67	IP68	IP67	IP68	IP54	IP54	IP54
<b>MIL-STD 810</b>	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
<b>Dimensions (HxWxL) mm</b>	Physical size	128 x 62 x 39 <sup>3)</sup>	122 x 56 x 36 <sup>1)</sup>	130 x 55 x 34 <sup>1)</sup>	130 x 55 x 36 <sup>3)</sup>	138 x 57 x 38 <sup>2)</sup>	138 x 57 x 40 <sup>3)</sup>	138 x 57 x 38 <sup>3)</sup>	138 x 57 x 40 <sup>2)</sup>
<b>Dimensions (Weight)</b>	Physical weight	341g <sup>1)</sup>	265g <sup>1)</sup>	282g <sup>1)</sup>	295g <sup>1)</sup>	330g <sup>1)</sup>	330g <sup>1)</sup>	456g <sup>1)</sup>	482g <sup>1)</sup>

## FEATURES AND FUNCTIONS

<b>Intelligent Audio</b>	Automatic volume control based on background noise levels	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>User Selectable Audio Profiles</b>	Optimises audio for specific environments and personal preferences	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Emergency Alarm</b>	Radio can initiate an Emergency call process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Lone Worker</b>	Initiates emergency if user does not respond to periodic alerts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Remote Monitor</b>	Radio can remotely activate another radio's microphone	Decode Only	Decode Only	Yes	Decode Only	Yes	Yes	Yes	Decode Only	Yes	Yes	Yes
<b>VOX (supported on radio)</b>	Voice activated calling allows handsfree operation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Audio Feedback Suppressor</b>	Blocks feedback from other radios to eliminate "howling"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Freeform Text Messaging</b>	User can enter and send free-form text messages	No	No	No	Yes	No	Yes	No	No	No	Yes <sup>5)</sup>	Yes <sup>5)</sup>
<b>Pre-programmed Text Messaging</b>	Radio can send pre-programmed text messages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Extended Texting</b>	Maximum text message length is 280 character	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Vibrate Alert</b>	Vibrate silently alerts the user to an incoming call	No	Option	Option	Option	No	Option	No	Option	No	Option	Option
<b>Covert Mode</b>	Disable display, LEDs and audible tones for ultimate discretion	No	No	No	No	No	No	No	No	No	No	No
<b>All Call</b>	One-way call to all radios on a logical channel	Decode Only	Yes	Yes	Yes	Yes	Yes	Yes	Decode Only	Yes	Yes	Yes
<b>Radio Check</b>	Check if another radio is active on a system without notifying the user	Decode Only	Decode Only	Yes	Decode Only	Yes	Yes	Decode Only	Yes	Decode Only	Yes	Decode Only
<b>Digital Telephone Patch</b>	Ability to connect to telephone system (requires additional hardware)	No	Option	Yes	Yes	Yes	Yes	Yes	No	Option	Yes	Yes
<b>Transmit Interrupt Encode</b>	Radio can interrupt transmissions from other radios	Decode Only	Option	Yes	Yes	Yes	Yes	Yes	Decode Only	Option	Yes	Yes
<b>Basic Privacy</b>	MOTOTRBO 16-bit encryption for protection against eavesdropping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Enhanced Privacy</b>	MOTOTRBO 40-bit encryption for more robust protection	No	Option	Yes	Yes	Yes	Yes	Yes	No	Option	Yes	Yes
<b>AES256 Encryption</b>	Advanced Encryption Standard (AES) 256-bit encryption	No	No	Option	Option	Option	Option	Option	No	No	Option	Option
<b>Default Voice Announcement</b>	Audible confirmation of selected operations of the radio	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Programmable Voice Announcement</b>	Ability to use customised recordings for voice announcements	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Text-to-Speech Announcement</b>	Radio "reads out" Channel, Zone, Functions, Text Messages, Job Tickets	No	No	Option	Option	Option	Option	Option	No	No	Option	Option
<b>Radio Management</b>	Centralised radio configuration and code plug management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Over the Air Programming (OTAP)</b>	Remote, over-air programming using Radio Management	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
<b>Integrated Wi-Fi</b>	Enables remote software updates for easier radio management	No	No	Option <sup>1)</sup>	Option <sup>1)</sup>	No	Option	No	Option	No	Option <sup>1)</sup>	Option <sup>1)</sup>
<b>Indoor Location Tracking</b>	Use built-in Bluetooth with iBeacons and suitable apps to locate and track radios	No	No	Option <sup>1)</sup>	Option <sup>1)</sup>	No	Option	No	Option	Option	No	Option <sup>1)</sup>
<b>Restricted Access to System</b>	Prevents unauthorised users from communicating through the repeater	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Radio Enable/Disable</b>	Radio can remotely disable and re-enable another radio	Decode Only	Decode Only	Yes	Decode Only	Yes	Yes	Decode Only	Yes	Yes	Decode Only	Yes
<b>Integrated Mandown</b>	Built-in accelerometer enhances personnel safety by monitoring movement	No	No	Yes <sup>11)</sup>	Yes	Yes	Yes	Yes	No	No	No	No
<b>Dual Capacity Direct Mode</b>	Use both TDMA time slots to double system capacity without a repeater	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Telemetry Supported</b>	Integrated basic telemetry capability	No	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes
<b>Telemetry I/O Pins</b>	Number of built-in input/output pins to support telemetry	n/a	n/a	3	3	3	n/a	n/a	n/a	0	n/a	5
<b>Telemetry Buttons</b>	Number of buttons that can be configured for telemetry	n/a	n/a	3	3	3	n/a	n/a	n/a	3	n/a	3
<b>Fixed Installation</b>	Mobile radios can be used in a fixed installation such as a control room	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Yes
<b>Control Station</b>	Mobile acts as the RF link between an Application Server and the radio network	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Yes
<b>Remote Mount Control Head</b>	Controls and display can be located separately from radio chassis	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	No	Option
<b>Data ADKs Available</b>	Data Application Developer Kits are available to ADP members	No	No	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes

## SYSTEM CONFIGURATIONS

<b>Direct Mode Operation</b>	Direct radio-to-radio operation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Single-Site Conventional</b>	Single site conventional operation (channel selection by users)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>IP Site Connect</b>	Multi-site conventional operation (channel selection by users)	Option	Yes	Yes	Yes	Yes	Yes	Option	Yes	No	Yes	Yes
<b>Capacity Plus</b>	Single- or multi-site MOTOTRBO trunking (channel selection managed by system)	No	Option	Yes	Yes	Yes	Yes	No	Yes	No	Option	Yes
<b>Capacity Max</b>	Multi-site, DMR Tier III compliant trunking with centralised controller	No	No	Option	Option	Option	Option	No	Option	No	No	Option
<b>Connect Plus</b>	Multi-site MOTOTRBO trunking with dedicated control channel	No	No	Option	Option	Option	Option	No	Option <sup>5)</sup>	No	No	Option

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<sup>1)</sup> Integrated Bluetooth, GPS, GLONASS and Wi-Fi are supported on DP3441e, DP4401e, DP4601e, DP4801e, DM4401e, DM4601e only <sup>2)</sup> Based on NiMH battery <sup>3)</sup> Based on standard Li-Ion battery <sup>4)</sup> Option board capability on SL4010e only <sup>5)</sup> SL4010e only <sup>6)</sup> Requires keypad microphone <sup>7)</sup> DP4401e, DP4801e, DP4801 Ex are available with MPT Option Board factory fitted <sup>8)</sup> DP1400, DM1400 and DM1600 analogue-only models can be upgraded to MOTOTRBO digital by purchasing a software license  
<sup>9)</sup> SL1600 Programmable Button can scroll through up to 7 features <sup>10)</sup> Requires IMPRES battery <sup>11)</sup> Event & distance driven location updates only supported on models with built-in GPS/GLONASS <sup>12)</sup> Only DP2400e, DP4401e, DP4801e, DM4401e and DM4601e available in 300MHz versions <sup>13)</sup> Integrated mandown on DP4401e, DP4601e and DP4801e only <sup>14)</sup> VHF models: 45W / 300MHz & UHF models: 40W <sup>15)</sup> 20 kHz not supported for all 300MHz models or DM4000e 450-527MHz models <sup>16)</sup> Maximum output RF power is 2W for frequencies >470MHz