

# FEATURE COMPARISON CHART

		MOTOTRBO PORTABLE RADIOS												MOTOTRBO MOBILE RADIOS										
		DP1000 SERIES	DP2000e SERIES		DP4000e SERIES			DP4000 Ex SERIES			DP3441e	SL SERIES	DM1000 SERIES	DM2000 SERIES	DM4000e SERIES									
		DP1400	DP2400e	DP2600e	DP4400e/DP4401e	DP4600e/DP4601e	DP4800e/DP4801e	DP4401 Ex	DP4801 Ex	DP4401 Ex Ma	DP4801 Ex Ma	DP3441e	SL1600	SL4000e/SL4010e	DM1400	DM1600	DM2600	DM4400e/DM4401e	DM4600e/DM4601e	DM4800e/DM4801e				
GENERAL SPECIFICATIONS																								
Protocol	DMR or analogue communications	Analogue/Digital or Analogue Only		Analogue/Digital			Analogue/Digital			Analogue/Digital			Analogue/Digital		Analogue/Digital		Analogue/Digital		Analogue/Digital					
Frequency	Capable of operating in the following frequency ranges	VHF: 136-174MHz UHF: 403-470MHz		VHF: 136-174MHz UHF: 403-527MHz 300 <sup>12</sup> : 300-360, 350-400MHz			VHF: 136-174MHz UHF: 403-527MHz 300 <sup>12</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 300 <sup>12</sup> : 300-360, 350-400MHz					
Max. Power Output	Radio's full power rating	4W UHF/5W VHF		4W UHF/5W VHF			1W UHF/VHF			4W UHF/5W VHF		2W(an) / 3W(dig)		3W		25W or 40/45W <sup>14</sup>		25W or 40/45W <sup>14</sup>		25W or 40/45W <sup>14</sup>				
Max. Channel Capacity	Programmable channel capacity	16		16			1000			32		1000		32		1000		16		160				
Channel Spacing	Programmable channel spacing	12.5 / 20 / 25 kHz		12.5 / 20 <sup>15</sup> / 25 kHz			12.5 / 20 <sup>15</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 / 25 kHz		12.5 / 20 <sup>15</sup> / 25 kHz				
Display	Displays provide easy access to advanced features	No		No			2 line monochrome			No		5 line colour		No		5 line colour		No		5 line colour				
Keypad	Keypads provide access to radio controls, texting and telephony	No		No			Menu buttons			No		Full Keypad		No		Full Keypad		No		Menu buttons				
Integrated GPS	Embedded GPS receiver for location monitoring	No		No			Menu buttons			Yes		No		No		No		No		No				
Integrated GLONASS	Embedded GLONASS receiver for location monitoring	No		No			Yes <sup>11</sup>			No		No		No		No		No		No				
Event Driven Location Updates	Location update based on input from external device (eg door sensor)	No		No			Yes <sup>11</sup>			No		No		No		No		No		No				
Distance Driven Location Updates	Location update transmission based on distance travelled	No		No			Yes <sup>11</sup>			No		No		No		No		No		No				
Integrated Bluetooth 2.1	Wireless connection for audio accessories or data comms	No		No			n/a			No		No		No		No		No		No				
Integrated Bluetooth 4.0	Energy efficient Bluetooth for greater battery life	No		No			Audio and Data <sup>1</sup>			No		Audio and Data		No		No		No		Audio and Data <sup>1</sup>				
Permanent Bluetooth Discovery	Bluetooth "always on" mode used by some applications	No		No			Option (Bluetooth models only)			No		Option		No		Option		No		Option				
Dedicated Emergency Button	Orange programmable button for one-touch emergency calling	No		No			Yes			Yes		No		Yes		No		No		No				
Programmable Buttons	Allow access to most often used features with one press	2		2			4			3		5		3		5		2		1 <sup>9</sup>				
Digital DMR Signalling	DMR standard digital voice communications	Yes <sup>8</sup>		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
PL / DPL Signalling	Analogue Private Line / Digital Private Line compatible	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				
MDC Signalling	Analogue MDC compatible	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
5 Tone Signalling	Analogue 5 tone compatible	No		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
DTMF Hot Keypad	DTMF tone compatible	No		No			No			Yes		No		Yes		No		Yes		Yes				
MPT1327 Signalling	Analogue MPT1327 compatible (requires option board)	No		No			Option <sup>7</sup>			No		No		No		Yes <sup>6</sup>		Yes <sup>6</sup>		No				
Option Board Capability	Supports option boards for third party applications	No		No			Yes			No		No		No		No		No		Option				
IMPRES Audio Compatible	IMPRES audio ensures your voice is heard clearer and louder	No		Yes			Yes			Yes		No		Yes <sup>4</sup>		No		Yes		Yes				
SINCGARS Noise Cancellation	Integrated, advanced noise cancellation for noisy environments	No		Option			Option			Option		Option		Option		No		Option		Option				
Automatic Gain Control	Modifies microphone performance to produce the best voice quality	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
Microphone Distortion Control	Automatic microphone gain adjustment to reduce distortion	No		No			Yes			Yes		No		No		No		No		No				
Trill Enhancement	Additional processing to enhance rolling "r" sound so speech is clearer	Yes		Yes			Yes			Yes		No		Yes		Yes		Yes		Yes				
IMPRES Energy Compatible	Use IMPRES batteries for longer life and optimal performance	No		Yes			Yes			No		No		No		n/a		n/a		n/a				
IMPRES OTA Battery Management	Automatic collection of battery data over the air with radios still in use	No		Yes <sup>10</sup>			Yes <sup>10</sup>			Yes <sup>10</sup>		No		No		n/a		n/a		n/a				
ATEX Certified	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 IIIC T130 °C Db Mining: I M2 Ex ib I Mb		No		No		No		No		No				
IEC Ex Certified	IEC Ex certified for use in potentially explosive environments	No		No			No			Gas: Ex ib IIC T4 Gb Dust: Ex ib IIIC T130°C Db Mining: Ex ib I Mb		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				
TIA4950 Intrinsically Safe	Telecommunications Industry Association (TIA) approved for IS use	No		TIA4950			TIA4950			No		No		No		No		No		No				
IP Rating	Rated sealing for dust and water ingress	IP54		IP67			IP68			IP68		IP54		IP54		IP54		IP54		IP54				
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				
Dimensions (HxWxL) mm	Physical size	128 x 62 x 39 <sup>1</sup>		122 x 56 x 36 <sup>3</sup>			130 x 55 x 34 <sup>3</sup>			130 x 55 x 36 <sup>3</sup>			130 x 55 x 36 <sup>3</sup>		138 x 57 x 38 <sup>3</sup>		138 x 57 x 40 <sup>3</sup>		138 x 57 x 38 <sup>3</sup>		138 x 57 x 40 <sup>3</sup>			
Dimensions (Weight)	Physical weight	341g <sup>2</sup>		265g <sup>2</sup>			282g <sup>2</sup>			295g <sup>2</sup>			330g <sup>2</sup>		330g <sup>2</sup>		456g <sup>2</sup>		482g <sup>2</sup>		456g <sup>2</sup>		482g <sup>2</sup>	
FEATURES AND FUNCTIONS																								
Intelligent Audio	Automatic volume control based on background noise levels	No		Yes			Yes			Yes		No		Yes		No		Yes		Yes				
User Selectable Audio Profiles	Optimises audio for specific environments and personal preferences	No		Yes			Yes			Yes		No		Yes		No		Yes		Yes				
Emergency Alarm	Radio can initiate an Emergency call process	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				
Remote Monitor	Radio can remotely activate another radio's microphone	Decode Only		Decode Only			Yes			Yes		Decode Only		Yes		Decode Only		Yes		Yes				
VOX (supported on radio)	Voice activated calling allows handsfree operation	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		No		Yes		Yes				
Freeform Text Messaging	User can enter and send free-form text messages	No		No			No			No		Yes		No		No		No		Yes <sup>8</sup>				
Pre-programmed Text Messaging	Radio can send pre-programmed text messages	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
Extended Texting	Maximum text message length is 280 character	No		Yes			Yes			Yes		No		Yes		No		Yes		Yes				
Vibrate Alert	Vibrate silently alerts the user to an incoming call	No		Option			Option			No		No		Yes		No		No		No				
Covert Mode	Disable display, LEDs and audible tones for ultimate discretion	No		No			No			No		No		Yes		No		No		No				
All Call	One-way call to all radios on a logical channel	Decode Only		Yes			Yes			Yes		Decode Only		Yes		Decode Only		Decode Only		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		Decode Only		Yes				
Digital Telephone Patch	Ability to connect to telephone system (requires additional hardware)	No		Option			Yes			Decode Only		Yes		Decode Only		Yes		Decode Only		Yes				
Transmit Interrupt Encode	Radio can interrupt transmissions from other radios	Decode Only		Option			Yes			Yes		Decode Only		Yes		Decode Only		Option		Yes				
Basic Privacy	MOTOTRBO 16-bit encryption for protection against eavesdropping	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
Enhanced Privacy	MOTOTRBO 40-bit encryption for more robust protection	No		Option			Yes			Yes		No		Yes		No		Option		Yes				
AES256 Encryption	Advanced Encryption Standard (AES) 256-bit encryption	No		No			Option			Option		No		Option		No		No		Option				
Default Voice Announcement	Audible confirmation of selected operations of the radio	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				
Text-to-Speech Voice Announcement	Radio "reads out" Channel, Zone, Functions, Text Messages, Job Tickets	No		No			Option			Option		No		Option		No		No		Option				
Radio Management	Centralised radio configuration and code plug management	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		No		Option		No		No		Option				
Integrated Wi-Fi	Enables remote software updates for easier radio management	No		No			Option <sup>1</sup>			Option		No		Option		No		No		Option <sup>1</sup>				
Restricted Access to System	Prevents unauthorised users from communicating through the repeater	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		Decode Only		Yes				
Integrated Mandown	Enhance personnel safety by monitoring movement	No		No			Yes <sup>13</sup>			Yes		No		Yes		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				
Telemetry Supported	Integrated basic telemetry capability	No		No			Yes			Yes		No		Yes		No		Yes		Yes				
Telemetry I/O Pins	Number of built-in input/output pins to support telemetry	n/a		n/a			3			n/a		n/a		0		n/a		4		5				
Telemetry Buttons	Number of buttons that can be configured for telemetry	n/a		n/a			3			n/a		n/a		3		n/a		3		3				
Fixed Installation	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		Yes		Yes		Yes				
Control Station	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		Yes		Yes		Yes				
Remote Mount Control Head	Controls and display can be located separately from radio chassis	n/a		n/a			n/a			n/a		n/a		n/a		No		No		Option				
Data ADKs Available	Data Application Developer Kits are available to ADP members	No		No			Yes			Yes		No		Yes		No		No		Yes				
SYSTEM CONFIGURATIONS																								
Direct Mode Operation	Direct radio-to-radio operation	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
Single-Site Conventional	Single site conventional operation (channel selection by users)	Yes		Yes			Yes			Yes		Yes		Yes		Yes		Yes		Yes				
IP Site Connect	Multi-site conventional operation (channel selection by users)	Option		Yes			Yes			Yes		Option		Yes		No		Yes		Yes				
Capacity Plus	Single- or multi-site MOTOTRBO trunking (channel selection managed by system)	No		Option			Yes			Yes		No		Yes		No		Option		Yes				
Capacity Max	Multi-site, DMR Tier III compliant trunking with centralised controller	No		No			Option			Option		No		Option <sup>5</sup>		No		No		Option				
Connect Plus	Multi-site MOTOTRBO trunking with dedicated control channel	No		No			Option			No		Options		No		Option		No		Option				

<sup>1</sup> Integrated Bluetooth, GPS, GLONASS and Wi-Fi are supported on 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