MOTOTRBO™ DM4000e SERIES

YOU'RE COMPLETELY CONNECTED

With this dynamic evolution of MOTOTRBO digital two-way radios, you're better connected, safer and more productive. The DM4000e Series is designed for the skilled professional who refuses to compromise. With high performance integrated voice and data, and advanced features for efficient operation, these next-generation radios deliver complete connectivity to your organisation.

CONNECTED

The MOTOTRBO DM4000e Series is a family of ETSI DMR Standards compliant digital radios that delivers operation critical voice and data communications. Bluetooth® audio lets you talk without wires, integrated Wi-Fi® enables remote software updates, and indoor and outdoor location-tracking capabilities give you total visibility of your resources. With support for trunking as well as legacy analogue technology, you can keep your organisation connected as it grows.

SAFE

Safeguard your staff with responsive push-to-talk technology. The quick access buttons on DM4000e Series radios can summon help with one touch, using Transmit Interrupt to clear a channel when necessary. A range of safe driving accessories allow your workers to communicate hands-free, and Text-to-Speech technology helps your drivers keep their eyes on the road.

PRODUCTIVE

Text messaging and Work Order Ticketing simplify complex communications, and data capabilities support advanced applications. Featuring a high power audio amplifier, these radios deliver loud, clear speech, with background noise cancellation for better intelligibility. DM4000e Series radios are also ideal as a dispatcher solution, with desktop microphones and a rugged, durable design for everyday use.

WHAT'S NEW IN THESE NEXT GENERATION RADIOS

- Bluetooth 4.0
- Indoor location tracking
- Multi-constellation GNSS for increased location accuracy
- Intergrated Wi-Fi
- Over-the-air software updates

PRODUCT DATA SHEET
MOTOTRBO™ DM4000e SERIES
DIGITAL TWO-WAY RADIOS

	Alphanumeric Model				Numeric Model			
Model Number	DM4601e / DM4600e[1]				DM4401e / DM4400e[1]			
Band	VHF	300MHz	UHF Band 1	UHF Band 2	VHF	300MHz	UHF Band 1	UHF Band 2
GENERAL SPECIFICATIONS								
Frequency	136-174 MHz	300-360 MHz, 350-400 MHz	403-470 MHz	450-527 MHz	136-174 MHz	300-360 MHz, 350-400 MHz	403-470 MHz	450-527 MHz
Low Power Output	1-25 W	-	1-25 W	-	1-25 W	-	1-25 W	-
High Power Output	25-45 W	1-40W	25-40 W	1-40W	25-45 W	1-40W	25-40 W	1-40W
Channel Spacing	12.5, 20[2], 25 kHz							
Channel Capacity	1000				32			
Dimensions (H x W x D)	53 x 175 x 206 mm							
Weight	1.8 kg							
Power Supply (Nominal)	12 V							
Max Current Drain, Standby	0.8 A							
Max Current Drain, Receive	2 A							
Max Current Drain, Transmit (Low Power)	11 A	-	11 A	-	11 A	-	11 A	-
Max Current Drain, Transmit (High Power)	14.5 A	14.5 A	14.5 A	12 A	14.5 A	14.5 A	14.5 A	12 A

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ALL MODELS

TRANSMITTER SPECIFICATIONS	
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D and 7K60FXD, 12.5 kHz Voice: 7K60F1E and 7K60FXE, Combination of 12.5 kHz Voice and Data: 7K60F1W
Digital Protocol	ETSI TS 102 361-1, -2, -3
Conducted/Radiated Emissions (TIA603D)	-36 dBm < 1GHz, -30 dBm > 1GHz
Adjacent Channel Power	60dB (12.5 kHz) 70dB (20[2] / 25 kHz)
Frequency Stability	± 0.5 ppm
RECEIVER SPECIFICATIONS	
Analogue Sensitivity (12dB SINAD)	0.18 uV
Digital Sensitivity (5% BER)	0.16 uV
Intermodulation (TIA603D)	70 dB
Adjacent Channel Selectivity, (TIA603A)-1T	60 dB (12.5 kHz) 70 dB (20[2] / 25 kHz)
Adjacent Channel Selectivity, (TIA603D)-2T	45 dB (12.5 kHz) 70 dB (20[2] / 25 kHz)
Spurious Rejection (TIA603D)	70 dB
AUDIO SPECIFICATIONS	
Digital Vocoder Type	AMBE+2™
Audio Response	TIA603D
Rated Audio	3 W (internal speaker) 7.5 W (external 8 ohm speaker) 13 W (external 4 ohm speaker)
Audio Distortion at Rated Audio	3%
Hum and Noise	-40 dB (12.5 kHz) -45 dB (20[2] / 25 kHz)
Conducted Spurious Emissions (TIA603D)	-57 dBm

BLUETOOTH SPECIFICATIONS	
Version	4.0
Range	Class 2, 10 m
Supported Profiles	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola fast push-to-talk.
Simultaneous Connections	1 x audio accessory and 1 x data device
Permanent Discoverable Mode	Optional
GNSS SPECIFICATIONS	
Constellation Support	GPS, GLONASS
Time To First Fix, Cold Start	< 60 s
Time To First Fix, Hot Start	< 10 s
Horizontal Accuracy	< 5 m
Wi-Fi SPECIFICATIONS	
Standards Supported	IEEE 802.11b, 802.11g, 802.11n
Security Protocol Supported	WPA, WPA-2, WEP
Maximum Number of SSIDs	128 (64 for Numeric Models)
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-30 °C to +60 °C
Storage Temperature	-40 °C to +85 °C
Electrostatic Discharge	IEC 61000-4-2 Level 4
Dust and Water Intrusion	IEC 60529 - IP54
Packaging Test	MIL-STD 810C, D, E, F and G

NOTES
1: DM4601e and DM4801e models include GNSS and Bluetooth as standard.
2: 20 kHz channel not available for 300MHz models.

MILITARY STANDARDS

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temp	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I/A1, II/A1
Low Temp	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temp Shock	503.1	I	503.2	A1/C3	503.3	A1/C3	503.4	I	503.5	I-C
Solar Radiation	505.1	II	505.2	I/Hot-Dry	505.3	I/Hot-Dry	505.4	I/Hot-Dry	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II/Hot-Humid	507.3	II/Hot-Humid	507.4	-	507.5	I/Hot-Humid
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	-	509.5	-
Dust	510.1	I, II	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.2	VIII/CatF/ CurveW, XI	514.3	I/Cat10, II/ Cat3	514.4	I/Cat10, III/ Cat3	514.5	I/Cat24, II/ Cat5	514.6	I/Cat24, II/ Cat5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, V, VI

CONNECTION
- ● VHF Band, 45 W
- ● 300MHz Band, 40 W
- ● UHF Band, 40 W
- ● Alphanumeric Model: Colour Screen, 1000 Channels
- ● Numeric Model: Numeric Display, 32 Channels
- ● Analogue and Digital
- ● Voice and Data
- ○ Integrated Wi-Fi
- ● Canned Text Messaging
- ● Freeform Text Messaging (Requires Keypad Mic)
- ● Work Order Ticketing
- ● Multi-Constellation GNSS for outdoor location tracking
- ● High Efficiency GNSS
- ● Event-Driven Location Update
- ● Bluetooth Audio
- ● Bluetooth Data
- ○ Bluetooth Permanent Discoverable Mode
- ○ Bluetooth Indoor Location Tracking
- ● Voice Announcement
- ○ Text to Speech
- ○ Option Board
- ● Home Channel Reminder

AUDIO
- ● Intelligent Audio
- ● IMPRES Audio
- ○ SINC+ Noise Cancellation
- ● Acoustic Feedback Suppressor
- ● Microphone Distortion Control
- ● User-Selectable Audio Profiles
- ● Trill Enhancement

PERSONALISATION
- ● Wide Range of Accessories
- ● 4 Programmable Buttons

MANAGEMENT
- ● Radio Management
- ● Over-the-Air Programming
- ○ Over-the-Air Software Update

SAFETY
- ● Lone Worker
- ● Basic Privacy
- ● Enhanced Privacy
- ○ AES256 Encryption
- ● Transmit Interrupt (decode)
- ● Transmit Interrupt (encode)
- ● Digital Emergency
- ● Emergency Search Tone
- ● Remote Monitor
- ● Radio Disable / Enable
- ● Rated IP54
- ● Rugged to MIL-STD 810

SYSTEMS
- ● Direct Mode (including Dual Capacity Direct Mode)
- ● IP Site Connect (Single and Multi-Site)
- ● Capacity Plus (Single and Multi-Site)
- ○ Capacity Max
- ○ Connect Plus

● Standard feature
○ Optional feature

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LONG RANGE WIRELESS MOBILE MICROPHONE

Designed for customers who depend on their high power mobile radio but must work outside of their vehicle, the Long Range Wireless Mobile Microphone keeps you connected and communicating up to 100m (330 ft) from your vehicle. With instant touch pairing and in-vehicle charging cradles, you can maintain critical communications even on remote job sites.

HANDHELD CONTROL HEAD

When space is tight, and you need the flexibility to operate your radio from anywhere in the vehicle, opt for the Handheld Control Head. Its colour screen, full keypad and extendable cord gives you complete control within 8 m (26 ft) of the radio.

BLUETOOTH AUDIO

Improve the mobility of your work teams without wires getting tangled. Your delivery driver can sort through packages on the back of the delivery truck, your bus driver can check students in the back of the bus, and your limousine driver can open the door for their passengers and stay connected.

CONNECT AND COORDINATE EFFORTLESSLY

IMPRES™ Smart Audio accessories communicate with the radio to suppress ambient noise, improve voice intelligibility and amplify loudness. Choose from a range of standard and heavy duty microphones, with or without keypads and navigation buttons.

INTERACT SAFELY WITHOUT DISTRACTIONS

To help your drivers keep their eyes on the road, you can customiset your installation with the IMPRES Visor Microphone and Remote Push-to-Talk.

To get connected with MOTOTRBO, visit www.motorolasolutions.com/mototrbo or find your closest Motorola representative or authorised Partner at www.motorolasolutions.com/contactus

MOTOTRBO™
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