

PRODUCT SPEC SHEET

MOTOTRBO™ CM200d™ AND CM300d™ MOBILE RADIOS



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YOU'RE SIMPLY MORE EFFICIENT



Your people are on the move, delivering cargo, picking up consignments, driving children to and from school. You need to keep them in touch and on track efficiently. And you want to make sure the radios they use are as affordable and adaptable as possible.

Now there are flexible mobiles that give you great voice communications today, and a path to crisp and clear digital voice communications when you're ready. Versatile and powerful, MOTOTRBO™ combines the best of two-way radio functionality with the latest analog and digital technology. The MOTOTRBO portfolio offers the right device for the right user, from voice-only portables to feature-rich voice and data radios.

The rugged MOTOTRBO CM200d and CM300d radios offer all the benefits of the latest technology – twice the capacity, greater coverage and superior audio. These affordable mobiles are compatible with the MOTOTRBO features you'll find are business-essential, for example a transmission can be interrupted to prioritize critical communications.

It's easy to transition your business to digital technology. These radios deliver the same easy-to-use features of the CM200 and CM300 mobiles you use today. It can operate in digital and analog modes concurrently so it fits seamlessly into your existing communication system, allowing you to migrate to digital at your own pace.

You can also choose the analog-only models of the CM200d and CM300d, and unlock the capabilities of digital when the time is right. Your investment is safe: all you will need is a simple software upgrade.

With its bright, high contrast alphanumeric screen, the CM300d allows drivers to see important information such as caller ID at a glance. The CM200d offers fewer channels and a simpler numeric display.

The CM200d and CM300d are so easy to use and deliver such clear voice communications, you'll be amazed how efficient your operation can be.

FEATURES

- Analog / Digital
- Voice Communications
- Dual Capacity Direct Mode¹
- Numeric Display (CM200d)
- Alphanumeric Display (CM300d)
- Digital Mobile Radio (DMR) Standards Compliant¹
- Narrowbanding Compliant
- Transmit Interrupt (Decode Only)¹
- Basic Privacy¹
- Voice Announcement
- IP54 Rated

OPTIONS

- Radio Management Suite

¹ Features only available in Digital mode

**SIMPLE VOICE COMMUNICATIONS
FOR THE EVERYDAY USER WHO WANTS TO STAY CONNECTED**

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CONNECT YOUR CREWS EASILY AND EFFICIENTLY

CM200d and CM300d mobile radios are ideal for keeping your people reliably and cost-effectively connected so they can communicate, coordinate and collaborate – whether they're delivering packages or transporting passengers. With easy-to-use ergonomics and crisp, clear audio, now your teams can work more efficiently.

Unleash the power of your CM200d and CM300d mobile radios with Motorola Original® accessories. They're the only accessories designed, built and tested with your radio to optimize its performance. (See separate accessory fact sheet for full portfolio.)

KEEP THEM IN CONTACT AND ON COURSE

A lost delivery driver uses his CM200d mobile radio installation to call the office. The visor microphone and steering wheel-mounted push-to-talk button allow him to communicate safely while driving, and the digital noise-cancelling software filters out the road noise so he can be heard clearly. Soon he's safely back on track.

The school bus driver relies on his CM300d to keep his passengers safe. The digital technology gives excellent coverage throughout the district, and now they're running the MOTOTRBO Dual Capacity Direct Mode, he has no problem getting a channel. The clear, bright alphanumeric screen gives him all the information he needs, and if there's an incident, he can use one of the programmable buttons to call for help – with one touch.

MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to any business. It's easy to migrate to digital with the CP200d and CM300d radio because they deliver the same features as the CM200 and CM300 as well as adding an upgrade path to digital. Both models can operate in analog and digital modes concurrently - and to ease the transition even further, the dynamic mixed mode repeater functionality streamlines automatic switching between analog and digital calls. So you can start using MOTOTRBO radios and repeaters on your existing analog system, then migrate to digital when your business is ready.

COMMUNICATE WITHOUT DISTRACTING THEM

The CM200d and CM300d are designed for the everyday driver and let you connect to your mobile workforce without distracting them. So while they improve efficiency, they also enhance safety. Unlike mobile phones, MOTOTRBO radios are not restricted by the U.S. Department of Transportation – they can be used by commercial motor vehicle (CMV) drivers while they are operating their vehicles.

INTEGRATE YOUR DEVICES SEAMLESSLY

Make sure your new MOTOTRBO radios are ready when you are. We can bring together the right experts and processes to help you integrate MOTOTRBO mobile radios into your business, quickly and cost-effectively. Motorola's Implementation Services include Coverage Mapping, Site Integration and Device Programming.

GET DURABILITY THAT ENDURES

The CM200d and CM300d are made to last. They are rated IP54 (splashproof, virtually dustproof), so they can be used even in harsh environments. Moreover, the design has been proven tough in Motorola's grueling Accelerated Life Test program, in which the radios must survive a simulated 5 years of hard service before they are accepted. You can be confident in the durability of your CM200d and CM300d radios.

Both radios are backed by a two-year Standard Warranty (US and Canada) with a minimum one-year warranty on Motorola-branded accessories. Because wear and tear happens, Motorola recommends Service from the Start Lite, which delivers accelerated turnaround on radio repairs and even covers shipping costs. By reducing your downtime, Service from the Start Lite helps you to lower your total cost of ownership and focus on your business operations, not your technology.



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GENERAL SPECIFICATIONS

	CM300d		CM200d	
	VHF	UHF BAND 1	VHF	UHF BAND 1
Channel Capacity	99		16	
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	25-45 W	25-40 W
Frequency	136-174 MHz	403-470 MHz	136-174 MHz	403-470 MHz
Dimensions (H x W x L)	1.7 x 6.7 x 5.3 in (44 x 169 x 134 mm)		1.7 x 6.7 x 5.3 in (44 x 169 x 134 mm)	
Weight	2.9 lbs (1.3 kg)		2.9 lbs (1.3 kg)	
Current Drain				
Standby	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
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	1-25 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
FCC Description	1-25 W: ABZ99FT3090 25-45 W: ABZ99FT3091	1-25 W: ABZ99FT4092 25-40 W: ABZ99FT4093	1-25 W: ABZ99FT3090 25-45 W: ABZ99FT3091	1-25 W: ABZ99FT4092 25-40 W: ABZ99FT4093
IC Description	1-25 W: 109AB-99FT3090 25-45 W: 109AB-99FT3091	1-25 W: 109AB-99FT4092 25-40 W: 109AB-99FT4093	1-25 W: 109AB-99FT3090 25-45 W: 109AB-99FT3091	1-25 W: 109AB-99FT4092 25-40 W: 109AB-99FT4093



CM300d



CM200d

RECEIVER

Frequency	136-174 MHz	403-470 MHz	136-174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz ²			
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm			
Analog Sensitivity (12 dB SINAD)	0.3 µV 0.22 µV (typical)			
Digital Sensitivity (5% BER)	0.25 µV 0.19 µV (typical)			
Intermodulation (TIA603D)	75 dB	70 dB	75 dB	70 dB
Adjacent Channel Selectivity (TIA603D)	50 dB @ 12.5 kHz 75 dB @ 25 kHz ²	50 dB @ 12.5 kHz 70 dB @ 25 kHz ²	50 dB @ 12.5 kHz 75 dB @ 25 kHz ²	50 dB @ 12.5 kHz 70 dB @ 25 kHz ²
Spurious Rejection (TIA603D)	75 dB	70 dB	75 dB	70 dB
Rated Audio	4 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 ²			
Audio Response	TIA603D			
Conducted Spurious Emissions (TIA603D)	-57 dBm			

TRANSMITTER

Frequency	136-174 MHz	403-470 MHz	136-174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz ²			
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm			
Low Power Output	1-25 W			
High Power Output	25-45 W	25-40 W	25-45 W	25-40 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz / ± 5.0 kHz @ 25 kHz ²			
FM Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 25 kHz ²			
Conducted / Radiated Emission	-36 dBm < 1 GHz / -30 dBm > 1 GHz			
Adjacent Channel Power	60 dB @ 12.5 kHz / 70 dB @ 25 kHz ²			
Audio Response	TIA603D			
Audio Distortion	3%			
FM Modulation	12.5 kHz: 11K0F3E 25 kHz ² : 16K0F3E			
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 Vocoder Type	AMBE +2™			
Digital Protocol	ETSI TS 102 361-1, -2, -3			

² 25 kHz may not be available in the U.S. for Part 90 operation due to the FCC's Narrowbanding requirements.

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements.

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MILITARY STANDARDS										
	810C		810D		810E		810F		810G	
	Method	Procedures	Method	Procedures	Method	Procedures	Method	Procedures	Method	Procedures
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	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
Low Temperature	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
Temperature Shock	503.1	–	503.2	I/A1/C3	503.3	I/A1/C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	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	507.3	II	507.4	–	507.5	II - Aggravated
Salt fog	509.1	–	509.2	–	509.3	–	509.4	–	509.5	–
Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV, V, VI

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 61000-4-2 Level 3
Dust and Water Intrusion	IP54, MIL-STD ³
Packaging Test	Per MIL-STD

³ Radio meets IP54 and MIL-STD rating with microphone sealing boot and rear accessory connector cover properly installed. Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

For more information, contact:



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MOTOTRBO™
DIGITAL REMASTERED.

