



YOUR MOBILE VOICE JUST GOT STRONGER

# MOTOTRBO™ CM7668 DIGITAL TWO-WAY MOBILE RADIO



From the delivery driver criss-crossing the city to the sanitation crew clearing streets, MOTOTRBO can transform your enterprise and make employee interactions smarter and safer. Our best-in-class audio and exceptional data capabilities empower people like never before.

Versatile and powerful, MOTOTRBO combines the best of two-way radio functionality with the latest digital technology. CM7668 mobile radios integrate voice and data seamlessly, offer enhanced features that are easy to use, and deliver operation-critical advantages like integrated Bluetooth® and Intelligent Audio.

The CM7668 mobile radio can remaster your workplace and the way people collaborate to help you achieve even greater efficiency.



## AUDIO BEYOND EXPECTATIONS

When it comes to exceptional audio clarity, the quality of digital can't be denied. With the CM7668 mobiles, you get digital quality plus unique features to help your employees hear and speak clearly, wherever they work.

With Intelligent Audio, the radio volume automatically adjusts to compensate for background noise so workers don't have to adjust their radio volume to avoid missing a call in loud situations or disturbing others when they move into quiet places. Increased background noise suppression filters out unwanted external clamor – from road traffic to the roar of engines.

Bluetooth® audio, embedded right in the radio, provides voice communication with exceptional clarity – giving your people the freedom to move without wires. Also, IMPRES™ audio accessories enhance noise suppression and improve voice intelligibility for smarter audio than they've ever experienced before.

## INDUSTRY-LEADING DATA

CM7668 radios feature integrated GPS that enables location tracking of mobile work teams and text messaging to enable communication when voice isn't feasible and the large, full-color display operates in day or night mode, for easy viewing of contact lists, text messages and work order tickets even in bright sunlight. These radios also feature integrated Bluetooth enabling the radio to wirelessly interface with Bluetooth-enabled devices such as barcode scanners and magnetic card readers to facilitate the collection of critical information in the field.

## HIGH-POWERED PERFORMANCE

Because MOTOTRBO uses TDMA digital technology, you get integrated voice and data, twice the calling capacity and clearer voice communications. Also, the smart IMPRES™ technology in our high-powered accessories enables easier communications – everywhere your people travel.

## RICH FUNCTIONALITY

CM7668 radios offer plenty of features your business seeks – including enhanced call signaling and encryption to prioritize critical communication the moment you need. Programmable button features appear on the display for easy viewing and quick access. And when workers can't be distracted, customizable voice announcement provides audible confirmation of channel and zone changes as well as programmable button features, eliminating the need to view the display.

## EXPANDED CAPACITY AND COVERAGE

Your work crews are on the go – picking up loads, dropping off cargo, repairing roads or restoring power after a storm. That's why you need the far-reaching performance of MOTOTRBO.

When your fleet is dispatched across the city and your workers are miles apart, you need a way to stay connected. MOTOTRBO Connect Plus multi-site trunking extends digital voice and data communication to as many as 29 talk groups and 2,900 users per site, so no matter where your work force goes, they can be reached – making them more efficient and safer in the process.

## MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to business. It's easy to migrate to digital with CM7668 radios because they operate in analog and digital mode. So you can begin using MOTOTRBO radios and repeaters on your existing analog system, and when your time and budget allow, move to digital at your own pace.

## ENHANCE YOUR RADIO'S CAPABILITIES

Motorola original® accessories are built with the highest quality standards and are specially engineered to ensure maximum performance of your radio.



**RMN5127**  
IMPRES Keypad  
Microphone



**RMN5050**  
Desktop Microphone



**RSN4002**  
13W External Speaker



**RSN4005**  
Desktop Tray with Speaker

## CM7668 SPECIFICATIONS

| GENERAL SPECIFICATIONS |                         |                  |
|------------------------|-------------------------|------------------|
| COLOUR DISPLAY CM7668  |                         |                  |
| UHF 1                  |                         |                  |
| Channel Capacity       | 1000                    |                  |
| Typical RF Output      | Power<br>25-40 W        |                  |
| Frequency              | 403-470 MHz             |                  |
| Dimensions (H x W x L) | 53.3 x 175.3 x 205.7 mm |                  |
| Weight                 | 1.8 kg (3.9 lbs)        |                  |
| Current Drain          | Standby                 | 0.81 A max       |
|                        | Rx @ Rated Audio        | 2 A max          |
|                        | Transmit                | 25-45W: 12 A max |
| Power Supply           | 13.8 VDC                |                  |
| FCC Description        | 25-40 W: ABZ99FT4088    |                  |

| RECEIVER                                      |   |
|---|---|
| COLOUR DISPLAY CM7668                         |   |
| UHF 1   |   |
| Frequencies                                   | 403-470 MHz   |
| Channel Spacing                               | 12.5 kHz / 25 kHz   |
| Frequency Stability (-30°C, +60°C, +25°C Ref) | ± 0.5 ppm   |
| Analog Sensitivity                            | 0.3 uV (20 dB SINAD)<br>0.22 uV (typical) (20 dB SINAD)<br>0.4 uV (20 dB SINAD) |
| Digital Sensitivity                           | 0.25 uV (5% BER), 0.19uV (typical) (5% BER)                                     |
| Intermodulation (TIA603D)                     | 75 dB   |
|   | ETS   |
| Adjacent Channel Selectivity (TIA603D)        | 55 dB @ 12.5 kHz  |
|   | 75 dB @ 25 kHz  |
|   | ETS   |
| Spurious Rejection (TIA603D)                  | 75 dB   |
|   | ETS   |
| Rated Audio                                   | 3 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   |
| Audio Response                                | +1, -3 dB   |
| Conducted Spurious Emission (TIA603D)         | -57 dBm   |

| TRANSMITTER                                   |   |
|---|---|
| COLOUR DISPLAY CM7668                         |   |
| UHF 1   |   |
| Frequencies                                   | 403-470 MHz   |
| Channel Spacing                               | 12.5 kHz / 25 kHz   |
| Frequency Stability (-30°C, +60°C, +25°C Ref) | ± 0.5 ppm   |
| Power Output                                  | 25-40 W   |
| Modulation Limiting                           | ± 2.5 kHz @ 12.5 kHz / ± 5.0 kHz @ 25 kHz   |
| FM Hum and Noise                              | -40 dB @ 12.5 kHz / -45 dB @ 25 kHz   |
| Conducted/ Radiated Emission                  | -36 dBm < 1 GHz / -30dBm > 1GHz   |
| Adjacent Channel Power                        | 60 dB @ 12.5 kHz / 70 dB @ 25 kHz   |
| Audio Response                                | +1, -3 dB   |
| Audio Distortion                              | 3%  |
| FM Modulation                                 | 12.5 kHz: 11K0F3E / 25 kHz: 16K0F3E   |
| 4FSK Digital Modulation                       | 12.5 kHz Data Only: 7K60F1D & 7K60FXD<br>12.5 kHz Voice: 7K60F1E & 7K60FXE<br>Combination of 12.5 kHz Voice & Data: 7K60F1W |
| Digital Vocoder Type                          | AMBE+2™   |
| Digital Protocol                              | ETSI TS 102 361-1, -2, -3   |

**MILITARY STANDARDS: COLOUR DISPLAY CM7668**

| APPLICABLE MIL-STD | 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    |

**GPS : COLOUR DISPLAY CM7668**

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength)

|  |              |
|--|--------------|
| TTFF (Time To First Fix)<br>Cold Start | < 1 minute   |
| TTFF (Time To First Fix)<br>Hot Start  | < 10 seconds |
| Horizontal Accuracy                    | < 5 meters   |

**BLUETOOTH : COLOUR DISPLAY CM7668**

|                    |   |
|--------------------|---|
| Version            | Supports Bluetooth® 2.1 + EDR Specification   |
| Profiles Supported | Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola fast push-to-talk. |
| Devices Supported  | Radio supports 1 Bluetooth audio accessory and 1 Bluetooth data device simultaneously   |
| Range              | Class 2, 10 meters  |

**ENVIRONMENTAL SPECIFICATIONS:  
 COLOUR DISPLAY CM7668**

|                          |                              |
|--------------------------|------------------------------|
| 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                |
| Packaging test           | MIL-STD 810C, D, E, F, and G |

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

Radio meets applicable regulatory requirements

For more information on how to strengthen your mobile voice, visit [motorolasolutions.com/ap/mototrbo](http://motorolasolutions.com/ap/mototrbo)



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Value Added Distributor

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 REMASTERED.

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