

## TM840 DMR MOBILE RADIO

### TM840 SPECIFICATIONS



#### General

|                          |                       |                       |
|--------------------------|-----------------------|-----------------------|
| Frequency Range          | 136~174MHz 400~470MHz |                       |
| Channel Capacity         | 1024                  |                       |
| Zone Capacity            | 248                   |                       |
| Channel Spacing          | 12.5kHz/20kHz/25kHz   |                       |
| Normal Operating Voltage | 13.6±15%              |                       |
| Current Drain            | Standby(Max)          | <0.6A                 |
|                          | Receive(Max)          | <2.0A                 |
|                          | Transmit(Max)         | <14A(40W)<br><8A(25W) |
| Dimension                | 176mm×59mm×183mm      |                       |
| Weight                   | 1.5Kg                 |                       |

#### Transmitter

|                             |   |
|-----------------------------|---|
| Frequency Stability         | 0.5ppm  |
| Power Output                | Low Power:25W High Power: 40W(UHF)/45W(VHF)                 |
| Modulation Limiting         | 2.5kHz@12.5KHz,4kHz@20kHz,5kHz@25kHz                        |
| FM Hum and Noise            | -40dB@12.5kHz,-45dB@20kHz/25kHz                             |
| Conducted/Radiated Emission | -36dBm@<1GHz, -30dBm@>1GHz                                  |
| Adjacent Channel Power      | -60dB@12.5kHz,-70dB@20kHz/25kHz                             |
| FM Modulation Mode          | 12.5kHz:11K0F3E, 25kHz:16K0F3E                              |
| Audio Response              | +1~-3dB   |
| Audio Distortion            | <3%   |
| Vocoder                     | AMBE+2™   |
| Digital Protocol            | ETSI TS 102 361-1, -2, -3                                   |
| 4FSK Digital Modulation     | 12.5KHz (data only) :7K60FXD, 12.5KHz (data+voice) :7K60FXE |

#### Receiver

|                              |                                      |
|------------------------------|--------------------------------------|
| Frequency Stability          | 0.5ppm                               |
| Digital Sensitivity          | 5%BER:0.22μV                         |
| Analog Sensitivity           | 0.3 μ V/(12dB SINAD)                 |
| Intermodulation              | TIA603C:70dB ETSI:70dB               |
| Adjacent Channel Selectivity | ETSI: 60dB@12.5kHz, 70dB@20kHz/25kHz |
| Spurious Response Rejection  | TIA603C:75dB ETSI:70dB               |
| Rated Audio Power            | 3W                                   |
| Rated Audio Distortion       | <3% (Typical)                        |
| Hum and Noise                | -40dB@12.5kHz, -45dB@20kHz/25kHz     |
| Audio Response               | +1~-3dB                              |
| Conducted Spurious Emission  | -57dBm@ < 1GHz, -47dBm @> 1GHz       |

Kirisun reserves the right to change any specifications without warning due to the technology improvement.

For more information, please visit [www.kirisun.com](http://www.kirisun.com) or contact [marketing.os@szkirisun.com](mailto:marketing.os@szkirisun.com)



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DMR MOBILE RADIO**



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ISO9001:2008 Accredited Designer & Manufacturer



# TM840

## DMR MOBILE RADIO

A DMR product with ergonomic design and all round digital functions, TM840 helps to improve management efficiency and responsiveness in emergency situations.

The Kirisun DMR series is the cost effective migration solution from analog to digital which you can do at your own pace.



**Kirisun DMR Solution  
Delivers Significant Benefits**

# TM840 DMR MOBILE RADIO

## KEY FEATURES AND BENEFITS

### • 1.8" Graphic Dot-matrix True Color Display

The large-sized, full color display enables easy viewing of information even under bright sunlight.

### • Multiple Languages

TM840 supports multiple languages including English, simplified Chinese, German, French, Turkish and Spanish.

### • One Touch Operation in Usage

TM840 provides four programming keys, providing one touch operation such as Text Message or Voice Calls.

### • Versatile Voice Calls & Data Services

The Intelligent TM840 supports various voice call types, including Private Call, Group Call, All Call and Emergency Call, as well as data services, e.g. Text Message and Data Transfer.

### • Voice Privacy

Enhanced digital encryption and scrambled analog call feature facilitate the management of the calls between team members and ensure the privacy of communications in any chosen mode.

### • GPS

Integrated LIP (Location Information Protocol) enables the real time tracking of the mobile radio.

### • Various Analog Signaling Types

TM840 supports various analog signaling types (MDC1200, DTMF, 2-Tone and 5-Tone), various squelch control types (CTCSS/CDCSS), thus providing compatibility with existing analog communication systems.

### • Supplementary Services

TM840 supports supplementary services such as Radio Check, Remote Monitor, Call Alert, Monitor Channel, Permanent Monitoring, Kill, Stun and Revive, Transmit Interrupt.

### • Accessory Expansion

TM840 is designed with second accessories ports via the rear port of the mobile, e.g. emergency footswitch or Telephone Interconnect (via DTMF signaling). It is also possible to support simplex voice communications between a radio and a telephone user. It allows a radio user to make a telephone call or a telephone user to make either a Group or Private Call to radio users through a Private Automated Branch Exchange (PABX) or a Public Switched Telephone Network (PSTN).

### • Scan

TM840 supports scanning of analog voice and signaling, digital voice and data, and also mixed mode scan including analog and digital signals.

### • Optional Board

TM840 reserves standard interface for any third party to further develop desired functions (such as Record, Bluetooth, RFID, and encryption Algorithm) with the optional board.



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## GPS

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

|                                    |             |
|------------------------------------|-------------|
| TTFF(Time To First Fix) Cold Start | <60 seconds |
| TTFF(Time To First Fix) Hot Start  | <10 seconds |
| Horizontal Accuracy                | <5 meters   |

## ENVIRONMENTAL SPECIFICATION

|                       |               |
|-----------------------|---------------|
| Operating Temperature | -30°C ~ +60°C |
| Storage Temperature   | -40°C ~ +85°C |
| Temperature Shock     | Per MIL-STD   |
| ESD                   | IEC 61000-4-2 |
| Humidity              | Per MIL-STD   |
| Water and Dust proof  | IP54          |

## MILITARY STANDARDS 810

| APPLICABLE MIL-STD | 810C    |                | 810D    |            | 810E    |            | 810F    |              | 810G    |                      |
|--------------------|---------|----------------|---------|------------|---------|------------|---------|--------------|---------|----------------------|
|                    | METHODS | PROC/CAT       | METHODS | PROC/CAT   | METHODS | PROC/CAT   | METHODS | PROC/CAT     | METHODS | PROC/CAT             |
| 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/Hot A1,II/Hot (A1) |
| 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/C1           |
| Temperature Shock  | 503.1   | -              | 503.2   | I/A1C3     | 503.3   | I/C1A3     | 503.4   | I            | 503.5   | I/C                  |
| Solar Radiation    | 505.1   | II             | 505.2   | I          | 505.3   | I          | 505.4   | I            | 505.5   | I                    |
| 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                   |
| 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                 |

## STANDARD ACCESSORIES



Remote Speaker



Fixed Bracket



DC Power Cable