

# SGS10-D3M

**DMR**  
DIGITAL MOBILE RADIO ASSOCIATION



## Main Functions

### Dual Modes (Analog + Digital)

SGS10-D3M supports analog and digital modes, it is compatible with the prevalent analog systems and has smooth analog to digital transitions.

### Versatile Voice Calls

SGS10-D3M supports various voice call types, including Private Call, Group Call, All Call and Emergency Call.

### Messages

SGS10-D3M supports IP Data/Defined Data messages, it also supports third party to control the radio via third party's API (GPS, Radio registration Services, Radio Call Control, Data Transfer), via Telemetry control to radio.

### Accessory Expansion

SGS10-D3M supports third party to develop accessories expansion via front and rear ports of the mobile radio.

(Check out that features as channel steering and emergency switch have been supported via the back port!)

### Various Analog Signaling Types

SGS10-D3M has various analog signaling types (QDC1200, DTMF, 2-Tone, 5-Tone and CTCSS/CDCSS).

### Supplementary Services

SGS10-D3M has the supplementary services of Radio Check, Remote Monitor, Call Alert, Radio Enable and Radio Disable.

### Scan

SGS10-D3M supports scanning of analog voice and signaling, digital voice and data. It can also support mixed modes scanning.

### Roaming

SGS10-D3M supports automatic roaming of all sites in an IP Multi-site Connect system.

### Privacy of Voice and Data

SGS10-D3M supports analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption algorithm to voice with 256-bit encryption.

### Upgrade to Tier-III

Customer can upgrade SGS10-D3M's software to Tier-III without buying new devices.

### GPS

SGS10-D3M has stable GPS performance and GPS text messages.

# SGS10-D3M

## Specifications

General	
Frequency Range	UHF:400-470MHz VHF:136-174MHz
Channel Capacity	1024(64 Zones×16 Channels)
Zone Capacity	64
Channel Spacing	25kHz/20kHz/12.5kHz
Operating Voltage	13.6 V ±15%
Dimensions(H×W×L)	60 × 173 × 178mm
Current Drain Standby	<0.9A
Current Drain Receive	<2A
Current Drain Transmit	5W <5A / 25W <8A / 45W(50W) <12A
LCD	220×176 Pixels, 262000 Colors, 2.0 Inch
Transmitter	
Tx Power Output	UHF Low:5W / Middle:25W / High:45W VHF Low:5W / Middle:25W / High:50W
Modulation Limiting	≤2.5kHz @ 12.5kHz/≤4.0kHz @ 20kHz/ ≤5.0kHz @ 25kHz
Conducted/Radiated Emission	<-36dBm(<1GHz)/<-30dBm(>1GHz)
Audio Response	+1~-3dB
Audio Distortion	≤3%
Frequency Stability	±1.0ppm
FM Modulation	11KΦF3E @ 12.5kHz /14KΦF3E @ 20kHz / 16KΦF3E @ 25kHz
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD / 12.5kHz Data & Voice: 7K60FXW
Adjacent Channel Power	60dB @12.5kHz/70dB@20/25kHz
Digital Vocoder Type	AMBE 3000++
Digital Protocol	ETSI-TS102 361-1,-2,-3
Receiver	
Sensitivity ( Analog)	0.22μV (12dB SINAD) / 0.25μV ( Typical ) (12dB SINAD) / 0.3μV (20dB SINAD)
Sensitivity(Digital)	0.25μV/BER5%
Adjacent Channel Selectivity	65dB
Intermodulation	70dB
Spurious Response Rejection	80dB
Blocking	84dB
Conducted Spurious Emission	≤-57dBm
Hum and Noise	40dB @ 12.5kHz / 43dB @ 20kHz / 45dB @ 25kHz
Audio Distortion	≤3%
Audio Response	+1~-3dB
Audio Power Output	Internal (@20Ω Load) 3W / External (@8Ω Load) 8W
Environmental Specifications	
Operating Temperature	-30C~+60C
Storage Temperature	-40C~+85C
ESD	IEC 61000-4-2 (Level 4) ±8kV (Contact) ±15kV (Air)
Dust & Water Protection	IP54 Standard



- 256-bit Encryption
- Rich Second-developments
- Support Analog and Digital Modes
- IP Data/Defined Data

## Accessory List

### Standard Accessories

- Microphone Hanger
- Power Cable
- Fixed Bracket
- Mobile Microphone
- Combination Screw
- Self-tapping Screw

### Optional Accessories

- Programming Cable
- GPS Antenna
- Sucker Antenna



## Stark Signals Inc.

169, Avenue Mountain View, CA-94042, USA

info@starksignals.com

www.starksignals.com