StellarWavez SC782

Digital Portable Two-Way Radio

The SC782 is a next-generation professional radio designed for high-performance communication in demanding environments. With ultra-clear audio, extended battery life, rapid response, and rugged reliability, its lightweight, durable design and advanced audio processing set a new standard for mission-critical use.

Highlights

Loud, clear audio

SC782 features an optimized loudspeaker for clear sound even in noisy environments. Its water-porting design drains water from the speaker cavity to maintain audio clarity, while AI noise cancellation reduces background noise and howling by up to 30 dB for crystal-clear calls.

Long battery life

SC782 features optimized design and advanced technologies to reduce power use, while its lightweight lithium polymer battery ensures up to 24 hours of operation at high transmit power with a 5/5/90 duty cycle.

User friendly

The SC782 features a 2.4-inch color screen with an intuitive new UI for more efficient operation. It displays up to six contacts per page, offers a Quick Access Menu for faster setup, and organizes messages in conversation view for easy reading. The programmable Interface Switcher allows quick toggling between up to four commonly used interfaces.

Enhanced coverage

The SC782 extends operational and talk range with high receiver sensitivity and transmit power, enabling communication in previously unreachable areas while improving user safety and reducing network costs.

Thinner & lighter

The SC782's optimized mechanical design and compact lithium polymer battery make it just 29.5mm thick and 310g in weight, offering a lightweight, minimalist build that helps officers stay focused on their mission.

Rugged reliability

SC782 meets MIL-STD-810H standards and is IP68 rated, waterproof, submersible to 2 meters for 4 hours, and resistant to 2-meter drops. Wherever duty calls, the SC782 endures the toughest environments.

Features

Operating Modes

- Analog Conventional
- Digital Conventional
- Digital trunking

Data Services

- Text Message
- Status Message
- Quick Text Message

Connectivity

- BT Audio/Data
- GPS
- Open API
- Wide Range of Accessories

Security

- Emergency Alarm
- Man Down
- Lone Worker
- Authentication
- Air Interface Encryption
- End-to-End Encryption
- Scrambler
- Disable/Enable
- Micro SD Card(max.16G)
- Audio recording

Voice Services

- Private Call
- Group Call
- All Call
- PSTN/PABX Call
- Broadcast Call
- Emergency Call
- Call Priority

Supplementary

- Profiles
- QR Code
- Roaming
- Covert Mode
- Radio Check
- Remote Monitor
- Alert Call

Specifications

General	
Frequency Range	UHF 350-470 MHz, UHF 806-941MHz
Channel Capacity	1024
Zone Capacity	64
Zone Channel	256
Channel Spacing	12.5kHz/20kHz/25kHz
Operating Voltage	7.7 V (rated)
Battery	2400 mAh Li-polymer
Battey Life (5/5/90 Duty Cycle,High TX Power)	24h (GPS OFF); 20h (GPS ON)
Frequency Stability	±0.5ppm
Antenna Impedance	50 Ω
Dimensions (H x W x D)	132 x 55 x 29.5mm
Weight	310g
Display	LCD, 320×240 pixel, 262000 colors 2.4 inch
BT	<-57 dBm

Receiver	
Sensitivity(Analog)	0.18 μV (12 dB SINAD); 0.16 μV (Typical) (12 dB SINAD);
Sensitivity(Digital)	0.18 μV/BER5%
Adjacent Channel Selectivity	TIA-603: 60dB@12.5kHz / 70dB@20/25 kHz; ETSI: 60 dB@12.5 kHz / 70 dB@20/25 kHz
Intermodulation	TIA-603: 70 dB@12.5/20/25 kHz; ETSI: 65 dB@12.5/20/25 kHz
Spurious Response Rejection	TIA-603: 70 dB@12.5/20/25 kHz; ETSI: 70 dB@12.5/20/25 kHz
Blocking	TIA-603: 80 dB; ETSI: 84 dB
Hum&Noise	40 dB@12.5 kHz; 43 dB@20 kHz; 45 dB@25 kHz
Rated Audio Power Output	0.5 W
Rated Audio Distortion	≤3%
Audio Response	+1~-3 dB
Conducted Spurious Emission	<-57 dBm

Transmitter	
RF Power Output	UHF: 4W/1W;
FM Modulation	11K0F3E@12.5 kHz; 14K0F3E@20 kHz; 16K0F3E@25 kHz
4FSK Digital Modulation	12.5 kHz data only: 7K60FXD; 12.5 kHz data and voice: 7K60FXW
Conducted/Radiated Emission	-36 dBm<1 GHz; -30 dBm>1 GHz
Modulation Limiting	±2.5 kHz@12.5 kHz; ±4.0 kHz@20 kHz; ±5.0 kHz@25 kHz
FM Hum&Noise	40 dB@12.5 kHz; 43 dB@20 kHz; 45 dB@25 kHz
Adjacent Channel Power	60 dB@12.5 kHz; 70 dB@20/25 kHz
Audio Response	+1 ~ -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™/SELP
Digital Protocol	ETSI-TS102 361-1,-2,-3

Environmental	
Operating Temperature	-30 °C to +60 °C (Radio only - Battery -20 °C)
Storage Temperature	-40 °C to +85 °C
ESD	IEC 61000-4-2 (Level 4) ±8 kV (contact); ±15 kV (air)
Dust & Water Protection	IEC60529 IP66 IP68 (2m, 4h)
Humidity	Per MIL-STD-810H Standard
Vibration,Drop&Shock	Per MIL-STD-810H Standard

GPS Specifications	
Horizontal Position Accuracy	<5 m
Cold Start (Time to First Fix)	<1 minute
Hot Start (Time to First Fix)	<10 seconds
Note	Accuracy Specs are for long-term tracking (95th percentile values>5 satellites visible at a nominal-130 dBm signal strength)

StellarWavez™

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