

SmartLink580 Fixed Ad Hoc Base Station



SmartLink580 Fixed Ad Hoc Base Station can provide long-distance wireless service in harsh environments without relying on external network and other communication equipment.

Highlights

Light and Portable

The compact backpack design and lightweight 3.2kg (including antenna and battery) body make SmartLink580 be easily carried on the back and rapidly deployed to the front line.

Standard Compliant

Comply with DMR standards, and is compatible with radios of mainstream DMR manufacturers.

Flexible and Dynamic Networking

Support flexible and dynamic networking modes including: chain, star, tree and hybrid, among which the network can reach a maximum of 32 nodes in chain mode.

Optimized RF Design

Well optimized RF circuit design renders the Ad-Hoc network a good wireless performance and achieves a long distance of network coverage.

IP Connection

SmartLink580 can connect and communicate with remote IP connection base stations. In the case of wireless Ad-Hoc network interruption, it can still keep in touch with the command center as long as the IP connection is not broken.

Carrier Network as Backup

Support external accessory connection, to ensure communication be completed through 4G carrier networks in case of disconnection with other Ad-Hoc nodes.

Support external battery as backup

SmartLink580 can use an external large-capacity 12V battery as backup power. When power supply is suddenly interrupted, the battery can ensure supply power to the device so that the base station can work normally.

Ruggedized Design and Reliable Quality

IP67 weather proof standard, working temperature ranges from -40°C~+60°C (with chill-proof battery), meeting the requirements of all-weather complex scenarios.

Specifications

General	
Protocol	DMR TierII
Frequency	UHF1: 400-470MHz UHF3: 350-400MHz VHF:136-174MHz
Channel Spacing	12.5kHz
Ad-Hoc Network Maximum Nodes	Up to 32 Nodes in chain mode
Dimensions (H×W×D)	320×190×70mm
Weight	3.2Kg
Power Supply	Voltage DC 12V-18V External power adaptor External backup battery External solar power supply Standby current < 0.55A
Stand-by Current	<0.55A
Transmission Current	10W Transmission Power < 4A 25W Transmission Power < 5A
Location	Beidou/GPS
4G Wireless Module Expansion	Optional support
Vocoder	NVOC/AMBE++
Port	Main antenna RF port x 1 GPS/BeiDou antenna port x 1 4G module main antenna port (optional) x 1 4G module secondary antenna port (optional) x 1 Main power port x 1 Battery port x 1 LAN network port x 1 WAN network port x 1 USB port x 1 UART port x 1

Transmitter	
Frequency Stability	±0.5ppm
Output Power	1W~ 25W
4FSK Digital Modulation	12.5KHz Data: 7K60FXD 12.5KHz Voice and Data: 7K60FXE
Conducted/Radiated Emission	-36dBm ≤1GHz, -30dBm >1GHz
Modulation Limiting	±2.5KHz @12.5KHz
Adjacent Channel Power	-60dB@12.5KHz
FM Hum and Noise	-40dB@12.5kHz
Audio Response	+1~-3dB
Audio Distortion	≤3% (Typical)

Receiver	
Frequency Stability	±0.5ppm
Sensitivity (Digital)	0.14uV (5% BER)
Intermodulation	75dB (TIA603D) 70dB (ETSI)
Adjacent Channel Selectivity	65dB@12.5 kHz (TIA603D) 65dB@12.5 kHz (ETSI)
Spurious Rejection	80dB (TIA603D) 80dB (ETSI)
Blocking or Desensitization	≥ 96dB (TIA603D) ≥ 96dB (ETSI)
Hum and Noise	-40 dB@12.5KHz / -45 dB@25KHz
Conducted Spurious Emission	-57 dBm
Audio Response	+1~-3dB
Audio Distortion	≤3% (Typical)

Environmental	
Operating Temperature	-40°C ~ +60°C
Storage Temperature	-50°C ~ +85°C
Dust and Water Resistance	IP67
Reliability	MIL-STD-810G

Beidou/GPS Location	
Accuracy specs are for long-term tracking (95th percentile values>5 satellites visible at nominal -130 dBm signal strength)	
TTF (Time To First Fix) Cold Start	<60s
TTF (Time To First Fix) Hot Start	<10s
Horizontal Accuracy	<10m



12F/Building G2, International E-City, Nanshan,
Shenzhen, China, 518052
www.caltta.com sales@caltta.com

General Disclaimer
The specifications in this document are in accordance with the applicable standard test. Due to the continuous technology development, Caltta may change the specifications without notice

