



SmartLink780

Narrowband Ad-hoc Networking
Dual-Channel Fixed Base Station



The SmartLink780 narrowband ad-hoc networking dual-channel fixed base station is built on a decentralized, self-organizing, multi-hop solution. It delivers voice, SMS, and positioning services, and supports simultaneous two-channel voice relay - enabling all-weather, long-distance ad-hoc wireless communications in complex scenarios without relying on wired transport networks or other communication devices.

- Power-on ready, intelligent routing
- Dual-channel concurrency, smooth communications
- Standard protocols, strong compatibility
- Lightweight and portable, easy to deploy
- Dispatch & network management, remote control
- Outdoor deployment, reliable and durable



Specifications

General	
Radio Mode	PDT/DMR Conventional
Frequency Range	UHF3: 350-400MHz
Channel Spacing	12.5KHz
Operating Bandwidth	Dual-channel 2×12.5KHz
Max. Ad-hoc Networking Nodes	32 nodes
Dimensions (H×W×D)	362×203×122mm
Weight	Approx. 7.0Kg
Power Supply	DC12-18V; supports external power adapter, external solar power system, and external battery
Positioning	Supports BeiDou positioning
4G Wireless Link	Optional support
Module Expansion	Optional support
Digital Vocoder	NVOC
Transmitter	
Frequency Stability	± 0.5ppm
Output Power	1-25W per channel, both channels continuously adjustable
4FSK Digital Modulation	12.5KHz Voice: 7K60FXE 12.5KHz Data: K60FXD 12.5KHz Voice & Data: 7K60FXW
Conducted/Radiated Emission	-36 dBm ≤1GHz; -30 dBm >1GHz
Modulation Frequency Deviation Limit	±2.5KHz @12.5KHz
Adjacent Channel Power	-60 dB@12.5KHz
Hum & Noise	-40 dB@12.5kHz
Audio Distortion	≤ 3%
Audio Response	+1 ~ -3dB

Receiver	
Frequency Stability	± 0.5ppm
Sensitivity (Digital Typical)	0.18μV (5% BER)
Intermodulation	75 dB (TIA603D); 70 dB (ETSI)
Adjacent Channel Selectivity	65 dB@12.5 kHz (TIA603D) 65 dB@12.5 kHz (ETSI)
Spurious Response	80 dB (TIA603D); 80 dB (ETSI)
Blocking	98 dB (TIA603D); 95 dB (ETSI)
Audio Distortion	≤3%
Hum & Noise	-40 dB@12.5KHz
Conducted Spurious Emission	-57 dBm
Audio Response	+1 ~ -3dB

Environmental	
Operating Temperature	-40°C ~ +60°C
Storage Temperature	-50°C ~ +85°C
Water & Dust Resistance	IP67
Reliability	Per GJB 150A-2009 standard

GPS	
For long-term tracking (95% value at rated >-130dBm signal strength with 5 satellites visible)	
TTFF (Time To First Fix) Cold Start	< 60s
TTFF (Time To First Fix) - Hot Start	< 10s
Horizontal Accuracy	< 10m

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 prior notice.

Accessories

Standard						
 Aviation Connector to RJ45 Cable						
Optional						
 RSM with Screen	 Pole Mounting Bracket	 High-Gain Directional Antenna	 1/2 RF Feeder	 Positioning Antenna	 4G Public Network Antenna	 DC Power Cable

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