

# Technical Specification & description

## 1. General Features

CDMA 2000 1xRTT

IS-95A/B

Standard RS-232E interface

Data transmission up to 153Kbps

Remote control by AT command

Built-in TCP/IP/UDP stack

2-way SMS

Voice, Enhanced variable rate codec (EVRC)

Quick Net Connect for fast Internet connection

Telemetry-specific features

Optimized for easy OEM applications

LCD/Keypad interface

GPIO for custom interface

GPSONE

Supports Circuit Data/Fax

## 2 Technical Specifications

### 2.1 General Specifications

Parameters	Descriptions
External Access	Code-Division-Multiple-Access (CDMA)
CDMA Protocol	IS-95 A/B, IS-98A, IS-126, IS-637A, IS-707A, IS-2000
Data Rate	153.6Kbps max
Transmit/Receive Frequency Interval	45MHz for Cellular and 80MHz for PCS
Vocoder	EVRC, 13kQCELP
RF technology	Zero Intermediate Frequency
Number of Channel	832 for Cellular and 42 for PCS
Operating Voltage	DC +3.4V ~ +4.3V BATT_INT (Pin88 and 90) DC +4.0V to +5.0V + VEXT_DC (Pin87 and 89)
Current Consumption	1. VCC applied to + VEXT_DC (Pin87 and Pin89) Stand by mode: Idle (110mA), Sleep (less than 9mA) Busy mode: 900mA (Max) 2. VCC applied to BATT_INT (Pin88 and Pin90) Stand by mode: Idle (110mA), Sleep (less than 1mA) Busy mode: 900mA (Max) See section 4.5.1 for detail
Operating Temperature	-30°C ~ +60°C
Frequency Stability	±300Hz for Cellular and ±150Hz for PCS
Antenna	GSC Connector, 50ohm
Size	38 X 38 X 5.8mm with case
Weight	About 15g
External Interface	RS-232s, Digital/Analog Audios, LCD, Keypad, Ringer External Reset Control, R-UIM, MP3, MIDI, GPIOs
User Interface Software	BREW support
Additional Function	GPSOne position location solution

### 2.2 Receiver Specifications

Parameters	Descriptions
Frequency Range	869.04 ~ 893.97 MHz for Cellular and 1931.25 ~ 1988.75MHz for PCS
Sensitivity	Below -104 dBm
Interference Rejection	Single tone (-30dBm @900KHz): Below -101dBm Two tone (-43 dBm @900KHz and 1700KHz): Below -101dBm Two tone (-32 dBm @900KHz and 1700KHz): Below -90dBm Two tone (-21 dBm @900KHz and 1700KHz): Below -79dBm
Spurious Wave Suppression	Below -80dBc
Input Dynamic Range	-25 dBm ~ -104dBm

### 2.3 Transmitter Specifications

Parameters	Descriptions
Frequency Range	824.04 ~ 848.97 MHz for Cellular and 1851.25 ~ 1908.75MHz for PCS
Nominal Power	0.32 W (24.7dBm)
Minimum Controlled Output Power	Below -50dBm
Max Power Spurious	900KHz: Below -42dBc/30KHz 1.98MHz: Below -54dBc/30KHz

### 2.4 gpsOne Receiver Specifications

Parameters	Descriptions
Frequency Range	L1, 1575.42MHz
C/A Code	1.023MHz Chip Rate
Receiver Sensitivity	-152dBm

### 3 Standards

- IS-95 A/B: Protocol Between MS & BTS
- IS-96A: Voice Signal Coding
- IS-98A: Base MS Function
- IS-126: Voice Loop-Back
- IS-637: Short Message Service
- IS-707: Data Service
- Built-in TCP/IP : AnyDATA proprietary software
- IS-657 : packet data