CNM550

CompactPCI Navigation And Wireless Communication Module

Features

- Compliance with PICMG 2.0 specification (32-bit / 33 MHz)
- Supports Windows XP Embedded/Vista/7, Linux
- GSM 850/900/1800/1900 MHz
- Data transmission: GPRS (up to 48 Kbit/s reception/ transmission), EDGE (up to 236.8 Kbit/s reception)
- Two SIM card sockets
- USB 2.0 device interface
- 24 universal GPS/GLONASS channels
- Positioning error – 5 m (2 m in differential mode)
- External GSM and GPS/ GLONASS antennas support
- Operating temperature: –40°C to +65°C

Overview

CNM550 is a 3U CompactPCI navigation and wireless communication module with Q2687 GSM GPRS/EDGE modem and MNPM7 GPS/GLONASS receiver (IMES. 468157.00201) designed to be used for embedded computing systems with applications requiring global positioning information, source for external real time clock and/or wireless voice or data channel via GSM/UMTS networks.

Technical Specifications

Specifications

- **GPS/GLONASS receiver:** MNP-M7 (versions CNM550-01, CNM550-02)
  - 24 universal channels for L1 ranges of GPS/GLONASS signals;
  - Dynamic range of antenna input: -130…-55 dBm;
  - Programmable navigation operations rate: 1…20Hz;
  - Coordinates measurement accuracy: not more than 6 m (2 m using differential corrections) at speeds up to 515 m/s;
  - First navigation parameters measurement delay after cold restart: 50 s max;
  - Communication with CPU module through two UART channels at speeds up to 115.2 Kb/s using software switchable protocols: MNP-Binary, IEC 61162-1 (NMEA-0183) or RTCM 10402.3;
  - Software Windows-utility for obtaining the detailed information from the receiver and for its operating mode management;
  - External GPS/GLONASS antenna connection via front panel SMA connector;
  - Power supply voltage for an external GPS/GLONASS antenna: 5 V, 3.3 V, or passive antenna, set with a jumper; maximal consumption current: 50 mA; the circuit is protected by the self-resettable fuse;
  - CR2032 lithium battery used as power backup for storage of almanac, satellite ephemerides, and internal clock data. Battery life is not less than 2.5 years.
- **GSM modem:** Q2687 for operation in 850/900/1800/1900 MHz GSM frequency ranges (version CNM550-01)
  - GPRS class 10, CS1…4
  - EDGE class 10, MCS5…9
- Communication with CPU module through two UART channels at speeds up to 921.6 Kb/s and USB2.0 full speed port;
- Connection of GSM antenna via SMA front panel connector;
- Audio: connector for a speaker and an electret microphone;
- Two software switchable SIM-cards

CompactPCI interface

- Compliance to PCI Local Bus Specification, revision 2.3
- 32-bit / 33 MHz Bus Target
- Universal 3.3V / 5V interface

Power

- Consumption from a +5V power source, max:
  - CNM550-01: 0.8A_{rms}, 2.1A_{peak}
  - CNM550-02: 0.35A

OS compatibility:

- QNX 6.3x, 4.25;
- Windows XP, XPE;
- Linux

Operating temperature:

- CNM550-01, CNM550-02: –40°C…+65°C

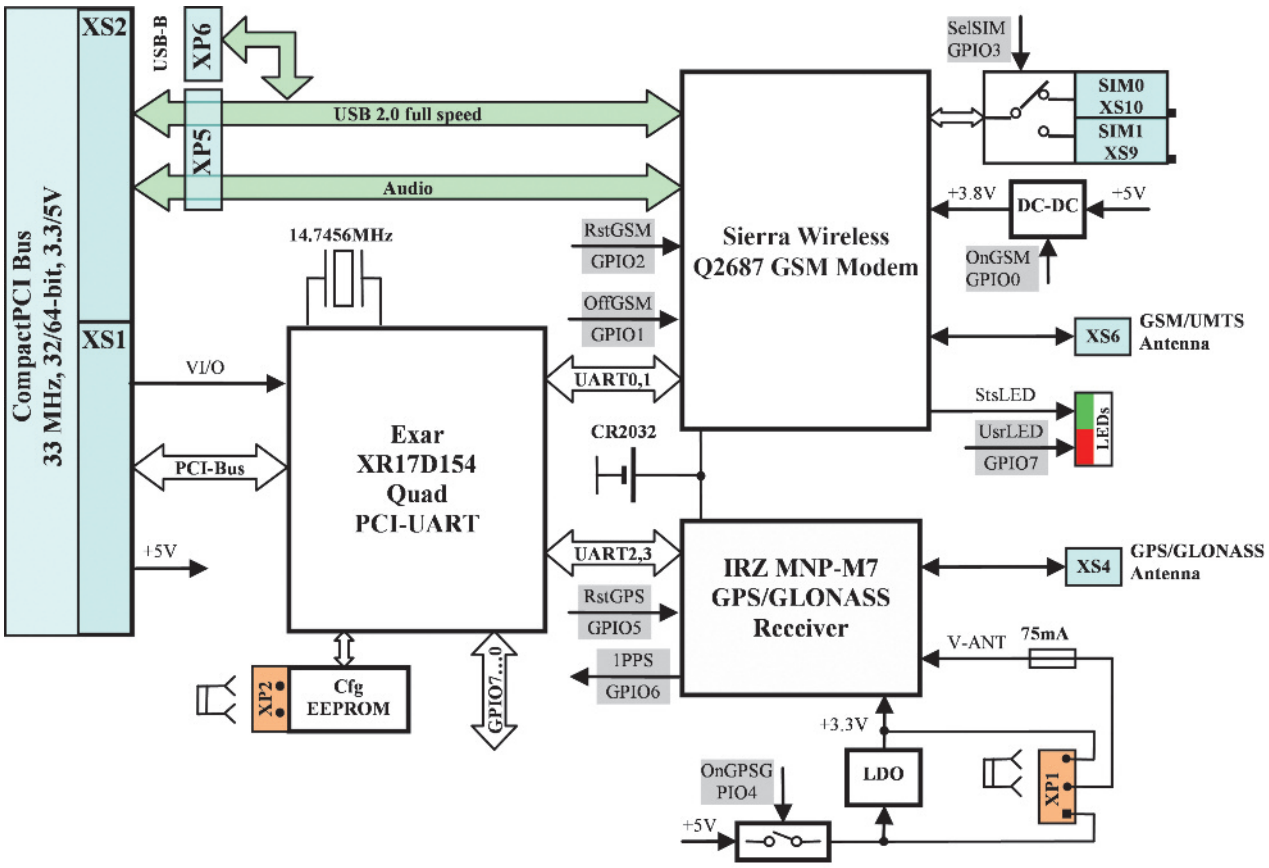
Optional protective coating

Dimensions: 130.5×213.0×20.32 mm

CNM550

CompactPCI Navigation And Wireless Communication Module

Board Layout



Ordering Information

CPC308 Configuration

Versions

CNM550-01	navigation and communication module with Q2687 GSM GPRS/EDGE modem and MNP-M7 GPS/GLONASS receiver (IMES.468157.002-01)
CNM550-02	navigation module with MNP-M7 GPS/ GLONASS receiver (IMES.468157.002-02)

Delivery checklist:

1. CNM550 module
2. Antistatic bag
3. Consumer package (cardboard box)
4. CD disc with documentation and drivers

Ver.1.12.2015

Product specifications are subject to change without notice

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