COM-1288 GSM-R / Tri-band GPRS GPS Module DATA SHEET

Technical Features

- Siemens 900/1800/1900MHz MC45 GPRS-modem provided with onboard or external SIM card slot
- 12-channel low power iTrax02 GPS receiver NMEA and Binary GPS protocols, +3.3V/+5V antennas
- 16 digital I/O with programmable pull-up/down, 2 +12/24V digital inputs
- 4 16C550 compatible serial ports (2 ports are used by GPRS and GPS, 2 RS-232 ports are free for user)
- Audio I/O port for headset
- Onboard I2C-bus temperature sensor; I2C-bus port
- Two status LEDs indicating GPS status and protocol
- -20/+70°C limited operating temperature range

Application Areas

- Vehicle and mobile computers
- Telematics systems, onboard computing
- GSM-R Rail communication systems
- Fleet management
- Remote data acquisition and telemetry

General Description

The Eurotech COM-1288 combines wireless Tri-band-GPRS or GPRS/GSM-R connectivity with a low power 12-channel parallel-tracking GPS receiver into embedded PC/104 systems. This low power highly integrated telematics board is the ideal choice for onboard computing applications requiring worldwide GPRS roaming, precise GPS positioning or mobile GSM-R communication for railways applications. A standard SIM-card can be installed onboard into a locking cardholder, or onto an external SIM card carrier board. Two versions of the COM-1288 are available from Eurotech, one with the support for the standard triple band GPRS and a version supporting GSM-R band for railways applications in Europe and Asia.

Onboard features include a four channel 16C550 compatible UART with two RS-232 serial ports available to the user, while one port is used by the GPRS-modem and one by the GPS-receiver. The board can be configured through software with the board settings stored in an EEPROM. This advanced scheme does not need banks of interrupt and base address jumpers or pull-up/pull-down selection jumpers. Reconfiguring your COM-1288 is easy even after the system is completely assembled. 16 bit-wise programmable digital I/O can be used to interface to other low power digital devices, whereas the two automotive level digital inputs can be used to connect to any automotive 12V or 24V digital signals. System expansion and monitoring is easy using the onboard I2C-bus.

GPRS specifications and features

- Siemens MC45 900/1800/1900 MHz GSM/GPRS or Triodata TRM:1 900/1800/GSM-R module
- Onboard or external 3.3V SIM card socket
- GPRS downlink data rate up to 85,6kbps
- up to 14,4kbps data, group 3 fax services
- SMS and SMS cell broadcast
- GPRS mobile station class B and GPRS multi slot class 10 compliance
- Output power class 4 (2W) at 900MHz and class 1 (1W) at 1800MHz

GPS features

- 12 channel low power Fastrax iTrax02 GPS
- Support for active +3.3 or +5V antennas
- Fastrax Binary or ASCII NMEA protocols
- Two status LEDs

General features

- Jumperless software configurable BASE address and IRQ, EEPROM stored setup
- 4x 16C550 serial ports (two RS232 serial ports user available)
- 16 bit programmable digital I/O, software configurable pull-up/down in groups of 4 lines
- Two +12/24V automotive digital inputs one connected to an odometer counter
- Audio interface port for headset
- Onboard temperature sensor (I2C-bus)
- External I2C-bus for device expansion
- Board configuration Base address + 400h

Specifications

- Ordering codes:
  COM-1288-00 900/1800/1900MHz Tri band GPRS + 12 channel GPS
  COM-1288-01 900/1800MHz/GSM-R Tri band GPRS + 12 channel GPS
- Fully PC/104 compliant
- Power supply: +5V, +/-5%
- Power consumption 1.1W idle 3.2W peak
- OSX-connectors, GSM & GPS antennas
- SIM card voltage +3.3V
- Antenna BIAS 125mA (max)
- Operating temperature range: -20/+70°C GPRS-section, -40/+85°C GPS-section
- Starter kits available with tri-band GPRS antenna and GPS antenna including interconnection cables.
- Meets requirements of EU directives for CE compliance
- Compatible with all Eurotech enclosure systems

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