

### Features

#### General Features:

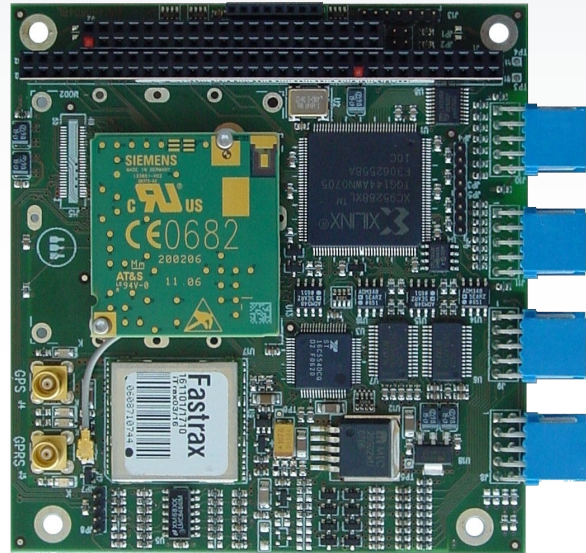
- Siemens 900/1800/1900MHz MC55 GPRS modem (or as option: Selex RGM101 GSM-R with onboard or external SIM-card interface)
- 12-channel low power Fastrax iTrax03 GPS with NMEA and Binary protocols, +3.3V antennas
- Two available free 16C550 compatible RS-232/RS422/RS485 serial ports, two serial ports used by GPRS and GPS
- Audio I/O port for headset
- Two status LEDs indicating GPS status
- Jumperless configuration (addresses and IRQs)
- Setup stored on EEPROM
- Antenna starter kits available:
  - ACS-9110-00 (3-band GSM antenna kit)  
Refer to Technical Datasheet Td0019
  - ACS-9111-00 (GPS antenna kit)  
Refer to Technical Datasheet Td0006

#### RoHS:

- Fully RoHS (2002/95/CE) Compliant.

#### Supported Operating Systems:

- Windows CE®
- Linux®



The Eurotech COM-1289 integrates GSM/GPRS (optionally GSM-R) wireless cellular connectivity and a low power GPS receiver within a PC/104 module. This low power integrated telematics board is the ideal choice for onboard computing applications requiring GPRS roaming across three continents and precise GPS positioning. A standard SIM-card can be installed onboard into a locking card holder, or onto an external SIM card carrier.

The COM-1289 is available with the Fastrax iTrax03 12-channel GPS receiver and the Siemens MC55 GSM/GPRS modem, or as option the Selex RGM101 GSM-R modem. GSM-R is widely used in rail and rolling stock system devices throughout Europe and Asia.

Onboard features include a 4-channel 16C550 compatible UART with two multistandard RS-232/422/485 serial ports are free for other devices, while two ports are reserved for the onboard cellular GPRS modem and GPS receiver. Board configuration is performed in software eliminating banks of configuration, interrupt and base address jumpers. The setup information is stored in a non volatile EEPROM that is loaded upon power-up. Reconfiguring your COM-1289 is easy even after the system is completely assembled. The board supports full interrupt sharing for all the serial ports.

# COM-1289

## Main GPS Features

- Fastrax iTrax03 12-channel low power GPS receiver
- L1 frequency, C/A code (SPS)
- Update rate: 1fix/s (user configurable up to 3 Hz)
- Accuracy:
  - Position: 1.2m (CEP95)
  - Velocity: 0.1m/s
  - Time: 20ns rms (static mode)
- Reacquisition: 100ms (typical)
- Tracking sensitivity: -156 dBm
- Support for +3.3 active & passive external antennas
- Protocols: NMEA-0183 and proprietary iTalk™ binary protocol

## Main GPRS Features

- Siemens MC55 900/1800/1900MHz
- Onboard or external 3V SIM card
- GPRS downlink data rate up to 85,6kbps
- 14,4kbps GSM data, group 3, class 2 fax services
- SMS and SMS cell broadcast
- GPRS mobile station class B and GPRS multi slot class 10 compliance
- WAP and MMS compliant
- Output power class 4 (2W) at 900MHz and class 1 (1W) at 1800/1900MHz

## Main GSM-R Features (optional)

- Selex RGM101 GSM-R module
- Onboard or external 3V SIM card
- GPRS features:
  - Multi-slot capabilities: 4+1 max (class8)
  - Coding: CS1, CS2, CS3, CS4
- Output power:
  - class 4 (2W) GSM-R
  - class 1 (1W) DCS
- Sensivity: -102 dBm
- Frequency Band:

	UIC	E-GSM	DCS
UPLINK (MHz)	876 - 880	880 - 915	1710 - 1715
DOWNLINK (MHz)	921 - 925	925 - 960	1805 - 1880

## Physical Characteristics

DIMENSIONS	90 x 96 mm (3.6" x 3.8")
HEIGHT	15 mm (0.6")
POWER SUPPLY	Single +5V DC +/- 5%
POWER CONSUMPTION	1.1 W (idle) 3.2 W (peak)
OPERATING TEMPERATURE	-20 ~ + 55°C (for GPRS) -40 ~ + 85°C (for GPS)
HUMIDITY	Up to 95% non-condensing

## Options

- Conformal coating
- Selex RGM101 GSM-R radio modem

## Typical Applications

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

## About Eurotech

EuroTech delivers embedded computer systems for high capability and low power applications, networking and wearable computing solutions, and application framework middleware for multimedia, industrial, transportation, medical, and wireless applications. EuroTech platforms allow OEM and enterprise customers to focus on their core revenue-generating products and services and get to market quickly.

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