IGPS.1

Communication Module for SMT Systems for Acquiring GPS Signals in Mobile Applications

The IGPS.1 is used to acquire typical GPS information such as the geographical position, current speed, acceleration and direction of movement. The receiver data is read in and processed simultaneously with other SMT signals.

Design
The GPS receiver is a fixed component part of the IGPS.1. The only additional external component is thus an active antenna that can be connected via the antenna socket on the front.

Data Preparation
Once data has been read out of the GPS receiver, the received data is formatted for further processing in the SMT system by the module. The relevant variables are available in the system software PEA as single channels incl. description, physical unit and value range.

Time Response
Depending on the configuration, the data rate of the module is much faster than the actual update rate of the GPS receiver. Together with additional synchronization channels that are made available, signal changes can thus be acquired absolutely precisely in terms of time which is a decisive advantage particularly with input variables for closed-loop controls and simulations.

Areas of Application
- Common time base of different data acquisition systems
- Speed and acceleration measurements
- Tracing the geographical position, for example in endurance tests and extensive field tests
- Calculation of lap times on circuits
- Support (drift correction) of local sensor technology

Advantages
- Synchronization of external GPS receivers with other physical measured data not necessary
- Precise time resolution of signal changes
# Technical Data

## General

| **Update rate** | 5 SPS |
| **Data rate** | 1 SPS ... 1 kSPS online, can be set per module |

## Supported signals

- Date and time
- Latitude and longitude
- Altitude
- Direction of movement
- Speed over ground
- Speed in all three spatial directions
- Acceleration in the plane
- Number of visible satellites
- Precision and status information

## Time to first fix (TTFF)

26 s

## Position accuracy

- 2.5 m (CEP)
- 2.0 m (CEP, SBAS)

## SBAS

WAAS, EGNOS, MSAS

## GPS module

ublox LEA-6S

## Environmental Conditions

### Storage

-30 °C ... +85 °C, 10 % ... 90 % rel. humidity, non-condensing

### Operation

-30 °C ... +70 °C, 10 % ... 90 % rel. humidity, non-condensing

## Order Numbers

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