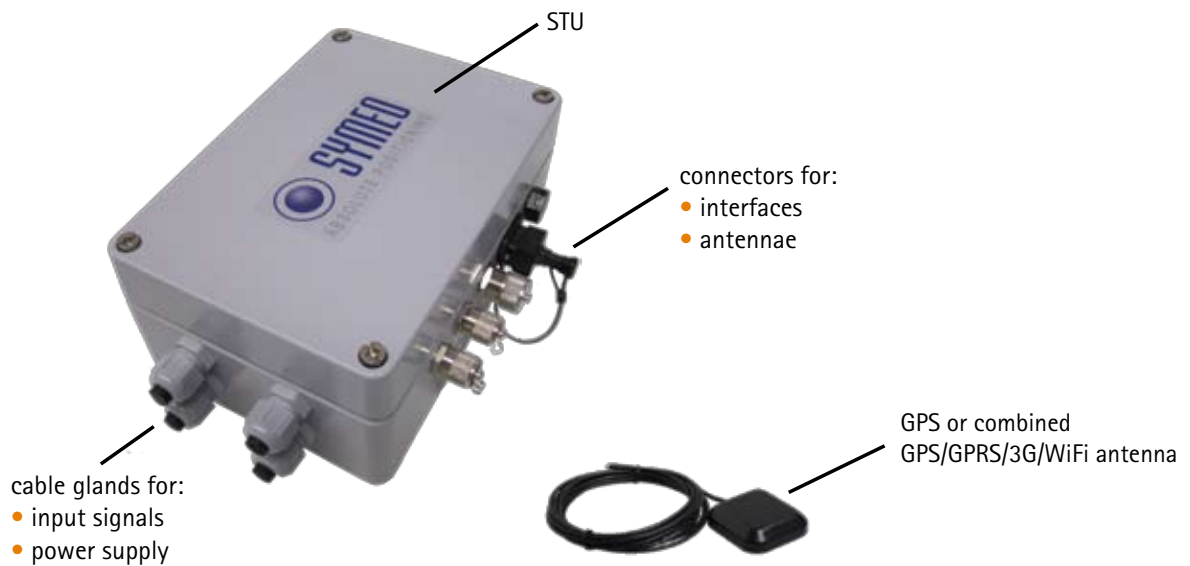


Symeo Telemetry Unit STU



Data Sheet

Reliable GPS Position And Vehicle Data Acquisition

- Easy to install and configure
- Unaffected by contamination, weather and vibration
- Provides valuable information for any Fleet Management tool
- Different vehicle types, one standard data interface
- Powerful Symeo toolbox for 2D position receivers applies
- Maintenance free

The Symeo Telemetry Unit (STU) features an integrated high sensitivity GPS receiver with additional IO signal capabilities. A number of different interfaces enable data transfer to the client's fleet management or vehicle tracking software.

For best GPS position capturing, the combined GPS/GSM/WiFi antenna can be mounted on the vehicle's roof.

Symeo provides acquired vehicle data and position fixes in a standard format, customized interfaces and simple NMEA messages are optional. IO data can be transferred raw, or processed by application specific filters (option) to minimize oscillating readings. The Symeo Framework environment that is used on all Symeo position receivers enables fusion of several sensor types (e.g. GPS, wheel encoder, inertia) in areas where a single sensor does not provide a reliable solution. The quality of the position is assessed by Symeo's own algorithms based on vehicle specific parameters. Symeo's powerful toolbox to store, replay and analyze captured data can be used for the STU as well. Logical combinations of several input signals can easily be set up to provide a reliable status of the respective vehicle.

Typical STU signals include position, speed, load status (e.g. fifth wheel sensor), fuel gauge reading, driver ID, hour meter, motor temperature and a shock sensor.

Data transfer is either via cable interface or using the optionally built in GSM/UMTS (3G) or WiFi 802.11 module.

Typical STU applications



Technical Data: STU

Digital Inputs / Outputs	8 / 8, opto-isolated, 0-40 V, LED status indication
Analog Inputs (10 bit resolution)	4, opto-isolated, 0-5 or 0-30 V DC
GPS	L1 frequency, C/A code, 50 channel continuous tracking SBAS: WAAS, EGNOS, MSAS update rate: up to 5 Hz accuracy: 2.5 m CEP signal acquisition, cold: 26 sec; hot: 1 sec position data: NMEA or local xy-coordinates
GSM/UMTS (3G) data communication	optional: HSUPA/HSDPA/HSPA or GPRS/EDGE modem
Shock sensor	on-board (option)
Data storage	micro SD card slot and USB for on-board data logging
Data interfaces	Serial RS232 / RS422, Ethernet TCP/IP or UDP (optional), CAN bus, USB
WiFi	optional: 802.11 b/g module with 802.11i (WPA2) security
Antenna	external, GPS only or combined GSM/UMTS, WiFi 802.11 and GPS
External connection	cable glands/internal terminal block, plug (TCP/IP), antenna connector
Voltage	10-36 V DC, voltage continuously monitored for battery protection
Power consumption	up to 15 W (depending on options)
Back-up battery	optional: Li-Ion or Li-Po battery pack
Ambient temperature	-40 °C to +75 °C , -40 °F to +167 °F
Protection class	IP 65
Housing dimensions (LxWxH); weight	200 x 140 x 93 mm; 1.5 kg