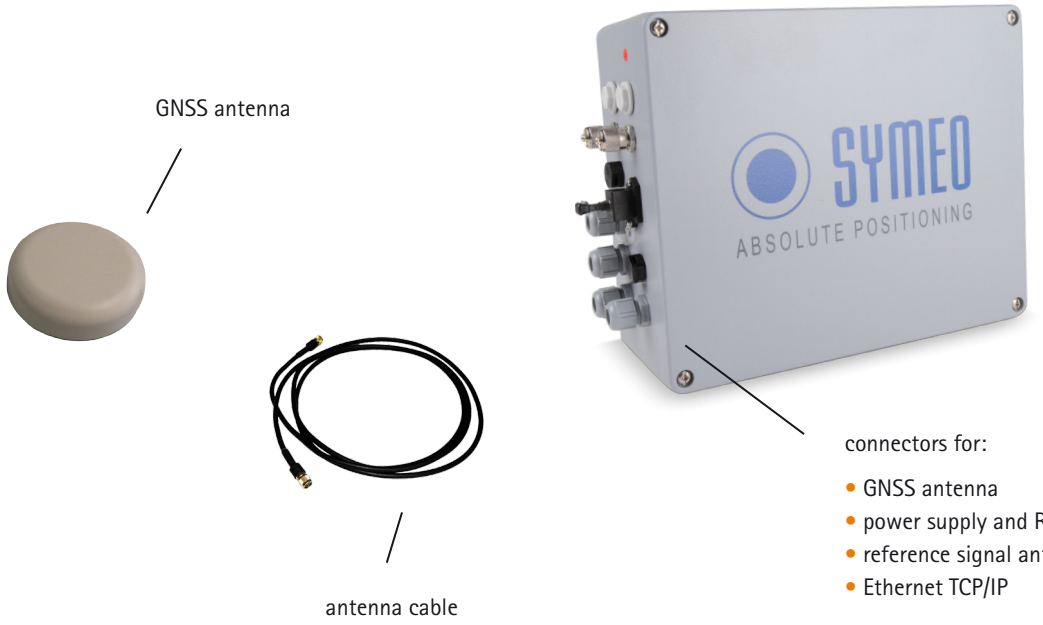
SAT/SAT-D

Data Sheet



SAT/SAT-D

Satellite-Based Position Detection with High Reliability

- Reliable and precise even under extreme conditions
- High signal stability and availability
- Suitable for all types of vehicles and cranes
- Standardized data interfaces
- Quick installation and commissioning
- Maintenance-free

The Symeo SAT-solution is a GNSS positioning system. The SAT-D system relies additionally on input from a correction signal generated by a reference station installed at a fixed location to provide $<$ 1 m accuracy.

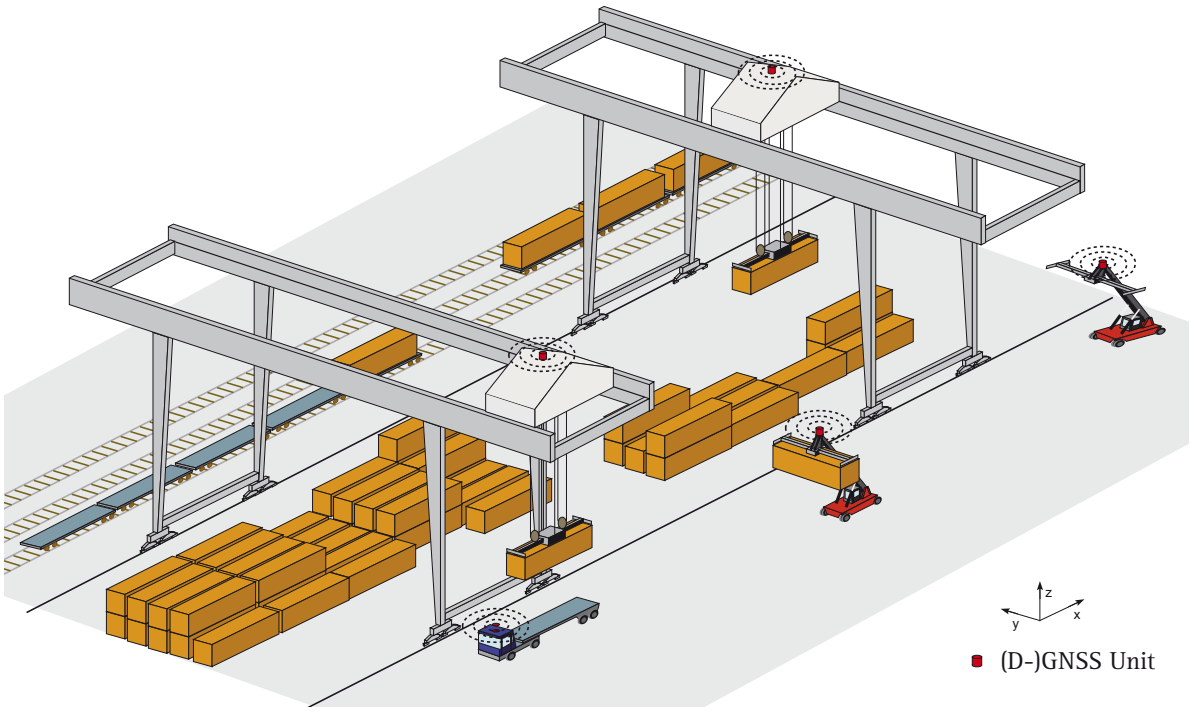
The SAT and SAT-D receivers can be mounted externally, inside the vehicle or in a separate control cabinet. The units are maintenance-free, contain no moving parts and can withstand harsh weather, dirt and vibrations.

The measurement unit features flexible options that permit capturing and analyzing additional telemetry and vehicle data such as weight, lift height or loading status, depending on the application. By adding a second GNSS antenna, this system can accurately determine the orientation of the vehicle even at slow speeds or when idling.

SAT and SAT-D, which operate with state-of-the-art (D-)GNSS technology, utilize the GPS and Glonass satellites simultaneously to provide position detection applications with a high degree of reliability and accuracy.

The captured data can be made available via an Ethernet standard interface.

Typical SAT/SAT-D application



Technical Data: SAT/SAT-D

GNSS receiver	L1, C/A code, optional L2 GPS + Glonass, optional RTK
Typical accuracy (horizontal)	up to: +/- 0,4 m CEP, P (95%): 0,83 m (D-GNSS)*; ± 2 m CEP (GNSS)**
Repeat rate	10 Hz, higher rates on request
Voltage	12-36 V DC
Power consumption at max. update rate	up to 20 W
Ambient temperature	-30 °C to +75 °C
Protection class	up to IP65
Housing dimensions (LxWxH); weight	280 x 230 x 110 mm; 3.8 kg
GNSS antenna dimensions	Ø 65 mm, height 20 mm or Ø 200 mm, height 50 mm
Hardware interface	serial RS232, Ethernet TCP/IP
Data interface	Symeo GNSS protocol
Status indication	LED
External connector type	Plug and cable gland
Antennas	up to 2 GNSS antennas
Compliance	CE, FCC

** provided that >= 8 GNSS satellites are received with unobstructed/uncorrupted signals (no multipath) with a GNSS base station according to Symeo specification (antenna cable and reference antenna) that provides GNSS correction signals to all GNSS receivers within a 5 km radius from the base station*
*** provided that >= 8 GNSS satellites are received with unobstructed/uncorrupted signals (no multipath)*

definition x meter CEP: 50% of all positions in a circle with radius x meter
definition P (95%) x meter: 95% of all positions in a circle with radius x meter