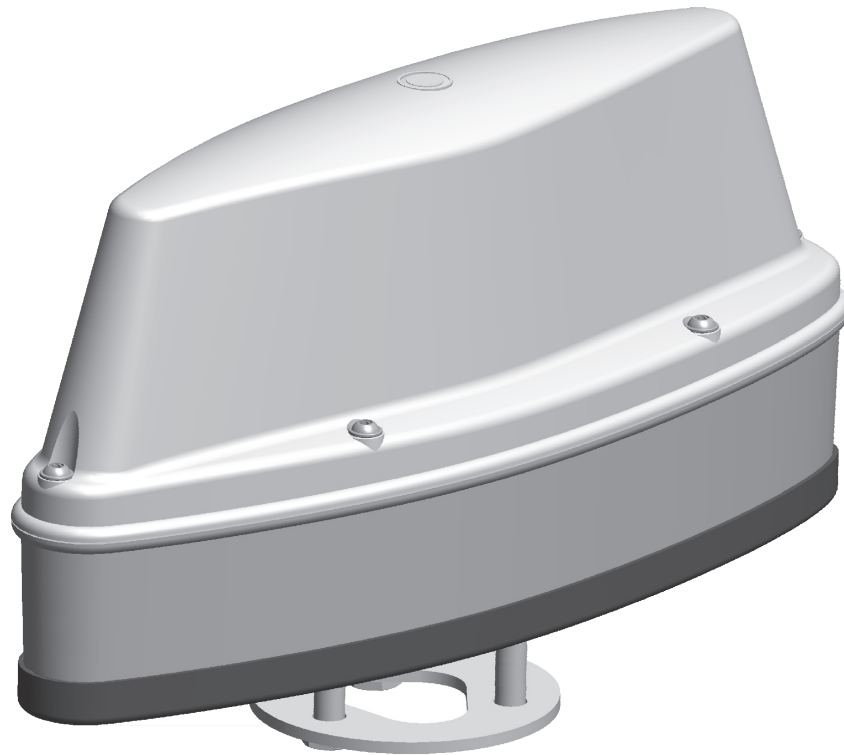


# SPU

## Syмео Positioning Unit



### SPU - Dynamic Acquisition of Vehicle Positions Indoors and Outdoors

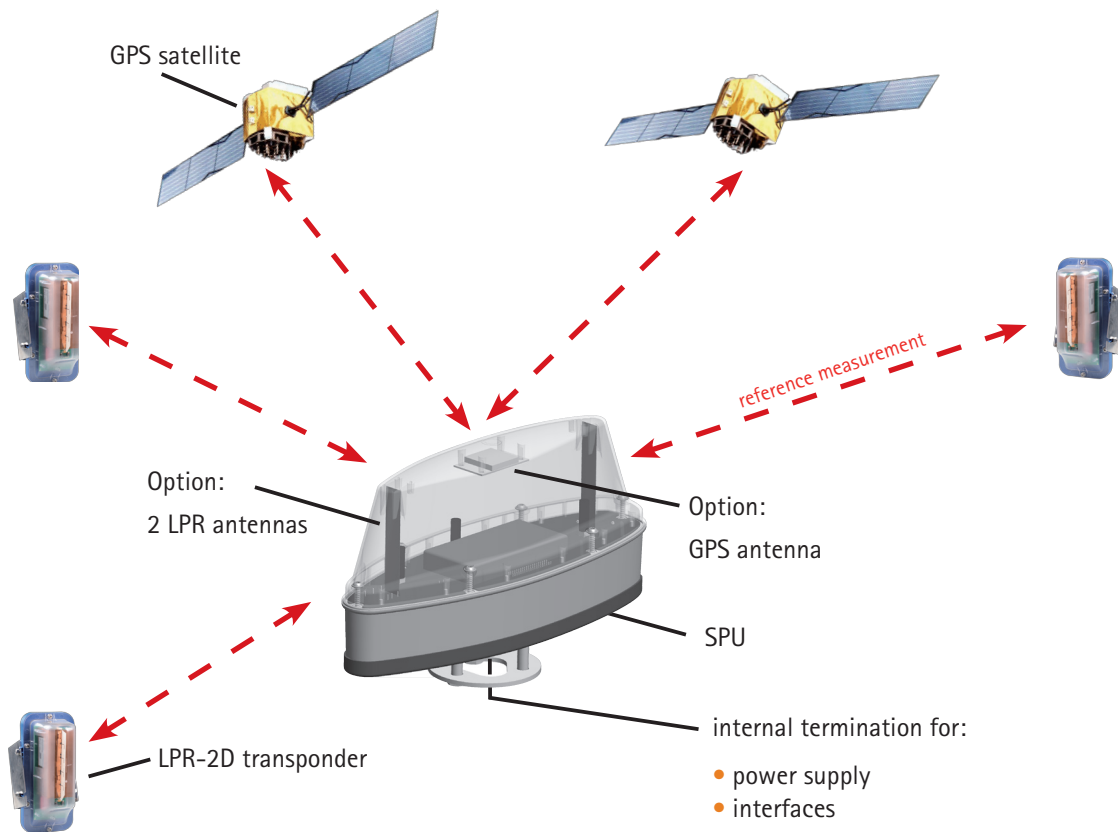
- Precise 2D position with LPR and/or GPS
- Non-contact radio technology
- Unlimited range
- Works under dust, dirt and adverse weather
- Quick installation
- Retrofit on all existing equipment
- Maintenance-free

The SPU is a compact unit with integrated antennas for permanent installation on a wide variety of vehicles and other moving devices.

It can optionally use Syмео LPR positioning technology and/or GPS signals. LPR allows exact position measurement indoors and outdoors, even under challenging industrial conditions. The LPR position is calculated based on the distance to fixed reference marks, so-called transponders. Transponders can easily be mounted at varying distances and height levels on existing walls, fences or pillars, making it a very flexible system. Based on the typical layout of the transponder network, even at a temporary loss of contact to some transponders, LPR will still continue to provide dynamic position measurement with good quality. The GPS receiver option allows location fixes with typical GPS accuracy, outdoors, if enough satellite signals are received. Syмео post processing of GPS data ensures the signal integrity.

Due to the radio based technology, the SPU determines reliable position data even under the influence of dust, dirt and adverse weather conditions.

Position information can be transferred via the own LPR radio frequency and by using Ethernet/WiFi or an optional on-board GRPS/UMTS modem.



## Technical Data: SPU

Frequency range	5.725-5.875 GHz, ISM band
Output power	Max. 0.025 W EIRP
Measuring distance SPU to transponder	Up to 300 m
System range	Unlimited
Typical accuracy	LPR: 0.5 m CEP; GPS: 2.5 m CEP *
Repeat rate	LPR: 20 Hz (internal); GPS: 4 Hz
Voltage	10 bis 36 V DC, 1 x continuous, 1x actively switched
Power consumption	continuous operation: 10 W stand-by: 1.5 W (avrg. wake-up every 30 min., 30s boot time) sleep: 100 mW (90 s boot time)
Ambient temperature	-30 °C to +70 °C, -22 °F to 158 °F
Protection class	IP65
Dimensions SPU (LxBxH)	358 x 120 x 174 mm
Dimensions transponder (LxBxH)	281 x 125 x 150 mm
Weight	1.9 kg
Hardware interface	LPR Com, Ethernet TCP/IP, GPRS/UMTS (both optional)
Data interface	Symeo 2D protocoll, custom formats (optional)
Connector type	cable gland, internal terminal block
Antenna	2 x LPR, 1x GPS, depending on options
Compliance	CE mark, special vehicle regulations (optional)

\* based on sufficient LPR transponders and/or GPS satellites with required signal quality available