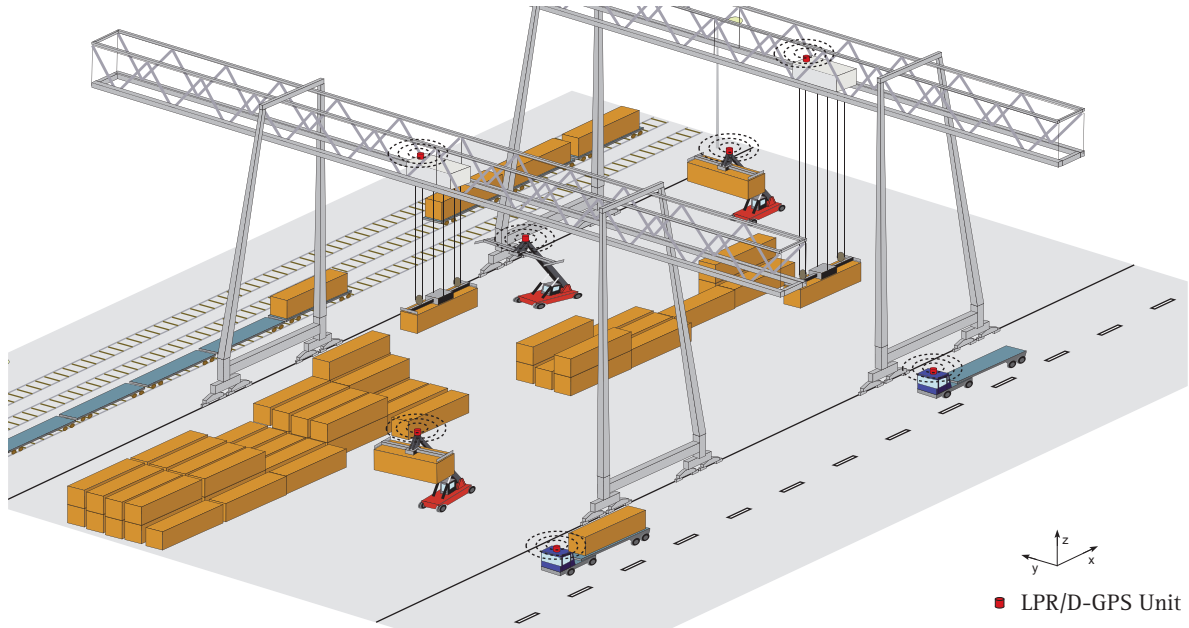


Position Detection



Available in the UK and Ireland only from
CL CRANE CARE LTD

Data Sheet 1



■ LPR/D-GPS Unit

Marine Grade GPS/D-GPS

Position detection of on-terminal vehicles with satellite navigation

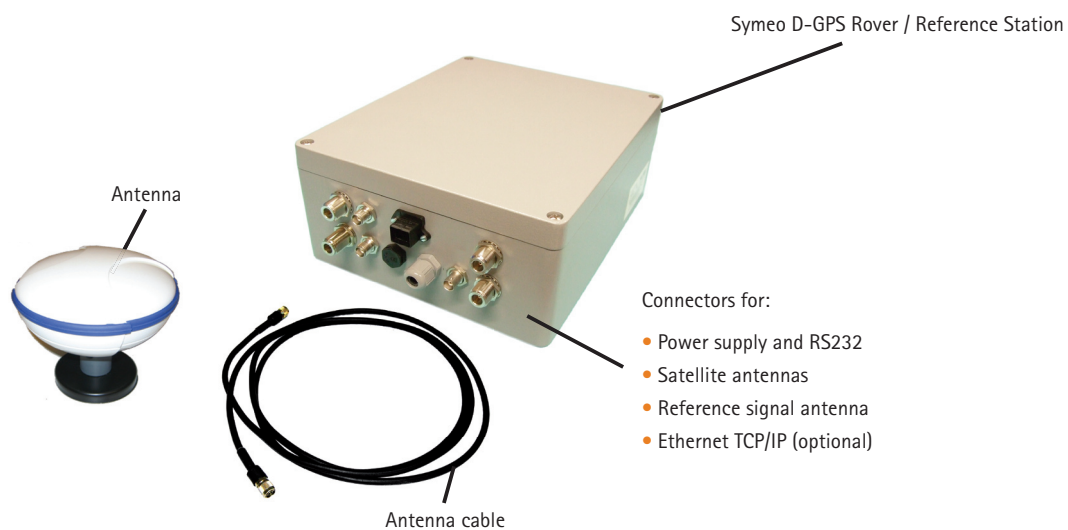
- Determination of vehicle position and direction of travel
- Independent from commercial correction signals with own reference station
- Unaffected by contamination, vibration or the weather
- Quick installation
- Retrofit during continued operations is possible
- Suitable for all types of vehicle and crane
- Maintenance-free

Symeo D-GPS integrates industrial GPS with independent reference stations to provide a correction signal for a typical $\pm 0.5\text{m}$ accuracy. With two antennas connected, the vehicle's direction of travel can also be determined.

Additional signals like spreader position can be acquired by the receiver and forwarded through the Symeo data protocol.

For ease of installation, the D-GPS receiver and the physical interface to the terminal operation software can be installed separately on the vehicle. This avoids any complex wiring to an existing on-board control unit.

For even greater accuracy and consistent position signals in areas where satellites are temporarily shielded or unavailable, the D-GPS receiver can be upgraded with LPR-2D. This will ensure that, even under cranes, vehicle positions are continually available, with precision up to $\pm 5\text{cm}$ in enhanced areas.



Technical Data: Symeo D-GPS

Receiver type	L1, C/A code
Channels	12-channel, parallel tracking
Start up time	60 s (no almanac and RTC)
Satellite reacquisition	< 1s
Typical accuracy (horizontal)	Up to ± 50 cm *
Repeat rate	1 to 20 Hz
Voltage	10-36 V DC
Power consumption	8 W at max. update rate
Ambient temperature	-10 °C to +50 °C
Protection class	Up to IP65
Housing dimensions (LxWxH)	280 x 230 x 110 mm
GPS Antenna dimensions	$\varnothing 150$ mm, height 130 mm
Hardware interface	Serial RS232, TCP/IP (optional)
Data interface	Symeo ASCII-protocol
External connector type	Plug
Antenna(s)	Up to 2 GPS antennas, 1 for reference radio signal
Compliance	CE mark
LPR 2D integration	Slot available

* depending on satellite availability and signal quality