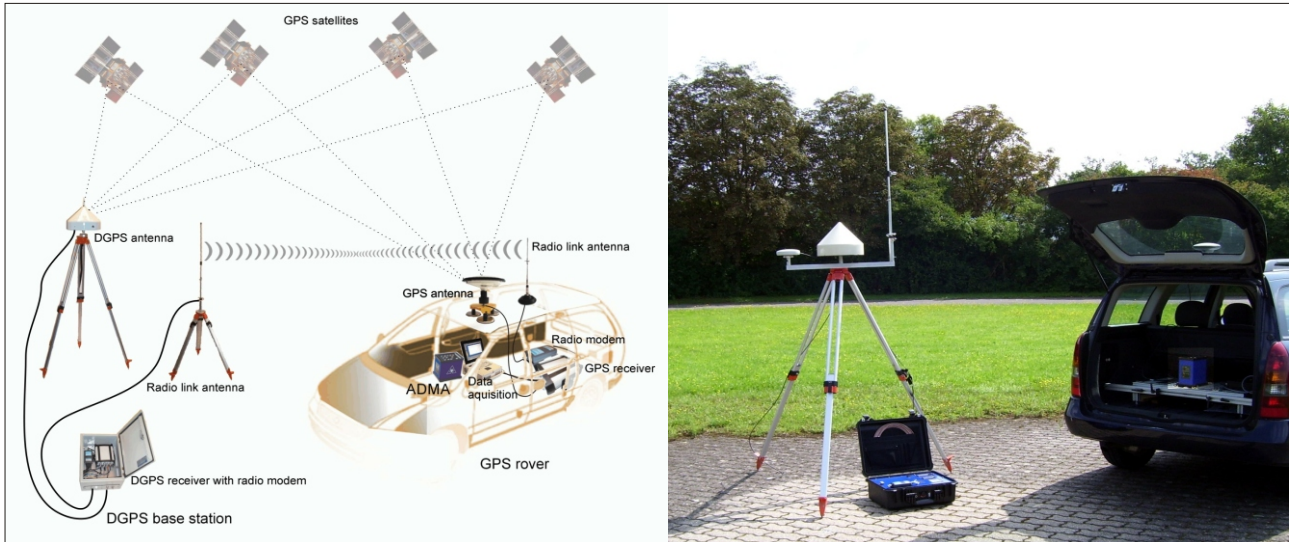




GPS Outdoor Base Station



DGPS-Correction Data Transmission for High-Precision GPS

The GPS Outdoor Base Station is designed for the easy-to-use generation of DGPS correction data for the mobile GPS receiver in or connected to the GeneSys **ADMA** (Automotive Dynamic Motion Analyzer) gyro system. It was developed especially for the dynamic testing of automobiles. The GPS outdoor base station is required to achieve highly accurate RTK2 position data (approx. 2 cm) with the mobile GPS receiver.

Special features

- △ For fast installation on the proving ground
- △ Based on NovAtel L1/L2 GPS receiver with PAC™ technology
- △ Wireless RF data transmission with 380 ... 470 MHz, 1 W for short range applications (< 3 km)
- △ Optionally up to 3 GSM modems for long range applications
- △ Complete systems with tripod, antennas, cables
- △ Packaged in rugged transport cases
- △ Easy-to-use operation terminal

Range of applications

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|---|---|
| △ Vehicle driving dynamics analysis | △ Deceleration/Acceleration testing |
| △ Adjustment of chassis systems | △ Tyre testing |
| △ Road holding test | △ Road survey |
| △ Kinematic and elasto-kinematic analysis | △ Track analysis |
| △ Verification of simulation models | △ GIS data acquisition |
| △ Steering robot navigation | △ Verification of driver assistance systems |



Description

The GPS Outdoor Base Station generates DGPS correction data. The DGPS correction data are required to run the mobile GPS receiver in the ADMA-G (-or connected to the ADMA) in high-precision mode with a position accuracy down to 2 cm. ADMA is the sophisticated inertial measurement system for dynamic vehicle testing manufactured by GeneSys. The correction data are transmitted via an internal RF modem or optionally up to 3 internal GSM modems parallel to one another.

The GPS Outdoor Base Station consists of:

- △ a NovAtel OEM4-G2 L1/L2 GPS receiver incorporated into the GPS Base case;
- △ a NovAtel L1/L2 GPS antenna model 533 with 15 m antenna cable;
- △ a SATEL 3AS radio modem 380 ... 470 MHz / 1 W, incorporated into the GPS Base case;
- △ a radio link antenna 410-470 MHz, 6dBd with 10 m antenna cable;
- △ up to 3 GSM modems incorporated into the GPS Base case (optionally);
- △ up to 3 GSM dualband antennas with 10 m antenna cable (optionally);
- △ power and communication cables;
- △ integrated operation terminal;
- △ a robust transport case for the aforementioned items;
- △ a tripod with antenna mounting adapter;
- △ a robust transport case for tripod and antenna mounting adapter.

Technical Data

GPS Base case (w.o. GSM option):	<ul style="list-style-type: none"> △ Power supply: 10-30 VDC, 4 A max. △ Accumulator: 24V, 7 Ah △ Charging time: 7 h △ Operating time: > 10 h △ Dimensions (W x L x H): 464 x 394 x 191 mm △ Positions to save: 10 △ Weight: 13.5 kg △ Temperature range: -20 to +55 °C
Radio modem:	<ul style="list-style-type: none"> △ Frequency range: selectable 380 ... 470 MHz △ Channel spacing: 12.5 kHz or 25 kHz selectable △ Carrier power 10 mW ... 1W / 50 Ohms adjustable △ Radio modem antenna gain: 6 dBd △ Radio modem antenna length: 1.1 m (to be separated into 2 parts for transport) △ Radio modem antenna cable length: 10 m
GSM modems (1 ... 3 items optionally):	<ul style="list-style-type: none"> △ Operation modes: GSM 900 / GSM 1800 / optionally GSM 850/ GSM 1900 (USA) △ Additional power consumption: 300 mA ... 1200 mA (output power dependent) △ GSM dual band outdoor antenna 900 / 1800 MHz △ GSM modem antenna cable length: 10 m
GPS receiver:	<ul style="list-style-type: none"> △ NovAtel OEMV-3-L1/L2 △ Correction Data Type: CMR, RTCA, RTCM △ Time to first fix: 50 s (cold start)
GPS Antenna:	<ul style="list-style-type: none"> △ NovAtel active L1/L2 Antenna 533 △ Diameter 308 mm △ Weight 4.1 kg △ Multipath rejection due to choke ring △ GPS antenna cable length: 15 m
Transport case GPS -Base:	<ul style="list-style-type: none"> △ Material: aluminium △ Contents GPS-Base case, antennas, cables and manuals △ Dimensions (W x L x H): 600 x 800 x 410 mm △ Weight: 33 kg (including all items)
Transport case Tripod:	<ul style="list-style-type: none"> △ Material: aluminium △ Contents: tripod, antenna mounting △ Dimensions (W x L x H): 1200 x 300 x 250 mm △ Weight: 14 kg (including all items)

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