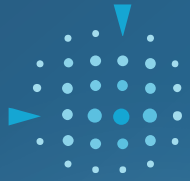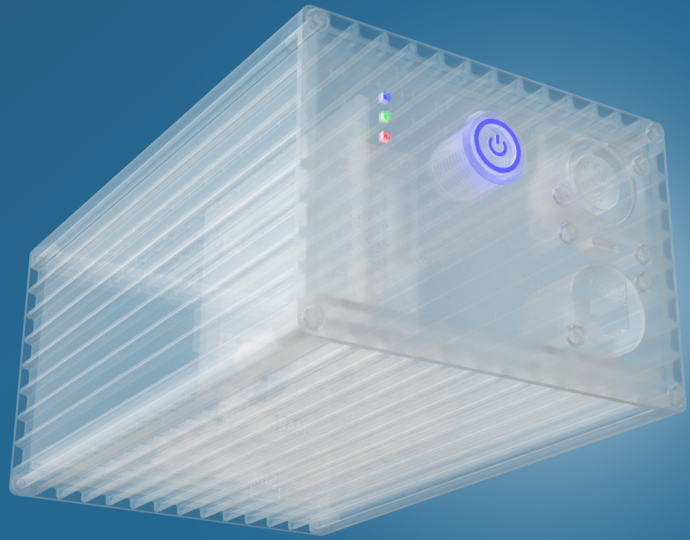# navXperience

next generation GNSS receivers

OSR series
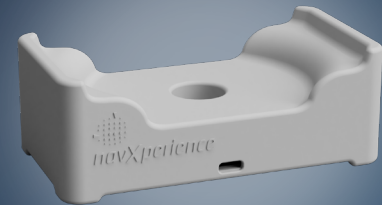
mobile | reference | control

Innovative Engineering - Made in Germany

Ouer precise GNSS receivers

OSR series

OSR mobil

Our new development OSR mobile is a so-called Smart antenna with a completely new concept. The inductive rapid charging of the batteries, the robust workmanship and the absolutely low power consumption stand for this new technology - Made in Germany.

Even under the most difficult conditions, we have battery life of more than 8 hours. Our intelligent management ensures careful use of the valuable battery resource and thus a long service life.

With a smartphone you have full access to all functions of the OSR mobile at all times, with fast and modern WLAN and Bluetooth you have wireless communication options.

The OSR mobile can be used as a reference station and also as a rover. All standard interfaces are available (e.g. NTRP, RTCM, RINEX). Of course we work with multi-frequency data from Galileo, GPS, GLONASS and Beidou. The use of the OSR mobile in the moving baseline procedure is also possible.

OSR reference

Our OSR (open source receiver) is the fi rst programmable reference station receiver in the world and designed for your CORS network with all important features, like a web interface, Linux or Window OS, streaming data and lots of memory (64GB per receiver). The OSR reference has optimal power flexibility for external power input as well as internal battery backup. In a reference receiver configuration, the OSR-Receiver delivers up to fourteen hours operation from the internal battery.

The OSR reference is compatible with every CORS software in the world. Designed to meet the future.

Our OSR reference receives the GNSS signals from Galileo, GPS, GLONASS and Galileo. The robust design, the low power consumption and the unique possibility of optional expansion with external instruments (e.g. weather stations) make the OSR reference receivers unique.

OSR contol

The OSR control is our versatile receiver. It is designed for use as a mobile receiver in machine control applications in the construction industry and in agriculture. The OSR control is used to monitor buildings and can be used for deformation analysis of dams. The built-in IMU allows additional applications and makes the OSR control a powerful GNSS receiver.

The OSR control can be equipped with internal batteries with a battery life of up to 20 hours.

Signals from all satellite navigation systems (Galileo, GPS, GLONASS and Beidou) are received and processed. Our robust housing allows use in extreme environments with high acceleration, strong vibrations and high exposure to environmental influences.

OSR twin control

Our OSR twin control is the extension to receive two GNSS positions simultaneously. He can as s.g. Heading receivers can be used, as well as receivers with two independent positions. Of course, an IMU is also installed here, which is freely configurable and its data is freely accessible to every user, as with all receivers in the OSR series. The OSR twin control can optionally be expanded with batteries and a radio modem. This means that it can be flexibly configured for all areas of application.

The OSR twin control also receives and processes the signals from all satellite navigation systems (Galileo, GPS, GLONASS and Beidou). The same housing concept is used here as with the OSR control, which is suitable for all environmental conditions.

Optionally, an extension to three antenna connections is possible.
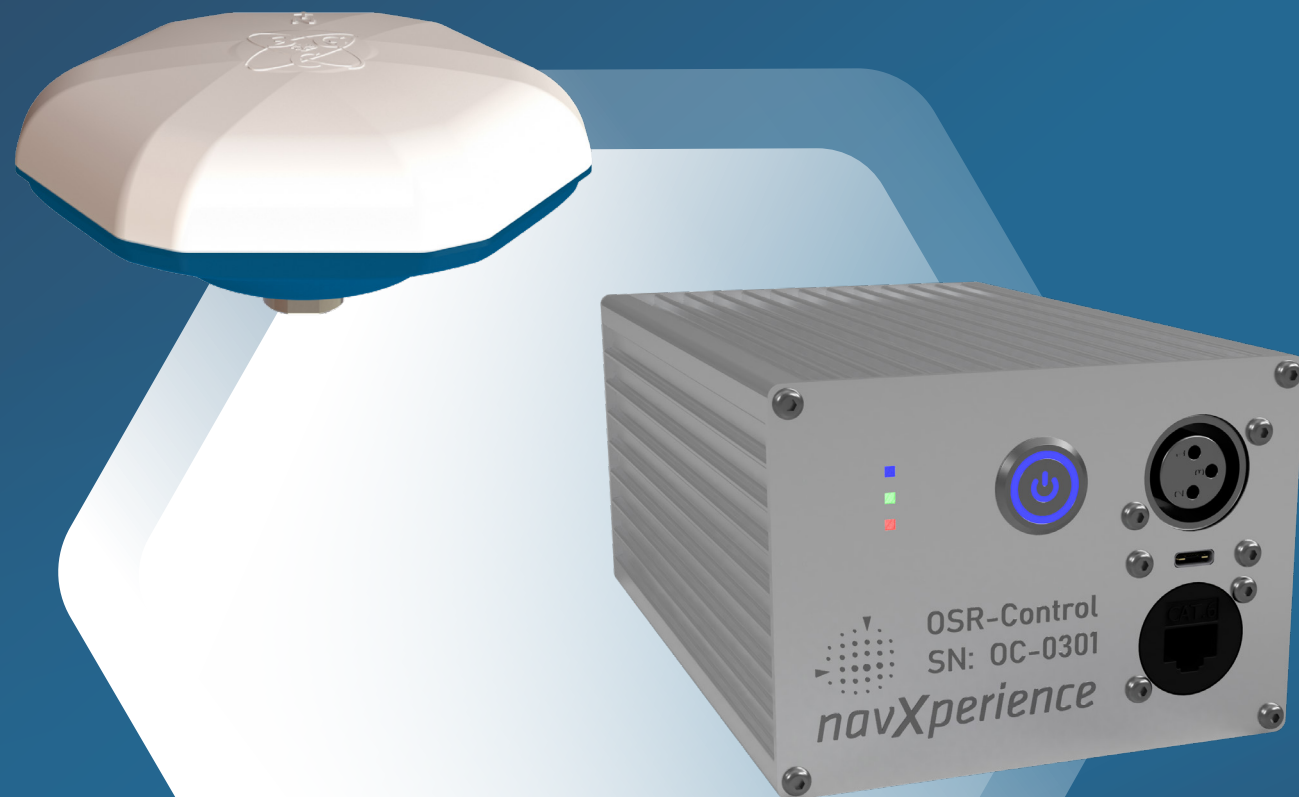
Technical Data

GNSS Parameter	GPS L1C/A L2C GLONASS L1OF L2OF Beidou B1I B2I Galileo E1B/C E5B
RTK configuration	20 Hz
Cold start ???	20 sec
Warm start ???	2 sec
RTK accuracy	< 1 cm
Postprocessing	< 2 mm
Time pulse	0,25 Hz bis 10 MHz
Hardware	Integrated IMU free configurable
SD card	32 GB
GSM modul	LTE
USV	6 h, optional 12 h
TNC	female antenna connector (back)
Voltage	9 up to 30 volt
Ports	USB C RS 232 serial ethernet port
Consumption	< 3,5 watt (including antennas)
Operating temperatur	-45° up to 85° C

Web interface - functions and protocols

Our OSR (open source receiver) series are equipped with a LINUX operating system. Access to that Operating system will be activated free of charge on request. After switching on again, the receiver also starts the last configuration.

These protocols are available by default: NTRIP, NMEA, RTCM 3.3, RINEX and OSRP raw data as Data logging and over TCPIP ports.

PVT: General displays like time, RTK mode, PDOP, Output Interval (1 to 20 Hz), Position in ECEF, Lat, Lon, ETRS89 speed and received satellites.

Geoid: A geoid model can be stored here.

NTrip: An NTRIP client can be configured here.

IMU: IMU configuration and calibration. Measurement of acceleration, angular velocities, temperature, 6 axis sensors. Accuracy 0.004° per sec and Resolution 0.00006g.

Satellites: Information about the receiving satellites such as azimuth, elevation, signal strength and status.

Satellites History: Number of satellites connected to time interval.

Skyplot: Visual representation of the satellites.

Survey: Simple recording of measuring points.

OSRP Data Record: Recording of raw and measurement data in the Jason-based data format.

RINEX Data Record: Configuration of the recording of 2 different data rates. It will zip and Hatanaka compression with RINEX 2 and 3 support.

Raw Data Record: Raw data recording.

RTK Config: Including configuration of base or rover, coordinate system, elevation mask, signal level and accuracy.

Log Messages: Setting of 24 parameters and Error messages included in a daily log to be written.

Info: System information such as the last log file that Entries, last boot and firmware version.

Explorer: interface for copying and deleting Data.

Connetions: Display and configuration of the ports, as well as the settings for FTP and SFTP.

Maintenance: System information on processor performance, Memory usage, processor temperature and board, uninterruptible power supply status, Battery capacity, setting of maximum sizes the recording folder, specifying the Users and passwords, firmware update and restart the system.
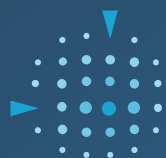
navXperience

next generation GNSS technology

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