RECORD AND REPLAY SOLUTIONS

- Implementation of customized solutions for GNSS record and replay
- Availability of mobile recording platforms
- Interference detection and characterization
- Record and replay solutions for PRS systems

YOUR COOPERATION OPPORTUNITIES

- **Applied research and customized development**
- **System design and evaluation**
- **Prototyping and licensing**
- **Independent consulting**

INTERESTED?

Contact us.

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Fraunhofer IIS

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

GNSS BASED LOCALIZATION



AT A GLANCE

Satellite-based navigation can be used independently of other infrastructures in outdoor environments. We develop customized, high-precision receivers for specific applications that process signals from a combination of different sources including Galileo, GPS, GLONASS, BeiDou and SBAS on multiple frequency bands. As well as being free from infrastructure constraints, our GNSS solutions are uniquely precise, reliable and secure.

WE OFFER

Receivers for GNSS signals including Galileo Public Regulated Service (PRS)

GNSS antenna solutions

IC design for GNSS receivers

Evaluation of GNSS receivers and antennas

Record and replay solutions

RECEIVERS FOR GNSS SIGNALS INCLUDING GALILEO PRS

- Development of customized solutions, also through the use of commercial GNSS components
- Adapting and expanding components based on Fraunhofer's GNSS receiver development platform (GOOSE):
  - Support for multi-system, multi-frequency signal processing (GPS L1/L2C/L5, Galileo E1BC/E5 AltBOC, GLONASS G1, BeiDou B1, etc.)
  - Sensor fusion: deep coupling with inertial sensors
  - Vector tracking with an open interface and support for customized solutions
  - Fast acquisition
  - Carrier phase solution
- GOOSE receiver platform for rapid prototyping, smart antenna, proof of concept, etc.
- Development of conventional PRS and server-based receivers

GNSS ANTENNA SOLUTIONS

- Navigation antennas for the L- and S-band
- Measuring and characterizing GNSS antennas
- Development of customized GNSS antenna solutions
- Development of array antennas

IC DESIGN FOR GNSS RECEIVERS

- Development of analog, mixed-signal and digital ASICs for GNSS receivers
- Multiband front-ends
- Integrated GNSS receivers

EVALUATION OF GNSS RECEIVERS AND ANTENNAS

- GNSS simulators for multi-band, multi-system signals (GPS, Galileo, GLONASS, BeiDou) incl. regional and SBAS systems (QZSS, WAAS, EGNOS) with generated inertial test signals
- PRS-suitable record and replay systems with mobile applications (Flexiband USB front-end)
- Anechoic chamber including over-the-air wave-field-synthesis test environment
- Development of Galileo PRS simulator components for Spirent's GSS9000 (»[prs]ware«)