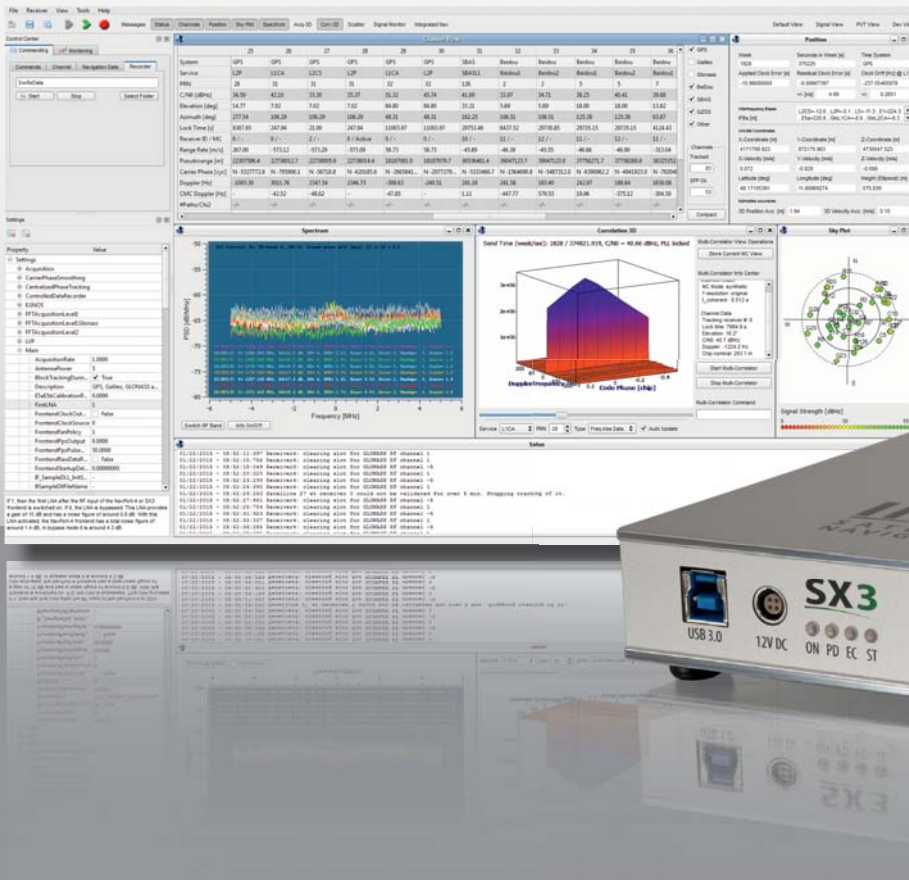


SX3 GNSS Software Receiver



Beyond Signal Processing

Real-time capable Multi-GNSS Software Receiver.
Supports all L-band and S-band RF frequencies.

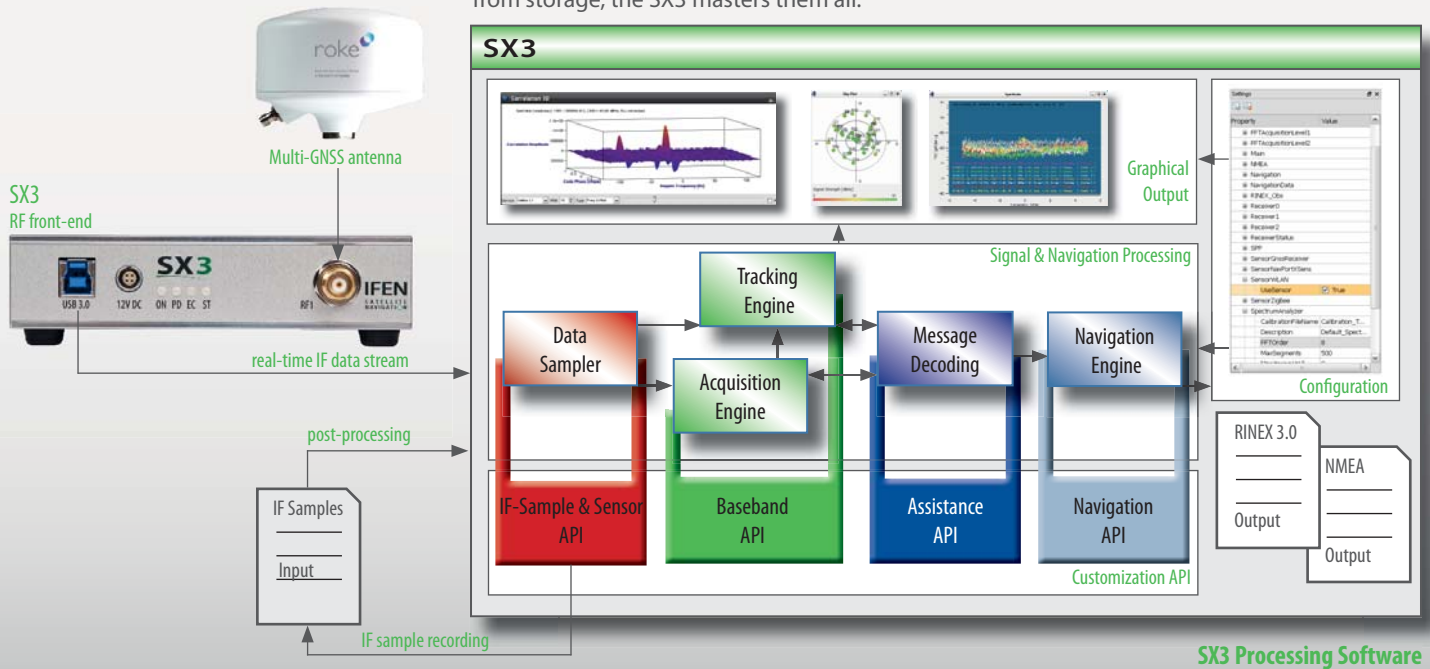


SX3

GNSS Software Receiver

HW & SW Architecture

The SX3 is a modular multi-GNSS software receiver, with superior flexibility and performance. Whether processing the RF front-end data stream in real-time or post-processing of IF samples from storage, the SX3 masters them all.



Features

Signal Capability

- GPS L1, L2P & L2C, L5 and SBAS L1
- Galileo E1, E5a, E5b (incl. AltBOC) and E6
- GLONASS G1, G2
- BeiDou B1, B2
- IRNSS L5 and S(-band)

Flexible and Extendible

- Real-time and post-processing capabilities
- GNSS signal upgradeability by SW license

Application Programmers Interface

- IF-Sample logging API (baseline)
- Navigation API (baseline)
- Sensor data injection API (optional)
- Baseband acquisition & tracking API (optional)
- Assistance API (optional)

Applications

- ▶ Multipath and spoofing signal evaluation
- ▶ Interference monitoring
- ▶ Weak signal investigation
- ▶ Ionospheric scintillation
- ▶ Sensor fusion (IMU, magnetometer)

Specification

Performance

- Real-time channels 300 channels on Intel Core i7-4790k (at 60% CPU load)
- Measurement rate up to 25 Hz
- Measurement latency < 70 ms
- Acquisition sensitivity 19 dBHz
- Tracking sensitivity 10 dBHz
- Code accuracy < 20 cm
- Carrier accuracy < 1 mm
- Mean TTFF < 1 s with ephemeris & position < 10 s with ephemeris < 55 s cold
- Maximum velocity 600 m/s

Hardware

- RF front-end 4 RF chains simultaneously with 50 MHz RF bandwidth each
- Computer system high performance Intel Core-i7 based HW

Software

- Supported operating systems Windows 7
- Configuration and control local GUI or remote via TCP/IP

Interfaces

- Real-time interface from RF front-end to computer system USB 3.0
- 1 RF in TNC female (50 Ohm)
- 1 PPS out BNC female (50 Ohm)
- 1 external trigger in BNC female
- 10 MHz external oscillator in BNC female (50 Ohm)
- 10 MHz internal reference out BNC female
- Additional data sources external IMU/magnetometer sensor
- Output format RINEX, NMEA and proprietary ASCII logs
- Reading of IF-samples for post-processing from file

Notes

Disclaimer:
All specifications subject to change without prior notice

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