

SX3 Black Edition GNSS Software Receiver



Dual-RF Signal Processing

Dual-RF capability with Multi-GNSS Software Receiver.
Select your Dual-RF/Dual-Frequency combination.

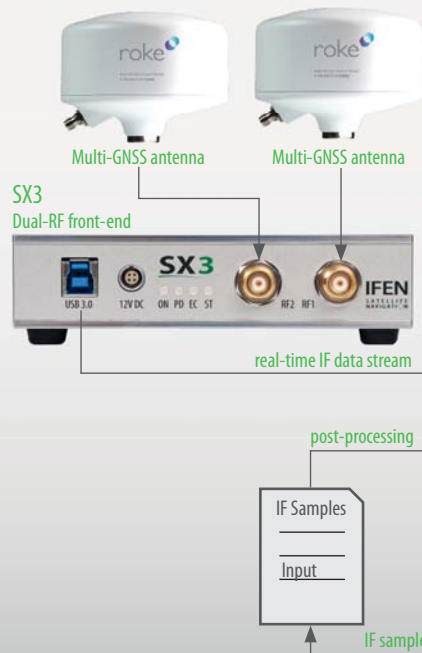
GPS	L5	L2	4 RF chains with 50 MHz RF bandwidth each	L1
Galileo	E5	E6		E1
GLONASS	G3	G2		G1
BeiDou	B2	B3		B1
IRNSS	L5			

GHz 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5

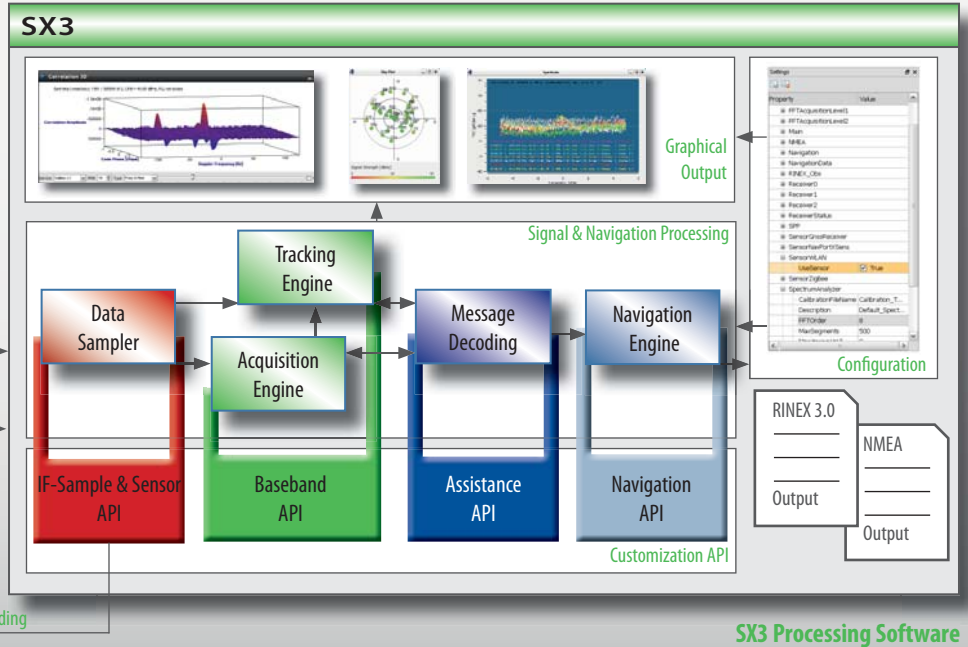
SX3

Black Edition GNSS Software Receiver

HW & SW Architecture



The SX3 Black Edition is a modular dual-RF multi-GNSS software receiver, with superior flexibility and performance. Whether processing the Dual-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)

Dual-RF Capabilities

- Heading (baseline)
- GNSS signal reflectometry (optional)

Applications

- ▶ Antenna Diversity
- ▶ Ionospheric scintillation
- ▶ Multipath and spoofing signal evaluation
- ▶ Interference monitoring
- ▶ Weak signal investigation

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

- Dual-RF front-end 2 RF chains with 50 MHz RF bandwidth per each RF input
- 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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