NavX®-NTR

GNSS Navigation Test Receiver

GNSS Receiver for Test & Customization

NavX® - Leading Edge GNSS Test Solutions

GPS
Galileo
GLONASS
GNSS

Software (defined) signal processing
Flexibility

Supports up to six frequencies simultaneously
Frequencies

The primary objective is to provide a high performance and full flexible test receiver for all types of GNSS systems. Thus the NavX®-NTR fully supports existing GPS and GLONASS, but also the coming Galileo system.

The signal processing is fully flexible. The high performance correlation engine with up to 54 signal component combined channels (SC^3) is implemented in a powerful sets of FPGAs. Signal acquisition and tracking are realized on a high performance embedded ARM Cortex A8.

Supporting up to six L-band frequencies in parallel, the NavX®-NTR multi GNSS test receiver supports all current GNSS transmission frequencies. Due to its plug-in design, the RF-front-end can be easily customized for special filtering and other frequencies.

Made in Germany

IFEN GmbH
Alte Gruber Str. 6
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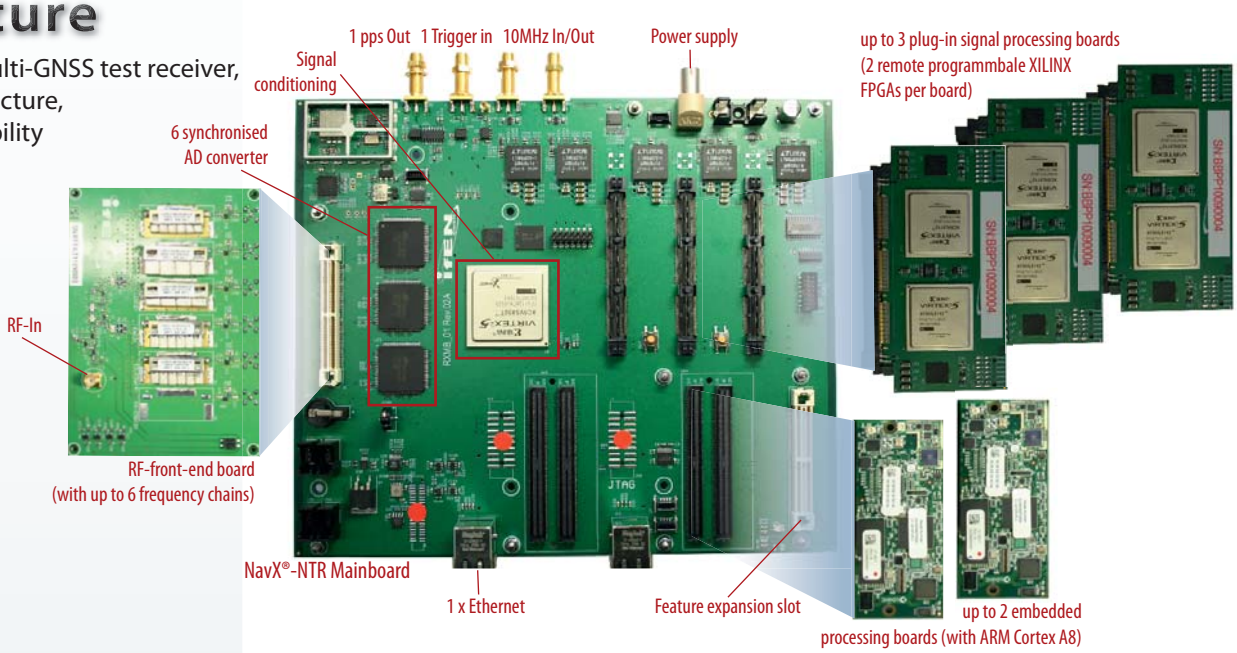
Germany

NavX®-NTR

GNSS Navigation Test Receiver

Architecture

The NavX®-NTR is a multi-GNSS test receiver, with a modular architecture, offering superior flexibility and performance.



Specification

Measurements

- Update rate: 1 Hz
- Latency (output) 300 msec

Tracking Performance

- Code accuracy (typical*) < 2 ... 20 cm
- Carrier accuracy < 1.5 mm
- TTFF (cold) < 60 s
- TTF (hot) < 5 s

Dynamics

- Velocity: 515 m/s

Physical

- Weight: 7 kg
- Size: 19" housing with 2 HU

Electrical (NTR board)

- Input Voltage: 115 / 230 VAC
- Power Consumption: 30 -50 W

I/O Ports

- 1 RF in
- 1 PPS out
- 1 External trigger in
- 10 MHz external oscillator in
- 10 MHz out
- 1 Ethernet

* e.g. GPS L1 20 cm, Galileo E5ab AltBOC 2cm

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Disclaimer:
All specifications subject to change without prior notice

Features

Signal Capability

- Galileo E1 (BOC/CBOC), E5, E5b, E5ab (AltBOC) and E6 (encryption only for authorized users)
- GPS L1, L2C, L5; GPS L2P will be available in Q4/2011
- GLONASS G1; GLONASS G2 will be available in Q4/2011
- SBAS (WAAS, EGNOS, GAGAN and MSAS) L1 acquisition and tracking

RF Front-End

- Plug-in RF front-end board
- Up to six L-band frequencies simultaneously
- Design optimised to minimise inter-frequency HW bias
- Supports 72 MHZ RF-bandwidth on Galileo E5ab

Correlation Engine

- Scalable up to 3 plug-in FPGA signal processing boards
- Advanced SC³ correlation engine on FPGA processing boards
- Up to 54 SC³ channels for I&Q signals (is equivalent to ~ 108 signal channels)
- Remote upgrade of SC³ correlation engine

Acquisition and Tracking Engine

- Plug-in A&T processing board (on ARM Cortex A8, 600MHz)
- Powerful software based acquisition & tracking engine
- Remote upgrade capability of acquisition & tracking engine

Navigation Engine

- Plug-in NAV processing board (on ARM Cortex A8, 600MHz)
- Remote upgrade capability of NAV engine

Feature Expansion Slot

- For cabapility customization

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