

Simceiver™ A3-R2-U3

GNSS simulation, signal-focused recording, software-receiver analysis and controlled RF playback

ONE SYSTEM. FOUR ENGINEERING MODES.

Simulate. Check. Record. Reproduce.

Simceiver combines ReGen simulation, integrated recording and RF playback with ARAMIS processing. One platform supports live verification, analysis and repeatable receiver testing.

Software: ReGen-CC | Streamer | ARAMIS



Provisional enclosure shown; final panel details may vary.

NARROWER BY DESIGN. MORE USEFUL IN RECEIVER R&D.

Wideband recorders preserve everything in a large RF span. Simceiver instead records the selected GNSS band required for the test and keeps the data directly accessible to receiver-processing software.

01 Selected-band capture

Capture the complete GNSS signal mixture within the configured band of interest, rather than storing unused wideband spectrum.

02 Receiver-matched 2-bit recording

Low-bit digitized-IF recording reflects the quantization used in high-performance GNSS receiver front ends while keeping datasets practical.

03 Verify before recording

Use ARAMIS on the control PC to confirm acquisition, tracking, satellite availability and signal quality - particularly under partial obstruction or attenuation.

04 Process and controlled playback

Inspect and process saved DIF data; where configured, modify it before RF playback without additional analogue record-and-re-record degradation.

THREE INDEPENDENT OPERATING PATHS

A FILE-BASED SIMULATION

Generate a simulated DIF file, then reproduce it as RF through Streamer and/or process it with the bundled ARAMIS receiver or Borre's free MATLAB receiver.

B REAL-TIME SIMULATION

Generate and transmit GNSS signals directly in real time using the 8-bit simulation path; no recording stage is required.

C LIVE-SIGNAL RECORDING

Check the live signal with bundled ARAMIS (SPS, NavIC and SBAS supported); record the selected band, then process it with ARAMIS or Borre's MATLAB receiver and/or reproduce it as RF.

Recording and RF playback are separate modes; there is no real-time record-to-transmit relay path.

Simceiver configurations

Current individually configured USB 3 system and established single-frequency USB 2 platform

CURRENT HIGH-END MODEL

Simceiver A3-R2-U3

USB 3 system with two-channel recording, controlled RF playback and bundled ARAMIS. SUM dual-frequency, or RF1/RF2 independent.



MATURE VOLUME MODEL

Simceiver A1-R1-U2

Proven single-frequency USB 2 Simceiver for universities, teaching laboratories, research groups and OEM applications. Volume orders; MOQ applies.



A four-RF solution is also available; please contact sales.

CAPABILITY MATRIX

Capability	A3-R2-U3	A1-R1-U2
Host interface	USB 3	USB 2
Simulation role	Dual frequency or two independent single-frequency scenarios	Single frequency
Simulator outputs	SUM, RF1 and RF2	One RF output
Recording	Integrated, two selected GNSS bands; 2-bit digitized IF	Integrated, one selected GNSS band
Playback	Integrated controlled RF playback	Integrated controlled RF playback
ARAMIS	Bundled for live and recorded-signal checks	Configured separately
Ordering	Individual configured systems	Volume orders; MOQ applies

SYSTEM AND SOFTWARE

- ReGen-CC real-time simulation and scenario control
- Streamer saved-signal playback workflow
- ARAMIS acquisition, tracking and signal analysis
- Windows control PC; command-line operation available
- 1PPS, reference clock and trigger interfaces by configuration

APPLICATIONS

- Receiver development and regression testing
- University and advanced teaching laboratories
- GNSS signal recording under real conditions
- Navigation algorithm and SDR development
- Custom signal/model work through optional APIs
- Controlled replay of verified field recordings

OFFICIAL QZSS PRODUCT-LINE REFERENCE

The Cabinet Office, Government of Japan, lists the original Simceiver implementation among QZSS supporting products and documents its simulation, recording, playback and analysis functions.

https://qzss.go.jp/en/usage/products/ip-solutions_170202.html