FEATURING
NI VST

RP-6500

500 MHz Wideband
RF Record and Playback

The **Averna RP-6500** is a state-of-the-art wideband recorder to capture **real-world** and **real-time multi-GNSS signals** in the field and **replay** them in a **controlled laboratory** environment.

Averna

RP-6500

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500 MHz Wideband RF Record and Playback

Key Features

Easy to use **RF Studio** user interface

500 MHz wide instantaneous bandwidth

Time-synchronized capture of RF, signals, and messages for easy contextual interpretation

Covers most common wireless protocols from 9 kHz to 6 GHz

High dynamic range (14 bits, >80 dB)

Form factor allows rack mounting or car trunk portability

High performance controller/high throughput with latest storage technology

For contextually-assisted testing, visualize:

- **Histograms**
- **Maps and video interface:** synched with GNSS capture
- **Other synched-to-GNSS digital instrumentation** to richly contextualize the signal recording/playback
- **User-configurable dashboard** to place what's important and disregard the rest, and programmable API

Overview

Bring world-class field measurement into the lab with the Averna RP-6500 Wideband Record and Playback platform. The RP-6500 both records and plays back up to 500MHz of RF spectrum—from 9 kHz to 6 GHz—making it ideal for multi-constellation GNSS applications. The system can also capture other signals such as WiFi, V2x, Radio, TV, cellular or public safety band spectrum.

The system fits into a car trunk for driving/recording applications (or is rack-mountable, if desired), and syncs with both a GPS and Averna's DriveView software, for synchronized location and video capture that is time-aligned with your data.

Multi-Constellation GNSS Record & Playback

Modern GNSS systems often use multiple frequencies in a single constellation. The RP-6500 records wide bandwidth of up to 500MHz, covering all common GNSS bands, and capturing multiple constellations simultaneously. Designed for GNSS-specific signal conditioning, the system includes a bias tee, amplifier, & attenuation for use off-the-shelf with GNSS antenna solutions.

RF Studio User Interface

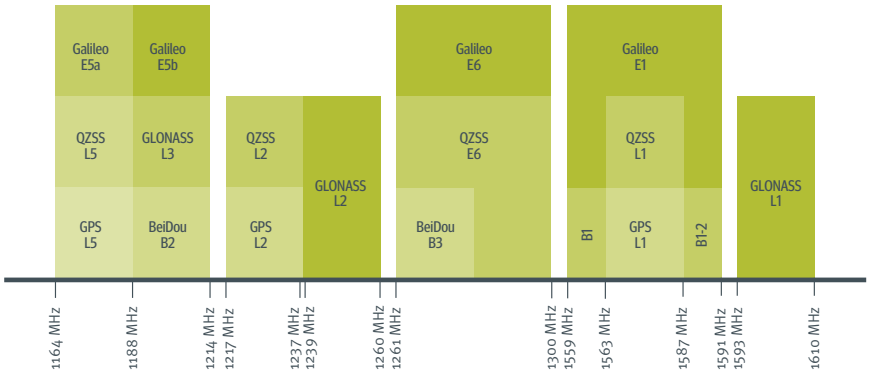
The RP-6500 is preloaded with **RF Studio**, a powerful RF record/playback software for capturing real-world RF spectrum, including GNSS, radio, video & location data. A state-of-the-art workflow tool, the RP-6500 series lets you quickly set up your recordings, add contextual data, visualize weak signals, and analyze your collected RF environments to validate and fine-tune your designs and products.

With RF Studio, visualize, capture & play back all the real-world RF spectrum you need to accelerate your designs & get to market fast!

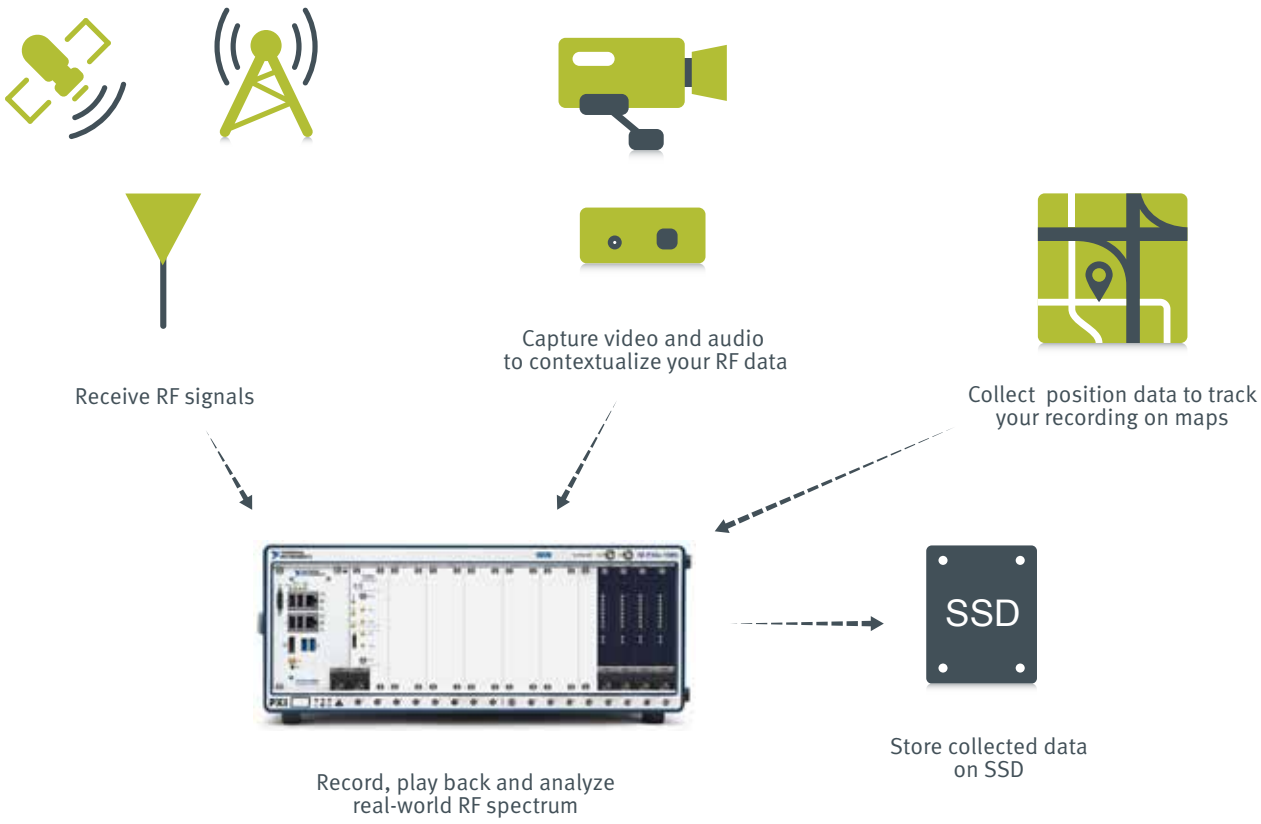
Need an All-In-One Solution to Simulate, Record & Play Back RF Signals?

Today's RF experts, engineers and scientists need a comprehensive RF Record-and-Playback solution to accelerate their product design, validation and research projects (an example: analysis and validation against spoofing/jamming). That's because there's no substitute for working with real-world RF signals. They provide the accuracy and repeatability not possible with drive tests or simulations.

The GNSS Spectrum



Setup Diagram



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500 MHz Wideband RF Record and Playback

RP-6500 500 MHz Wideband RF Record and Playback

RP-6500 Series: Multi-Channel RF Record & Playback Powerful, cost-effective RF solutions for capturing GNSS, WiFi, LTE & more

RF Studio: RF Record & Playback Software Easily record and analyze RF, audio and video as well as NMEA data*

*With DriveView option

RP-6500 Series Technical Specifications

Center Frequency	Bandwidth	Approx. Storage Time @ 16 TB, SSD
› 410 MHz - 650 MHz	100 MHz	~8.3 hr
› 650 MHz - 1.3 GHz	200 MHz	~4.6 hr
› 1.3 GHz - 5.75 GHz	500 MHz	~1.8 hr

Averna Record & Playback Comparison Chart




Feature	RP-6500	RP-6100	AST-1000	URT-5000
Record & Playback	√	√	Optional	N/A
Playback	√	√	Optional	√
Control Generation & Simulation	No	No	Radio, GNSS, Video, Connectivity	Radio, GPS
Frequency Range	9 kHz – 6 GHz	10 MHz – 6 GHz	9 kHz – 6 GHz	140 kHz – 2.5 GHz
Channels/Bandwidth	Up to 1 @ 500 MHz	Up to 4 @ 40 MHz Up to 2 @ 80 MHz	Up to 2 @ 200 MHz	Up to 1 @ 20 MHz/ Unit (expandable)
Storage	Up to 32 TB SSD	Up to 16 TB SSD	Optional	Up to 4 SATA HDD 500 GB
DriveView	Optional	Optional	Optional	Optional
Portable	Customizable	RP-6120P	Optional	N/A

All characteristics described in this document are based on the manufacturing design. This equipment information is only for product description and is not covered by warranty.

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