

FEATURING
NI VST

RP-6500

500 MHz Wideband
RF Record and Playback



The **Averna RP-6500** is an all-in-one wideband **RF Record & Playback** Solution with **Real-Time GNSS Simulator** and **SATCOM signal generator** designed to support advanced Satellite Navigation applications.

 **Averna**



RP-6500

RP-6500

500 MHz Wideband RF Record and Playback

Key Features

Easy to use **RF Studio** user interface

500 MHz wide instantaneous bandwidth

Covers most common wireless protocols from 9 kHz to 6 GHz

Multi-constellation and multi-frequency GNSS Simulator

Supports SATCOM protocols for Satellite Set-Top Box testing

High dynamic range (14 bits, > 80 dB)

Form factor allows rack mounting or car trunk portability



For contextually-assisted testing, visualize:

- **Histograms**
- **Maps and video interface** synched with GNSS capture
- **Other synched-to-GNSS digital instrumentation** to contextualize the signal recording/playback
- **User-configurable dashboard** and programmable API

→ Overview

Advance your Satellite Navigation projects with the Avera RP-6500 Wideband Record and Playback platform. The RP-6500 can record and playback up to 500 MHz of RF spectrum from 9 kHz to 6 GHz, as well as simulate all common GNSS signals (BeiDou, Galileo, GLONASS, GPS, and QZSS). The system can also generate Satellite communications signals (DVB-S and DVB-S2), making the RP-6500 the ideal platform to cover all your needs, present and future.

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

→ Multi-Constellation GNSS Simulation, Record & Playback

Modern GNSS systems often utilize multiple frequencies in a single constellation. The RP-6500 enables wide bandwidth recording, covering all GNSS bands, and allowing multiple constellations to be captured at one time. The unbeatable combination of a real-world RF record & playback and a real-time GNSS Simulator covers all your design validation needs fast and cost-effectively. 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?

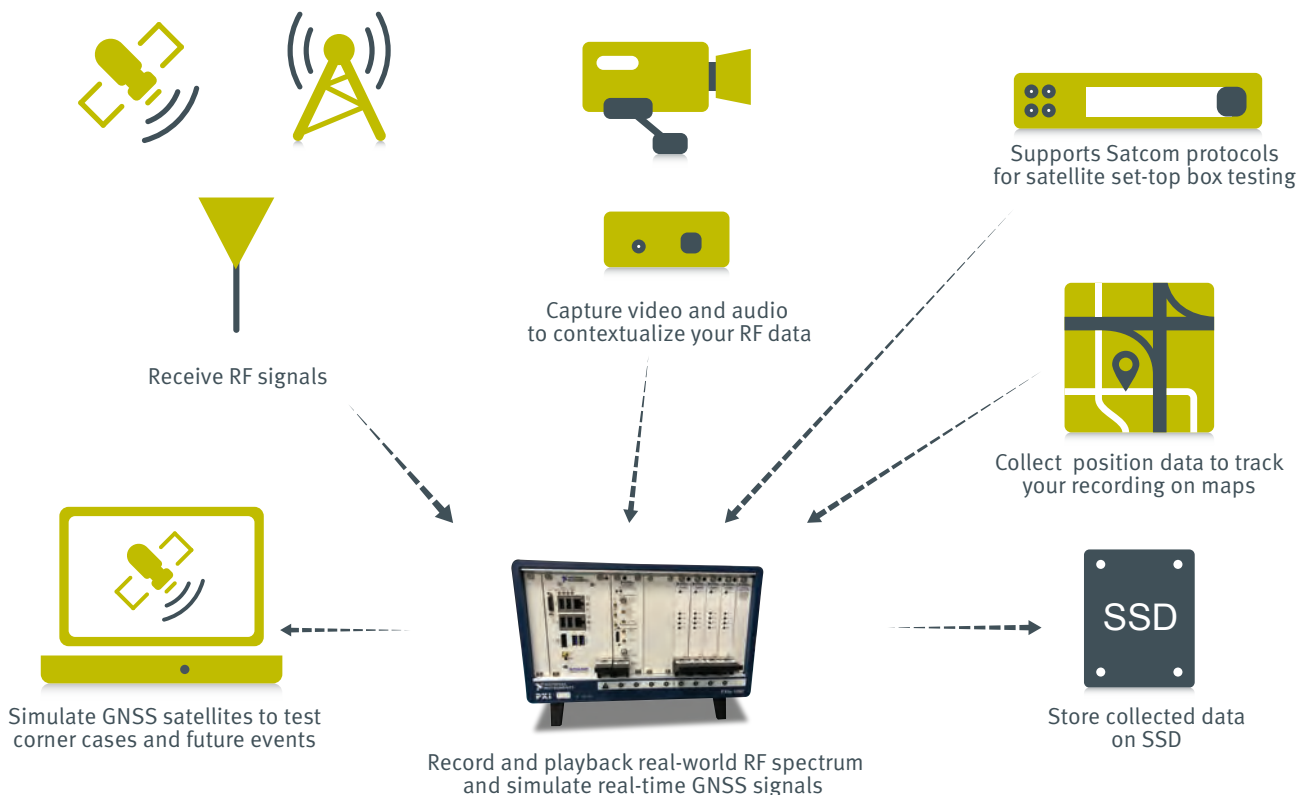
Today's RF experts, engineers and scientists need a comprehensive RF Record-and-Playback solution to accelerate their product design, validation and research projects (an example: analysis and validation against spoofing/jamming).



→ The GNSS Spectrum



→ Setup Diagram









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RP-6500 Series Technical Specifications

Center Frequency	Bandwidth	Approx. Storage Time @ 32 TB, SSD
› 410 MHz - 650 MHz	100 MHz	~16.6 hr
› 650 MHz - 1.3 GHz	200 MHz	~9.2 hr
› 1.3 GHz - 5.75 GHz	500 MHz	~3.6 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	GNSS, SATCOM	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	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
Applications	Satellite Navigation	Field	Infotainment	Lab

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.

IMPORTANT LEGAL NOTE: Every country has different laws governing the transmission and reception and/or recording of radio signals. Users are solely responsible for using their RP-6500 in compliance with all local and applicable laws and regulations governing the transmission and reception and/or recording of radio signals. Averna Technologies Inc. does not accept liability for such use of our products. Averna recommends that you determine what licenses may be required and what restrictions may apply prior to use.



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