



SAT-SIM SATELLITE CHANNEL RECORDER/PLAYER

For Real-World
Testing and Validation

PRODUCT SHEET

CAPTURE. REPLAY. PERFECT YOUR LINK.

The SAT-SIM Satellite Channel Recorder/Player extends the SAT-SIM Satellite Channel Simulator with powerful real-world signal capture and playback capabilities—enabling true-to-life satellite link emulation. By capturing live RF signals and replaying them with precision, SAT-SIM Recorder/Player becomes a vital tool for realistic field testing, link verification, and hardware validation. Fully integrated with the SAT-SIM Simulator, it brings unmatched fidelity to your satellite communication test environment. Supporting up to 250Msps complex bandwidth and up to 4 subchannels, it delivers high-speed recording and playout of real-world signal conditions—including dynamic RF impairments, fading, and interference.

REAL-WORLD SIGNAL CAPTURE FOR LAB AND FIELD

By recording actual RF conditions in operational environments, the SAT-SIM Recorder/Player eliminates guesswork in modem performance testing and integration workflows. Integrated into the SAT-SIM environment, the SAT-SIM Recorder/Player records RF signals from satellite transmission, field test setups, or live networks, and replays them with full signal characteristics, ensuring precise and repeatable lab testing. It is particularly useful when testing terminals in fluctuating RF conditions, capturing events like dropouts, jamming, adjacent channel interference, or complex fading. With swappable SSDs for prolonged recording sessions and intuitive GUI controls, the SAT-SIM Recorder/Player empowers engineers to conduct detailed waveform analysis and recreate edge-case scenarios on demand.

ENHANCE DEVELOPMENT AND REDUCE RISK

Designed for satellite modem vendors, terminal developers, military integrators, and research labs, the SAT-SIM Recorder/Player complements SAT-SIM Channel Simulator to simplify the validation process and shorten development timelines. It offers an ideal environment for stress-testing new designs under real-world conditions, without relying on controlled signal generators that miss RF subtleties. Together with SAT-SIM, it supports full-cycle link emulation—capture, modify, replay—giving developers complete control over testing workflows and system readiness.

HIGHLIGHTS

- Records and replays real-world satellite RF signals with high fidelity
- Supports up to 250Msps complex sample rate across up to 4 subchannels
- Enables capture and playback of full satellite transponders (up to 216MHz)
- Swappable SSDs enable extended recording durations Indoor and outdoor models
- Provides accurate measurements with excellent spurious signal rejection
- Features intuitive GUI for fast setup and operation
- Ideal for capturing hard-to-replicate field conditions and returning them to the lab
- Seamlessly complements the SAT-SIM Satellite Channel Simulator for end-to-end validation

SAT-SIM SATELLITE CHANNEL RECORDER/PLAYER – SPECIFICATIONS

SAMPLING & STORAGE

Sample Rate:

250 Mbps (complex)

Storage:

5 SSD drives, 3.8 TB each

Storage Time (at maximal sample rate):

5 Hours

PHYSICAL, ENVIRONMENTAL & POWER

Dimensions:

Rack mount – 2U, 19"

Weight:

4.5 Kg

Power:

110-240 VAC, 50/60 Hz, 600 W max

ENVIRONMENTAL & POWER

Operating temperature:

0° to +40° C

Storage Temperature:

0° to +60° C

For more information visit
www.novelsat.com

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