

Maury Microwave Solutions for Satellite Communications

Maury Microwave delivers advanced calibration, measurement, and RF test solutions for satellite communications. From signal generation and channel emulation to amplification, RF power measurement, and device characterization, Maury technologies and expertise enable engineers to design, validate, and optimize next-generation satellite platforms with confidence.



Satellite Link Emulation: ACE9600

The ACE9600 Advanced Channel Emulator emulates the physical RF layer of LEO, MEO, and GEO satellite links. Real-time link- and hardware-generated impairments replicate realistic channel conditions for satellite link testing.



Signal Impairment: CNG EbNo & UFX7000B

The CNG Eb/No provides fully automated carrier-to-noise and Eb/No testing by precisely controlling the ratio between a user-supplied carrier and internally generated noise. The UFX7000B enables manual RF signal impairment generation for carrier-to-noise and NPR testing with flexible attenuation control across a wide range of signal levels and frequencies.



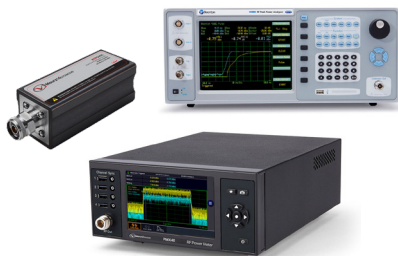
Transceiver Testing & Calibration: Noise Sources

Noise sources serve as a stable receiver reference or BITE for evaluating system performance. Switching in a noise source enables the collection of front-end spectral data for system modeling. Available as diodes, modules, and calibrated sources, they support a range of integration requirements.



Pulsed & CW RF Signal Amplification: MPA-series

MPA-series solid-state amplifiers provide high-power CW and pulsed RF signal amplification for satellite uplink and downlink testing. Covering frequencies from 80 MHz to 98 GHz, the MPA-series delivers stable output power, excellent linearity, and low distortion across wide bandwidths.



RF Power Measurement: RTP5000, PMX40, & 4500C

RTP5000 peak power sensors, the PMX40 RF power meter, and 4500C power measurement analyzer provide accurate CW and pulsed power measurements, along with amplifier compression and latency characterization for satcom systems.



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RF Signal Generation: HSM, HSX9100, & HSY9100

HSM modules, along with the HSX9100 and HSY9100 RF synthesizers, generate high-fidelity signals. The HSM series supports CW and pulsed operation, including TDD pulses, while the HSX9100 and HSY9100 provide single- and multi-channel architectures with low phase noise, frequency accuracy, channel-to-channel stability, and phase coherency.



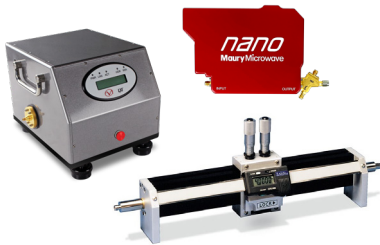
Phase Noise Measurement: HA7162C & HA7162D

HA7162C and HA7162D real-time phase noise analyzers measure phase noise, frequency, and jitter introduced by satcom RF transceivers. Real-time dual FFT engines enable fast, full-bandwidth measurements while the configurable front end allows direct measurement of analyzer noise floor.



Automated VNA Calibration: uCal™

Universal VNA calibration modules (uCal) automate VNA calibration by electronically switching integrated calibration standards. This simplifies the calibration process and reduces human error, enabling fast, repeatable, and highly accurate measurements across multiple calibration sessions and users.



Device Characterization: Manual & Automated Tuners

Manual and automated impedance tuners enable precise impedance control for RF device characterization and load pull testing. Manual and automated tuning allow engineers to evaluate device performance and optimize impedance conditions for satellite system development.



Signal Transport: Stability Cable Assemblies

Stability cables provide reliable, phase-stable signal transmission in satellite communications systems. Designed for low loss and mechanical durability, these cables maintain performance after cable flexure, ensuring measurement repeatability and accuracy.

