Berkeley Nucleonics introduces the RFS-4220T, a benchtop microwave signal generator reaching 22 GHz for under $10,000

Self-contained touchscreen instrument puts calibrated 20 GHz signal generation on the bench, with LAN, USB, and SCPI remote control for automated test.

SAN RAFAEL, Calif., August 20, 2026. Berkeley Nucleonics Corporation (BNC) today announced the Model RFS-4220T, a benchtop RF and microwave signal generator with calibrated output to 20 GHz, settable to 22 GHz, priced under $10,000.

Microwave-class signal generation has long asked engineers to make a trade. Full-size bench instruments carry price tags that strain small-lab and production budgets, while compact PC-tethered modules give up the front panel entirely. The RFS-4220T removes that trade. It packs microwave-class RF performance into a self-contained benchtop chassis: an integrated touchscreen, physical buttons, and a rotary knob put the full instrument at the operator’s fingertips, no external computer required.

For automated and networked test, the RFS-4220T is equally at home under remote control. A matching graphical application controls the instrument over LAN or USB, with automatic device discovery and toggleable multi-session operation so multiple computers can coordinate on one unit. SCPI command support over LAN or USB

drops the RFS-4220T straight into existing test executive environments, and every control surface stays synchronized: a change made from the touchscreen, the front panel, or the software is reflected across all three.

Key specifications

- Calibrated output to 20 GHz, settable to 22 GHz
- Output power to +15 dBm: −45 to +15 dBm below 13.5 GHz, −26 to +15 dBm from 13.5 to 22 GHz, with ±2.0 dB typical accuracy
- Low phase noise and clean spectral purity, with harmonic content below −25 dBc typical
- Internal 10.0 MHz OCXO reference (±10.0 ppb stability) or external 10 MHz reference input, plus an external trigger input for synchronized test
- On-instrument sweep-list storage: create, save, recall, and run list sweeps as CSV files, or upload them from a computer
- Compact 8.6 × 4 × 12.25 in (21.84 × 10.16 × 31.12 cm) chassis weighing 5.6 lbs (2.55 kg)

> “Twenty gigahertz used to mean a large instrument and a larger purchase order,” said John Lauder, Chief Technical Officer at Berkeley Nucleonics. “The RFS-4220T changes that math. We put calibrated 20 GHz performance into a benchtop package you can walk up to and use. At under ten thousand dollars, it earns a place on the microwave bench everywhere from the production floor to the university lab.”

Applications include RF component characterization, local oscillator sourcing, radar and receiver testing, antenna development, EMC pre-compliance work, automated production verification, wireless infrastructure development, aerospace and defense research, and educational laboratories.

Availability

The RFS-4220T is available now, direct from BNC or through local representatives in over 60 countries. An optional three-year service agreement (SA-8000-3) is offered at time of order. Full specifications and quote requests are on the RFS-4220T datasheet page. The complete family is at the RF and microwave signal generators home. A product introduction video is available on YouTube.

About Berkeley Nucleonics

Berkeley Nucleonics Corporation (BNC) has been a trusted name in precision electronic instrumentation since 1963, serving defense, research, academic, and industrial customers with digital delay generators, arbitrary waveform generators, RF/microwave signal generators, pulsed power systems, and nuclear radiation detection equipment. With 60+ years of reliability and responsive technical support, BNC is flexible and listens to your application.

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