System Offers a New Level of Realism in Testing and Evaluation of Advanced Radar and EW Systems

Agilent Technologies announced a range of cutting-edge capabilities that enable economical testing and evaluation of advanced radar and electronic-warfare (EW) systems. Spanning signal-creation software, signal generators, measurement applications and signal analyzers, the additions enable test solutions that provide greater flexibility and cost-effectiveness than typical single-purpose EW threat simulators.

“These highly sophisticated capabilities represent a focused response to requests from designers creating the next generation of radar and EW systems,” said Guy Séné, vice president and general manager of Agilent’s Microwave and Communications Division. “By offering new levels of realism and performance in commercial, off-the-shelf products, we’re delivering the flexibility and cost-effectiveness developers need to handle multiple variations of present and future designs.”

In testing radar and EW systems, the N7620A Signal Studio for pulse building software enables the creation of highly realistic test signals. New options add the generation of pulse-width and pulse-repetition interval patterns, which enhance the realism of radar simulations. Impairments such as jitter and wobulation add even greater realism to simulated pulsed-RF signals. Options include a wide variety of antenna scan and radiation patterns, enabling accurate modeling of antenna behavior.

Signals created with Signal Studio for pulse building can be downloaded into instruments such as the Agilent E8267D PSG vector signal generator. A recent

enhancement to the PSG, Option UNY, typically provides -143 dBc/Hz phase noise (10-kHz offset, 1-GHz signal), which is required for precise simulation of moving-target-indicator (MTI) and pulsed-Doppler radar signals.

Signal analysis is essential to the testing and evaluation of radar and EW transmitters. For detailed analysis of pulsed signals, the N9051A pulse measurement application runs inside Agilent X-Series signal analyzers such as the PXA, MXA and EXA. Recent enhancements to the PXA extend its industry-leading phase noise, displayed average noise level (DANL), and 140-MHz analysis bandwidth to 50 GHz. External mixing extends the frequency range to 325 GHz and beyond.

Optional phase and frequency measurements include pulse-to-pulse phase, pulse mean and standard deviation, and chirp demodulation and analysis. An option for extended analysis and statistics provides numerical and graphical analysis of pulsed signals.

U.S. Pricing and Availability

All of the new capabilities are available now worldwide. List prices are as follows:

• N7620A Signal Studio for pulse building starts at $13,377.
• Option N7620A-205, advanced pulse building, is $6,500.
• E8267D PSG vector signal generator starts at $75,813.
• Option E8267D-UNY, enhanced ultra-low phase noise, is $16,464.
• N9051A pulse measurement software starts at $4,072.
• Option N9051A-3FP, phase and frequency measurements, is $4,124.
• Option N9051A-4FP, extended analysis and statistics, is $2,066.
• N9030A PXA signal analyzer with 50-GHz frequency range starts at $93,639.

More information about Agilent’s pulse-measurement solutions is available at www.agilent.com/find/pulseapps [1].

For more information visit www.agilent.com [2].

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Links:
[1] http://www.agilent.com/find/pulseapps
[2] http://www.agilent.com/