From September 2006 *High Frequency Electronics*

New Instruments Feature Performance, Lower Cost and Connectivity

This issue's cover features new instruments that represent a trend toward greater connectivity and increased performance while lowering the costs of ownership

Agilent Technologies announces three new instruments that represent new approaches to design, resulting in significantly improved performance, reliability and usability.

These products represent a dedicated effort to simultaneously improve measurement accuracy and increase speed, provide universal connectivity, enhance reliability and offer the most accessible user interface—all while achieving the lowest possible cost of ownership.

The Agilent E6601A wireless test set offers high-speed test capability, software-based test applications, and innovative transportable and term licensing options.

Agilent E6601A Wireless Test Set is Designed for Speed, Accuracy, Reliability and Low Operating Cost

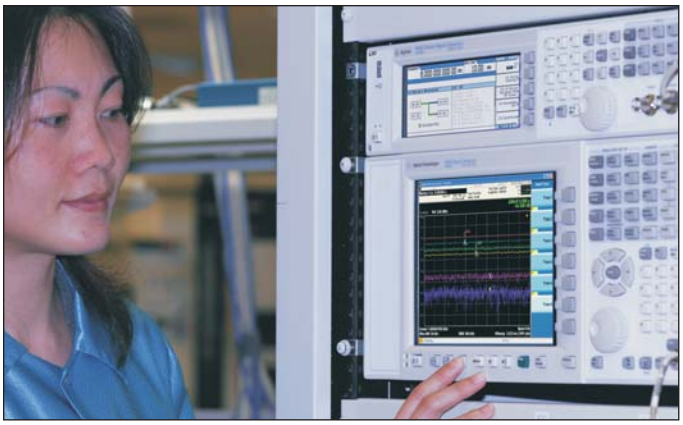
Agilent's next-generation wireless communications test set platform, the Agilent E6601A, is an ideal solution for calibrating mobile phones in high-volume manufacturing. It provides industry-leading measurement speed and integrity, as well as unique scalability, all aimed at driving down the cost of manufacturing test.

The E6601A is an integrated test system in one box. It features a built-in open Windows® XP PC, which allows test programs to be developed, downloaded and executed directly in the system, eliminating the test-system PC. E6601A connectivity is possible via 100 base-T LAN, GPIB and six USB 2.0 ports.

With a completely new measurement architecture designed for high-speed measurements and industry-leading accuracy, repeatability and measurement integrity, the Agilent E6601A significantly lowers the cost of mobile-phone manufacturing test. In addition, the product has been designed for optimal reliability and low cost of ownership.

A key feature of the E6601A test solution is its speed—up to 30 percent faster than other solutions. New calibration applications for GSM/GPRS/EGPRS, WCDMA and HSDPA provide scalable, multi-format capability with only a software upgrade. An optional Fast Device Tune measurement provides breakthrough test-time improvements for mobile-phone calibration, up to 10x faster than traditional methods.

Agilent's E6601A also has flexible licensing options that enable users to effectively manage test assets and reduce capital equipment by purchasing the licensing option best suited to their manufacturing needs. Cost-effective term licenses make it easy to quickly respond to short-term needs for increased test capacity, while transportable licenses allow users to quickly rebalance test capacity.



The Agilent MXG and MXA provide a compact test combination with the MXG providing the test signals and MXA performing the analysis. The MXA's on-board Windows XP PC controls the entire test process, including communications and any user-defined functions.

The E6601A integrated test system is the newest addition to the Agilent Wireless Communications Test Set product portfolio, which includes the 8960 Wireless Communications Test Set. As Agilent's flagship product, the 8960 continues to provide application solutions for wireless device R&D, conformance test, manufacturing, and service and support. Together, the E6601A and 8960 Wireless Communications Test Sets provide engineers with more choices for optimizing high-volume wireless device manufacturing.

The Agilent E6601A Wireless Communications Test Set platform is available now. Pricing is: E6601A Wireless Communications Test Set $27,100; GSM/GPRS Calibration Application $6,000; W-CDMA Calibration Application $6,000.

Agilent MXA Signal Analysis Platform Offers High Performance and Fast Measurements

The new MXA platform allows flexible signal and spectrum analysis measurements for the design and manufacture of wireless communication devices to current and emerging standards. It seamlessly integrates a broad range of standards-based measurements, such as WiMAX, with Agilent's 89601A vector signal analysis (VSA) software—all in a single instrument. In addition to the use of an open Windows XP Professional operating system, the MXA provides an advanced signal analysis user interface. All measurement features and functions are intuitively grouped and accessible from the front panel or via a USB keyboard and mouse.

Optional measurement application software provides preconfigured test routines for testing 802.16e WiMAX, W-CDMA, HSDPA/HSUPA and phase-noise applications. Running the 89601A VSA software application in the MXA enables advanced signal modulation analysis and troubleshooting of the industries broadest selection of formats including 2G, 3G, 3.5G, WiMAX, WLAN, digital video, Private Mobile Radio and many other formats. A complete set of one-button-power measurements are standard. These include ACPR, Channel Power, Occupied Bandwidth, Spectrum Emissions Mask, CCDF, Burst Power and Spurious Emission.

A breakthrough characteristic of the MXA platform is its intrinsic speed, which allows measurements from 30 percent to 300 percent faster than other analyzers. The MXA produces a W-CDMA ACLR fast-mode measurement speed of <14 ms, marker peak search at <5 ms, RF center frequency tune and transfer over GPIB at <51 ms. Measurement mode switching speeds are typically <75ms. This exceptional speed enables a fast and seamless change between WiMAX, W-CDMA, HSDPA/HSUPA, phase noise measurements, and 89601A VSA software.

The MXA platform supports multiple frequency ranges from 20 Hz to 3.6, 8.4, 13.6 and 26.5 GHz, internal preamplifiers up to 26.5 GHz, and analysis bandwidths of 10 MHz or 25 MHz. This fully scalable performance is complemented by MXA's 15 dBm third-order intercept, –151 dBm/Hz displayed average noise level and 72 dB W-CDMA ACLR dynamic range, as well as industry-leading 0.3 dB total absolute amplitude accuracy, which is made possible by the all-digital, 14-bit ADC IF section.

The MXA platform is part of the Agilent Open program, which simplifies test-system setup and integration by offering instruments based on open industry standards, and is fully compliant with the LXI class-C specification. Connectivity is possible via 100 base-T LAN, GPIB and seven USB 2.0 ports.

The Agilent N9020A MXA signal analyzer is available now and priced as follows: N9020A-503 (20 Hz to 3.6 GHz) $25,900; N9020A-508 (20 Hz to 8.4 GHz) $33,900; N9020A-513 (20 Hz to 13.6 GHz) $37,900; N9020A-526 (20 Hz to 26.5 GHz) $42,900; N9020A-B25 25 MHz Analysis Bandwidth $15,000. Additional options are also available.

Agilent MXG Signal Generators Feature Top ACPR Performance and Fast Switching Speed

Agilent MXG analog and vector signal generators are ideal for manufacturing teams producing components and receivers for communications systems. They feature adjacent channel leakage ratio (ACLR) performance at –65 dBc (–69 dBc measured) for a 4-carrier 3GPP W-CDMA signal, and –71 dBc (–76 dBc measured) for a single-carrier signal. This performance allows for greater test margins, ensuring more accurate measurements and improved yield, and also makes the Agilent MXG signal generators ideal for characterizing high dynamic-range components such as multi-carrier power amplifiers.

Agilent MXG signal generators also provide the fastest switching speeds available on the market today, enabling a dramatic increase in throughput. With SCPI programming, the generators can make arbitrary switches in frequency and amplitude at ≤1.2 ms. In list mode, simultaneous switching of frequency, amplitude and waveforms takes place at ≤900 µs.

Simplified self-maintenance is another key feature of the Agilent MXG signal generators, making it possible for all users to maintain or repair the instruments in-house and maximize uptime. Typical onsite calibration can be performed in less than one hour and requires only a spectrum analyzer and power meter. With 100-percent internal diagnostic capability and a simple design consisting of five assemblies including the single RF assembly (all are field-replaceable), the average Agilent MXG repair time is just 30 minutes with no calibration required.

The MXG vector signal generator works with Agilent's proven Signal Studio software to simplify standard-based waveform creation. Signal Studio's 3GPP W-CDMA software includes the latest revisions for HSUPA and HSDPA. Its mobile WiMAX software complies with the latest revision to the IEEE 802.16e-2005 standard. Numerous other standards are also supported.

Agilent's new MXG signal generators are well-suited for use in high-volume wireless component manufacturing, as well as in high-performance, base station MCPA (multi-carrier power amplifier) design and low-volume manufacturing. With a cost-effective price point and an option structure that provides scalable performance, the Agilent MXG signal generators are also suitable for design and manufacturing WiMAX and WLAN receivers for the cost-sensitive wireless connectivity industry.

The Agilent MXG signal generators are fully compliant with the LXI class-C specification and are part of the Agilent Open program, which simplifies test-system setup and integration by offering instruments based on open industry standards. Agilent MXG connectivity is possible via 100 based-T LAN, GPIB and two USB 2.0 ports.

The Agilent N5181A MXG analog signal generator and N5182A MXG vector signal generator are now available. The N5181A has a starting price of $6,200; the starting price for the N5182A is $16,000.

Agilent Technologies Inc.
Agilent E6601A—www.agilent.com/find/E6601A
Agilent MXA—www.agilent.com/find/mxa
Agilent MXG—www.agilent.com/find/mxg
LXI standard—www.lxistandard.org
Agilent Open—www.agilent.com/find/open
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