

AURIGA CTS-3

MULTI-STATE RF MODULE TEST PLATFORM

Multi-State RF Module Testing has never been Faster or More Accurate



Faster than previous generations by multiple orders of magnitude

Ensuring exact results of hundreds—if not thousands—of complex RF measurements during each series of test sequences, Auriga's automated test systems balance technical requirements with everyday business demands:

- Speed
- Flexibility
- Accuracy
- Ease-of-Use



Auriga CTS-3 Signifies Speed

Meeting the ever-expanding requirements of engineering, yet fast enough for automated manufacturing production, the Auriga CTS-3 strikes the perfect balance of flexibility and speed without sacrificing accuracy. Auriga CTS-3 leverages the newest available components and Auriga's 3rd generation measurement software. The result, a state-of-the-art system built for complex, multi-state device testing—such as T/R chips and modules—that measures every device under every user condition with unsurpassed accuracy.



CTS-3 systems feature the latest technology and equipment, such as the Agilent PNA-X and PXA

Auriga CTS-3 Represents Accuracy

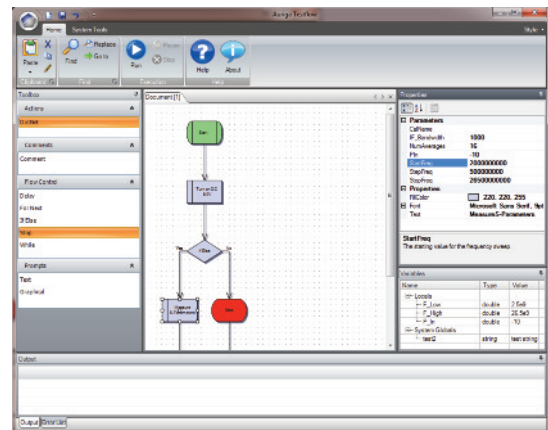
Based on the latest advanced equipment from Agilent Technologies™ and National Instruments™, the Auriga CTS-3 delivers measurements that are precise and efficient. By combining Auriga's software expertise with the performance of Agilent's PNA-X and PXA and National Instrument's digital control and FPGA capabilities, the Auriga CTS-3 is fast, user-friendly, and unparalleled in measurement accuracy.

Auriga CTS-3 Defines Flexibility

Designed for maximum configuration and test measurement flexibility, the System's agile and scalable architecture delivers high-speed, high-volume microwave and millimeter-wave measurement capabilities while providing frequency coverage from 10 MHz to 50 GHz.

For added flexibility, the Auriga CTS-3 also features:

- **Front panel control for manual measurements**
- **Four RF test ports**
- **Optional high-power capabilities**
- **Fast, repeatable, reliable, and stable measurement algorithms**



Easily script even the most complex measurement processes with Auriga Testflow software

Auriga CTS-3 Exemplifies Ease-of-Use

Auriga Testflow software makes even the most complex measurement processes easy to script, so test plans no longer need to be created by someone with specialized programming knowledge. The wide range of intuitive measurement and control objects enables all users—even those without coding skills—to build professional, accurate test flow diagrams. Auriga Testflow software was developed to be user-friendly with a drag-and-drop graphical interface so once a measurement diagram is complete, calibration and execution is as easy as pressing a button.

Auriga CTS-3 Backed by an A+ Team

RF measurement specialists and system designers are Auriga's first line of communication for developing and supporting all Auriga CTS-3 systems. When treated as a member of the customer's development and production teams, Auriga's team of RF specialists help to deliver the best quality product in the most time- and cost-efficient manner.

Of course, there will always be a time when factory assistance is required, and when that time comes, service needs to be accessible, fast, simple, and complete. Auriga's Custom Systems Group is dedicated to exceeding customer satisfaction expectations. Leveraging decades of experience in delivering and supporting systems deployed throughout the world, Auriga customizes support programs to meet even the most demanding customer requirements.

High-frequency Applications Demand High Performance

Aerospace/defense and communications markets are forecasting large growth over the next decade. This growth, driven by new developments in land-, air-, and sea-based radar systems, demands more bandwidth and high-speed information transmission. To lead the market, high-frequency module and MMIC manufacturers must deliver cost-effective components as quickly as possible while maintaining the highest quality and performance. Critical components of increasing complexity, frequency, and capability are deployed in today's satellite arrays, point-to-point radios, multi-function MMICs, and radar T/R modules. All require full testing prior to shipment, and Auriga CTS-3 supports that requirement.

Module Development or High-throughput Production Agility

Ready to test a few devices with numerous measurements, many devices with a few measurements, or thousands of devices with thousands of measurements, Auriga CTS-3 is the right choice. The System has all the essential tools and flexibility for building complex test sequences required for product and process improvement while maintaining the power for optimizing manufacturing production throughput. As a production test system, the Auriga CTS-3 lowers the cost-of-test by delivering high-speed, complex measurement results.

A Tailored System that's Ready for Today, Poised for Tomorrow

Auriga CTS-3 is capable of making a variety of CW and pulsed microwave measurements from 10 MHz to 50 GHz on both linear and frequency-translating devices.

Basic test capabilities of the Auriga CTS-3 include:

- **S-parameters (Mag/Ph), CW and pulsed**
- **DC voltage and current, CW and pulsed**
- **Tuned power incident and output**
- **Gain (linear and conversion)**
- **Gain compression (1, 3, 5 dB)**
- **Gain flatness**
- **Efficiency**
- **Harmonics**
- **Total harmonic distortion**
- **Spurious signals (in-band, out-of-band, known, unknown)**
- **Higher order intercept points**
- **RF pulse profile**
- **DC pulse profile**
- **Pulse droop (Mag/Ph)**
- **Noise figure (vector corrected and cold noise)**
- **Frequency-translation measurements**
- **Extendable to include digitally modulated RF measurements, such as EVM and Envelope-Tracking measurements**

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The Auriga CTS-3 is designed to be customized and optimized for each customer's needs. Auriga's RF measurement specialists and system designers work closely with each customer to ensure the delivered system meets all measurement and performance requirements. Often, the Auriga team will suggest enhancements to the customer's process by leveraging the team's deep history and experience in delivering leading-edge, multi-state RF module test systems.

System Architecture: Auriga integrates the latest in advanced technology from component suppliers to build the core of the System. By leveraging the strengths of vendors such as Agilent Technologies, National Instruments, and Auriga's own sub-systems, the foundation of the Auriga CTS-3 is poised for optimization. Each System is designed and integrated based on end-user measurement requirements and careful consideration is taken to not only meet the customer's measurement demands of today, but to anticipate their needs of tomorrow.

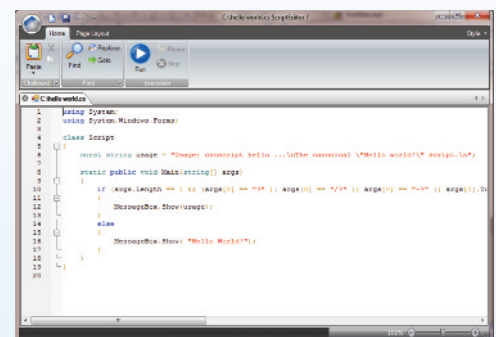
System DUT Control: Featuring analog or digital DUT control, the Auriga CTS-3 provides synchronous DUT control to align measurement triggers with DUT states in a hardware handshake mode. For digital control, Auriga CTS-3 may be configured for as many as 32-bit parallel or serial lines at clock rates up to 200 MHz. For analog control, Auriga CTS-3 may be configured with up to 16 DAC stimulus lines, each capable of +/-10 V (20 mA). Additionally, 32 digital receive channels are provided for DUT response—each capable of measuring up to 10 V.

Software Description: Auriga CTS-3 provides open software architecture designed to support today's growing volume of measurements in production environments while allowing future process improvements, expansion, and upgradeability. The software runs under Microsoft® Windows 7®, Windows Vista®, and Windows XP® operating systems on a PC workstation. If desired, a complete and documented low-level API can be utilized for hardware control.

The Windows operating system provides strong support for existing LAN infrastructures, allowing off-line test plan development, as well as simple access to production data for full off-line statistical data analysis. Standard data formats are available in CSV (comma separated values), Microsoft Excel® and CITI files. Specific data translators can be developed to meet unique requirements.



Launch Pad provides a quick and easy access point for all of the system's capabilities



Script Editor allows the user to run custom code as part of the test flow

