

ROOS INSTRUMENTS



MODULAR ATE SYSTEMS
for the world's most advanced technology

Think Differently

A notion that's well known in Silicon Valley, but increasingly relevant to test and measurement. It's time to boldly challenge the status quo of our industry. To drive the evolution of ATE to meet the demands of ever changing technology. To build better ATE we have to seek answers to tomorrow's test challenges to push beyond the boundary of what's possible today.

How do we design ATE for today's test needs and tomorrow's technology?

How do we make a tester more efficient while providing more capacity?

How do we reduce cost while adding more capability?



dimensions	height	5.9 ft 1.8 m
	footprint	3.9 ft x 3.6 ft 1.2 m x 1.1 m
	weight	220 lbs 99 kg (equipped)
electrical	requirement	100 to 220 VAC
	consumption	<1000 W/hr (equipped)
features	16 instrument slot test head	
	applications from DC to 100GHz	
	precision handler / prober docking	
	instant multi-site scaling	



CASSINI 16

CASSINI

When we ask the right questions, we can design the right solution. Our test platforms offer a fully integrated, modular test system. Bred from the same RF-centric design as its predecessor, the RI7100, Cassini puts all of the measurement resources into compact, swappable instruments to deliver completely configurable ATE with targeted test capability. Combined with a graphical programming environment, Cassini delivers seamless multi-instrument and multi-functional test in a production solution that can be shaped to custom devices, adapted to changing technologies, and scaled to meet demand.

SPYDER

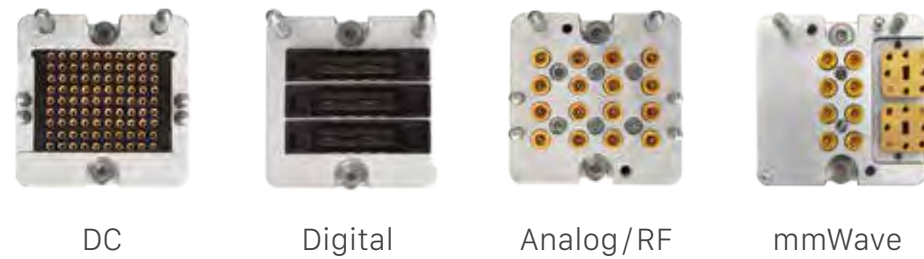


dimensions	height	2.4 ft 0.73 m
	footprint	1.9 ft x 2.5 ft 0.58 m x 0.76 m
	weight	95 lbs 43 kg (equipped)
electrical	requirement	100 to 220 VAC
	consumption	<1000 W/hr (equipped)
features	16 instrument slot test head	
	ultra compact footprint	
	lowest zero-pin cost	
	rapid development	

Measure the Difference



At the heart of Cassini's configurable architecture are Test Instrument Modules (TIMs). These air-cooled, shielded instruments provide all of the source, receive, measure, and signal processing capability for a broad range of DC, digital, mixed-signal, RF, and millimeter wave applications.



Blind mate interfaces — it's the missing piece that transforms a set of modular instruments into a modular test system. Built-in mechanical compliance and self-aligning interfaces create a unified test head that enables faster and more efficient device change out, handler docking, servicing, and upgrades.

Unlimited Test Capability

Cassini isn't just modular instruments, it's a modular architecture and there's a difference. Test Instrument Modules provide the building blocks for a configurable microwave system with resource ports designed to integrate seamlessly, creating a flexible instrument architecture. This gives Cassini drop in measurement capability and frequency extension as well as instant multi-site expansion.

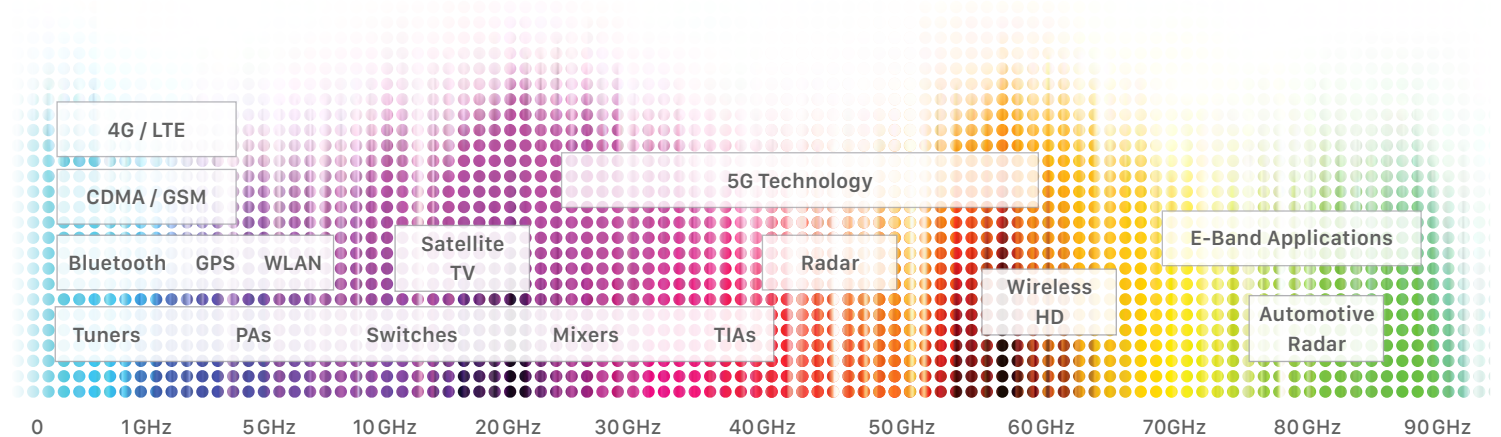


configurable with up to

224 DC Supply Pins

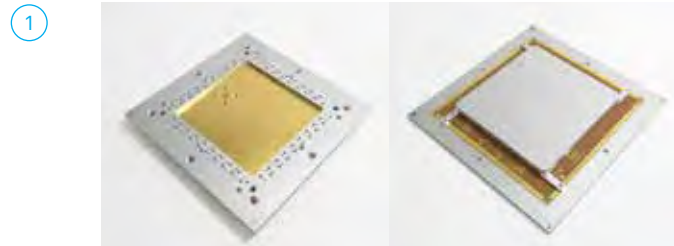
1200 Digital Pins

32 Vector RF Ports

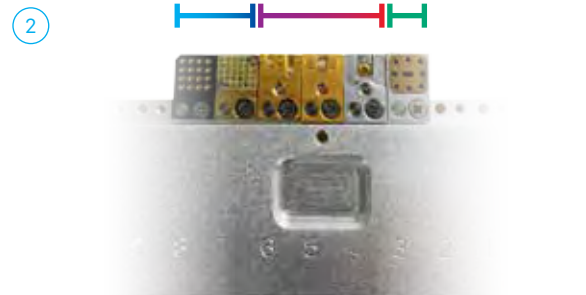


Taking Modular to a Whole New Level

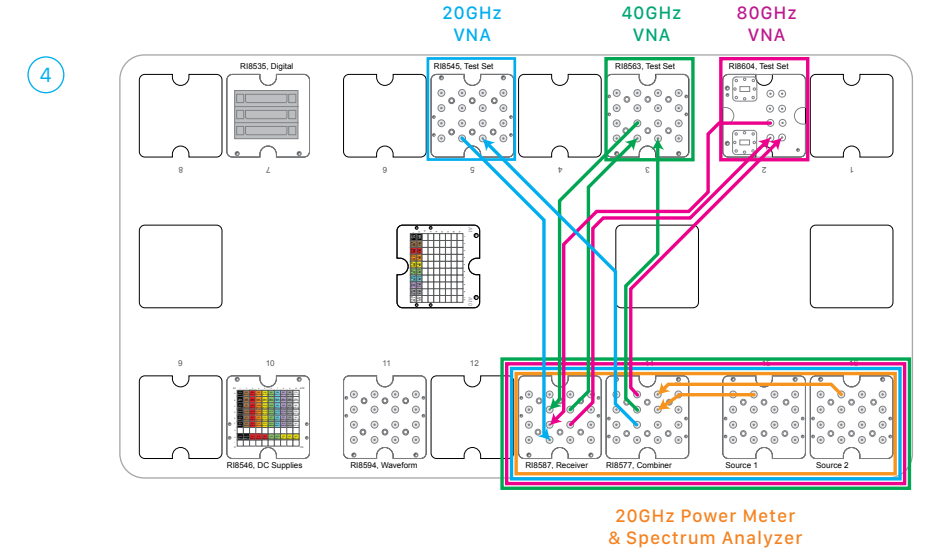
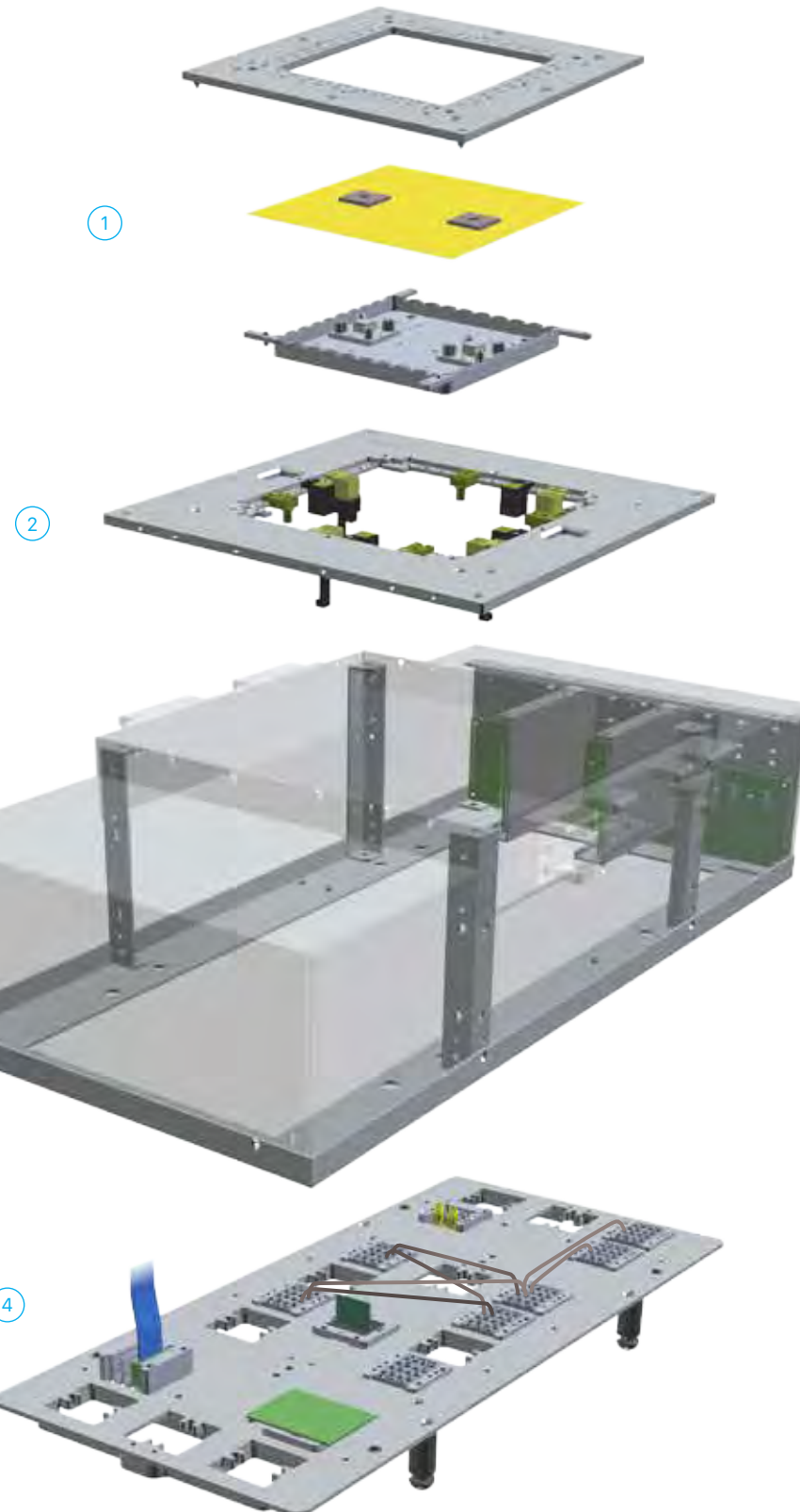
A modular test system is only as modular as its least configurable component. With Cassini fixtures, all of the capability of load boards have been re-engineered to take advantage of a flexible tester integration framework. Standardized interfaces and interchangeable interconnect provide a versatile application environment that can be modified, expanded, and upgraded.



The two-layer PCB and aluminum reinforcement combine high frequency performance and production durability. The design simplifies board layout, reduces the cost of high wear components, and expedites change out and drop-in replacement in production.



Interchangeable blind-mate signal launches enable high density, mixed signal topologies with truly symmetric multi-site layouts for packaged ICs and wafer probing.



A truly unique aspect of Cassini ATE is the RF system integration layer in the device interface. The 16 universal instruments slots accommodate interchangeable interface blocks and interconnect, allowing the test system's architecture to be dynamically configured for each device application.



The aluminum enclosure provides a precision docking interface for handlers or probers on the outside, and an RF shielded environment on the inside. Integration with Cassini's software allows for additional instrumentation and signal switching to extend and enhance test capability with a cascaded calibration layer that guarantees accuracy right to the device pin.

Making the Complex Simple

Accurate measurements are made not only by using the right equipment, but also employing the right practices. The software environment dynamically builds VNA, spectrum analyzer, and power meter functionality from the instrument configuration and resource interconnections. Combined with a code base of over 25 years of microwave test and measurement experience, Cassini delivers streamlined multi-instrument test in a simple, more powerful test work flow. This expert system software enables a user to design and execute sophisticated microwave measurements accurately and reliably every time.



Organize instrument setup, measurement execution, and test flow with an intuitive graphical programming environment. Advanced state flow and algorithm design blocks provide simplified multi-instrument, multi-function measurements.

Built-in user access control provides role-specific application and file permissioning throughout the software environment.

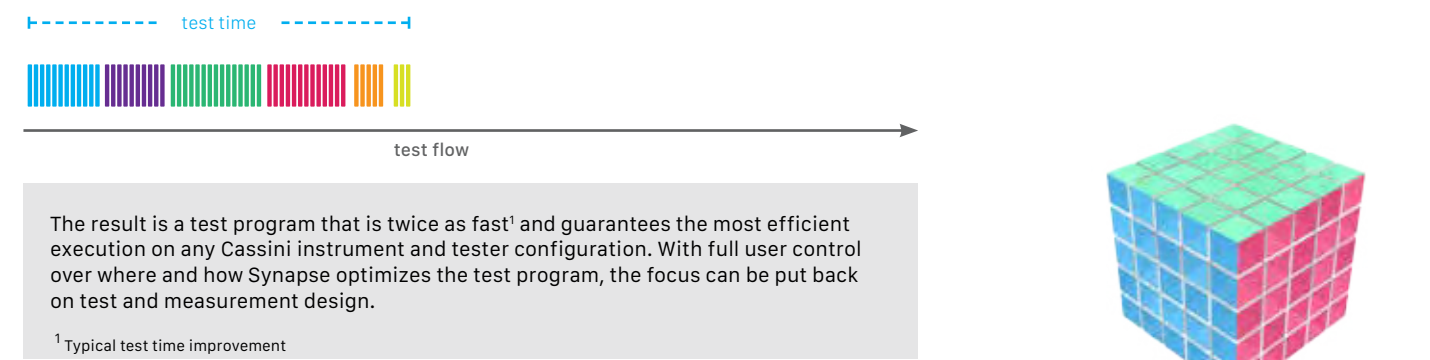
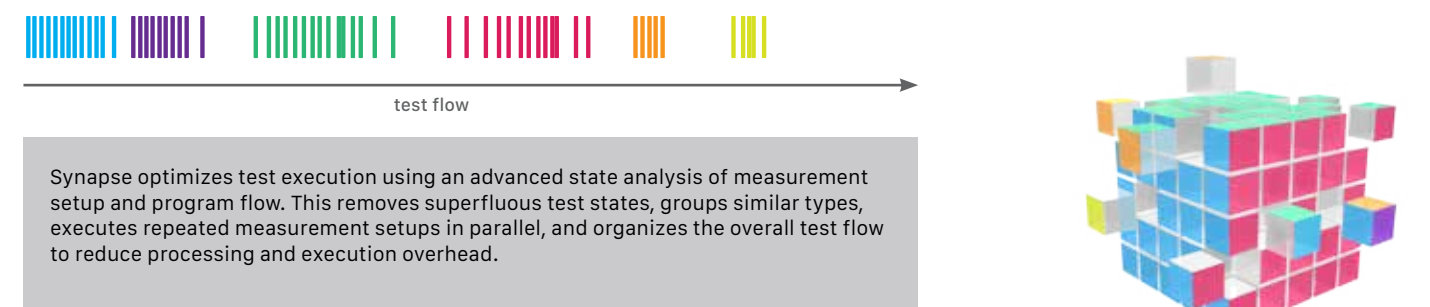
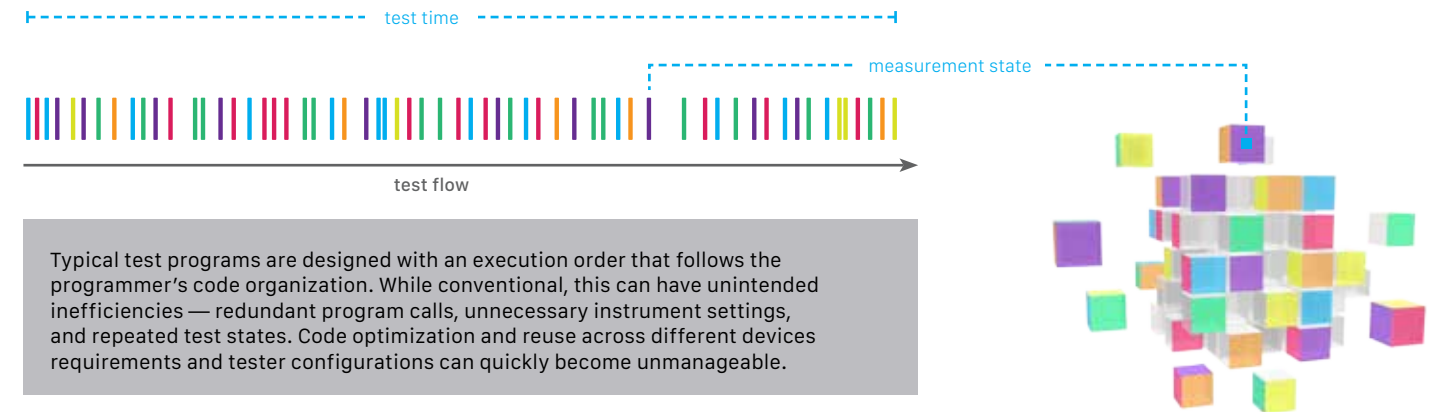
Interactive buttons allow for bench type instrument control during test development as well as in-situ test program debugging.

Advanced data and graphing tools support modern database storage, statistical packages, and third-party software tools.

Full simulation environment for offline test development lets you design from anywhere. With Guru integration, test programs and resources are synced and available across the production floor instantly.

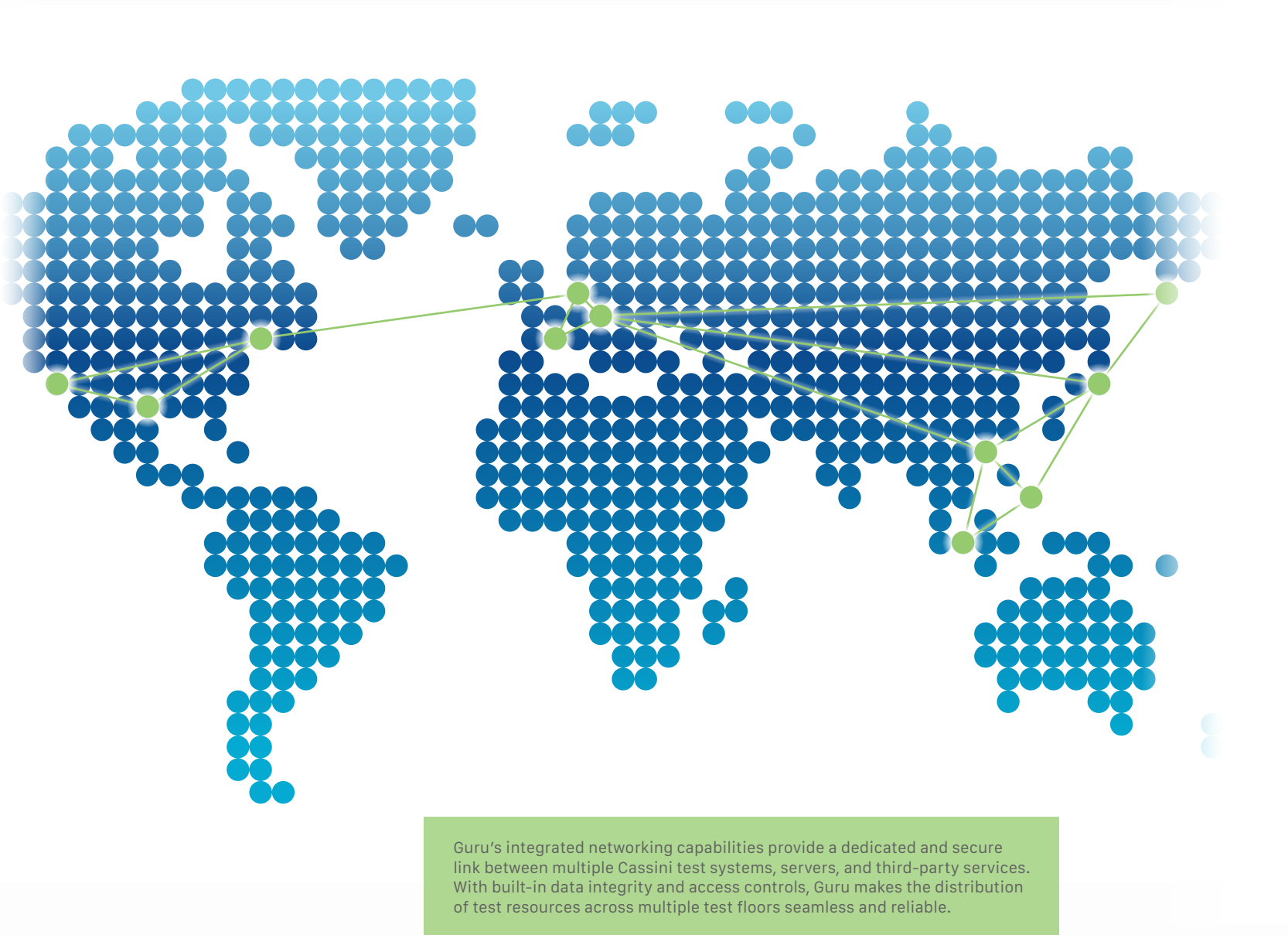
Unleash State Machine Speed

Under the surface of the graphical programming environment is a fundamentally different interaction of software and hardware. Test programs are compiled into a dedicated, run-time state machine on FPGAs that drive the instrumentation and signal processing in real time. This produces faster tests, consistent measurements, and enables a powerful feature never before possible in an ATE system - intelligent test optimization. Built into the compiler is [Synapse](#), a test state optimizer that guarantees the most efficient program execution on any tester configuration.



Building Bridges to Islands of Automation

Managing tester configurations and maintaining consistency across production floors and location sites can be a complex and challenging task. Guru™ provides the enterprise tools and software infrastructure to administer Cassini test systems anywhere in the world. With distributed system management for ATE, you can maximize productivity on the test floor and simplify the logistics of production test.



Guru knows where everything goes

Guru is the first of its kind, integrating the file system with a database and networking backbone to create a seamless software work flow. With an integrated local and network storage architecture, Guru manages file directories, tester configuration resources, and storage space automatically across the entire production floor. Users can create tests and link resources while Guru keeps track of dependencies and distribution for easy organization and quick deployment to production with a host of powerful features.

digitally signs and encrypts files for secure data transfer

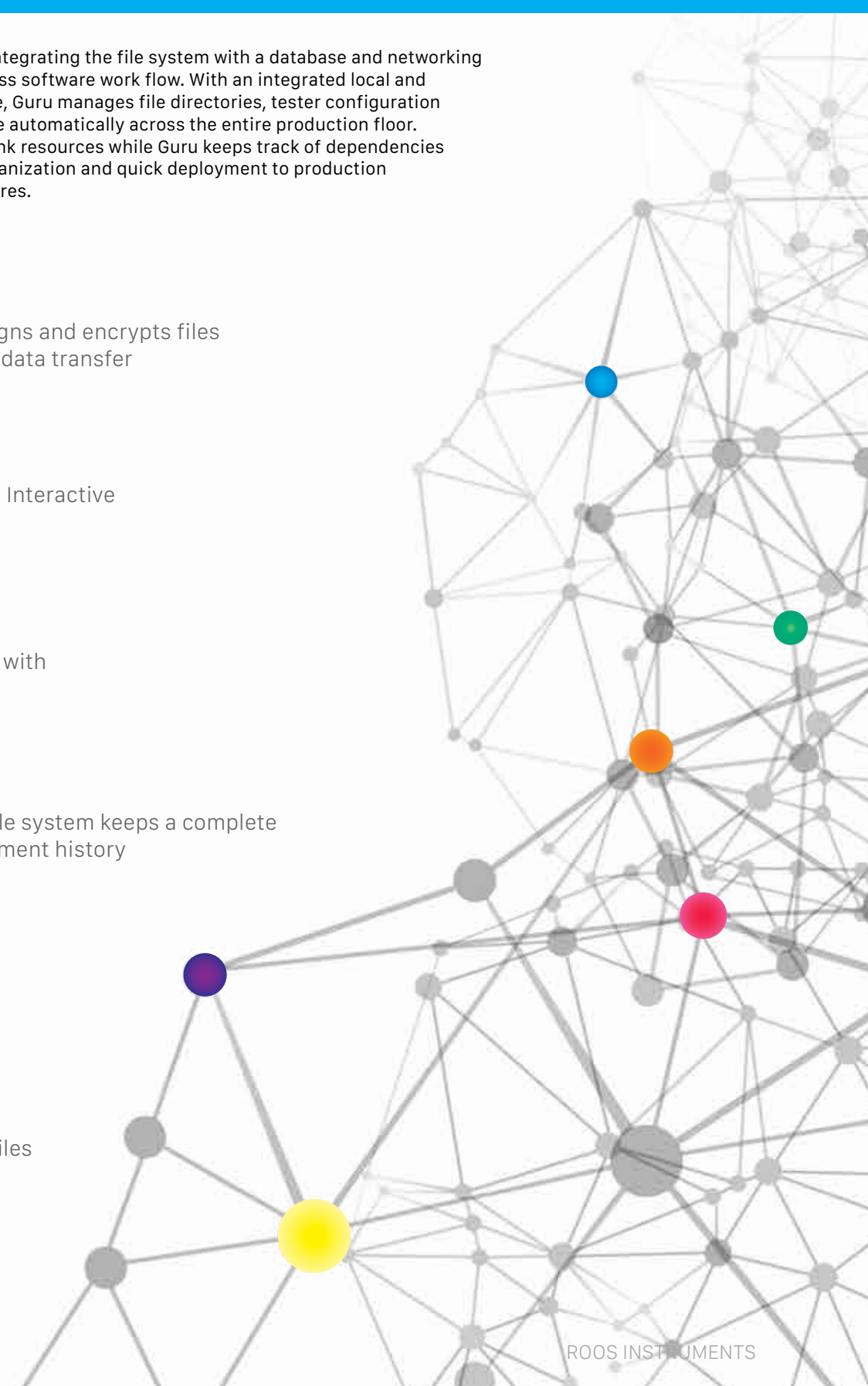
native support for Rich Interactive Test Database (RITdb)

link test resources with user-defined tags

versioning file system keeps a complete test development history

file and data redundancy with automated backups

search, filter, and organize files quickly and efficiently





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