

# Spectrum™ HS

## High Speed Functional Test Platform for High Performance Analog, Digital, and Real-Time Bus Test

Built on Teradyne's decades of test system design experience and its highly successful Spectrum platform, the Spectrum HS is Teradyne's newest fully integrated test system, optimized for high speed digital bus or real time test of boards, assemblies, and systems.

Spectrum HS is the first Spectrum system centered on PXI and LXI instrumentation, which is rapidly emerging as the preferred means to address current and future analog and digital functional test performance requirements.

The system is also HSSub-Ready. Teradyne's High Speed Subsystem is the runtime-defined instrumentation solution that is rapidly becoming the standard for flexibility in Defense and Aerospace ATE.

Above all, Spectrum HS is the optimal combination of high performance, flexibility, and completeness that defense and aerospace test managers in factories and depots require for successful board-level to system-level test.



### FEATURES

- Flexibility to test the most complex UUTs with unparalleled capability for real-time busses
- Ready for parallel digital and realtime analog instrumentation
- Architected with industry standards: PXI, LXI, IVI, VXI, GPIB, Windows, ATML, safety, EMI
- Quality assured, field-proven Spectrum software, eliminating delays and reducing start-up costs
- Advanced station monitoring
- Open architecture

### CONFIGURATIONS

- Single or multiple bay configurations are available
- Single-tier G20X and double-tier G40 interface (ICA)
- 4 KVA to 60 KVA input power



### High Speed Change Requires a High Performance Solution

Technology is evolving faster than ever. Test systems must meet today's increasingly formidable specs, while being able to adapt quickly to tomorrow's even more challenging requirements.

Evolving product performance also drives the need for ever-increasing test capability at increasing speeds, lower latency, and real-time data management. That means the test system itself must be ready for instrumentation that can handle these requirements and allow the test program to reconfigure it "on the fly." This will enable the test system to meet a proliferation of standardized and custom bus protocols, as well as handle a massive amount of real-time data.

That system is now available: the Spectrum HS Functional Test System.

### High Performance Test Capability

High performance test capability is embedded in the heart of Spectrum HS, and demonstrated by the following features:

- Best-in-class PXI/LXI analog core capability with a fully-integrated PXI chassis mated to a GX20X PXI 28-slot receiver/ICA from Virginia Panel
- HSSub-Ready to deal with serial or parallel, standardized or custom, protocol-based buses of any speed
- Architected around the HSSub Open Three-Tier Architecture™, which combines programmable hardware, real-time processing, and PC technology to simplify and speed protocol and TPS development across a broad range of requirements
- Enables full boundary scan test from multiple vendors without requiring additional proprietary "pods"

# Spectrum HS Functional Test System

## PXI/LXI-Centric Flexibility

PXI/LXI-centric flexibility satisfies present and future test requirements in every functional test setting from factory to depot. The flexibility of Spectrum HS is evident in the following capabilities:

- Easily scales from a small system to a full turnkey production tester capable of supporting many different products
- Includes TestStudio test executive software, and supports other test executives such as NI TestStand
- Compatible with standard third party instrumentation, including power supplies, DMM, AWG, Timer-Counter, and a wide range of standard signal switching options
- Future-ready, open standards-compliant platform with available additional PXI and/or VXI chassis, ample rack space and optional expansion bays
- Available integration of other customer-specified instrumentation
- Multiple power distribution unit options accommodate installations worldwide



## Complete Test Solution

A complete test solution is much more than a rack of instrumentation and a test executive. As a member of the Spectrum family, every Spectrum HS comes with Teradyne's experienced applications expertise and a worldwide support and maintenance infrastructure to ensure rapid setup and implementation and years of reliable performance with outstanding uptime. The Spectrum HS is backed by:

- Teradyne test experts who help configure systems to provide optimum price performance in the factory floor or depot
- Teradyne's global service and support network

with a wide variety of available service options and maintenance contracts

- HSSub-Ready PC running Windows 7
- Teradyne System Manager for real time monitoring of critical elements and safety features such as real time monitoring of the ICA latch, disabling UUT power supplies if the latch is disengaged
- Standard analog, digital, and bus instruments and power supplies feature integrated Wire Verification Test, documentation, and Teradyne spare parts stock
- Standardized documentation and standardized training classes available at Teradyne facilities, or on-site.

## High-Performance. Flexible. Complete.

The Spectrum HS has it all. It's like having a custom test system that accommodates every conceivable test requirement virtually on the fly—with all the support, reliability, and infrastructure benefits of a standard test system. Best of all, it comes from Teradyne—the worldwide leader in commercial Defense and Aerospace ATE.

Spectrum HS is more than a “best in class” test system because it's in a class of its own.



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