



Spectra2|SE² PCIe-1

Portable and powerful



A Portable Test Solution for Your Diversified Testing Needs

Field Troubleshooting and Analysis

Spectra2|SE² PCIe-1 is a field transportable test platform for the dynamic modern day work environment. PCIe-1 is the TDM extension chassis to Spectra2|SE², which enables PSTN testing. Spectra2|SE² software supports VoIP and NGN protocol testing using USB to Gig-E adapters (included in the kit) that plug into the native USB ports on the host laptop or desktop.

Spectra2|SE² PCIe-1 is the best all-around entry level solution for field turn-ups and troubleshooting of multi-technology (PSTN, NGN) networks.

The PCIe-1 chassis is based on the newly designed SMI (Signaling Media Interface) family of hardware modules for TDM testing. Spectra2|SE² PCIe-1 solution supports 8 T1/E1 links. Coupled with SE²'s ability to leverage the native host GigE ports, this portable solution provides a complete TDM to IP test solution. This solution can be used in a laptop or desktop host environment.

Spectra2|SE² PCIe-1:

Portable, Best Value, Effective Field Testing Performance

- Part of Spectra2 *build-as-you-grow* solution-set to enable engineers with personal test equipment
- Functional, media, and conformance testing for the core network
- Transportable chassis form factor allows field support engineers to carry this unit at all times
- As this unit can deliver superior load performance, this solution can be used to troubleshoot field environments with production level load performance

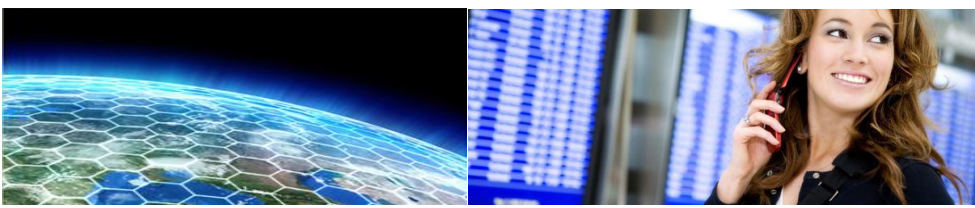
Features & Benefits

- Scalable TDM load performance (8K* total CPS and 2.4 million Open Calls)
- Lower per port/link cost
- PSTN & NGN protocol testing in a single chassis/software solution
- Complete portability of software and scripts from other Spectra2 installs and vice versa
- Capture network traffic for analysis locally or to reproduce in the lab test environment
- Spectra2|SE² PCIe-1 isolates user network connectivity from the test network for seamless operation
- Spectra2 SIP Auto-Scripting and InjectRAW help create test scenarios from production captures

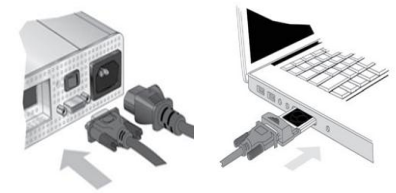
* Customer can originate or terminate ISUP calls at a total rate of 8K CPS



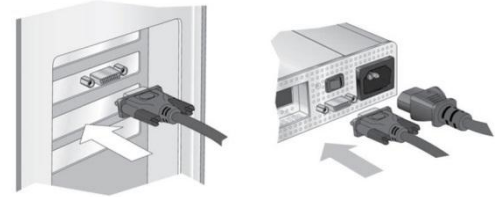
PCIe-1 for field troubleshooting



Spectra2 SE ² PCIe-1 Hardware	
Chassis	Portable
Board	4-port TDM Signaling Media interface board
Ethernet Interfaces	Two USB to GigE adapters
T1/E1 Interfaces	Up to 8 T1/E1 links
Host Connectivity	Express Card for Laptop and PCIe Host Card for Desktop
Power Supply	60 Watt, internal, auto-switching Input Voltage: 90 - 264 VAC Input Frequency: 47 - 63 Hz Inrush Current: less than 30A @ 115VAC less than 60A @ 230VAC DC Output: 60W Max 12V/5.0A
Dimensions	Height 7.71 inches (196 mm) Width 1.73 inches (44 mm) Depth 13.72 inches (349 mm)
Weight	4.3lbs or 1.95kg



PCIe-1 connecting to laptop with Express Card



PCIe-1 connecting to desktop with Host Card

Spectra2 SE ² PCIe-1 Software Application Capabilities	
Software Application	Spectra2 SE ²
Capabilities	Functional/Conformance Testing Media/QoS Testing Monitoring and Troubleshooting (SIP Auto-scripting, InjectRAW)
NGN Protocols	SIP, H.248, DIAMETER, XCAP, HTTP, RTSP
VoIP Protocols	SIP, H.323, Megaco/H.248 and MGCP
Diameter Interfaces	Cx, Dx, Ro/Gy, Rf/Gz, Rq, Gx, Rx, Sh, S6a, S9, Gq/Gq', E2/E4
PSTN/SS7 Protocols	ISUP, TCAP, BICC and ISDN
IP Versions	IPv4 and IPv6
PSTN Link Types	Low Speed (MTP2/MTP3), High Speed (HDLC/ATM), SIGTRAN (M2PA, M3UA)
Media Capabilities	Inject media, capture media, detect media PESQ, MOS, R-Factor Quality of Service measurements
Media types	Voice: G.711, G.723, G.726, G.729, AMR WB/NB, EVRC Tones: RFC 2833, DTMF, SF Video: H.263, H.263+, H.264, MPEG4 Fax: T.38
Media Transport	TDM and RTP
Conformance Testing	SIP, H.323, MGCP, H.248, ISUP, TCAP, ISDN
ISUP/TCAP Variants	Japan ISUP, UK ISUP, Hong Kong ISUP, Germany ISUP, Brazilian ISUP, AIN TCAP, IS41 TCAP, GSM3 TCAP

About Tektronix Communications:

Tektronix Communications provides network operators and equipment manufacturers around the world an unparalleled suite of network diagnostics and management solutions for fixed, mobile, IP and converged multi-service networks.

This comprehensive set of solutions support a range of architectures and applications such as LTE, fixed mobile convergence, IMS, broadband wireless access, WiMAX, VoIP and triple play, including IPTV.

For Further Information:

Tektronix Communications maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

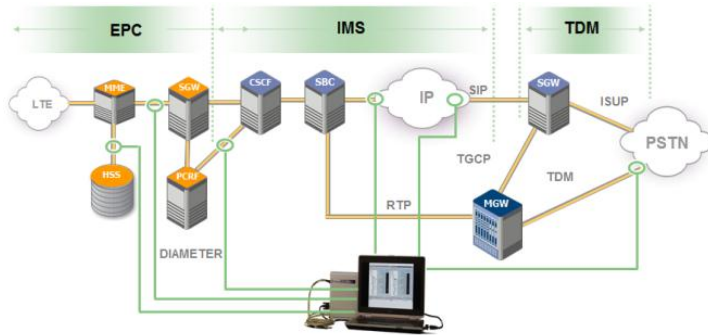
Contact Tektronix Communications:

Please visit www.tekcomms.com/spectra2

Other Products:

Spectra2 3^U: A high performance rack mount chassis solution that runs Spectra2 application for lab testing. Spectra2 workspaces are compatible between PCIe-1 and 3U making it easy for field operations units to work with R&D teams.

Spectra2|SE²: The Spectra2|SE² is a software-only testing solution that provides users the capability to test their IMS and VoIP networks using any off-the-shelf computing platform.



Spectra2|SE2 Portable Chassis
Spectra2|SE2 PCIe-1 for your field troubleshooting