SPIRENT TESTCENTER

HIGH PERFORMANCE AVALANCHE LAYER 4-7 TEST SOLUTION

HYPERMETRICS MX 10G MODULE

The Spirent TestCenter 10G Ethernet HyperMetrics mX test modules introduce a new paradigm in network infrastructure, security and application testing. The HyperMetrics architecture with Cloud Core processing enables maximum performance and scale without disabling any test ports. When testing converged multi-service devices, the HyperMetrics mX ensures delivery of the mobile multiplay experience by combining high-performance statful traffic, high-scale routing, access and mobile control plane on a single module. With 40 Gbps of linerate stateful Avalanche traffic capability in a single module the HyperMetrics mX scales to the highest levels for security, infrastructure and application testing.

APPLICATIONS

- **Security Testing and Vulnerability Assessment**: Verify viruses, Denial of Service attacks and other malicious content are stopped while legitimate traffic is forwarded with acceptable performance in the presence of realistic line-rate traffic.
- **Network Device Testing**: Perform vendor trials, acceptance testing, system tests and configuration optimization testing under realistic and maximum traffic and user conditions.
- **Multiplay Testing**: Test network design, rollout and service from the user's point of view (quality of experience) using realistic voice calling, unicast and multicast streaming videos with Internet traffic in a single test—true user emulation testing.
- **Line-Rate Web Application Testing**: Ensure that your e-commerce and business applications are ready for peak traffic times, such as Black Friday. Scale up to and beyond expected loads with real transactional traffic, protocol emulation and user behavior emulation.

The Hypermetrics™ mX modules comes in 2, 4 and 8 port 10 GbE versions with linerate stateful traffic capabilities up to 40 Gbps. In addition these modules also provide high performance Layer 2-3 capabilities for holistic L2-7 network testing.

BENEFITS

Traditional test module design fixes CPU resources to specific ports. These one-dimensional architectures necessitate three hardware designs to achieve the usage goals of high port scalability, virtual network emulation and high-capacity application traffic. HyperMetrics' architecture relegates these design limitations to the past.

- **Test in a realistic network and user environment**: Dropped packets, latency, think times and click-aways reveal how your applications will perform in your production network.
- **Test with your unique mix of traffic**: With its unparalleled support for a wide variety of protocols supported by multi-core processing, HyperMetrics AP enables you to test your networks and applications with your unique traffic mix. In addition, you can capture traffic from custom applications and replay them using the Avalanche solution on Spirent TestCenter.
- **Reduce time to test**; Built-in samples get you started with testing. Support for automation helps you repeat tests quickly.
- **One tool for all your testing needs**: Test a range of devices including, but not limited to, firewalls, IDS/IPS systems, proxy and caching servers, URL and cache filters, traffic accelerators, mail and Web servers, IPSec and SSL VPN gateways, Windows and Real media servers.

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KEY FEATURES

- Spirent TestCenter Cloud Core combined with Intel® maximizes performance and scale of emulated topologies and stateful application traffic
- Brings the HyperMetrics Enhanced Realism and Performance to the scale of mobile
- Benchmark Cloud data centers, mobile broadband and application experience
- Available test packages and integrated configuration of ultra high-scale mobility, mobile backhaul, routing, access and application test cases

Authentic testing: Avalanche for Spirent TestCenter emulates actual user transactions and provides control over TCP/ IP stack characteristics such as maximum segment size, delayed ACKs, IP fragmentation and TCP time-out behavior. Avalanche for Spirent TestCenter can emulate browsers, decompress gzips, encode URLs and apply realistic user level attributes.

High performance testing*: Line rate Layer 4-7 traffic up to 40 Gbps per module. Greater than 1 Million TCP connections per second performance and more than 5 Gbps of high realism-encrypted traffic per module.

Extensive, flexible reporting: Real-time statistics for critical variables across all protocols. SNMP statistics can be gathered from the components under test and correlated with statistics from Spirent TestCenter.

Flexible load specifications: Flexibility to specify load variables such as user sessions, new user sessions per second, transactions, transactions per second, connections or connections per second.

Multi-protocol support:

- 802.1x/NAC
- 802.1Q VLAN tagging
- Capture/Replay
- CIFS
- DNS
- DNSSEC
- FTP
- HTTP 1.0/1.1
- HTTP Adaptive Streaming Microsoft™, Apple™, Adobe™
- HTTPS
- IPSec
- IPv6
- Mail (SMTP/POP3)
- NFS
- PPPoE
- RTMP
- Streaming media
- Telnet
- Voice (SIP)
- QuickFlow™ (100+ Stateful protocols)

  Bit Torrent, Gnutella, MSN, Yahoo, Skype, SQL, MYSOL, Oracle, SMB, NFS, Remote Desktop, Exchange and LDAP

TECHNICAL SPECIFICATIONS	
Dimensions	*Overall:* 10.75” W x 14” D x 1.41” H *Board size:* 9.25” W x 13.5” D
Network Interfaces	HyperMetrics mX 10G Layer 2-7 media module. Available in 2x10G, 4x10G and 8x10G versions, SFP+ transceiver support for MMF and SMF support.
Power Requirements	190W
Weight	4 lbs. 4 oz.
Chassis Operating Environment	15—35° C
Relative Humidity	20-80% relative humidity, non-condensing

ORDERING INFORMATION		
	Description	**Comments**
MX-10G-S2	**HyperMetrics mX 2-Port 10G SFP+ 20Gbps Layer 2-7 module**	Requires BPK-1200 software for Base L4-7 functionality
MX-10G-S4	**HyperMetrics mX 4-Port 10G SFP+ 40Gbps Layer 2-7 module**	Requires BPK-1200 software for Base L4-7 functionality
MX-10G-S8	**HyperMetrics mX 8-Port 10G SFP+ 40Gbps Layer 2-7 module**	Requires BPK-1200 software for Base L4-7 functionality
BPK-1200	**Spirent TestCenter Layer 4-7 System software base package A for 2U chassis**	Spirent TestCenter Layer 4-7 System software Base package A for 2U chassis

SPIRENT SERVICES

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at www.spirent.com or contact your Spirent sales representative.

* Please refer to per release performance numbers for most current performance capabilities. All numbers cited are card to card or card to target

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