

Spirent **Landslide™ C100-M4**

Mobile Core, Wi-Fi, Diameter, and IMS Performance Test System

The Spirent Landslide C100-M4 is the highest performance Landslide Test Server. The test server performs the roll of control and data plane load generation and analysis as well as emulation of adjacent nodes surrounding the network under test. Using a combination of powerful processors and hardware accelerators the C100-M4 typically runs 30 to 40% faster than its predecessor.

Solution Overview

Designed to test secure and application aware mobile networks, the Landslide C100-M4 provides unprecedented performance resulting from Spirent’s multi-core architecture with new hardware-assisted application, mobility and encryption acceleration.

The Landslide C100-M4 platform enables the Landslide application to provide the highest scale and most realistic mobile emulation while providing a significant increase in the amount of mobile application traffic over the previous generation. The Landslide C100-M4 supports the Fireball Data Performance Mode and this, when paired with the new quad-port 10G interface, significantly reduces the amount of equipment, power and connections required to test a high-performance mobile network.

Applications

Spirent Landslide has the ability to both test and emulate the nodes of the mobile core, carrier Wi-Fi, IMS and Diameter networks. Test cases include:

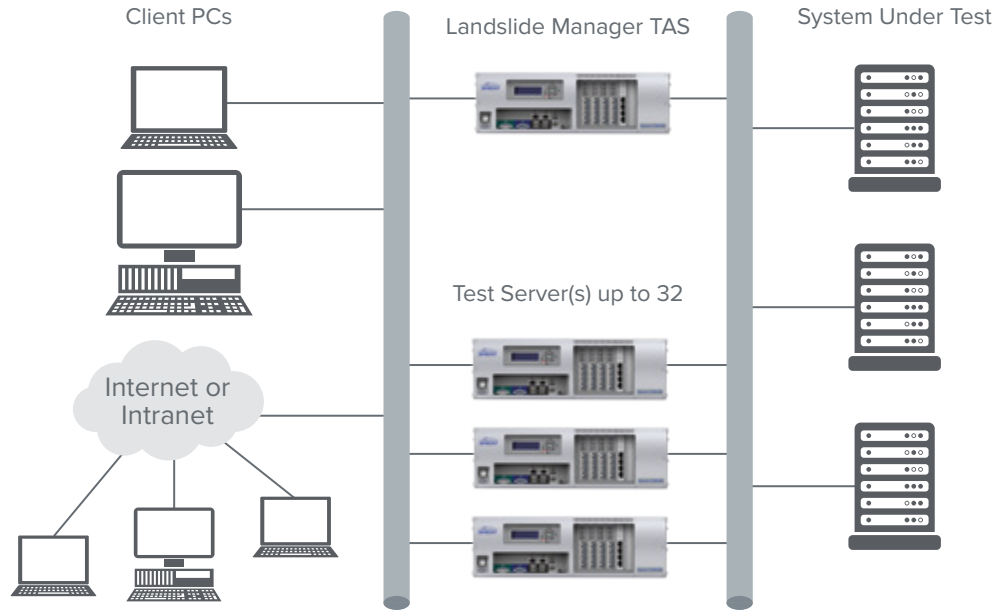
SPIRENT C100-M4 LANDSLIDE

• 2G/3G/4G	• eHRPD	• IP Data	• Off line Charging	• TAS
• 3GPP/3GPP2	• eMBMS	• IPSec	• On line Charging	• Test Automation
• AAA Diameter	• Emergency PDNs	• Iu-CS/3G Voice	• PCC	• Trusted/Untrusted Wi-Fi Access
• AAA Radius	• eNodeB	• L2TP VPN Gateway	• PCRF	• UDR
• ABR Video	• ePDG	• LCS	• QoS/QoE	• UMTS
• CAPWAP	• Femtocell	• LDAP	• Radius	• Video Quality
• CDMA Femtocell	• GPRS	• MIPv4/v6	• Reporting	• Voice Quality
• CDMA2000	• GRE	• MME	• SCEF	• VoLTE/VoIP
• CSFB	• HLR	• Mobile Attacks	• Security Gateway	• VoWi-Fi
• DCCA	• HNB Gateway	• MSC	• SGSN/GGSN	• Wi-Fi Offload
• DECOR	• Home NodeB	• MTC/M2M	• SGW/PGW	• Wi-Fi RF
• Diameter	• HSS	• NB-IoT IP/Non-IP	• SMS	• WiMAX
• DPI Enabled Mobile Gateway	• I/P/S-CSCF	• Network Mobility	• SRVCC	• WLAN Gateway
• DRA	• IMS	• NFV testing	• Supplementary Services	



Configuration

The Landslide Manager can be physical or virtual. Each manager can control 1 to 32 Test Servers which can also be physical or virtual. Test Servers are added to scale the capacity and throughput performance as required. The user has three options to control Landslide: using a standard web browser, via a Tcl API or via a RESTful API. All three connect to the Landslide Manager, which controls the Landslide Test Servers. The Landslide Manager supports up to 48 simultaneous users.



Technical Specifications

Spirent C100-M4 Landslide	
Dimensions	5.25" H x 16.75" W x 21" D Fits standard 19" rack 3U high
Weight	31 lbs / 14.05 kg
Operating Environment	0°C–30°C
Non-Operating Environment	-20°C–70°C
Relative Humidity	10%–70% RH (non-condensing)
Power Requirements	100-240VAC, 50/60 Hz, 6A
Regulatory Approvals	FCC Part 15 Class A EN 55032 Class A EN 55024/CISPR 35: 2016 EN 60950

Client PC Requirements

The Landslide Client hardware requirements are dependent on the system license and the testing activity. The recommended values are:

- 64-bit Operating System with 4 GB RAM and 1GB memory assigned to client
- Minimum 10 GB available disk space
- 100 MB/1G Ethernet connection to the LAN

The Landslide Client software requirements are:

- Test system web pages are best viewed with Internet Explorer 10+ and Firefox 30+
- JavaScript and Java Web Start must be enabled in the browser
- Popup blockers should be disabled before starting
- Cookies should be allowed if you want your memory settings to save
- Java™ Runtime Environment 1.8.0 (or later) is required for the Landslide Application

Ordering Information

Landslide C100-M4		
Landslide C100-M4 Test Systems include one Landslide Manager, one Landslide Test Server with related applications, and two Quad-port GIGE copper NICs.		
Part Number	Product Name	Test Coverage
L-KIT-8001	C100-M4 Landslide GPRS Test System	GPRS based GGSNs
L-KIT-8001-01	C100-M4 Landslide UMTS & GPRS (IU-IP) Test System	Iu-PS interface
L-KIT-8001-02	C100-M4 Landslide UMTS GPRS GB Interface Test System	GPRS GGSNs and SGSNs with GbIP and IuIP interfaces
L-KIT-8002	C100-M4 Landslide CDMA2000 Test System	CDMA2000
L-KIT-8003	C100-M4 Landslide MIPv6 Test System	MIPv6
L-KIT-8007	C100-M4 Landslide IP Data Test System	WAP 1.2, WAP 2.0, MMS, RTSP, RTP, IMAP, TFTP, POP3, SIP and others
L-KIT-8012	C100-M4 Landslide PCRF Test System	PCRF servers
L-KIT-8013	C100-M4 Landslide CSN Test System	WiMAX CSN
L-KIT-8014	C100-M4 Landslide ASN-GW Test System	WiMAX ASN-GW
L-KIT-8020	C100-M4 Landslide LTE Gateway Test System	LTE Serving and PDN gateways
L-KIT-8021	C100-M4 Landslide LTE MME Test System	LTE Mobility Management Entities
L-KIT-8037	C100-M4 Landslide HNB-GW Test System	SecGW and HNB-GW over Iuh and IuPS interfaces
L-KIT-8038	C100-M4 Landslide Wi-Fi Offload GW Test System	Wi-Fi Offload gateways
L-KIT-8039	C100-M4 Landslide Diameter (DRA) Test System	Diameter Routing Agents, Clients and Servers
L-KIT-8040	C100-M4 Landslide LTE Core Emulation System	LTE ePC emulation with S1-MME, S1-U and SGI interfaces
Test Manager		
L-C100-S4-MGR	Landslide C100 S4 System Manager	Physical Landslide C100 TAS manager for Landslide test systems, requires test server(s) and test applications
L-C100-MGR-VTAS	Landslide Virtual C100 Test Manager License	Virtual Landslide C100 TAS manager license, requires test server(s) and test applications
Additional Test Server		
L-C100-M4-TS	C100-M4 Landslide Add-On Test Server	Expansion test server for an existing Landslide test system. Includes 512GB memory, base SW & upgraded system license. NICs purchased separately.
Interface Modules - Maximum of 4 per test server		
L-NIC-31B	Landslide Quad-Port 1GBPS Fiber NIC	QUAD-PORT 1GBPS FIBER NIC. Quad-port Gigabit Ethernet fiber module.
L-NIC-32B	Landslide Quad-Port 1GBPS Copper NIC	QUAD-PORT 1GBPS COPPER NIC. Quad-port Gigabit Ethernet copper module.
L-NIC-66	Landslide Quad-Port 10GBPS SFP+ NIC	QUAD-PORT 10GBPS SFP+. Includes four 10GBASE-SR 850nm MMF transceivers.
L-NIC-73	Landslide Dual-Port 25GBPS SFP28 NIC	Dual port optical and direct attach copper 25Gbe NIC. Includes SFP28 25GBASE-SR 850nm MMF transceivers and SFP28 direct attach copper media.
L-NIC-74	Landslide Dual-Port 40GBPS QSFP+ NIC	Dual-port optical and direct attach copper 40Gbe NIC. Includes QSFP+ 850nm MMF optical transceivers and QSFP+ CR4 direct attach copper media. QSFP+ 40GBASE-LR4 1310nm SMF optical transceiver available, see L-ACC-6004.
L-ACC-6004	Landslide Optical Transceiver QSFP+ 40GBASE-LR4 SMF 1310NM	QSFP+ 40GBASE-LR4 1310nm, single mode fiber transceiver. For use in L-NIC-74 only, one per NIC port required.
Accelerator Module		
L-ACC-007	Landslide IPSEC Security Adaptor	Landslide Basic IPsec Accelerator adds hardware accelerated IPsec processing

A full complement of test applications and features are available. Please contact your Spirent Sales Representative to select the right options for your testing needs.

About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

For more information, visit:
www.spirent.com

Professional Services

- **Test Lab Optimization:** Test automation engineering services
- **Service Deployment and Service-Level Optimization:** Vendor acceptance testing, SLA benchmarking, infrastructure and security validation
- **Device Scalability Optimization:** POC high scalability validation testing

Education Services

- **Web-Based Training:** 24x7 hardware and software training
- **Instructor-Led Training:** Hands-on methodology and product training
- **Certifications:** SCPA and SCPE certifications

Implementation Services

- Optimized new customer productivity with up to three days of on-site assistance

Contact Us

For more information, call your Spirent sales representative or visit us on the Web at www.spirent.com/ContactSpirent.

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