Ospirent™

Spirent Landslide™ C100-M4

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 a dual-port 25G, 40G or 100G 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, ORAN, carrier, Wi-Fi, IMS and Diameter networks. Test cases include:

The Spirent Landslide C100-M4 is the highest performance Landslide Test Server. The test server performs the role 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.

5G	AMF, AUSF, CHF, Dual-Connectivity 5G NSA, EIR, gNB, gNB-CU (NSA & SA), IP Data, Network Mobility, NEF, NRF, NSSF, PCF, SMF, UDM, UPF
4.5G	DECOR, Dual-Connectivity 5G NSA, eMBMS, Emergency PDNs, HSS, IoT, IP Data, IPSec, LCS, MCPTT, MME, NB-IoT IP/Non-IP, Network Mobility, Off line Charging, On line Charging, Rel14 CUPS, SCEF, SGW-C/SGW-U, PGW-C/PGW-U, Video Quality, Voice Quality, VoLTE/VoIP
4G	CSFB, Dual-Connectivity 5G NSA, EIR, eMBMS, Emergency PDNs, eNodeB, ePDG, Femtocell, HSS, IP Data, IPSec, Iu-CS/3G Voice, L2TP VPN Gateway, LCS, MME, Network Mobility, Off line Charging, On line Charging, Security Gateway, SGW/PGW, SMS, SRVCC, Video Quality, Voice Quality, VoLTE/VoIP
2G/3G	CSFB, EIR, Emergency PDNs, Femtocell, GPRS, HLR, HNB Gateway, Home NodeB, IP Data, Iu-CS/3G Voice, MSC, Network Mobility, Security Gateway, SGSN/GGSN, SMS, UMTS
Diameter	AAA Diameter, DCCA, DRA, EIR, HLR, HSS, IPSec, LCS, MME, Off line Charging, On line Charging, PCC, PCRF, SCEF, SGSN/GGSN, TAS/AS
IMS	ATCF/ATGW, BGCF, ePDG, E-CSCF, GMLC, HSS, I/P/S-CSCF, IMS, IPSec, MCPTT, MGCF, TAS/AS, Video Quality, Voice Quality, VoLTE/VoIP, VoWi-Fi
Wi-Fi	CAPWAP, ePDG, GRE, IP Data, IPSec, N3IWF, Security Gateway, Trusted/Untrusted WiFi Access, TWIF, VoWi-Fi, Wi-Fi Offload, Wi-Fi RF
Other	AAA Radius, ABR Video, CDMA Femtocell, CDMA2000, eHRPD, IP Data, IPSec, L2TP VPN Gateway, LDAP, MIPv4/v6, Mobile Attacks, QoS/QoE, Radius, Reporting, Test Automation, UDR, WiMAX, WLAN Gateway

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.
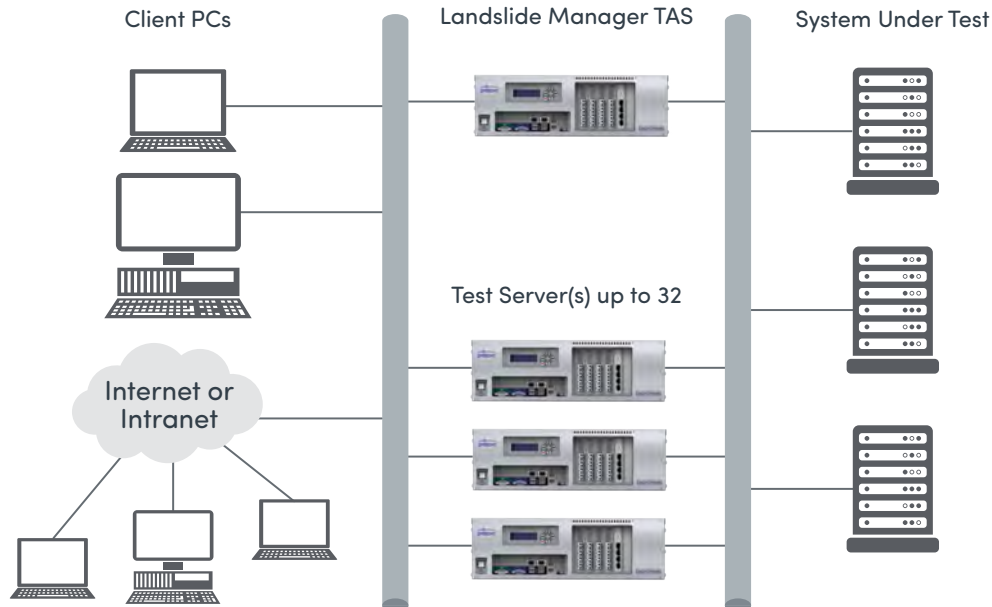
Technical Specifications

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 depend 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 Test Manager, one Test Server with related applications, and two Quad-port GIGE copper NICs.		
Part Number	**Product Name**	**Test Coverage**
Test Manager		
L-C100-S5-MGR	Landslide C100 S4 System Manager	Physical Landslide C100 Test 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 Test manager license, requires test server(s) and test applications
Additional Test Server		
L-C100-M4-TS	C100-M4 Landslide Add-On Test Server	Add-on test server for existing Landslide test system. Includes 512GB memory, base SW & system license. NICs purchased separately
Interface Modules – Maximum of 4 per Test Server		
L-NIC-31B	Landslide Quad-Port 1GBPS Fiber NIC	Quad-port Gigabit Ethernet fiber module.
L-NIC-32B	Landslide Quad-Port 1GBPS Copper NIC	Quad-port Gigabit Ethernet copper module.
L-NIC-66	Landslide Quad-Port 10GBPS SFP+ NIC	Quad-port optical 10 GbE NIC. 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-NIC-75	Landslide Dual-Port 100GBPS QSFP+ NIC	Dual-port optical and direct attach copper 100GbE NIC. Includes QSFP28+ 850 nm multi-mode fiber optical transceivers and QSFP28 passive copper cable for 100 GbE. QSFP28+ 100GBASE-LR4 1310 nm SMF optical transceiver available, see L-ACC-6005.
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.
L-ACC-6005	Landslide Optical Transceiver QSFP28 100GBASE-LR4 SMF 1310NM	QSFP28 100GBASE-LR4 1310nm, single mode fiber optical transceiver. For use in the L-NIC-75 only.
Accelerator Module		
L-ACC-008	Landslide HP IPSec Accelerator Card	Adds high-performance 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**

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