VIAVI Solutions

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DATASHEET

Spirent C200 Appliance

For CyberFlood and Avalanche

In today's digital world, it's essential that the performance of content aware networks and web applications are carefully assessed to ensure that business transactions and communication are not impacted. The C200 is a powerful Layer 4-7 stateful traffic performance solution in a 1U form factor that is capable of very high throughput with high-strength cryptographic and hyper-realistic application traffic. By taking up less valuable rack space, users can scale to test beds supporting multiple terabits of application layer traffic generation.

Built-in CyberFlood

The C200 comes with a built-in CyberFlood controller. Within minutes from unpacking, users can be up and running tests with the powerful, web-based CyberFlood solution, without the need for additional hosting platforms.

Performance and Flexibility

The C200's 4 x QSFP28 interfaces provide connectivity for 10G, 25G, 40G, 50G, and 100G Layer 4-7 application traffic. Users can specify load variables and easily create tests with mixed traffic profiles, emulating real-world network scenarios. With built-in advanced cryptographic acceleration technologies, the C200 can meet today's and the future's most demanding test needs for encrypted traffic with high strength ciphers at massive scale.

Application Performance Testing Solutions

The C200 appliance for CyberFlood and Avalanche provides the industry's highest performance and capacity with multi-speed support for 10G, 25G, 40G, 50G, and 100G in a slim-line 1U form factor. Users can test the performance limits of network devices, Web applications and media services, ensuring Quality of Service (QoS) and Quality of Experience (QoE) for their customers. The C200 is compatible with both CyberFlood and Avalanche testing solutions, giving you the most versatility for application performance testing.

Applications

- Network performance testing
- Web application testing
- High-performance HTTPS/TLS testing
- SSL VPN/IPSec performance
- Application Identification testing with hundreds of thousands of application scenarios
- Advanced video application testing
- Mobile network firewall testing
- Zero-Trust scale and performance testing
- Replay UDP/TCP traffic at scale
- Optional advanced security testing solutions are also available

Advanced Performance Testing with CyberFlood

CyberFlood is a powerful, easy-to-use web-based testing solution that generates hundreds of thousands of different realistic application traffic scenarios to test the performance and scalability of today's application aware network devices and solutions. Unlike other test solutions, CyberFlood generates real high performance user applications based on actual application scenarios, for realistic load and functional testing.

NetSecOPEN Testing Standards-based Methodologies

NetSecOPEN is a networking industry group where networking vendors, tool vendors, labs and enterprises collaborate to create open and transparent testing standards.

The goal of this group is to create a suite of standards that can be used for the evaluation and/or certification of network devices and solutions. The NetSecOPEN standard methodologies are built into CyberFlood, providing easy-to- use pre-made methodologies for testing modern network devices, including goal seeking tests that will automatically find the maximum performance of devices under test. For more information on NetSecOPEN, go to www. netsecopen.org.

User Realism with Avalanche

Avalanche software on the C200 supports the execution of hyper realistic user behavior, so tests accurately reflect your company's network usage and traffic patterns. The system interacts seamlessly with sites using dynamic and interactive content, HTML links and online fill-in forms. Multiple types of browsers can be emulated, providing detailed control over browser connection behavior, SSL versions, authentication, and browser client headers.

User behavior such as think times and "clickaways" (HTTP aborts) can be simulated, and the system also supports HTTP basic and proxy authentication. In addition, next-generation integrated video testing is available for protocols such as HTTP Adaptive Bitrate streaming for Apple®, Microsoft®, and Adobe®.

Features & Benefits

- **>100Gbps Line Rate Stateful Traffic—**Provides the capability to generate over 100Gbps of line rate stateful Layer 4-7 traffic. Each C200 supports high density 16 x 10G interfaces and up to 4 x 40G or 4 x 100G interfaces.
- **Flexible Software Options—**The C200 is compatible with CyberFlood providing a web-based, easy-to-use yet powerful application with Avalanche for advanced directed one-ended and two- ended testing.
- **Throughput with Mixed Traffic—**Create and execute tests with preconfigured traffic mixes to achieve high throughput HTTPS/TLS encryption, or easily create your own mixes from a database of hundreds of thousands of application scenarios. Create tests that use next generation web protocols, including the industry's only full support for HTTP/3.
- **Network Devices Performance Testing—**Provides performance and capacity testing on a variety of network devices including: Firewall, Application Firewall, Load Balancer, SD-WAN, SASE, Cache, Proxy, URL Filter, Content Filter, Anti-Virus, Anti-Spyware, Reverse-Proxy, SSL Accelerator, HTTP/HTTPS Accelerator, WAN Accelerators, SMTP Relay, IDS/IPS, and IPsec VPN Gateway.
- **Application Server Performance Testing—**Validates the performance of several types of real services including: Web, CIFS, Application Services, eMail, DHCP, FTP, DNS, RTSP/ RTP QuickTime Streaming, Multicast, RTMP, HTTP ABR, and more.
- **Performance Operation Modes—**Easily change the C200 mode of operation to adjust CPU and memory allocation behind test interfaces providing maximum flexibility for a variety of performance and use case options.
- **Reliability Testing—**Perform long duration soak tests with the TestCloud application load to ensure solutions work at high capacity for long periods of time.
- **VPN Testing—**Validate IPSec and SSL VPN* capacities including tunnel setup, maximum tunnels, and data rates over encrypted tunnel for remote access and site to site use cases.
- **ZTNA Testing—**Test the Zero Trust Policy Enforcement Point (PEP), validate that secure network and application access are delivered and verify that connections and per-user access policies are functioning as intended without impacting performance or QoE.
- **Automatic Goal Seeking—**Determine maximum capabilities of a device with minimal user interaction.
- **Realistic Web Testing—**Use web-capture capabilities to import and replay recorded sessions of complex website interactions and traffic to validate performance and comprehensive application policies.

Spirent C200 Appliance	
Feature	
Number of test users	Up to 16 users on specific configurations
Network interfaces	4 x QSFP28 supports a number of interface options Up to 16 x 10G Fiber (SR4) Up to 8 x 25G Fiber (SR4) Up to 4 x 40G Fiber (SR4 or LR4) Up to 4 x 50G Fiber (SR4) Up to 4 x 100G Fiber (SR4 or LR4) DAC cable support for 10G/40G and 100G (Transceivers sold separately)
CPU	32 high-powered cores for advanced traffic generation
Cryptographic Processing	256 Symmetric and 320 Asymmetric Cores
CyberFlood Feature Details	
Web Based Interface	Easy to use multi-user web-based interface makes setting up and executing comprehensive tests fast, easy and consistent
Application Scenarios	Hundreds of thousands of current and popular application and user scenarios
HTTPS/TLS Testing	Support for SSLv3, TLS v1.0, TLS v1.2, and TLS v1.3 with selectable certificate and cipher suites
HTTP/HTTPS Rate	Open millions of new connections per second to ensure connection rate and capacities of your network devices and solutions
Advanced Mixed Traffic Assessment	Create custom and highly configurable tests and assessments with user action lists that allow test assessments to be created which will walk through a set of user application interactions for HTTP, HTTP/2, HTTP/3, HTTPS, SMTP, POP3, IMAP4, FTP, DNS over TLS and HTTPS, and other protocols (additional protocol support coming soon).
HTTP/HTTPS Bandwidth	Find the maximum throughput achievable using emulated, realistic HTTP clients and HTTP servers and leveraging a configurable network topology
HTTP/HTTPS Connections	Open millions of concurrent TCP connections within the state table of your DUT to find the maximum concurrency it can support. Leverage HTTP as the protocol for added realism during this test
Mixed Traffic Tests	Measure the impact on application performance when using real-world built-in applications or extended with the power of TestCloud. Individually measure the bandwidth and success rate of each application added to the test to confirm the impact of the network under test.
ZTNA Testing	Validate the scale & performance of the ZTNA architecture by emulating authenticated, authenticated, unauthenticated & unauthorized users via SMAL and OIDC to validate least-privilege access policies.
Traffic Replay	Replay your own custom traffic profiles at scale to determine the impact of specific traffic flows on network devices and services
VPN Testing	Easily assess capacities and capabilities of site to site and remote access IPSec and SSL VPN* from tunnel setup to data traffic handling
DNS Tests	Stress your DUT by sending hundreds of thousands of DNS queries per second for it to process and traverse, as well as process the corresponding events that occur on the DNS responses
Automation	CyberFlood RESTful API and Avalanche Tcl API
Dimensions	Height 1U, width 17.5” inches (without rack mounts), depth 37.1” inches
Weight	46 lbs. (11kg)
Operating environment	Supported 0° to 35°C ambient temperature
Non-operating environment	-20C to 70C
Relative humidity	10% to 70% (non-condensing)
Power requirements	Dual outlet 100-240V, 50/60 Hz–1600W 15A
Regulatory approvals	FCC Class A, EN 55022 Class A, EN 55024, EN 61000-3-3:2013, 61000-3-2:2014 or equivalent Product Safety requirement

* Expanding set of SSL VPN dialects.

About Spirent

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

Ordering Information

Description	Part Number
C200 with 4 x QSFP28* Interfaces CyberFlood Capacity License (add on unit)	CF-KIT-001-C200
C200 with 4 x QSFP28* Interfaces with CyberFlood Performance Licenses	CF-KIT-002-C200

C200 appliances come with built-in CyberFlood controller and base software for HTTP bandwidth and connections tests.

Security Testing options and other bundles are also available. Please contact Spirent Sales for more information.

* QSFP28 transceivers are sold separately.

ALSO AVAILABLE

Optional Advanced Security Testing Capabilities

Spirent Services

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

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