

Bivio 6310 Series

Compact Cyber Security Applications Platform



Rack-Efficient Cyber Security Applications & Network Sensor

The Bivio 6310 Series is a family of compact, high-performance packet processing systems that are ideal host platforms for a wide range of Network Security, Cyber Intelligence, Active Cyber Defense and other Deep Packet Inspection (DPI) applications. The platforms are optimized for packet processing through a field-proven architecture that features multicore Intel® processors and a robust Linux application environment.

The Bivio 6310 Series platforms are designed for the most demanding cyber mission environments via two chassis configurations:

- **B6310** system platform for enterprise and data center environments
- **B6310R** system platform for portable cases and other harsh conditions

Both platforms may be ordered as validated Common Criteria (NIAP) and NSA Commercial Solutions for Classified (CSfC) configurations.

The Bivio 6310 Series platforms are purpose-built for rapid deployment of open source, proprietary, and commercial off-the-shelf (COTS) cyber security applications at up to 20 Gbps in a single rack space. The platforms utilize unique packet acceleration technology with standard API compatibility allowing any Linux-based networking application to perform at top speed with little or no porting effort.

The Bivio 6310 Series Compact Cyber Security Applications Platforms are ideal for large enterprise IT and government Cyber Operations teams who demand maximum networking performance in a compact rack-mount chassis.

- **Compact 1U Rack Mount System**
Extremely compact chassis design delivers outstanding performance for open source, proprietary, and commercial off-the-shelf cyber applications.
- **True Wire-Speed, 20 Gbps Performance**
Purpose-built high-performance architecture features multicore Intel® processors to ensure full deep packet processing at up to 20 Gbps with no changes to applications such as SNORT, Suricata, Bro NSM, and others.
- **Secure Linux Environment**
Applications run on a secure and performance-optimized Linux® distribution with industry-leading throughput and agility.
- **Robust, Enterprise Hardened Platform**
Dual redundant power supplies, solid-state hard drives and redundant system configurations provide maximum system uptime.
- **Validated for Common Criteria (NIAP) and Commercial Solution for Classified (CSfC)**



Cyber Mission Deployments

- Network Security
- Cyber Threat Intelligence
- Active Cyber Defense
- Portable Cyber Protection Racks

Proven Architecture for High Performance Sensors

The extraordinary cyber security application processing of the Bivio 6310 Series is achieved through BiviOS™, a patented packet acceleration and application environment that is fully integrated with the standard Linux libraries.

Using this implementation, the application does not need to be modified with any system details – it only needs to invoke the standard Linux network traffic and packet handling mechanisms. This compatibility delivers significant performance improvements over server-class appliances for open source Linux applications such as SNORT®, Suricata, Bro NSM, Argus, YAF, nProbe, TCPdump, as well as other commercial and proprietary software.

Service & Application Consolidation

The Bivio 6310 platform also features exclusive multi-application support. Rather than relying on virtualization or sequential chaining, the Bivio 6310 uses an efficient and unique host infrastructure to enable running multiple cyber applications in parallel, with all applications simultaneously accessing the same network traffic. This capability allows cyber teams to easily consolidate applications and tools on a single platform to improve network security posture, eliminating the cost and complexity of managing multiple disparate systems.

The Bivio 6310 Series supports both inline and passive modes of operation, and when running multiple applications, some can be inline and some can be passive on the same platform.



Transparent Network Interfaces

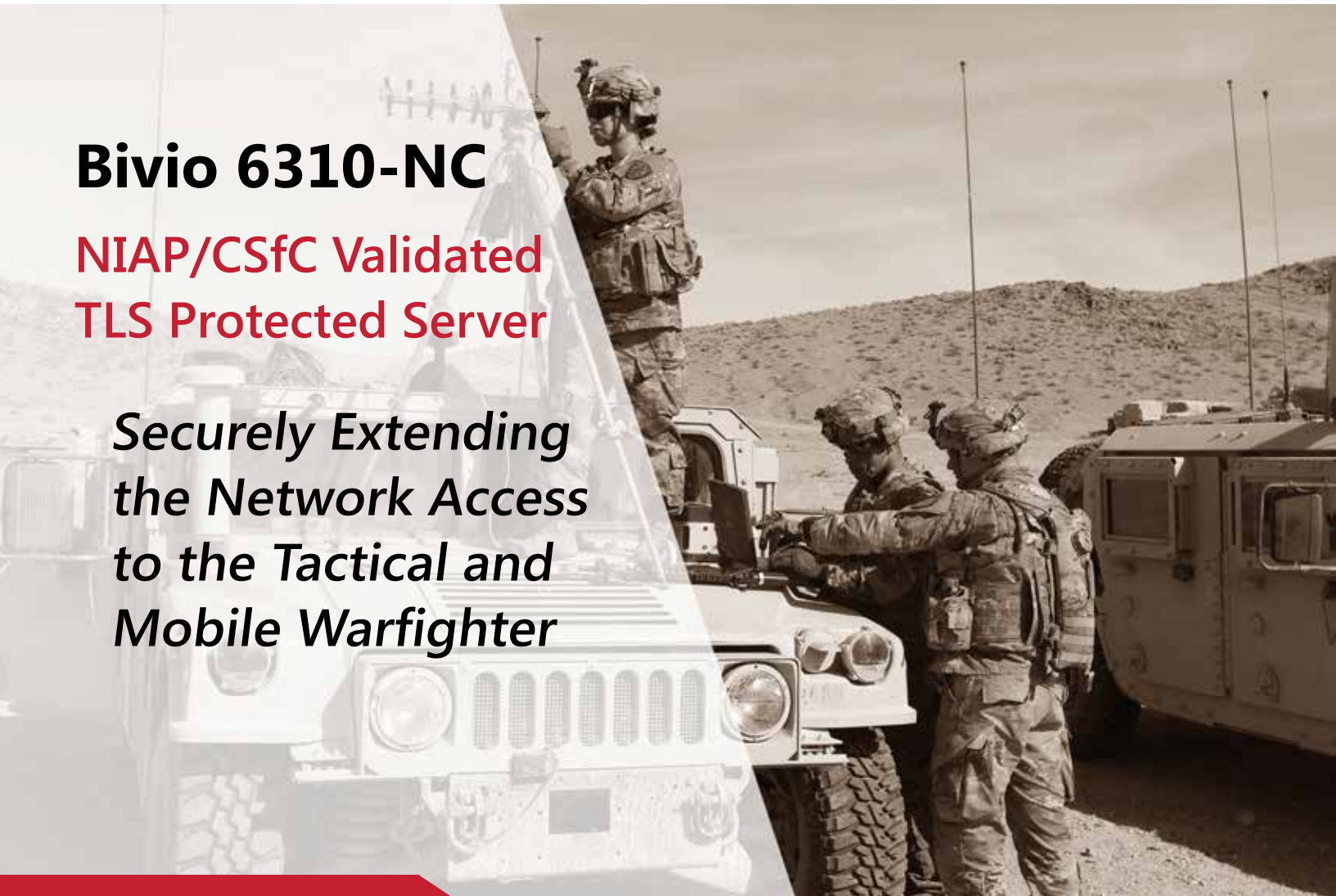
The Bivio 6310 includes up to six 1/10 Gb Ethernet ports and four 1 Gb Ethernet ports that can be provisioned as copper and/or fiber for network traffic processing. All ports operate in transparent mode so that the platform is completely invisible when deployed as an inline or passive network sensor.

The platform also includes a system management processor with out-of-band connectivity for separation of the platform management from payload traffic processing..

Bivio 6310-NC

NIAP/CSfC Validated
TLS Protected Server

*Securely Extending
the Network Access
to the Tactical and
Mobile Warfighter*





Full-Featured Analytics Reduce Information Overload and Analyst Fatigue



Robust Linux Environment

Bivio 6310 Series platforms include a robust and performance-optimized Red Hat® Enterprise Linux® distribution that provides a secure and reliable host environment for cyber security and network packet processing applications. The system combines the operating system with Bivio's exclusive packet acceleration and application management software to nearly eliminate internal packet handling latency and achieve a significant performance advantage over alternative solutions.

Common Criteria & NSA CSfC Validation

The Bivio 6310-NC Series platforms have been rigorously tested and validated by an approved independent laboratory for compliance to the collaborative Protection Profile for Network Devices (cPP-ND) Version 1.0 as overseen by the National Information Assurance Partnership (NIAP), and have received the Common Criteria Certification.

In addition to completing the NIAP Common Criteria certification, the Bivio 6310-NC platforms have been added to the Commercial Solutions for Classified (CSfC) Components List maintained by the National Security Agency (NSA). Products from the CSfC Components List are eligible for use in NSA approved Capability Packages for protecting classified data for a variety of different capabilities.

Enhancing the Cyber Defense Process

The Bivio 9000 platform hosts an advanced set of features for enhancing the Cyber Defense process and operating network sensors. Achieving speed-to-decision in mitigating cyber threats requires the ability to integrate threat intelligence indicators of compromise, automate the workflow for decision making and share threat information with third-party systems.

The platform supports the STIX™, TAXII™ and CybOX™ specifications that aid in integrating threat intelligence indicators into network-based cyber sensors. The platform also incorporates a visual workflow engine that aids the automation process for decision making with cyber sensor data.

In addition, tools for threat sharing include an integrated Kafka message broker to allow the cyber operator to move data from the platform to one or more external systems, and OpenDXL to facilitate sharing data with McAfee® cyber security products and other third-party technologies. Other threat sharing APIs are available with a custom API package for the platform.



Bivio 6310 Series

Specifications

Platform Feature	B6310 and B6310-NC	B6310R and B6310R-NC
System Performance (max)	20 Gbps	20 Gbps
# of Network Interfaces (Payload Processing)	1G/10G fiber (SFP/SFP+): Up to 6 1G copper (RJ45): Up to 4	1G/10G fiber (SFP/SFP+): Up to 4 1G copper (RJ45): Up to 4
Local Storage Technology / Capacity	SSD / Up to 30 TB	SSD / Up to 30 TB
System Management Ports	1G copper (RJ45) out-of-band and serial console	1G copper (RJ45) out-of-band and serial console
Power Consumption	750 W	550 W
Chassis Sizing	Form factor: 1U Rack-Mount Chassis depth: 26.9 inches (683 mm)	Form factor: 1U Rack-Mount Chassis depth: 20.7 inches (525 mm)
System Weight	48.3 lbs (21.9 kg)	30.0 lbs (13.6 kg)
Common Criteria / NIAP and NSA CSfC	B6310-NC models only	B6310R-NC models only
Harsh Environment Testing	N/A	MIL-STD-810G. MIL-STD-461G, Marine Standard DNV-GL

The Bivio 6310R is the core component of the Bivio Cyber Mission Tactical Rack (TacRak™), a portable and fully-integrated cyber operations kit for Tactical Cyber Operations, Breach Analysis, Incident Response and forward deployed Cyber Network Defense (CND) requirements.



About Bivio Networks

Bivio Networks is dedicated to providing leading networking products that enable government agencies and service providers to control, monitor and secure critical network infrastructure. A leader in cyber intelligence, cyber security and network control solutions, Bivio products are deployed in a wide range of environments by a global customer base including leading intelligence agencies, service providers and enterprises. Bivio is privately-held and is headquartered in the San Francisco Bay Area.

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