



As enterprise networks evolve, 10Gbps network links have become relatively low in cost and increasingly more widespread. Core network upgrades driven by data center consolidation, high performance computing and high bandwidth applications like video on demand and file sharing contribute to the adoption of 10Gbps networks. The need to inspect and remove malicious traffic at high throughput traffic points is now greater than ever. Network and security engineers realize intrusion prevention systems (IPS) must be implemented not only at the traditional WAN perimeter, but also between major network segments within core networks and data centers. The TippingPoint Core Controller enables 10Gbps links to be protected by the industry-leading TippingPoint IPS solution in a scalable, economical manner while ensuring the high availability, performance, low latency and security accuracy that are the hallmarks of TippingPoint IPS solutions.

Product Features

- In-Line 10Gbps IPS Protection
- Carrier-Class Reliability and Redundancy
- Scalable IPS Capacity for Changing Bandwidth Requirements
- Use a Single Security Management System for Core Controllers and IPS's
- Deploys in Minutes / Easy to Manage

"The TippingPoint Core Controller is a completely new approach to providing IPS scalability and redundancy for 10Gbps networks. With over 100G's of bandwidth capacity, Softlayer has chosen to use the TippingPoint solution because of its performance, security accuracy and ease of manageability. The Core Controller is just further evidence of TippingPoint's innovation and commitment to comprehensive network security."

Sean Charnock
VP Business Development
Softlayer Technologies, Inc.

In-Line 10Gbps IPS Protection

Protect Network Resources and Critical Applications on 10Gbps Networks

The TippingPoint Core Controller enables automated, in-line 10Gbps inspection to protect network devices, operating systems and applications from attack.

10Gbps IPS Traffic Inspection for Up To Three Network Segments

The TippingPoint Core Controller is deployed as a 'bump-in-the wire' network element for up to three 10Gbps network links. Traffic entering the Core Controller is intelligently flow balanced to a bank of TippingPoint IPS's where traffic inspection and enforcement are performed. Malicious and unwanted traffic is blocked, and clean traffic is returned to the Core Controller for distribution to the appropriate 10Gbps egress link, allowing organizations to scale security traffic inspection and enforcement.

Flow Management Across Multiple IPS's

The TippingPoint Core Controller balances traffic inspection loads across multiple IPS units, allowing you to effectively use only the amount of IPS capacity required.

The Core Controller utilizes multiple hash functions, so the likelihood of hot spots or hash collisions found in some load-balancing solutions is reduced immensely. The unit guarantees flow affinity so that all associated traffic goes through the same IPS segment.

Carrier-Class Reliability and Redundancy Maintain Network Reliability for 10Gbps Network Segments

All TippingPoint appliances are purpose built with the reliability to go in-line within enterprise

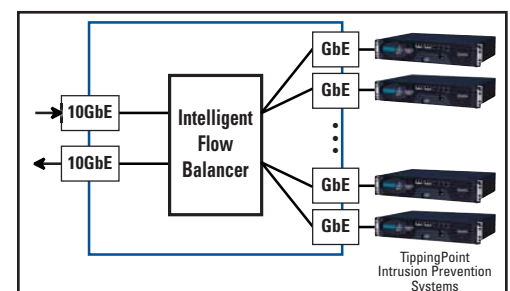
and service provider networks. In addition, the TippingPoint Core Controller has sophisticated high availability features, including redundant Core Controller configurability, built-in zero power bypass (Smart ZPHA), IPS heartbeat monitoring, link down synchronization and hardware watchdogs.

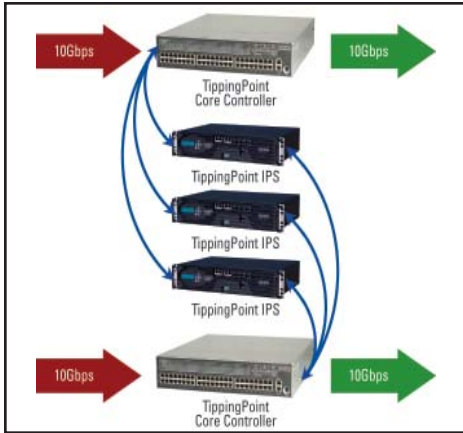
Flexible Core Controller and IPS Redundancy Configurations

TippingPoint's 10Gbps solution allows an unprecedented level of flexibility to eliminate a single point of failure. Where 10Gbps redundant paths are implemented, one Core Controller can be deployed in each path, both of which then share a common pool of IPS's (see diagram on next page). As a result, a TippingPoint Core Controller or IPS can be removed from service without impacting network availability, performance or security coverage.

Hot Swappable XFP's and Zero Power High Availability (Smart ZPHA)

Smart ZPHA is an optional, modular component available for the Core Controller's 10GbE segments which enables optical traffic bypass in the event of system power loss – providing





an additional level of network uptime assurance. Smart ZPHA modules may be removed from the Core Controller without impacting traffic on the 10GbE segment.

Hot Swappable Power Supplies

The Core Controller supports redundant, hot swappable power supplies – allowing modules to be replaced without affecting system performance, impacting network availability, or security coverage.

Hardware and IPS Monitoring

The TippingPoint Core Controller implements advanced monitoring mechanisms to ensure high availability in mission critical environments:

- Internal subsystem monitoring (temperature, fan speed, memory utilization)
- iLink availability using heartbeat packets
- Link down synchronization
- Thresholding

In the event one of these mechanisms triggers a fault, the Core Controller can go into Layer 2 Fallback (L2FB) mode. If a single Core Controller is deployed (non-redundant 10Gbps paths), traffic is managed accordingly, up to and including simply passing traffic through un-inspected.

The Core Controller periodically sends heartbeat packets across IPS connections. These heartbeat packets measure latency and availability of the IPS. If the latency exceeds a user specified threshold, or if a user specified number of heartbeat packets are dropped, the Core Controller will remove the IPS from the pool.

Scalable IPS Capacity for Changing Bandwidth Requirements

Pay As You Grow IPS Capacity

Start small with IPS capacity and minimize the cost of entry for 10GbE protection. Buy only the IPS units initially required, and add more to the pool as traffic inspection needs increase.

Utilize Existing TippingPoint IPS Units

With the Core Controller, customers gain the peace of mind of continuing to use already proven IPS technology. Further, units that have been purchased for lower speed network links can easily be redeployed behind the Core Controller.

A Single Security Management System

Centralized Management System for IPS and Core Controller

A single Security Management System (SMS) can manage both TippingPoint IPS's and Core Controllers – simplifying installation, configuration and ongoing monitoring and maintenance by taking advantage of the SMS's familiar and easy to use management interface.

Deploys in Minutes/Easy to Manage

Multiple Flow Management Algorithms Cater to a Variety of Traffic Profiles

The actual traffic mix that traverses a given 10Gbps link can vary significantly from one network to another. Some links may see a greater mix of large frames of file and video content while others may see a greater mix of smaller packets associated with VoIP or other latency sensitive traffic.

The Core Controller's system software contains several flow management algorithms enabling the optimization of throughput performance and security inspection based on the nature of the actual traffic traversing the link.

Intelligent Learning Mode Enables Rapid Deployment

An Intelligent Learning Mode is provided which analyzes network traffic on each 10GbE segment and provides recommendations for the optimal algorithm – saving valuable configuration time for network and security engineers.

Hardware Specifications Interfaces

- 6 x 10GbE fiber interfaces (3 segments)
- 48 x 10/100/1000 Base T iLink Interfaces
- Optional 3 x 10GbE Smart ZPHA modules (supports short and long range)
- 1 x 10/100/1000 Base T Mgmt Port
- 1 x RJ-45 Console Port

Physical Dimensions

Height (in): 3.5 in	Height (cm): 8.9 cm
Width (in): 19 in	Width (cm): 48.26 cm
Depth (in): 22 in	Depth (cm): 55.88 cm
Weight (lb): 45.5	Weight (kg): 20.64

Power

Amps (Max. Fused Power): 8/5
Volts: 100/240
Freq. Range (Hz): 50/60

Safety

- UL60950-1 Standard for Safety of Information Technology Equipment
- CSA 22.2: 60950-1
- EN60825: Safety of Laser Products
- EN60950-1
- IEC60950-1
- ROHS Compliance

Immunity

- EN-61000-3-2: Harmonic Emissions
- EN-61000-3-3: Voltage Fluctuations and Flicker
- EN-61000-4-2: ESD Immunity
- EN-61000-4-3: Radiated Immunity
- EN-61000-4-4 EFT: Burst Transients
- EN-61000-4-5: Surge Protection
- EN-61000-4-6: Injected RF
- EN-61000-4-11: Dips and Sags

Emissions

- FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance
- ICES-003, Class A
- EN 55022 Class A
- VCCI Class A
- AS/NZS CISPR 22 Class A

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