



Trend Micro™

# TIPPINGPOINT™ THREAT PROTECTION SYSTEM FAMILY

Real-time detection, enforcement, and remediation without compromising security or performance

Organizations today are in the constant shadow of evolving and sophisticated cyber threats. In some cases, these threats are not only more complex than those of the past, but they are also targeted and rely on newly discovered vulnerabilities or exploits. In other cases, threats take advantage of older vulnerabilities that you thought were long forgotten. Safeguarding your network assets and data from such threats requires detailed visibility into all your network layers and resources. It requires comprehensive, up-to-date security intelligence, and a dynamic approach that uses awareness and automation to adapt to new threats, new vulnerabilities, and everyday network changes.

These vastly different threats require a multi-pronged approach to security. Organizations need robust security solutions at the edge of and inside their networks to prevent malicious attacks from getting to critical resources. They also need comprehensive threat intelligence to protect against known, unknown, and undisclosed vulnerabilities.

Trend Micro™ TippingPoint™ Threat Protection System (TPS) is a powerful network security platform that offers comprehensive threat protection against known and undisclosed vulnerabilities with high accuracy. TPS provides industry-leading coverage across different threat vectors from advanced threats, malware and phishing, etc. with extreme flexibility and high performance. The TPS uses a combination of technologies, including deep packet inspection, threat reputation, URL reputation and advanced malware analysis on a flow-by-flow basis—to detect and prevent attacks on the network. The TPS enables enterprises to take a proactive approach to security, providing comprehensive contextual awareness and deeper analysis of network traffic. This complete contextual awareness, combined with the threat intelligence from Trend Micro™ TippingPoint™ Digital Vaccine® Labs (DVLabs) provides the visibility and agility necessary to keep pace with today’s dynamic, evolving enterprise and data center networks.

“Trend Micro™ Deep Discovery™ was a no brainer. It outperformed all competitors and was well-respected by Gartner™. When Trend Micro purchased TippingPoint, we knew we had the best of both worlds.”

Frank Bunton,  
Vice President and CISO,  
MedImpact



## KEY FEATURES

**TippingPoint Threat Protection Extended to the Cloud:** Trend Micro™ Cloud Network Protection, powered by Trend Micro™ TippingPoint™, is a powerful inline security solution that allows enterprises to extend their existing TippingPoint network protection to their hybrid cloud environments. Offering comprehensive threat protection—including virtual patching, shielding against vulnerabilities, blocking exploits, and defending against known and zero-day attacks with high accuracy—it provides industry-leading coverages across multiple threat vectors. Apply your TippingPoint security controls and policies to your cloud environments via your existing Security Management System (SMS).

**On-Box SSL Inspection:** Sophisticated and targeted attacks are increasingly using encryption to evade detection. TPS reduces security blind spots created by encrypted traffic with on-box SSL inspection.

**Performance Scalability:** The increase in data center consolidation and proliferation of cloud environments requires security solutions that can scale as network demands increase. TPS delivers unprecedented security and performance for high-capacity networks with a scalable deployment model that includes the industry's first 40Gbps NGIPS in a 1U form factor with the ability to scale up to 120 Gbps aggregate in a 3U form factor.

**Flexible Licensing Model:** Easily scale performance and security requirements with pay-as-you-grow approach and flexible licenses that can be reassigned across TPS deployments without changing network infrastructure.

**Real-Time Machine Learning:** Many security threats are short-lived and constantly evolving, at times limiting the effectiveness of traditional signature and hash-based detection mechanisms. TPS uses statistical models developed with machine learning techniques deliver the ability to detect and mitigate threats in real time.

**Enterprise Vulnerability Remediation (eVR):** Quickly remediate vulnerabilities by integrating third-party vulnerability assessments with the TippingPoint product portfolio. Customers can pull in information from various vulnerability management and incident response vendors (Rapid7, Qualys, Tenable), map Common Vulnerabilities and Exposures (CVEs) to TippingPoint Digital Vaccine® filters and take action accordingly.

**Advanced Threat Analysis:** Extend protection from unknown threats through integration with Trend Micro™ Deep Discovery™ Analyzer. TPS pre-filters known threats, forwards potential threats for automated sandbox analysis, and remediates in real time upon confirmation of malicious content.

**High Availability:** Ideal for inline deployment, TPS has multiple fault-tolerant features including hot swappable power supplies, watchdog timers to continuously monitor security and management engines, built-in inspection bypass, and zero power high availability (ZPHA). In addition, TPS can be provisioned using redundant links in a transparent active-active or active-passive high availability (HA) mode.

**Integrated Advanced Threat Prevention:** TPS integrates with Trend Micro™ Deep Discovery™ advanced threat detection solutions, rated as the most effective and "Recommended" breach detection system by NSS Labs.

**Asymmetric Traffic Inspection:** Traffic asymmetry is widespread and pervasive throughout enterprise and data center networks. Enterprises must overcome challenges from both flow and routing asymmetry to be able to fully protect their networks. TPS by default inspects all types of traffic, including asymmetric traffic, and applies security policies to ensure comprehensive protection.

**Agility and Flexibility:** TPS embraces software-defined network protection by deploying IPS as a service. TPS also protects virtualized applications from within your virtualized infrastructure (VMware®, KVM).

**Best-in-Class Threat Intelligence:** Digital Vaccine Labs (DVLabs) provide cutting-edge threat analysis and security filters that cover an entire vulnerability to protect against all potential attack permutations, not just specific exploits. In addition to DVLabs, exclusive access to vulnerability information from the Zero Day Initiative (ZDI) protects customers from undisclosed and zero-day threats. ZDI is the largest vendor-agnostic bug bounty program, with 700 vulnerabilities published in 2016. In 2016, Trend Micro TippingPoint customers were protected an average of 57 days ahead of a vulnerability being patched by affected vendors.

**Virtual Patching:** Virtual patching provides a powerful and scalable frontline defense mechanism that protects networks from known threats and relies on vulnerability-based filters to provide an effective barrier from all attempts to exploit a particular vulnerability at the network level rather than the end-user level. This helps enterprises gain control of their patch management strategy with pre-emptive coverage between the discovery of a vulnerability and the availability of a patch, as well as added protection for legacy, out-of-support software.

**Support for a Broad Set of Traffic Types:** TPS platform supports a wide variety of traffic types and protocols. It provides uncompromising IPv6/v4 simultaneous payload inspection and support for related tunneling variants (4in6, 6in4, and 6in6). It also supports inspection of IPv6/v4 traffic with VLAN and MPLS tags, mobile IPv4 traffic, GRE and GTP (GPRS tunneling), and jumbo frames. This breadth of coverage gives IT and security administrators the flexibility to deploy its protection wherever it is needed.

**Centralized Management:** The TippingPoint Security Management System (SMS) delivers a unified policy and element management graphical user interface that provides a single mechanism for monitoring operational information, editing network security policies, configuring elements and deploying network security policy across the entire infrastructure whether its physical or virtual.

## Key Benefits

### Pre-emptive threat prevention

TPS deployed inline has the ability to inspect and block all directions of traffic (inbound, outbound, and lateral) in real time to protect against known, unknown, and undisclosed vulnerabilities.

### Threat insight and prioritization

Visibility and insight is crucial to making the best security policy decisions. TPS delivers complete visibility across your network and provides the insight and context needed to measure and drive threat prioritization.

### Real-time enforcement and remediation

Defend the network from the edge, to the data center, and to the cloud with real-time, inline enforcement and automated remediation of vulnerable systems. TPS achieves a new level of inline, real-time protection, providing proactive network security for today's and tomorrow's real-world network traffic and data centers. The Threat Suppression Engine (TSE) architecture performs high-speed inline deep packet traffic inspection, and the purpose-built appliance's modular design enables the convergence of additional security services.

### Operational simplicity

With flexible deployment options that are easy to set up and manage through a centralized management interface, TPS provides immediate and ongoing threat protection with out-of-the-box recommended settings.

## TPS TECHNICAL SPECIFICATIONS



| Features                                | 440T<br>(TPNN0291)  | 2200T<br>(TPNN0292)   | 8200TX<br>(TPNN0090)   | 8400TX<br>(TPNN0091)   |
|---|---|---|--|--|
| Supported IPS Inspection Throughput     | 250 Mbps/500 Mbps/1 Gbps  | 1 Gbps/2 Gbps   | 3/5/10/15/20/30/40 Gbps  | 3/5/10/15/20/30/40 Gbps  |
| SSL Inspection                          | Not available   | 500 Mbps  | 2 Gbps (2K keys SHA256)  | 2 Gbps (2K keys SHA256)  |
| Latency                                 | <100 microseconds   | <100 microseconds   | <40 microseconds   | <40 microseconds   |
| Concurrent Sessions                     | 1,000,000   | 10,000,000  | 120,000,000  | 120,000,000  |
| New connections per second              | 70,000  | 115,000   | 650,000  | 650,000  |
| MTBF (Mean Time Between Failures)       | 39,694 hours @ 25C ambient  | 34,837 hours @ 25C ambient  | 88,706 hours @ 25C ambient   | 88,706 hours @ 25C ambient   |
| Form Factor                             | 1U  | 2U  | 1U   | 2U   |
| Weight                                  | 15.28 lb (6.93 Kg)  | 26.26 lb (11.91 Kg)   | 32 lb (max including IOMs)<br>29 lbs (w/ blank IOMs)   | 50 lb (max including IOMs)<br>41.5 lb (w/ blank IOMs)  |
| Dimensions (W x D x H)                  | 16.78 in.(W) x 17.3 in.(D) x 1.72 in.(H)<br>42.62 cm x 45.00 cm x 4.40cm  | 16.77 in (W) x 18.70 in (D) x 3.46 in (H)<br>42.60 cm x 47.50 cm x 8.80 cm  | 16.78 in (W) x 17.3 in (D) x 1.72 in (H)<br>42.62 cm x 45.00 cm x 4.40 cm  | 16.77 in (W) x 18.70 in (D) x 3.46 in (H)<br>42.60 cm x 47.50 cm x 8.80 cm   |
| Management Ports                        | One out-of-band 10/100/1000 RJ-45 one RJ-45 serial manageable   |   |  |  |
| Management Interface                    | Security management system (SMS), local web console, command-line, SNMPv2c, SNMPv3 (TippingPoint MIB available) |   |  |  |
| Network Connectivity                    | Eight 10/100/1000 RJ-45 ports and integrated bypass support one 10/100/1000 RJ-45 high availability ports       | Eight 10/100/1000 RJ-45 ports with integrated bypass support 8 x 1 G SFP 4 x 10 G SFP+ one 10/100/1000 RJ-45 high availability ports support for external ZPHA for SFP/SFP+ | 2x IOM slots, mix/match: 6-segment 1 GE copper 6-segment 1 GE SFP 4-segment 10 GE SFP+ 1-segment 40 GE QSFP+ 4-segment 1 GE copper bypass 2-segment 1 GE SR/LR fiber bypass 2-segment 10 GE SR/LR fiber bypass | 4x IOM slots, mix/match: 6-segment 1 GE copper IOM 6-segment 1 GE SFP IOM 4-segment 10 GE SFP+ 1-segment 40 GE QSFP+ 4-segment 1 GE copper bypass 2-segment 1 GE SR/LR fiber bypass 2-segment 10 GE SR/LR fiber bypass |
| On-Box Storage                          | 8 GB hot-swappable CFast drive  |   | 32 GB hot-swappable 1.8" SSD module  |  |
| Voltage                                 | 100-240 VAC, 50-60 Hz   |   | 100 to 240 VAC/-40 to -60 VDC  |  |
| Current (Max. Fused Power)              | 4-2 A   | 12-6 A  | 12/6 Amps AC, 24/16 Amps DC  |  |
| Max Power Consumption                   | 250 W (853 BTU/hour)  | 493 W (1,682 BTU/hour)  | 750 W (2,557BTU/hour)  |  |
| Power Supply                            | Single fixed  | Dual/redundant hot-swappable  | Dual/redundant hot-swappable   |  |
| Operating Temperature                   | 32°F to 104°F (0°C to 40°C)   |   |  |  |
| Operating Relative Humidity             | 5% to 95% non-condensing  |   |  |  |
| Non-Operating/Storage Temperature       | -4°F to 158°F (-20°C to 70°C)   |   |  |  |
| Non-Operating/Storage Relative Humidity | 5% to 95% non-condensing  |   |  |  |
| Altitude                                | Up to 10,000 feet (3,048 m)   |   |  |  |
| Safety                                  | UL 60950-1, IEC 60950-1EN 60950-1,CSA 22.2 60950-1RoHS compliance   |   |  |  |
| EMC                                     | Class A, FCC, VCCI, KC EN55022, CISPR 22, EN55024 CISPR 24, EN61000-3-2 EN61000-3-3, CE marking                 |   |  |  |

## CLOUD NETWORK IPS TECHNICAL SPECIFICATIONS

| Features                   | Cloud Network Protection |
|----------------------------|--------------------------|
| AWS Instance Type          | C5.2xlarge               |
| IPS Inspection Throughput* | Up to 3.5 Gbps           |
| Latency                    | <100 microseconds        |
| Concurrent Connections     | 7.5M                     |
| New Connections Per Second | 75,000                   |

\*undergoing performance testing final numbers may vary

## vTPS TECHNICAL SPECIFICATIONS

| Features                            | vTPS Standard  |                                  |
|-------------------------------------|--|----------------------------------|
| Supported IPS Inspection Throughput | 250 Mbps/500 Mbps/<br>1 Gbps/2 Gbps  | 250Mbps/500Mbps/<br>1Gbps/2 Gbps |
| SSL Inspection                      | NA   | Yes                              |
| Number of Logical Cores             | 2 or 3   | 4                                |
| Memory                              | 8 GB   | 16 GB                            |
| Disk Space                          | 16 GB  | 16 GB                            |
| IPS Concurrent Connections          | 1,000,000  |                                  |
| New Connections per Second          | Up to 120 K VMware Up to 60 K KVM  |                                  |
| Virtual Platform Support            | VMWare ESXi 5.5, 6.0,6.5<br>(NSX is not required for transparent inspection<br>and enforcement) & KVM - Redhat Enterprise<br>Linux® 6, 7 |                                  |
| Network Drivers                     | VMWare- VMNet3; KVM- virtIO  |                                  |
| Number of Network Segments          | 1  |                                  |
| Number of Virtual Segments          | No limit   |                                  |
| Dedicated Management vNIC           | Yes  |                                  |



Securing Your Connected World

## TIPPINGPOINT I/O MODULES

| TippingPoint IO Module Description                    | Product SKU |
|---|-------------|
| TippingPoint IO Module: 6-segment Gig-T               | TPNN0059    |
| TippingPoint IO Module: 6-segment GbE SFP             | TPNN0068    |
| TippingPoint IO Module: 4-segment 10GbE SFP+          | TPNN0060    |
| TippingPoint IO Module: 1-segment 40GbE QSFP+         | TPNN0069    |
| TippingPoint IO Module: 4-segment Gig-T Bypass        | TPNN0070    |
| TippingPoint IO Module: 2-segment 1G Fiber SR Bypass  | TPNN0071    |
| TippingPoint IO Module: 2-segment 1G Fiber LR Bypass  | TPNN0072    |
| TippingPoint IO Module: 2-segment 10G Fiber SR Bypass | TPNN0073    |
| TippingPoint IO Module: 2-segment 10G Fiber LR Bypass | TPNN0074    |

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