Trend Micro™ TippingPoint™ TXE Series

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

Your organization faces increasingly sophisticated cyber threats, including targeted attacks exploiting new and old vulnerabilities. Protecting network assets and data demands detailed visibility across all network layers, up-to-date security intelligence, and a dynamic approach that leverages automation to adapt to new threats and changes.

A multi-layered security strategy is essential. Robust solutions at the network edge and within prevent malicious attacks from reaching critical resources. Comprehensive threat intelligence safeguards your environment against known, unknown, and undisclosed vulnerabilities. With Trend Vision One™ enterprise cybersecurity platform integration, your team can leverage advanced threat detection, centralized visibility, and automated response capabilities to enhance your overall security posture.

Introducing Trend Micro™ TippingPoint™ Threat Protection System (TPS)

This powerful network cybersecurity sub-module delivers comprehensive threat protection against known and undisclosed vulnerabilities with high accuracy. TippingPoint TPS provides your organization with industry-leading coverage across different threat vectors with extreme flexibility and high performance, keeping you resilient against advanced threats like malware and phishing. TippingPoint TPS uses a combination of technologies on a flow-by-flow basis. Deep packet inspection, threat reputation, URL reputation, and advanced malware analysis enable you to detect and prevent attacks on your network. Take a proactive approach to security with comprehensive contextual awareness and deeper network traffic analysis. This complete contextual awareness, combined with the threat intelligence from Trend Micro™ Digital Vaccine™ provides the visibility and agility necessary to keep pace with today's dynamic, evolving enterprise and data center networks.

Key benefits

Inline NDR with pre-emptive threat prevention

- Real-time inspection and blocking of all directions of traffic (inbound, outbound, and lateral)

Threat insight and prioritization

- Complete visibility across your network

Real-time enforcement and remediation

- Continuous, proactive monitoring and automated repair of vulnerable systems

Operational simplicity

- Advanced threat detection, centralized visibility, and automated response (with Trend Vision One integration)

Key features

Inline network detection and response (NDR). As a customer, you can enable Network Security visibility along with IPS enforcement capabilities. This TXE sub-module takes a unique approach, isolating and reserving solution resources for NDR visibility without compromising inline reliability.

This enables you to:

- **Discover your attack surface.** Find unknown assets with your network telemetry and correlate with Microsoft Entra ID data, vulnerability scans, and endpoint context
- **Identify risky activities.** Track suspicious behavior beyond IPS filters. This includes large, unexpected file transfers and suspicious login attempts. Our AI/machine learning (ML)-driven approach allows you to analyze context, from your network to integrations to your endpoints
- **Prioritize your riskiest assets.** Continuously assessed risk now offers insights into suspicious network behaviors and known threats
- **Act with prioritized recommendations.** Leverage the power of your inline IPS with Trend Vision One workflows to remediate threats by blocking IPs, FQDNs, and URLs, or by deploying virtual patching recommendations tailored to your environment
- **Visualize incidents for faster, comprehensive remediation.** Network telemetry is archived and accessible so you can visualize incidents, displaying network-connected resources and communications over time
- **Reduce security blind spots.** Sophisticated and targeted attacks are increasingly using encryption to evade detection. TippingPoint TPS helps you encrypt traffic with on-box secure sockets layer (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. TippingPoint TPS gives you unprecedented security and performance for your high-capacity networks. Including a scalable deployment model, featuring the industry's first 100 Gbps next-generation intrusion prevention system (NGIPS) in a 1U form factor. This gives you the ability to scale up to 0.5 Tbps (500 Gbps) aggregate in a 5U form factor.

Identify and reduce risks. Discover unmanaged assets and identify vulnerabilities within your network integration. Identify vulnerabilities by integrating Trend Micro endpoint detecting and response (EDR) or third-party vulnerability assessments with Trend Vision One. Pull in information from various vulnerability management and incident response vendors (Rapid7, Qualys, Tenable) to map Common Vulnerabilities and Exposures (CVE) to Digital Vaccine filters and act accordingly. Utilize Cyber Risk Exposure Management (CREM) to improve your overall security posture by reducing your risk score.

Advanced threat analysis. Extend protection against unknown threats by integrating with Trend Vision One cloud sandboxing. TippingPoint TPS pre-filters known threats, forwards potential threats for automated sandbox analysis, and provides real-time remediation upon confirmation of malicious content.

High availability. Ideal for inline deployment, TippingPoint TPS provides multiple fault-tolerant features. These include hot-swappable power supplies, watchdog timers for continuous monitoring of security and management engines, built-in inspection bypasses, and zero-power high availability (ZPHA). Additionally, you can provision TippingPoint TPS with redundant links in a transparent active-active or active-passive high availability (HA) mode.

Asymmetric traffic inspection. Traffic asymmetry is widespread and pervasive throughout enterprise and data center networks. To fully protect your networks, you must overcome challenges from both flow and routing asymmetry. By default, TippingPoint TPS allows you to inspect all types of traffic, including asymmetric traffic, and allows you to apply security policies to ensure comprehensive protection.

Best-in-class threat intelligence: Trend™ Research provides cutting-edge threat analysis and security protections that cover an entire vulnerability lifecycle to help you protect against all potential attack permutations, not just specific exploits. In addition, you have exclusive access to vulnerability information from our Trend Zero Day Initiative™ (Trend ZDI), which provides advanced zero-day threat protection. Trend ZDI is the largest vendor-agnostic bug bounty program. According to Trend Micro experts, with more than **1,211 vulnerabilities published in 2023**, TippingPoint customers are protected an average of **96 days** before a vulnerability is patched by the affected vendors.

Support for a broad set of traffic types. TheTippingPoint TPS sub-module 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 your IT and security administrators the flexibility to deploy protection.

> [Trend Vision One] covers us on all aspects, from endpoint to cloud app security, to perimeter, as well as east-west traffic inside our network.

Cody Lee

Executive Director of Technology, Weatherford ISD

An enterprise-level network serving 8,000 students and 1,200 employees

WEATHERFORD ISD

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Leader in global vulnerability research and discovery since 2007

Quantifying the Public Vulnerability Market: 2024 Edition, Tanner Johnson, Adam Strange, Elvia Finalle, June 2024

Proven Leadership

G2 Leader FALL 2024 | G2 Best Usability FALL 2024 | G2 Best Relationship FALL 2024

Gartner Peer Insights Customers' Choice 2024

Recognized in 2024 Voice of the Customer for Network Detection and Response, Midsize Enterprise ($50M - $1B)

FORRESTER WAVE LEADER 2023 Network Analysis And Visibility

Named a Leader in the Forrester Wave™, Network Analysis and Visibility, Q2 2023

Technical specifications

Trend offers these performance numbers as an example of expected performance using recommended settings, in a testing lab environment. Customers are encouraged to complete proof-of-concept (PoC) testing at their own site to confirm that the TippingPoint TPS capabilities meet individual requirements.[3]

PERFORMANCE SPECIFICATIONS	5600TXE	8600TXE	9200TXE
Max Inspection Throughput	10 Gbps	40 Gbps	100 Gbps
New Connections Per Second	550,000	1M	
Max Concurrent Connections	60M	300M	
Latency[1]	<60 usec		
TLS Inspection Throughput[2]	7.5 Gbps	25 Gbps	40 Gbps
New TLS Connections Per Second	10,000	20,000	
Max TLS Concurrent Connections	100,000	250,000	
Max Imported TLS/SSL Certificates	1,000	2,500	
Supported Inspection License Capacities	250, 500 Mbps, 1, 2, 3, 5, 10 Gbps	5, 10, 15, 20, 30, and 40 Gbps	40, 60, 80, and 100Gbps

STACKING PERFORMANCE	2 UNIT STACK		3 UNIT STACK		4 UNIT STACK		5 UNIT STACK	
TXE Model	8600TXE	9200TXE	8600TXE	9200TXE	8600TXE	9200TXE	8600TXE	9200TXE
Max Inspection Throughput	80 Gbps	200 Gbps	120 Gbps	295 Gbps	160 Gbps	390 Gbps	200 Gbps	485 Gbps
New Connections Per Second	2M		3M		4M		5M	
Max Concurrent Connections	600M		900M		1,200M		1,500M	
Latency[3]	<60 usec							
TLS Inspection Throughput[5]	50 Gbps	80 Gbps	75 Gbps	120 Gbps	100 Gbps	160 Gbps	125 Gbps	200 Gbps
New TLS Connections Per Second	50 Gbps	80 Gbps	75 Gbps	120 Gbps	100 Gbps	160 Gbps	125 Gbps	200 Gbps
Max TLS Concurrent Connections	500,000		750,000		1,000,000		1,250,000	
Max imported TLS/SSL Certificates	2,500							

[1]Performance tests are run in a lab-based environment with DUT configured using recommended settings. Actual performance may differ in a production network.

[2]Average latency for all packet sizes.

[3]Average packet size of 256KB with ECDHE-RSA-AES256-GCM-SHA384 cipher.

[5]HTTPS response size average of 64KB and 256KB with ECDHE-RSA-AES256-GCM-SHA384 cipher and 2K key size.

PHYSICAL SPECIFICATIONS	5600 TXE	8600TXE	9200TXE
Max Network IO Modules	2 (see Network IO Modules table below)		
Management Ports	1 GbE copper OR SFP28 RJ-45 serial (out of band CLI console access)		
Stacking Interconnect	NA	Dual QSFP28-DD	
Dimensions	18.54" W x 22.40" D x 1.73" H (1RU)	18.54" W x 28.90" D x 1.73" H (1RU)	18.54" W x 34.10" D x 1.73" H (1RU)
Weight	18 lbs (w/ Blank IOMs)	32 lbs (w/ blank IOMs)	42 lbs (w/ blank IOMs)
Voltage	100VAC ~ 240VAC (C14 connector), -40VDC ~ -60VDC	100 VAC ~ 240 VAC (C16 connectors) -40VDC ~ 60VDC	
Max. Fused Power	450W @ 110VAC/220VAC	1,200W @110 VAC/220 VAC	1,500W @110 VAC
Max. Power Consumption	434W w/ 2x 100GbE IOMs	1,000W w/ 2x 100 GbE IOMs	1,300W w/ 2x 100 GbE IOMs
Power Supplies	2x hot swappable, 1+1 redundant		
Fans	4x embedded/fixed configuration	7x hot swappable	
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)	32 °F to 104 °F (0 °C to 40 °C)	
Operating Relative Humidity	5% to 95% non-condensing	5% to 95% non-condensing	
Non-Operating Storage Temperature	-4 °F to 158 °F (-20 °C to 70 °C)	-4 °F to 158 °F (-20 °C to 70 °C)	
Non-Operating Storage Humidity	5% to 95% non-condensing	5% to 95% non-condensing	
EMC	EN55032:2014/A11:2020, CISPR: 2015; EN55035:2017/A11:2020, CISPR 35: 2015; EN61000-3-2:2014; EN61000-3-3:2013/A1:2019		
Safety	IEC 60950-1:2005, AMD1:2009, AMD2:2013; IEC62368- 1:2014; IEC62368-1: 2018		
Altitude	Up to 6,500 feet above MSL (2000m)		
Mean Time Between Failure (MTBF)	473,641 hours @ 25C	364,594 hours @ 25C	176,952 hours @ 25C

NETWORK IO MODULES			
Standard	**# Ports/Connector Type**	**Port Speed**	**Part Number**
6-segment 25 GbE SFP28	12 x SFP28/SFP+/SFP	1/10/25 Gbps	TPNN0370
4-segment 100 GbE QSFP28	8 x QSFP28/QSFP+	40/100 Gbps	TPNN0371
Standard	**# Ports/Connector Type**	**Port Speed**	**Part Number**
6-segment Gig-T	12 x copper RJ45	1 Gbps	TPNN0414
4-segment 1 GbE fiber SR	8 x multi-mode fiber (LC type)	1 Gbps	TPNN0412
4-segment 1 GbE fiber LR	8 x single-mode fiber (LC type)	1 Gbps	TPNN0413
4-segment 10 GbE fiber SR	8 x multi-mode fiber (LC type)	1/10 Gbps	TPNN0410
4-segment 10 GbE fiber LR	8 x single-mode fiber (LC type)	1/10 Gbps	TPNN0411
4-segment 25 GbE fiber SR	8 x multi-mode fiber (LC type)	25 Gbps	TPNN0374
4-segment 25 GbE fiber LR	8 x single-mode fiber (LC type)	25 Gbps	TPNN0375
2-segment 40 GbE fiber SR4	4 x multi-mode fiber (MPO type)	40 Gbps	TPNN0408
2-segment 40 GbE fiber LR4	4 x single-mode fiber (LC type)	40 Gbps	TPNN0409
2-segment 100 GbE fiber SR4	4 x multi-mode fiber (MPO type)	100 Gbps	TPNN0372
2-segment 100 GbE fiber LR4	4 x single-mode fiber (LC type)	100 Gbps	TPNN0373