



# Policy Traffic Switch 32000

## Big Performance in a Small Package, with Real-World Versatility

The PTS 32000 delivers PCEF/TDF functionality at the highest scale, boasts the best performance density, and supports 100GE, 40GE, and 10GE interfaces that let you embed the Sandvine Policy Engine anywhere in your network and enable your transition to 100GE.

The Policy Traffic Switch (PTS) is a key component of Sandvine's network policy control platform, enabling the realtime application of business logic and policy enforcement on data traffic. The PTS 32000 is powered by the Sandvine Policy Engine and a high-performance packet processing operating system executing on purpose-built, carrier-grade hardware. In conjunction with Sandvine's control plane, the PTS is bringing unified network policy control to fixed, mobile, and converged networks worldwide.

Within a network policy control deployment, the PTS performs three critical functions: traffic classification, policy decision-making, and policy enforcement. More information about the PTS in general is available in [Policy Traffic Switch: Overview](#).

### BIG PERFORMANCE IN A SMALL PACKAGE, WITH REAL-WORLD VERSATILITY

The PTS 32000 packs an enormous punch in only 2RU; by any meaningful measure, the element has world-leading:

- **Throughput:** each unit reaches 400 Gbps of throughput with full line-rate inspection, and the architecture supports clustered deployments up to 8 Tbps
- **Concurrent Flows:** a single PTS 32000 scales to more than 90 million concurrent flows and a flow initiation rate of 4.4 million new flows per second
- **Performance Density:** this high performance is delivered in only 2RU, giving the PTS 32000 the world's best per rack unit performance density
- **Port Density:** whether using the 100GE ports, the 40GE ports (perhaps for directing VAS traffic to a blade enclosure), or the 10GE ports, carriers benefit from the world's highest performance density
- **Power Consumption:** this high performance is delivered with low power costs. At only 1440 W the PTS 32000 leads in performance per Watt, too

By providing the world's best performance, coupled with support for 100GE, 40GE, and 10GE interfaces in compact, low-power hardware, the PTS 32000 empowers network operators to introduce or transition to 100GE-enabled network policy control precisely when, where, and how they want.

### UNIQUE ARCHITECTURE FOR DISTINCT BENEFITS

Like all Policy Traffic Switch models, the PTS 32000 incorporates unique architectural features that convey realworld operator benefits, including hardware-based load distribution, separate data management and data processing functions, software bypass capability, and inter-model clustering.

The above features give the Policy Traffic Switch distinct advantages over competing products and enable operators and their subscribers to reap the rewards of network policy control.

Figure 1

THE PTS 32000: the highest performance in the smallest package



### TECHNICAL DETAILS AND PERFORMANCE SPECIFICATIONS

For an overview of features common to all PTS models, please refer to Policy Traffic Switch: Overview.

#### PTS 32000 Performance

The following table provides PTS 32000 performance metrics under typical network conditions. Actual inspection throughput performance will vary based upon the software licenses, enabled policies, and deployment characteristics.

Metric	PTS 32000	Description
Intersection Throughput	400 Gbps	The maximum bandwidth that can be intersected by the PTS
Inspection Throughput	375 Gbps	The maximum bandwidth that can be processed by the PTS with no shunts, no drops and all packets inspected
New Flows Per Second	4.4 M	Maximum flows per second is determined by the type of traffic and policy applied
Maximum Concurrent Flows	>90 M	Maximum number of flows processed by the PTS at the same time
Maximum Subscribers	30 M	Maximum number of subscribers for which basic subscriber statistics can be collected within the default reporting interval of one hour
Maximum Throughput in a Cluster	8 Tbps	The maximum throughput in a cluster of PTS 32000
Power Consumption	1440 W	Fully populated power consumption
Performance	3.84	Watts/Gbps

#### PTS 32000 Blade and Interface Options

The PTS 32000 features one blade slot, into which any of the available interface and bypass blade can be inserted.

Blade	Type	Description
BLD 32080	Expansion	2x40GE
BLD 32042	Passive Bypass	2xLR4 or 2xLR

Interface Type	Number of Ports	Description
CFP4	4	Data Only
QSFP+	13	4 Data and 9 Cluster
SFP+	32	8 Data/Cluster/Service

## Additional Information

The information presented in these tables is not exhaustive – it is a subset of the most commonly requested details.

<b>Network Interface Standards</b>	Gigabit Ethernet	10 Gigabit Ethernet	IEEE 802.1q and 802.1ad
<b>Tunnel &amp; Encapsulation Support</b>	GTP MobileIP MPLS GRE	LAN IPinIP L2TPv2 EoMPLS	6rd Teredo CAPWAP
<b>Access Technology Support</b>	2G 3G 4G	LTE WiMAX DSL	FTTx DOCSIS
<b>IP Version Support</b>	IPv4	IPv6	
<b>RFC Support</b>	SNMPv2: RFC 1905, 2578, 3418 SNMPv3: RFC 3411-3418 RADIUS: RFC 2865, 2866, 2869 Diameter: RFC 3588 TACACS+: RFC 1492 NTP: RFC 1305		
<b>Network Integration Support</b>	3GPP TS 32.299 version 9 (Diameter Gy) 3GPP TS 29.212 version 9 (Diameter Gx) 3GPP TS 29.061 version 7.9 (3GPP RADIUS) 3GPP TS 32.225 and 3GPP TS 32.299 (Rf) BGPv4		
<b>Centralized Management</b>	Yes – refer to <b>Control Center: Management Simplified</b>		
<b>High Availability</b>	Yes (via Virtual Switch Cluster, unit redundancy and N:N+1 deployment redundancy)		
<b>Physical Specifications</b>	Dimensions: 432 mm x 89 mm x 585mm / 17" x 3.5" x 23" (Width x Height x Depth) Mounting: Standard 19" rack (2 RU) Weight: 27.3 kg / 60 lbs Power Supply: 120-240Vac or 40-60Vdc Power Supply efficiency: 88% Temperature: 0°C to +40°C / +32°F to +104°F Humidity: 5% to 85% non-condensing		
<b>Regulatory Compliance</b>	Compliant with international standards for product safety and electromagnetic compatibility (EMC) NEBS Level 3 Compliant		

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## ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit [sandvine.com](http://sandvine.com) or follow Sandvine on Twitter at [@Sandvine](https://twitter.com/Sandvine).



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