



Policy Traffic Switch 32000

Big performance in a small package, with real-world versatility

The PTS 32000 delivers high scale PCEF/TDF functionality, boasting a performance density, and supports 100GE, 40GE, and 10GE interfaces that let you embed the solution anywhere in your network.

The Policy Traffic Switch (PTS) is a key component of Sandvine's network policy control platform, enabling the real-time 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.

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, while the architecture supports clustered deployments up to 4.2 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 Watt, the PTS 32000 also 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 PTS models, the PTS 32000 incorporates unique architectural features that convey real-world 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 PTS 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

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 | 4.2 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+ | 8 | 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.

| | | | |
|---|---|-----------------------------------|-------------------------|
| Network Interface Standards | Gigabit Ethernet | 10 Gigabit Ethernet | IEEE 802.1q and 802.1ad |
| Tunnel & Encapsulation Support | GTP MobileIP MPLS GRE | LAN IPinIP L2TPv2 EoMPLS | 6rd Teredo CAPWAP |
| Access Technology Support | 2G 3G 4G | LTE WiMAX DSL | FTTx DOCSIS |
| IP Version Support | IPv4 | IPv6 | |
| RFC Support | SNMPv2: RFC 1905, 2578, 3418 SNMPv3: RFC 3411-3418 RADIUS: RFC 2865, 2866, 2869 Diameter: RFC 3588 TACACS+: RFC 1492 NTP: RFC 1305 | | |
| Network Integration Support | 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 | | |
| Centralized Management | Yes | | |
| High Availability | Yes (via clustering, unit redundancy and N:N+1 deployment redundancy) | | |
| Physical Specifications | Dimensions: 432 mm x 89 mm x 585 mm / 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 | | |
| Regulatory Compliance | Compliant with international standards for product safety and electromagnetic compatibility (EMC) NEBS Level 3 Compliant | | |

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 or follow Sandvine on Twitter at [@Sandvine](https://twitter.com/Sandvine).



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