

## Sandvine Policy Traffic Switch 22000

### Your Platform for Network Policy Control

Sandvine is dedicated to building solutions that allow today's fixed and mobile data service providers to increase network profitability while improving the quality of experience (QoE) for the Internet subscriber.

The Policy Traffic Switch (PTS) platform is a key component of the network policy control strategy for many of the world's most successful broadband service providers.

Customers worldwide have selected Sandvine's PTS platform for its consistent architecture, reliability, and industry-leading port-density - all of which contribute to a low total cost of ownership (TCO).

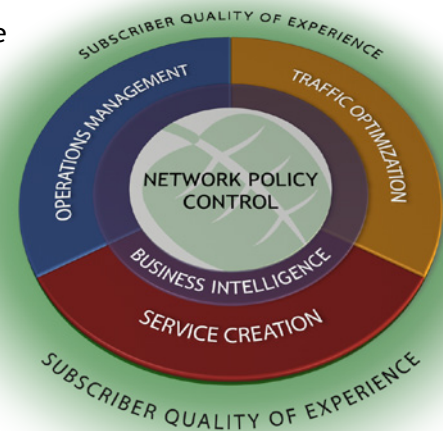
The Policy Traffic Switch leverages a powerful array of technology features that combine to address specific problems faced by today's service providers, including:

- **Subscriber Awareness** - true subscriber awareness, even with multiple IP addresses spread across many devices
- **Traffic Identification** - accurate, application-aware, traffic identification in any routing environment
- **Policy Decision** - identification of network conditions and real-time rule evaluation to make policy decisions locally
- **Policy Enforcement** - broad range of actions to define and enforce your network policies
- **Any Access** - deploy anywhere, regardless of what last-mile technologies your network uses
- **Smart Scalability** - linear scaling and seamless clustering up to 80 Gbps, or 480 Gbps with PTS 24000
- **Safe Switching** - ensures traffic flow continues unaffected, even if operating parameters are exceeded
- **Partner Enablement** - seamless integration with solution partners simplifies deployment of value-added services

Together, these features provide a powerful tool set that supports deployment of traffic optimization, service creation, operations management, and business intelligence solutions, which have helped the Policy Traffic Switch to become the industry's most widely deployed network intelligence platform.

### Sandvine PTS 22000

With three models offering inspection throughput of 20 Gbps, 10 Gbps or 4 Gbps per unit, and clusters intersecting up to 80 Gbps per cluster, the PTS 22000 is perfectly suited for subscriber edge or aggregation layer deployments. The high efficiency power supplies further reduce TCO. Whether a service provider is operating in an emerging market where sustainable growth is the primary issue, or fighting in a competitive landscape where rapid innovation is the key to success, the PTS 22000 is the platform that can take the network to the next level.



#### Key Benefits

- Low lifetime Total Cost of Ownership through operational stability, architectural consistency and port density
- Innovative clustering for linear scaling up to 80 Gbps
- Unsurpassed application identification, even in asymmetric environments, means you can manage traffic confidently
- Subscriber awareness ensures accurate billing and network usage statistics
- Integration with Solutions Partner Ecosystem for simplified deployment of new value-added services



## Technical Details and Specifications

The Policy Traffic Switch platform is a highly scalable network element that enables Sandvine's full suite of network policy control solutions. With stateful traffic identification, subscriber-awareness, standards-based interfaces and the broadest range of policy management options available, the PTS lets service providers protect or enhance subscriber quality of experience while simultaneously achieving business and operational objectives.

### PTS 22000 Performance

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

	Cluster (exclusively PTS 22000)	PTS 22400	PTS 22100	PTS 22050*
Maximum Intersection Throughput	80 Gbps	20 Gbps	10 Gbps	10 Gbps
Maximum Inspection Throughput	80 Gbps	20 Gbps	10 Gbps	4 Gbps
Maximum New Flows per Second	800 K	200 K	100 K	50 K
Maximum Concurrent Flows	32 M	8 M	4 M	2 M
Maximum Subscribers	5 M	2 M	1 M	500 K
Typical Power Consumption		770 W	700 W	700 W
Maximum Power Consumption		1200 W	1200 W	1200 W

\* PTS 22050 requires separate software license to enable clustering feature

### PTS 22000 Port and Interface Options

The PTS 22000 has fixed ports and one slot that can be used for interface blade or any of the bypass blades to mitigate outages due to power failures and major system events.

BLD 24010 (20 Gbps)		Interface Characteristics			Fixed Ports	
10 ports (cluster/ data) and 2 ports (cluster)	SFP	1 GE	Copper	10/100/1000T	SFP	8 ports (cluster or data)
			Optical	SX (MM)		
				LX (SM)		
	SFP+	10 GE	Optical	ZX (SM)	SFP+	
				SR (MM)		
				LRM (MM)		
2 ports (cluster)	XFP	10 GE	Optical	LM (SM)		
				ER (SM)		
				SR (MM)		
				LRM (MM)		
				LR (SM)		
				ER (SM)		

Interface blade and fixed ports options

BLD24030	62.5 um	MM	6 Link
BLD24050	50 um		
BLD24040	9 um	SM	2 Link
BLD24032	62.5 um	MM	
BLD24052	50 um		
BLD24042	9 um	SM	

Bypass blade options

The PTS22000 also features N:N+1 clustering, dual console ports, dual management ports and redundant/ field-replaceable components.

### External Interface Specifications

The PTS 22000 offers a broad range of standards-based interfaces:

- IETF standard-compliant alarm MIBs to Network Operations Center
- 3GPP standard-compliant Gx interface to Policy and Charging Rules Function (PCRF)\*
- 3GPP standard-compliant Gy interface to Online Charging Systems (OCS)\*
- Support for mobile data intersection for 3GPP Gn, Gi, Gp, luPS, S5, S8, S1
- Support for mobile data intersection for 3GPP2 Pi, PDN
- Usage Data Records (UDR) to Offline Charging Systems (OFCS)\*

\*Requires separate software license

### PTS 22000 Physical Specifications

- Dimensions: 428 mm x 88.14 mm x 582 mm / 16.85" x 3.47" x 22.91" (Width x Height x Depth)
- Mounting: Standard 19" rack (2 RU)
- Weight: 18.68 kg / 41.5 lbs
- Power Supply: AC 100-240 V or DC 40-60 V input
- Power Supply efficiency: minimum 89% at 50%, minimum 85% at 20% and 100% of PSU's rated output
- Temperature: 0°C to +40°C / +32°F to +104°F
- Humidity: 5% to 85% non-condensing

### Certifications and Approvals

The PTS 22000 is NEBS Level 3 certified. Product Safety and EMC approvals are available upon request.