PTX10001 AND PTX10003 FIXED CONFIGURATION ROUTERS DATASHEET

Product Overview

Changing market dynamics have intensified the challenge of accommodating growth with traditional products and architectures. Juniper's secure and automated solutions help cloud-based networks quickly react to these evolving conditions, accelerating service delivery with world-class products and innovative architectural components. PTX Series fixed-configuration routers with custom Express3 and Express4 silicon are an integral part of this solution. They deliver massively scalable and efficient core architectures across space- and power-constrained cloud provider, service provider, and enterprise networks, reducing TCO with innovative, highly flexible, high performance platforms built for the most demanding environments.

Product Description

The Juniper Networks® PTX Series Packet Transport Routers transform the core network with physical and virtual innovations that deliver unprecedented scale at the lowest cost per bit. Two fixed-configuration platforms are available: the PTX10001-36MR Packet Transport Router, a compact, power-optimized 400GbE platform based on custom Express4 silicon, and the PTX10003, the industry's first 3U 400GbE-enabled packet transport routing device. These transport routers give cloud and communication providers the freedom to develop and deliver new virtualized services anywhere in the network with elastic architectures and precise traffic controls without compromising the service experience.

The Evolving Landscape

New traffic dynamics, such as mobility, video, and cloud-based services, are transforming traditional network patterns and topologies. Stratified, statically designed, and manually operated networks must evolve to support the constantly growing volumes of traffic quickly and economically. Many operators have seen their profits stagnate and TCO grow under the burden that these growing traffic volumes are imposing. Cloud and service providers need to become more agile to optimize their existing network resources, shorten planning cycles, and remove rigid network layers.

Operators face the following challenges under the current environment:

- **Static scale**: The cloud and communication providers' backbone handles the full weight of network traffic. Therefore, it is paramount that core networks are inherently designed for scalability and efficiency. The 400GbE-capable platforms, 100/400GbE inline MACsec, silicon, system, and SDN innovations for the core empower network operators to scale faster than the traffic in an elegant, elastic, redundant package—without requiring forklift upgrades.
- **Static architecture**: Virtualized services and the explosion of cloud-based applications are creating increasingly unpredictable traffic patterns. To handle this unpredictability, service providers need a dynamic, scale-out architecture across all layers to create programmable, traffic-optimized networks that support any service, anywhere.
- **Power costs**: For cloud and communication providers, the operational cost of transmitting a packet through the core is less than the cost of the power required to move that packet. In fact, projections suggest that over a few short years, the total power draw will exceed the cost of deploying the entire network infrastructure. Efficient power utilization by the core router requires a holistic, ground-up engineering approach.

- **Facility limitations**: Service providers cannot grow their facilities exponentially forever. They need innovations that provide a low-touch deployment model optimized around space availability, facility power requirements, and floor weight thresholds. Transport-oriented central office locations have the added burden of meeting European Telecommunications Standards Institute (ETSI) standard depth. Any transit router innovation must operate within these constraints.

In order to address these challenges, cloud and communication providers need an innovative, scalable core router that satisfies three defining principles: performance, deployability, and SDN programmability. The PTX10001-36MR and PTX10003 fixed-configuration packet transport routers provide the foundation for a scale-out core backbone architecture, ensuring a consistent user experience across geographies. The PTX10001-36MR and PTX10003 meet all existing traditional core requirements. They easily fit into cloud and communication provider networks that require transit-focused IP/MPLS applications such as internet peering, scale-out metro and backbone topologies, and label-switching router (LSR) optimized deployments.

Architecture and Key Components

The PTX10001-36MR and PTX10003 fixed-configuration packet transport routers bring physical and virtual innovation to the cloud and service provider core networks, addressing concerns about operational expenditures while scaling organically to keep pace with growing traffic demands with the following features:

- **Core routing**: The PTX10001-36MR and PTX10003 employ a massively scalable yet compact 1U or 3U form factor with secure connectivity and high flexibility.
- **Peering**: The PTX Series fixed platforms are perfect for scale-out peering in space- and power-constrained environments with full traffic visibility and L3 services.
- **LSR**: The PTX Series fixed platforms provide 8 Tbps, 9.6 Tbps and 16 Tbps aggregate capacity for multi-plane core networks as an LSR router. They can also be positioned as an LSR fabric node in spine-leaf architectures for increased scale and reduced blast radius.
- **CDN gateway**: The compact PTX Series offers high routing scale in a 1U, or 3U fixed form factor for full traffic statistics visibility and deep buffers.
- **Data center interconnect (DCI)**: The PTX10001-36MR and PTX10003 offer secure inline MACsec with no compromise in throughput or latency and an extended range enabled by 400GbE ZR / ZR+.

Innovations in Silicon

Physical innovations at the core silicon level enable the PTX Series fixed-configuration routers to reduce OpEx and accommodate scale-out architectures with smooth migration paths as traffic patterns change.

Express3 Silicon

The PTX10003 is powered by Express3 silicon to support high-density 100/200/400GbE interfaces and inline 100 GbE MACsec with no performance penalty while delivering the same IP/MPLS functionality. Express3 silicon eliminates the complex sawtooth packet profile found in elaborate, over-engineered network processing units (NPUs) deployed in other core routers. This delivers the peering scale required to match expanding traffic demands.

These devices build upon the Juniper Networks Junos® Express silicon concepts of low consistent latency and wire-rate packet performance for both IP traffic and MPLS transport without sacrificing the optimized system power profile. These concepts are incorporated into the PTX Series design along with full IP functionality, preserving the spirit of the original Junos Express chipset. The Express3 silicon is the first purpose-built telecommunications silicon to engineer a 3D memory architecture into the base design for more than 1.6 billion filter operations per second, dynamic table memory allocation for mammoth IP routing scale, and enormous power efficiency gains. The PTX10003 supports inline MACsec on all interfaces using 10/40/100GbE.

Express4 Silicon

The PTX10001-36MR is powered by the highly scalable, next-generation ASIC in the Express silicon family, Juniper Express4 silicon—the industry's first inline MACsec for 400GbE chips that supports universal multirate QSFP56-DD. Juniper Express4 silicon delivers consistently low latency, 8m counters, 256 AES MACsec encryption supported on all ports, and wire-rate packet performance for IP traffic without sacrificing the optimized system power profile. Preserving the spirit of the Junos Express silicon family, Juniper Express4 silicon is the first purpose-built telecommunications silicon to incorporate a 3D memory architecture into the base design, offering the industry's highest packet performance per gigabit in the fewest rack units. It also provides dynamic table memory allocation for massive IP routing scale while delivering tremendous power efficiency gains at 0.14 watts/Gig.

The ability to address a provider's core networking requirements—scale, operational flexibility, and SDN control—begins with silicon. With the PTX Series fixed-configuration routers, operators can now deploy a core architecture with SDN control. Combining Juniper Networks Paragon Pathfinder with a robust full-featured internet backbone router and a regional IP/MPLS core router with integrated 400GbE coherent transport for superior performance, operators can tune their network infrastructure through proactive monitoring and what-if planning capabilities. The Paragon Pathfinder dynamically creates explicit routing paths using a global view based on user-defined constraints to create a fully autonomous operation.

Scale is one of the guiding design principles for the PTX Series routers, allowing network operators to smoothly handle increased traffic demands. The PTX Series fixed-configuration routers simplify network engineering challenges with predictable system latency, improving the overall service experience by delivering best-in-class resiliency to help providers meet strict customer service-level agreements (SLAs).

Operational efficiency is another design attribute for the PTX Series routers, focusing on power, space, and weight—fundamental concerns that affect network operators' operational budgets. Juniper has designed the PTX Series to fit the requirements of current and future data center facilities.

SDN programmability brings virtual innovations to the service provider core while the Paragon Pathfinder offers an open, standards-based solution that optimizes both the IP layer and the transport layer with precise SDN control, allowing network operators to fully automate and scale their operations with ease.

PTX10001-36MR

The PTX10001-36MR features a compact, 1U form factor that is easy to deploy in space- and power-constrained internet exchange locations, remote central offices, and embedded peering points throughout the network, including cloud-hosted services.

The PTX10001-36MR is particularly suited for power-constrained environments, providing unprecedented power efficiency of 0.14 watts/Gbps. It offers up to four million IPv4 FIB, deep buffers, and integrated 100GbE and 400GbE MACsec capabilities. The PTX10001-36MR operates at 9.6 Tbps in a fixed core router configuration with 36 multi-rate ports—24 400GbE (QSFP56-DD) ports and 12 100GbE (QSFP28) ports to facilitate the migration from 100GbE to 400GbE deployments.

Two versions of the PTX10001-36MR are available: the PTX10001-36MR and PTX10001-36MR-K. PTX10001-36MR-K is an upgraded version of PTX10001-36MR with TPM2.0 and Digital Cryptographic Identity (Dev-ID). The Dev-ID enables key security features including secure Zero Touch Provisioning (sZTP) and file system encryption, and it increases security for management and control plane traffic.

The PTX10001-36MR features flexible interface configuration options with universal multi-rate QSFP-DD for 100GbE/400GbE to support 120 10GbE ports with QSFP+ breakout, 60 100GbE ports with QSFP28-DD (24x2) and QSFP28 (12), 108 100GbE ports with QSFP56-DD breakout (24x4) and QSFP28 (12), and 24 400GbE ports with QSFP56-DD. PTX10001-36MR supports MACSec on all ports, regardless of the port speed.

PTX10003

The PTX10003 is a fixed-configuration core router featuring a compact, 3U form factor that is easy to deploy in space-constrained internet exchange locations, remote central offices, and embedded peering points throughout the network, including cloud-hosted services. It offers up to four million FIB, deep buffers, and integrated 100GbE MACsec capabilities.

The PTX10003 uniquely addresses power-constrained environments by providing power efficiency of 0.2 watts/Gbps. Two versions of the PTX10003 are available, supporting 8 Tbps and 16 Tbps, respectively, in a 3U footprint.

Operating in a fixed core router configuration, the 8 Tbps model features flexible interface configuration options with universal multi-rate QSFP-DD for 100GbE/400GbE to support 160 (QSFP+) 10GbE ports, 80 (QSFP28) 100GbE ports, 32 (QSFP28-DD) 200GbE ports, and 16 (QSFP56-DD) 400GbE ports.

The 16 Tbps model also offers universal multi-rate QSFP-DD for 100GbE/400GbE to support 320 (QSFP+) 10GbE ports, 160 (QSFP28) 100GbE ports, 64 (QSFP28-DD) 200GbE ports, and 32 (QSFP56-DD) 400GbE ports.

PTX10001-36MR and PTX10003 routers offer native SFP+ transceiver support through QSFP adapter, MAM1Q00A-QSA. This option enables deployments where 10GE connectivity over more than 10KM single mode fiber links is required.

Features and Benefits

Performance is one of the guiding design principles for the PTX Series Packet Transport Routers. This focus empowers cloud and service providers with superior scale to match increased traffic levels and network engineering challenges with predictable system latency to improve the overall service experience, deliver best-in-class resiliency, and ensure that services meet strict customer SLAs. Deployability is the other guiding design principle for the PTX Series routers, focusing on power, space, and weight—fundamental

concerns that impact service providers' operational budget with respect to growing traffic.

Infinite programmability with automation and telemetry brings virtual innovations to the cloud and service provider core while Paragon Pathfinder is an open, standards-based solution that optimizes both the IP layer and the transport layer with precise SDN control. This lets service providers automate and scale operations with efficiency, simplicity, and security.

One Junos Experience delivers operational consistency and uniformity across PTX Series platforms and solutions. The most modern OS on the market, Junos Evolved, is designed from the ground up for reliability, resiliency, velocity, and integration simplicity.

Table 1 summarizes the features available on the fixed-configuration PTX Series Packet Transport Routers.

Table 1. Fixed-Configuration PTX Series Features and Benefits

Feature	Feature Description	Benefit
System capacity	The PTX10001-36MR scales to 9.6 Tbps in a single chassis, featuring flexible interface configuration options with universal multi-rate QSFP-DD for 100GbE/400GbE to support 120 10GbE ports with QSFP+ breakout, 60 100GbE ports with QSFP28-DD (24x2) and QSFP28 (12), 108 100GbE ports with QSFP56-DD breakout (24x4) and QSFP28 (12), and 24 400GbE ports with QSFP56-DD. The PTX10003 8 Tbps model scales to 8 Tbps is a single chassis, breaking out into 160 10GbE, 80 100GbE, 32 200GbE, and 16 400GbE interfaces. The PTX10003 16 Tbps model scales to 16 Tbps in a single chassis, breaking out into 320 10GbE, 160 100GbE, 64 200GbE, and 32 400GbE interfaces. The pay-as-you-grow capacity model is available for both PTX10001 and PTX10003.	The PTX10001-36MR and PTX10003 give cloud and service providers the performance and scalability needed to outpace growing traffic demands.
High availability (HA) hardware	The PTX10001-36MR and PTX10003 are built with hardware redundancy for cooling, power supplies, and forwarding.	HA is critical for service providers to maintain an always-on infrastructure base and meet stringent SLAs across the core.
Packet performance	The PTX10003 uses a newer version of Express3 silicon that delivers 100GbE inline MACsec on all ports and dense 100/400GbE. The PTX10001-36MR uses the next generation of Express, Express4 silicon, that delivers 100/400GbE inline MACsec on all ports for dense 400GbE architectures.	Exceptional packet processing capabilities help alleviate the challenge of scaling the network as traffic levels increase while optimizing IP/MPLS transit functionality around superior performance and elegant deployability.
Ultra-compact 1U, and 3U form factor	With cutting-edge innovation in power and cooling technology, the PTX fixed-configuration core routers provide compact, power-optimized scale and efficiency. The PTX10001-36MR provides 9.6 Tbps in a 1U form factor and the PTX10003 provides up to 16 Tbps of capacity in a 3U form factor.	Space efficiency is a critical requirement for peering internet exchange points, peering collocations, central offices, and regional networks, especially in emerging markets.
Security	The PTX Series Packet Transport Routers use a combination of hardware-based mechanisms like MACsec and software-based features like firewall filters and DDoS to provide scalable security. Inline MACsec is supported on all ports with no compromise in latency.	Inline data plane MACsec security with no throughput or latency penalties in addition to control plane security with DDoS.

PTX10003-80C Packet Transport Router

PTX10003-160C Packet Transport Router

PTX10001-36MR Packet Transport Router

PTX Series Fixed-Configuration Routers Specifications

Hardware	PTX10001-36MR	PTX10003 (8T)	PTX10003 (16T)
System throughput	9.6 Tbps	8 Tbps	16 Tbps
Forwarding capacity	Up to 6 Bpps	Up to 5.3 Bpps	Up to 10.6 Bpps
Max. 10GbE port density	120	160	320
Max. 40GbE port density	30	40	80
Max. 100GbE port density	108	80	160
Max 200GbE port density	48	32	64
Max 400GbE port density	24	16	32
Dimension (WxHxD)	17.3 x 1.75 x 25.5 in (44 x 4.45 x 64.8 cm)	17.4 x 5.25 x 31 in (44.2 x 13.3 x 78.7 cm)	17.4 x 5.25 x 31 in (44.2 x 13.3 x 78.7 cm)
Rack units	1 U	3 U	3 U
Weight	39.7 lb (18 kg)	88 lb (40 kg)	110 lb (50 kg)
CPU	Intel Xeon 12-Core 2.1 GHz CPU	Intel Broadwell CPU with 12 Cores	Intel Broadwell CPU with 12 Cores
RAM	64 GByte SDRAM	64 GByte SDRAM	64 GByte SDRAM
SSD	200 GBx2	200 GBx2	200 GBx2
Maximum power draw	2164 W (AC, DC), 7384 BTU/hr	~2500 W (AC,DC), 8525 BTU/hr	~4000 W (AC.DC), 13640 BTU/hr
Typical power draw	1300 W (AC, DC), 4436 BTU/hr	~1600 W (AC,DC), 5456 BTU/hr	~3100W (AC,DC), 10571 BTU/hr
Power supply	2x3000 watts (AC/DC)	2x3000 watts (AC/DC)	4x3000 watts (AC/DC)
Cooling (front-to-back fan)	6 hot-swappable redundant fans	3 hot-swappable redundant fans	5 hot-swappable redundant fans
Packet buffer	24 GByte	64 GByte	128 GByte
Latency	2.5 µs within PFE, 5 us between PFEs	2.5 µs within PFE, 5 us between PFEs	2.5 µs within PFE, 5 us between PFEs
Power Efficiency (watts/Gbps)	0.14	0.2	0.2

PTX10001 and PTX10003 Software Feature Table

Feature	PTX10001-36MR(-K)	PTX10003 (8/16 Tbps)
MPLS-TE	Yes	Yes
MPLS LSR	Yes	Yes
Firewall filters ACL	Yes	Yes
SPRINGv4	Yes	Yes
DDoS control plane	Yes	Yes
JFlow/SFlow	Yes	Yes
BGP FlowSpec, EPE, URPF, L3VPN	Yes	Yes
Integrated routing and bridging (IRB)	Yes	Yes
RoCEv2	Yes	Yes
Telemetry, NETCONF/YANG	Yes	Yes
Zero Touch Provisioning (ZTP)	Yes	Yes
PCEP, BGP-LS	Yes	Yes
Fast restoration	Yes	Yes
Operation, Administration, and Maintenance (OAM)	Yes	Yes

Management Interfaces

- One small form-factor pluggable transceiver (SFP/SFP+) port or Precision Time Protocol (PTP) Grandmaster
- Fiber (SFP) or 10/100/1000BASE-T (RJ-45) Ethernet management port
- SMB in, SMB out, 10 MHz in, 10 MHz out
- One console port
- USB 2.0 storage interface

Environmental Ranges

- Operating temperature: 32° to 115° F (0° to 46° C) at sea level
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: Up to 10,000 ft. (3048 m)
- Relative humidity operating: 5 to 90% (noncondensing)
- Relative humidity nonoperating: 5 to 95% (noncondensing)
- Seismic: Designed to meet GR-63, Zone 4 earthquake requirements

Safety and Compliance

Safety

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment—Safety
- UL 60950-1 Information Technology Equipment—Safety
- EN 60950-1 Information Technology Equipment—Safety
- IEC 60950-1 Information Technology Equipment—Safety (all country deviations)
- EN 60825-1 Safety of Laser Products—Part 1: Equipment Classification

Electromagnetic Compatibility

- 47CFR Part 15, (FCC) Class A
- ICES-003 Class A
- EN 55022 Class A
- CISPR 22 Class A
- EN 55024
- CISPR 24
- EN 300 386
- VCCI Class A
- AS/NZA CISPR22 Class A
- KN22 Class A
- CNS 13438 Class A
- EN 61000-3-2
- EN 61000-3-3
- ETSI
- ETSI EN 300 019: Environmental Conditions & Environmental Tests for Telecommunications Equipment
- ETSI EN 300 019-2-1 (2000)—Storage
- ETSI EN 300 019-2-2 (1999)—Transportation
- ETSI EN 300 019-2-3 (2003)—Stationary Use at Weather-protected Locations
- ETS 300753 (1997)—Acoustic noise emitted by telecommunications equipment

Environmental Compliance

Restriction of Hazardous Substances (ROHS) 6/6

Silver PSU Efficiency


Recycled material

Waste Electronics and Electrical Equipment (WEEE)

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

China Restriction of Hazardous Substances (ROHS)

Telco

- Common Language Equipment Identifier (CLEI) code

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit https://www.juniper.net/us/en/products.html.

Automated Support and Prevention

Juniper's Automated Support and Prevention consists of an ecosystem of tools, applications, and systems targeted toward simplifying and streamlining operations, delivering operational efficiency, reducing downtime, and increasing your network's ROI running Juniper Networks Junos operating system. Automated Support and Prevention brings operational efficiency by automating

several time-consuming tasks, such as incident management, inventory management, proactive bug notification, and on-demand EOL/EOS/EOE reports. The Junos Space® Service Now and Service Insight service automation tools are standard entitlements of all Juniper Care contracts.

Warranty

For warranty information, please visit https://support.juniper.net/support/warranty/

Ordering Information

Product Number	Description
PTX10001-36MR	
PTX10001-36MR-AC	PTX10001 36 QSFP56-DD / QSFP28 multi-rate port base system with redundant AC Power supplies, FAN trays, Junos Evolved
PTX10001-36MR-DC	PTX10001 36 QSFP56-DD / QSFP28 multi-rate port base system with redundant DC Power supplies, FAN trays, Junos Evolved
PTX10001-36MR-K-AC	PTX10001 36 QSFP56-DD / QSFP28 multi-rate port base system with redundant AC Power supplies, FAN trays, TPM2.0 with Dev-ID, Junos Evolved
PTX10001-36MR-K-DC	PTX10001 36 QSFP56-DD / QSFP28 multi-rate port base system with redundant DC Power supplies, FAN trays, TPM2.0 with Dev-ID, Junos Evolved
JNP-FAN2-1RU	Fan Tray for JNP10001-36MR platform
JNP10001-36MR	JNP10001 chassis with 36 QSFP56-DD / QSFP28 multi-rate ports, no power supplies or fans
JNP10001-36MR-K	JNP10001 chassis with 36 QSFP56-DD / QSFP28 multi-rate ports, TPM2.0 with Dev-ID, no power supplies or fans
JNP-3000W-AC-AFO	AC power supply for JNP10001-36MR fixed platform
JNP-3000W-DC-AFO	DC power supply for JNP10001-36MR fixed platform
S-PTX10K-108C-A1-P	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced1 tier, without SW support, Perpetual
S-PTX10K-108C-A2-P	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced2 tier, without SW support, Perpetual
S-PTX10K-108C-P1-P	SW, PTX10K fixed platform, 10.8T, right-to-use Premium1 tier, without SW support, Perpetual
S-PTX10K-108C-P2-P	SW, PTX10K fixed platform, 10.8T, right-to-use Premium2 tier, without SW support, Perpetual
S-PTX10K-108C-A1-5	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced1 tier, with SW support, five years
S-PTX10K-108C-A2-5	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced2 tier, with SW support, five years
S-PTX10K-108C-P1-5	SW, PTX10K fixed platform, 10.8T, right-to-use Premium1 tier, with SW support, five years
S-PTX10K-108C-P2-5	SW, PTX10K fixed platform, 10.8T, right-to-use Premium2 tier, with SW support, five years
S-PTX10K-108C-A1-3	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced1 tier, with SW support, three years
S-PTX10K-108C-A2-3	SW, PTX10K fixed platform, 10.8T, right-to-use Advanced2 tier, with SW support, three years
S-PTX10K-108C-P1-3	SW, PTX10K fixed platform, 10.8T, right-to-use Premium1 tier, with SW support, three years
S-PTX10K-108C-P2-3	SW, PTX10K fixed platform, 10.8T, right-to-use Premium2 tier, with SW support, three years
S-PTX10K100GMSEC-P	SW, PTX10K 100G MACsec License SKU, w/out Customer Support, must purchase CS SKU separately, perpetual
S-PTX10K400GMSEC-P	SW, PTX10K 400G MACsec License SKU, w/out Customer Support, must purchase CS SKU separately, perpetual
PTX10003	
PTX10003-160C-AC	PTX10003-160C base system with 160 100GbE ports or 32 400GbE ports, four 3000W AC power supplies, four power cables, and five fan trays, with standard tier right-to-use license
PTX10003-160C-DC	PTX10003-160C base system with 160 100GbE ports or 32 400GbE ports, four 3000W DC power supplies, and five fan trays, with standard tier right-to-use license
PTX10003-80C-AC	PTX10003-80C base system with 80 100GbE ports or 16 400GbE ports, two 3000W AC power supplies, two power cables, and three fan trays, with standard tier right-to-use license
PTX10003-80C-DC	PTX10003-80C base system with 80 100GbE ports or 16 400GbE ports, two 3000W DC power supplies, and three fan trays, with standard tier right-to-use license
S-PTX10K3-16T-A1-P	16T PTX10003 Advanced1 tier right-to-use license, perpetual, without SW support
S-PTX10K3-16T-A2-P	16T PTX10003 Advanced2 tier right-to-use license, perpetual, without SW support
S-PTX10K3-16T-P1-P	16T PTX10003 Premium1 tier right-to-use license, perpetual, without SW support
S-PTX10K3-16T-P2-P	16T PTX10003 Premium2 tier right-to-use license, perpetual, without SW support
S-PTX10K3-16T-A1-5	16T PTX10003 Advanced1 tier right-to-use license, 5-year term, with SW support
S-PTX10K3-16T-A2-5	16T PTX10003 Advanced2 tier right-to-use license, 5-year term, with software support
S-PTX10K3-16T-P1-5	16T PTX10003 Premium1 tier right-to-use license, 5-year term, with software support
S-PTX10K3-16T-P2-5	16T PTX10003 Premium2 tier right-to-use license, 5-year term, with software support
S-PTX10K3-16T-A1-3	16T PTX10003 Advanced1 tier right-to-use license, 3-year term, with SW support
S-PTX10K3-16T-A2-3	16T PTX10003 Advanced2 tier right-to-use license, 3-year term, with software support
S-PTX10K3-16T-P1-3	16T PTX10003 Premium1 tier right-to-use license, 3-year term, with software support
S-PTX10K3-16T-P2-3	16T PTX10003 Premium2 tier right-to-use license, 3-year term, with software support
S-PTX10K3-8T-A1-P	8T PTX10003 Advanced1 tier right-to-use license, perpetual, without SW support
S-PTX10K3-8T-A2-P	8T PTX10003 Advanced2 tier right-to-use license, perpetual, without SW support
S-PTX10K3-8T-P1-P	8T PTX10003 Premium1 tier right-to-use license, perpetual, without SW support
S-PTX10K3-8T-P2-P	8T PTX10003 Premium2 tier right-to-use license, perpetual, without SW support
S-PTX10K3-8T-A1-5	8T PTX10003 Advanced1 tier right-to-use license, 5-year term, with software support
S-PTX10K3-8T-A2-5	8T PTX10003 Advanced2 tier right-to-use license, 5-year term, with software support
S-PTX10K3-8T-P1-5	8T PTX10003 Premium1 tier right-to-use license, 5-year term, with software support
S-PTX10K3-8T-P2-5	8T PTX10003 Premium2 tier right-to-use license, 5-year term, with software support
S-PTX10K3-8T-A1-3	8T PTX10003 Advanced1 tier right-to-use license, 3-year term, with software support
S-PTX10K3-8T-A2-3	8T PTX10003 Advanced2 tier right-to-use license, 3-year term, with software support

Product Number	Description
S-PTX10K3-8T-P1-3	8T PTX10003 Premium1 tier right-to-use license, 3-year term, with software support
S-PTX10K3-8T-P2-3	8T PTX10003 Premium2 tier right-to-use license, 3-year term, with software support
JNP10003-160C-CHAS	JNP10003-160C spare chassis with 160 100GbE ports or 32 400GbE ports
JNP10003-80C-CHAS	JNP10003-80C spare chassis with 80 100GbE ports or 16 400GbE ports
JNP10003-FAN	Fan tray for 3RU 8T and 16T fixed platforms
JNP-3000W-AC-AFO	AC power supply for JNP10003-160C and JNP10003-80C fixed platforms
Pay-as-you-grow License	
S-PTX10K-400G-P1-3	SW, PTX10K, 400G, Premium 1, with SW support, Flex Capacity License, JAL required, three years
S-PTX10K-400G-P1-5	SW, PTX10K, 400G, Premium 1, with SW support, Flex Capacity License, JAL required, five years
S-PTX10K-400G-P1-P	SW, PTX10K, 400G, Pre1, without SW support, Perpetual
S-PTX10K-400G-P2-3	SW, PTX10K, 400G, Premium 2, with SW support, Flex Capacity License, JAL required, three years
S-PTX10K-400G-P2-5	SW, PTX10K, 400G, Premium 2, with SW support, Flex Capacity License, JAL required, five years
S-PTX10K-400G-P2-P	SW, PTX10K, 400G, Pre2, without SW support, Perpetual

Ordering Information

Virtual PTX is available for lab evaluations of PTX features and capabilities. To run Virtual PTX in a test environment, please contact your local Juniper account team for more information.

About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud. Additional information can be found at www.juniper.net or connect with Juniper on X (formerly Twitter), LinkedIn and Facebook.

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