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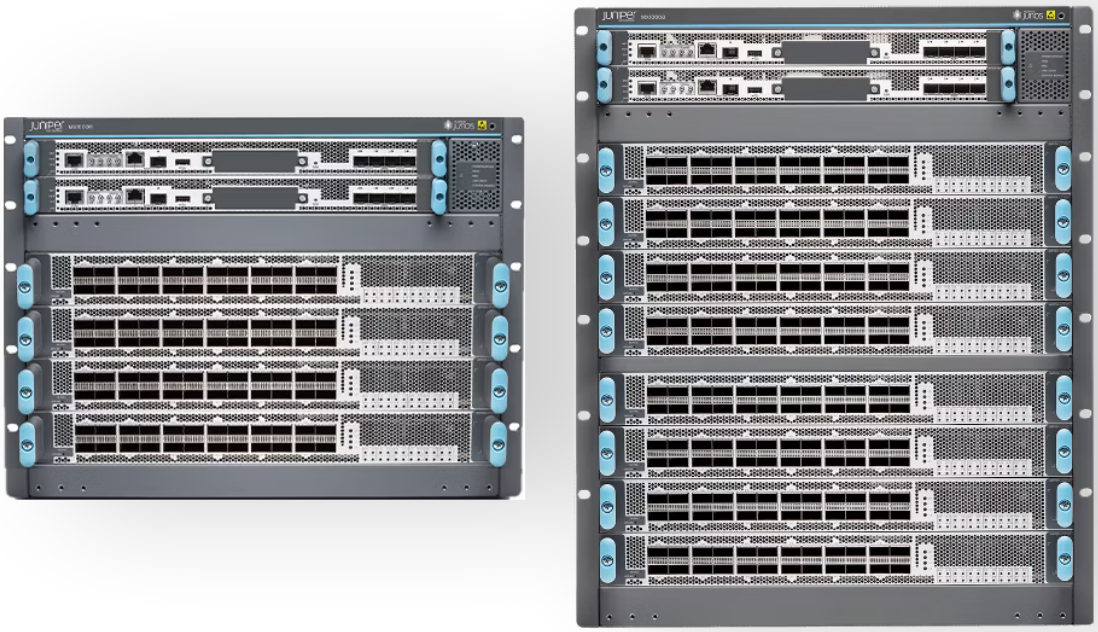
Data sheet



MX10000 Modular Universal Routing Platforms

HPE

Product overview

HPE's secure automated distributed cloud blueprint lets service providers react quickly to changing market conditions in the cloud era and accelerate service delivery.

The MX10000 line of universal routing platforms is ideal for space- and power-constrained environments. The routing platforms:

— Redefine per-slot economics so customers can do more with less
— Simplify network design
— Reduce OpEx
— Enable the profitable delivery of a broad range of business, residential, mobile, cable, data center, and cloud services

Product description

Increasingly sophisticated technology users seek highly responsive, customizable, cloud-like online experiences and services that align with their unique needs and interests, creating more traffic that consumes increasing amounts of network bandwidth.

Unfortunately, traditional hardware-centric edge routers lack the programmability and scale required to allow network operators to profitably meet these market demands, limiting their competitiveness, constraining their revenue and market share growth, and increasing their CapEx, OpEx, and TCO. To overcome these challenges, service providers and cloud operators need software-centric edge solutions that address current demand while offering investment-protecting evolution to emerging technologies such as mobility, Internet of Things (IoT), and the continued growth of cloud networking.

The Juniper Networks® MX10000 line of universal routing platforms includes the 7 RU, 38.4 Tbps-capable MX10004, supporting up to 9.6 Tbps per slot, and the 13 RU, 76.8 Tbps-capable MX10008, supporting up to 9.6 Tbps per slot. They offer dense, 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE and 400GbE support and are 800GbE-ready. This enables service providers and cloud operators to confidently build the best networks across data centers, business edge, and cloud markets. The MX10000 line shares common chassis components with equivalent Juniper Networks PTX Series Packet Transport Routers and QFX Series Switches. Using specific software and line cards, the universal chassis can be successfully deployed as a core router, IP edge router, or switch, reducing the burden on network operators to qualify multiple platforms.

The MX10000 line of modular platforms is powered by the same programmable Juniper Trio chipset and the same Juniper Networks Junos operating system that powers the rest of the Juniper Networks MX Series Universal Routing Platform portfolio, leveraging nearly two decades of HPE R&D investments and innovations that have transformed the economics of networking. Leveraging common Packet Forwarding Engine (PFE) and software ensures complete feature consistency and a common operational and management framework. This consistency reduces the cost, risk, and complexity of network evolution, helping current MX Series customers rapidly qualify and deploy the MX10000 line of modular platforms.

Architecture and key components

The MX10000 line of modular routers features a number of architectural elements. Dual redundant Routing Engines (REs) run Junos OS, where they manage all routing protocol processes, router interface control, and control plane functions such as chassis components, system management, and user access to the router. These processes run on top of a kernel that interacts with the PFE on the line cards via dedicated high-bandwidth management channels, providing a clean separation of the control and forwarding planes.

Other key features include a comprehensive suite of advanced automation and telemetry capabilities that serve as the foundation for future self-driving networks, as well as line-rate 400GbE Media Access Control Security (MACsec) encryption and integrated advanced timing. The MX10004 and MX10008 support handling IPsec security in ESP tunnel mode directly within the forwarding engine using encryption (AES GCM-128 and AES-GCM-256). This means encryption and encapsulation of the entire IP packet, including its header.

The MX10000 modular line cards currently support 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE, and 400GbE interfaces, and are designed to support 800GbE interfaces in the future. The line cards are oriented horizontally in the front of the chassis, connecting directly to the vertical switch fabric cards in the rear of the chassis via orthogonal interconnects without requiring a midplane. This provides unparalleled investment protection by ensuring a smooth upgrade path to higher speed switch fabric cards as they become available. The midplane-less design also improves airflow with a front-to-back design.

To maintain uninterrupted operation, modular fan trays cool the line cards and REs with redundant, variable-speed fans. In addition, all MX10000 modular components are hot-swappable, and all central functions are available in redundant configurations, providing high operational availability by allowing continuous system operation during maintenance or repairs. The chassis' universal design also allows them to be used independently for core, edge, or switching configurations.

MX10000 line modular hardware components

Line cards

The line cards for the MX10000 line of modular platforms are based on highly scalable, custom Juniper Trio 6 silicon, making it the industry's leading router for data center edge, core, peering, and aggregation applications. Each slot on the MX10004 and MX10008 supports 9.6 Tbps while the line cards support multi-rate 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE, and 400GbE interfaces.

The modular design of the MX10004 and MX10008 routers provides investment protection by allowing future upgrades. The LC480 line card leverages Trio 4 chips to achieve 480 Gbps total throughput. The LC4800 line card leverage Trio 6 chips to achieve 4.8 Tbps total throughput. The LC9600 line card leverages Trio 6 chips to achieve 9.6 Tbps total throughput.

The PFEs provide ingress queuing with loopback stream optimization to avoid reading and writing packet tails when packets are sent to and received back from a loopback stream. The line cards also provide operation, administration, and maintenance (OAM) support with per-port Ethernet OAM counters, as well as packet memory that uses Hybrid Memory Cube DRAM technology to reduce power usage, increase speed, and improve system density.

Routing engine processor

The MX10004 and MX10008 RE features a 10-core 2.2 GHz Intel® processor with 64/128 GB memory and 2x200 GB solid state drive (SSD) storage.

Power

The MX10004 contains three power supply slots and the MX10008 contains six power supply slots to provide complete flexibility for provisioning and redundancy.

The first generation of AC power supplies on the MX10008 accepts 200 to 240 volts alternating current (VAC) input, delivering 2700 watts of power to the chassis. The DC power supplies accept –40 to –72 volts direct current (VDC) input, delivering 2500 watts of power to the chassis. Each AC and DC power supply has two inputs for feed redundancy.

The second generation of AC/DC power supplies on the MX10004 and MX10008 delivers up to 5500 W per unit to the chassis, enabling dense 400GbE with optional lower power settings. For more information on the MX10000 line power supplies, please visit our documentation overview page.

Cooling

The MX10000 line of modular chassis supports front-to-back cooling with air drawn in through perforations on the REs and the line cards in the front of the platform while hot air exits through the rear of the chassis. The modular fan trays are accessible from the rear of the chassis.

Chassis management

The MX10000 modular line delivers powerful Junos OS chassis management that allows environmental monitoring and field-replaceable unit (FRU) control. Chassis management provides a faster primary switchover, enhanced power budgeting with modular power management, reduced power consumption for partially populated systems, granular control over FRU power-on, single zone cooling with better fan speed control for reduced noise, and CPU leveling during monitoring intervals.

Simplified management

The MX10000 modular line simplifies management based on the elegance and simplicity of Junos OS. Management applications can receive streaming telemetry data to provide robust protocol analytics for an SDN environment. Junos OS also supports OpenConfig, which is a YANG-based data model that supports a variety of operator use cases.

Table 1. MX10000 line features and benefits

Feature	Feature description	Benefits
System capacity	The MX10004 scales to 38.4 Tbps (76.8 Tbps half-duplex) in a single chassis, breaking out into 192 1GbE, 384 10GbE, 96 40GbE, 384 100GbE, and 96 400GbE interfaces.	The MX10000 line gives cloud and service providers the performance and scalability needed to outpace increased traffic demands.
Packet performance	The innovative and groundbreaking Juniper Trio silicon empowers the MX Series Routers with unparalleled packet processing for both full IP and MPLS functionality, leveraging revolutionary 3D memory architecture.	Exceptional packet processing capabilities alleviate the challenge of scaling the network as traffic continues to increase while optimizing IP/MPLS transit functionality around superior performance and elegant deployment.
Full-scale IP and MPLS routing	The MX10000 modular line features a rich set of IP/MPLS services, low latency, and wire-rate forwarding at scale while providing the reliability needed to meet strict service-level agreements (SLAs).	Distributed peering scale of 12 million (with NSR) or 13 million (without NSR) forwarding information base (FIB) and 80 million routing information base (RIB) (also known as forwarding and routing tables, respectively) delivers the performance required to match expanding traffic demands.
Source Packet Routing in Networking (SPRING)	Junos OS supports SPRING, which provides the ability for a trusted source node to specify a forwarding path, other than the normal shortest path, that a particular packet will traverse.	SPRING support provides additional flexibility per packet source. It also adds features such as network path and node protection to support fast reroute (FRR) mechanisms, enhanced network programmability, OAM functionality, simplified network signaling, load balancing, and traffic engineering functions.
High availability hardware	The MX10000 modular line is designed with full hardware redundancy for cooling, power supply, REs, and switch fabric, as applicable.	High availability (HA) is a critical requirement for service providers to maintain an always-on infrastructure to meet stringent SLAs.
High availability software	The MX10000 modular line features a resilient operating system that supports HA features such as graceful RE switchover (GRES), nonstop active routing (NSR), and unified in-service software upgrade (unified ISSU) for high availability. The MX Series also supports game-changing 50 ms redundancy switchover under load.	Junos OS supports HA features that allow software upgrades and changes without disrupting network traffic.

Figure 1. MX10004 and MX10008 Routers

Table 2. MX10000 line specifications

Feature	MX10004	MX10008
Physical dimensions (W x H x D)	17.4 x 12.2 x 35 in (44.2 x 33 x 88.9 cm); 42.2 in (107.7 cm) depth with electromagnetic interference (EMI) door	17.4 x 22.55 x 32 in (44.2 x 57.76 x 81.28 cm); 39.37 in (100 cm) depth with electromagnetic interference (EMI) door
Maximum weight	272 lb (123 kg) (excluding line cards)	330 lb (150 kg) (excluding line cards)
Mounting	4 post rack	4 post rack
Power system rating*	200-240 VAC/50-60 Hz -48 VDC @ 60 A	200-240 VAC/50-60 Hz -48 VDC @ 60 A
Typical power consumption	7.5 kW, fully loaded	12 kW, fully loaded
Operating temperature	32°F to 115°F (0°C to 46°C) at sea level	32°F to 115°F (0°C to 46°C) at sea level

MX10004 and MX10008 ordering information

For more information, please contact your HPE representative.

Table 3. MX10004 and MX100008 ordering information

Product number	Description
MX10004 base unit	
MX10004-BASE	MX10004 4-slot chassis [JNP10004]. Includes 1 RE, 2 power supplies, 2 fan trays, 2 fan tray controllers, and 5 Switch Fabric cards.
MX10004-PREMIUM	MX10004 redundant 4-slot chassis [JNP10004]. Includes 2 REs, 3 power supplies, 2 fan trays, 2 fan tray controllers, and 6 Switch Fabric cards.
MX10008 base unit	
MX10008-BASE	MX10008 8-slot chassis [JNP10008]. Includes 1 RE, 3 power supplies, 2 fan trays, 2 fan tray controllers, and 5 Switch Fabric cards.
MX10008-PREMIUM	MX10008 redundant 8-slot chassis [JNP10008]. Includes 2 REs, 6 power supplies, 2 fan trays, 2 fan tray controllers, and 6 Switch Fabric cards.
MX10000 routing engines and control boards	
JNP10K-RE1-BB	MX10000/JNP10000 REx10, base bundle
JNP10K-RE1-R	MX10000/JNP10000 REx10, redundant
JNP10K-RE1	MX10000/JNP10000 REx10
JNP10K-RE1-LT-BB	MX10000/JNP10000 REx10, limited encryption version, base bundle

Table 3. MX10004 and MX100008 ordering information (continued)

Product number	Description
JNP10K-RE1-LT-R	MX10000/JNP10000 REx10, limited encryption version, redundant
JNP10K-RE1-LT	MX10000/JNP10000 REx10, limited encryption version
JNP10K-RE1-128-BB	MX10000/JNP10000 REx10, 128 GB memory, base bundle
JNP10K-RE1-128-R	MX10000/JNP10000 REx10, 128 GB memory, redundant
JNP10K-RE1-128	MX10000/JNP10000 REx10, 128 GB memory
JNP10K-RE3-BB	MX10000/JNP10000 RE3, 128 GB memory, base bundle
JNP10K-RE3-R	MX10000/JNP10000 RE3, 128 GB memory, redundant
JNP10K-RE3	MX10000/JNP10000 RE3, 128 GB memory
JNP10K-RE3-LT-BB	MX10000/JNP10000 RE3, 128 GB memory, limited encryption version, base bundle
JNP10K-RE3-LT-R	MX10000/JNP10000 RE3, 128 GB memory, limited encryption version, redundant
JNP10K-RE3-LT	MX10000/JNP10000 RE3, 128 GB memory, limited encryption version
JNP10K-RE3-256-BB	MX10000/JNP10000 RE3, 256 GB memory, base bundle
JNP10K-RE3-256-R	MX10000/JNP10000 RE3, 256 GB memory, redundant
JNP10K-RE3-256	MX10000/JNP10000 RE3, 256 GB memory
JNP10K-RE3LT256-BB	MX10000/JNP10000 RE3, 256 GB memory, limited encryption version, base bundle
JNP10K-RE3LT256-R	MX10000/JNP10000 RE3, 256 GB memory, limited encryption version, redundant
JNP10K-RE3LT256	MX10000/JNP10000 RE3, 256 GB memory, limited encryption version
MX10004 switch fabric	
JNP10004-SF2-BB	MX10004/JNP10004 Switch Fabric2 card, base bundle
JNP10004-SF2-R	MX10004/JNP10004 Switch Fabric2 card, redundant
JNP10004-SF2	MX10004/JNP10004 Switch Fabric2 card
MX10008 switch fabric	
JNP10008-SF-BB	MX10008/JNP10008 Switch Fabric card, base bundle
JNP10008-SF-R	MX10008/JNP10008 Switch Fabric card, redundant
JNP10008-SF	MX10008/JNP10008 Switch Fabric card
JNP10008-SF2-BB	MX10008/JNP10008 Switch Fabric2 card, base bundle

Table 3. MX10004 and MX100008 ordering information (continued)

Product number	Description
JNP10008-SF2-R	MX10008/JNP10008 Switch Fabric2 card, redundant
JNP10008-SF2	MX10008/JNP10008 Switch Fabric2 card
MX10004 fan tray and controller	
JNP10004-FAN2-BB	MX10004/JNP10004 fan tray, second generation, base bundle
JNP10004-FAN2	MX10004/JNP10004 fan tray, second generation
JNP10004-FTC2-BB	MX10004/JNP10004 fan2 controller, base bundle
JNP10004-FTC2	MX10004/JNP10004 fan2 controller
MX10008 fan tray and controller	
JNP10008-FAN-BB	MX10008/JNP10008 fan, base bundle
JNP10008-FAN2-BB	MX10008/JNP10008 fan2, base bundle
JNP10008-FAN	MX10008/JNP10008 fan
JNP10008-FAN2	MX10008/JNP10008 fan tray, second generation
JNP10008-FANCTRL-BB	MX10008/JNP10008 fan tray controller, base bundle
JNP10008-FTC2-BB	MX10008/JNP10008 fan2 controller, base bundle
JNP10008-FAN-CTRL	MX10008/JNP10008 fan tray controller
JNP10008-FTC2	MX10008/JNP10008 fan2 controller
X10000 power modules	
JNP10K-PWR-AC-BB	MX10000/JNP10000 2700 W AC power supply, base bundle
JNP10K-PWR-AC-R	MX10000/JNP10000 2700 W AC power supply, redundant
JNP10K-PWR-AC	MX10000/JNP10000 2700 W AC power supply
JNP10K-PWR-DC-BB	MX10000/JNP10000 2500 W DC power supply, base bundle
JNP10K-PWR-DC2-BB	MX10000/JNP10000 Gen 2 5500 W DC power supply, base bundle
JNP10K-PWR-DC-R	MX10000/JNP10000 2500 W DC power supply, redundant
JNP10K-PWR-DC	MX10000/JNP10000 2500 W DC power supply
JNP10K-PWR-AC2	MX10000/JNP10000 Gen 2 5500 W AC/HVDC power supply
JNP10K-PWR-AC2-BB	MX10000/JNP10000 Gen 2 5500 W AC/HVDC power supply, base bundle

Table 3. MX10004 and MX100008 ordering information (continued)

Product number	Description
JNP10K-PWR-AC2-R	MX10000/JNP10000 Gen 2 5500 W AC/HVDC power supply, redundant
JNP10K-PWR-DC2	MX10000/JNP10000 Gen 2 5500 W DC power supply
JNP10K-PWR-DC2-R	MX10000/JNP10000 Gen 2 5500 W DC power supply, redundant
JNP10K-PWR-DC3-BB	MX10000/JNP10000 Gen3 7800W W DC power supply, base bundle
JNP10K-PWR-AC3	MX10000/JNP10000 Gen3 7800W W AC power supply
JNP10K-PWR-AC3-BB	MX10000/JNP10000 Gen3 7800W W AC/HVDC power supply, base bundle
JNP10K-PWR-AC3-R	MX10000/JNP10000 Gen3 7800W W AC/HVDC power supply, redundant
JNP10K-PWR-DC3	MX10000/JNP10000 Gen3 7800W W DC power supply
JNP10K-PWR-DC3-R	MX10000/JNP10000 Gen3 7800W W DC power supply, redundant
JNP10K-PWR-AC3H-BB	MX10000/JNP10000 Gen3 7800W AC power supply supporting AC/HVDC/HVAC with SG400 receptacle, Base Bundle
JNP10K-PWR-AC3H	MX10000/JNP10000 Gen3 7800W AC power supply supporting AC/HVDC/HVAC with SG400 receptacle
JNP10K-PWR-AC3H-R	MX10000/JNP10000 Gen3 7800W AC power supply supporting AC/HVDC/HVAC with SG400 receptacle, redundant
MX10004 front panels	
JNP10004-FRPNL-BB	MX10004/JNP10004 front panel, base bundle
JNP10004-FRNT-PNL	MX10004/JNP10004 front panel
JNP10004-FRPNL1-BB	MX10004/JNP10004 front panel with filter, base bundle
JNP10004-FRPNL1	MX10004/JNP10004 front panel with filter
MX10008 front panels	
JNP10008-FRPNL-BB	MX10008/JNP10008 front panel, base bundle
JNP10008-FRNT-PNL	MX10008/JNP10008 front panel
JNP10008-FRPNL1-BB	MX10008/JNP10008 front panel with filter, base bundle
JNP10008-FRPNL1	MX10008/JNP10008 front panel with filter

Table 4. Flex licensing for MX10K-LC480

Product number	Description
Hardware	
MX10K-LC480-BASE	MX10K-LC480 integrated SKU with base hardware and standard Junos software; perpetual
Software	
S-MX-4C8-A1-1*	MX Series Advanced software feature subscription license for 1-year term; 4x100GE + 8x10GE software support included, valid for subscription renewals only
S-MX-4C8-A1-3	MX Series Advanced software feature subscription license for 3-year term; 4x100GE + 8x10GE software support included
S-MX-4C8-A1-5	MX Series Advanced software feature subscription license for 5-year term; 4x100GE + 8x10GE software support included
S-MX-4C8-A1-P	MX Series Advanced software feature perpetual license; 4x100GE + 8x10GE software support not included
S-MX-4C8-P1-1*	MX Series Premium software feature subscription license for 1-year term; 4x100GE + 8x10GE software support included, valid for subscription renewals only
S-MX-4C8-P1-3	MX Series Premium software feature subscription license for 3-year term; 4x100GE + 8x10GE software support included
S-MX-4C8-P1-5	MX Series Premium software feature subscription license for 5-year term; 4x100GE + 8x10GE software support included
S-MX-4C8-P1-P	MX Series Premium software feature perpetual license; 4x100GE + 8x10GE software support not included

* One-year term license for Advanced and Premium tier are renewal only

Table 5. Flex licensing for MX10K-LC4800 and MX10K-LC4802

Product number	Description
Hardware	
MX10K-LC4800-BASE	MX10K-LC4800 integrated SKU with base hardware and standard Junos software; perpetual
MX10K-LC4802-BASE	MX10K-LC4802 integrated SKU with base hardware and standard Junos software; perpetual
Software	
S-MX-48C-A1-1*	MX Series Advanced software feature subscription license for 1- year term; 48x100GbE software support included, valid for subscription renewals only
S-MX-48C-A1-3	MX Series Advanced software feature subscription license for 3- year term; 48x100GbE software support included
S-MX-48C-A1-5	MX Series Advanced software feature subscription license for 5- year term; 48x100GbE software support included
S-MX-48C-A1-P	MX Series Advanced software feature perpetual license; 48x100GbE software support not included
S-MX-48C-P1-1*	MX Series Premium software feature subscription license for 1-year term; 48x100GbE software support included, valid for subscription renewals only

* One-year term license for Advanced and Premium tier are renewal only

Table 5. Flex licensing for MX10K-LC4800 and MX10K-LC4802 (continued)

Product number	Description
S-MX-48C-P1-3	MX Series Premium software feature subscription license for 3-year term; 48x100GbE software support included
S-MX-48C-P1-5	MX Series Premium software feature subscription license for 5-year term; 48x100GbE software support included
S-MX-48C-P1-P	MX Series Premium software feature perpetual license; 48x100GbE software support not included

Table 6. Flex licensing for MX10K-LC9600

Product number	Description
Hardware	
MX10K-LC9600-BASE	MX10K-LC9600 integrated SKU with base hardware and standard Junos software; perpetual
Software	
S-MX-96C-A1-1*	MX Series Advanced software feature subscription license for 1- year term; 96x100GbE software support included, valid for subscription renewals only
S-MX-96C-A1-3	MX Series Advanced software feature subscription license for 3- year term; 96x100GbE software support included
S-MX-96C-A1-5	MX Series Advanced software feature subscription license for 5- year term; 96x100GbE software support included
S-MX-96C-A1-P	MX Series Advanced software feature perpetual license; 96x100GbE software support not included
S-MX-96C-P1-1*	MX Series Premium software feature subscription license for 1-year term; 96x100GbE software support included, valid for subscription renewals only
S-MX-96C-P1-3	MX Series Premium software feature subscription license for 3-year term; 96x100GbE software support included
S-MX-96C-P1-5	MX Series Premium software feature subscription license for 5-year term; 96x100GbE software support included
S-MX-96C-P1-P	MX Series Premium software feature perpetual license; 96x100GbE software support not included

* One-year term license for Advanced and Premium tier are renewal only

Table 7. Flex licensing for bandwidth scale

Product number	Description
S-MX-4C-A1-D-1*	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 1 Year, valid for subscription renewals only
S-MX-4C-A1-D-3	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology with SVC Customer Support, 3 Year
S-MX-4C-A1-D-5	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 5 Year
S-MX-4C-A1-D-P	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, without Customer Support, must purchase CS SKU separately, Perpetual
S-MX-4C-P1-D-1*	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 1 Year, valid for subscription renewals only
S-MX-4C-P1-D-3	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 3 Year

* One-year term license for Advanced and Premium tier are renewal only

Table 7. Flex licensing for bandwidth scale (continued)

Product number	Description
S-MX-4C-P1-D-5	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 5 Year
S-MX-4C-P1-D-P	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, without Customer Support, must purchase CS SKU separately, Perpetual
S-MX-4C-A1-D-1	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 1 Year, valid for subscription renewals only
S-MX-4C-A1-D-3	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology with SVC Customer Support, 3 Year
S-MX-4C-A1-D-5	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 5 Year
S-MX-4C-A1-D-P	SW, MX, 1x400GE ports, Advanced1, SoD (Scale on Demand), Requires license compliance technology, without Customer Support, must purchase CS SKU separately, Perpetual
S-MX-4C-P1-D-1	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 1 Year, valid for subscription renewals only
S-MX-4C-P1-D-3	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 3 Year
S-MX-4C-P1-D-5	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, with SVC Customer Support, 5 Year
S-MX-4C-P1-D-P	SW, MX, 1x400GE ports, Premium1, SoD (Scale on Demand), Requires license compliance technology, without Customer Support, must purchase CS SKU separately, Perpetual

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