

# EX Series Network Switch Comparison

Compare the features & specifications of various models of the EX Series High Performance Ethernet Switches from Juniper Networks.

## Access Switches

	EX2300	EX2300-C	EX3400	EX4000	EX4100
					
<b>Form factor</b>	Fixed 1 U access	Fixed 1 U access	Fixed 1 U access	Fixed 1 U access	Fixed 1 U access
<b>Port density</b>	1GbE and SFP+ uplink port options	12 x 1GbE and 2 SFP+ 10GbE	1GbE and SFP+/QSFP+ uplink port options	EX4000-8P: 12 (8 host ports + 2 port 1GBaseT Uplinks + 2 port 10GbE SFP+ Uplinks) EX4000-12T/12P: 16 (12 host ports + 2 port SFP+ Uplinks + 2 port 10GbE SFP+ Virtual Chassis/uplinks) EX4000-12MP: 16 (12 host ports + 2 port SFP+ Uplinks + 2 port 10GbE SFP+ Virtual Chassis/uplinks) EX4000-24T/24P: 28 (24 host ports + 2 port SFP+ Uplinks + 2 port 10GbE SFP+ Virtual Chassis/uplinks) EX4000-24MP: 28 (24 host ports + 2 port SFP+ Uplinks +	EX4100-24P/T: 24 x 1GbE PoE/Non-PoE, 4 x 1/10GbE uplinks, and 4 x 10/25GbE stacking/uplinks EX4100-48P/T: 48 x 1GbE PoE/Non-PoE, 4 x 1/10GbE uplinks, and 4 x 10/25GbE stacking/uplinks

	EX2300	EX2300-C	EX3400	EX4000	EX4100
					
				<p>2 port 10GbE SFP+ Virtual Chassis/uplinks)</p> <p>EX4000-48T/48P: 52 (48 host ports + 2 port SFP+ Uplinks + 2 port 10GbE SFP+ Virtual Chassis/uplinks)</p> <p>EX4000-48MP: 52 (48 host ports + 2 port SFP/SFP+ uplinks + 2 port 10GbE SFP+ Virtual Chassis/uplinks)</p>	
<b>Wired Assurance</b>	Yes	Yes	Yes	Yes	Yes
<b>Campus Fabrics</b>	Virtual Chassis	Virtual Chassis	Virtual Chassis	No. 6-member Virtual Chassis.	10-member Virtual Chassis, EVPN-VXLAN
<b>Cloud Managed</b>	Yes	Yes	Yes	Yes	Yes
<b>Dimensions (W x H x D)</b>	<p>EX2300-24T/24P/48T: 17.4 x 1.75 x 10.2 in (44.19 x 4.45 x 25.9 cm) 1 rack unit</p> <p>EX2300-48P: 17.4 x 1.75 x 12.2 in (44.19 x 4.45 x 30.98 cm) 1 rack unit</p>	<p>10.98 x 1.72 x 9.4 in (27.9 x 4.4 x 23.9 cm) 1 rack unit</p>	<p>17.4 x 1.7 x 13.8 in (43.7 x 4.4 x 35 cm) 1 rack unit</p>	<p>EX4000-8P and EX4000-12T: 10.39 x 1.71 x 9.57 in (26.4 x 4.34 x 24.3 cm)</p> <p>EX4000-12P and EX4000-12MP: 10.39 x 1.71 x 9.99 in (26.4 x 4.34 x 25.37 cm) w / PSU Fins</p> <p>EX4000-24T: 17.36 x 1.71 x 8.42 in (44.10 x 4.34 x 21.40 cm)</p> <p>EX4000-24P and EX4000-24MP: 17.36 x 1.71 x 10.16 in (44.10 x 4.34 x 25.80 cm)</p> <p>EX4000-48T: 17.36 x 1.71 x 10.16 in (44.10 x 4.34 x 25.80 cm)</p> <p>EX4000-48P and EX4000-48MP: 17.36 x 1.71 x 11.97 in (44.10 x 4.34 x 30.40 cm)</p>	<p>1.72" (H) x 17.4" (W) x 13.8" (D)</p>
<b>Backplane speed</b>	80 Gbps	40 Gbps	160 Gbps	Up to 80Gbps Virtual Chassis	200 Gbps Virtual Chassis

	EX2300	EX2300-C	EX3400	EX4000	EX4100
					
				interconnect	Interconnect
<b>Data rate</b>	EX2300-24P/24T: 128 Gbps EX2300-48T/48P: 176 Gbps	64 Gbps	EX3400- 24P/24T/24T-DC: 288 Gbps EX3400-48P/48T: 336 Gbps	EX4000-8P: 30 Gbps (unidirectional)/60 Gbps (bidirectional), EX4000-12P/12T: 52 Gbps (unidirectional)/104 Gbps (bidirectional), EX4000-12MP: 58 Gbps (unidirectional)/116 Gbps (bidirectional), EX4000-24P/24T: 64 Gbps (unidirectional)/128 Gbps (bidirectional), EX4000-24MP: 70 Gbps (unidirectional)/140 Gbps (bidirectional), EX4000-48P/48T: 88 Gbps (unidirectional)/176 Gbps (bidirectional), EX4000-48MP: 100 Gbps (unidirectional) /200 Gbps (bidirectional)	EX4100-24P/T: 164/328 Gbps, EX4100-48P/T: 188/376 Gbps
<b>Throughput</b>	EX2300-24P/24T: 95 Mpps (wire speed) EX2300-48T/48P: 130 Mpps (wire speed)	47 Mpps	EX3400- 24P/24T/24T-DC: 214 Mpps (wire speed) EX3400-48P/48T: 250 Mpps (wire speed)	EX4000-8P - 44Mpps, EX4000-12P/T - 77Mpps, EX4000-12MP - 86Mpps, EX4000-24P/T - 95Mpps, EX4000-24MP - 104Mbps, EX4000-48P/T - 130Mpps, EX4000-48MP - 148Mpps	EX4100-24P/T: 244 Mpps, EX4100-48P/T: 279 Mpps
<b>Resiliency</b>	Integrated power supply and fans	Fanless Design	Redundant, field-replaceable power supplies Redundant trunk	Integrated Power supply and fans	Redundant internal load-sharing power supplies;

	EX2300	EX2300-C	EX3400	EX4000	EX4100
					
			groups that provide port redundancy and simplify switch configuration		redundant variable speed fans
<b>Traffic monitoring</b>	sFlow	sFlow	sFlow	sFlow	sFlow, IPFIX, flow based telemetry
<b>Quality-of-service (QoS) queues/port</b>	8	8	8 unicast/4 multicast	12 (8 unicast, 4 multicast)	12 (8 unicast, 4 multicast)
<b>MAC addresses</b>	16,000	16,000	32,000	32,000	64000
<b>Jumbo frames</b>	9216 bytes	9216 bytes	9216 bytes	9216 bytes	9216 bytes
<b>IPv4 unicast/multicast routes</b>	4096 / 2048	4096 / 2048	36,000/4,000	1000/1024	32650/16100
<b>IPv6 unicast/multicast routes</b>	2048 / 1024	2048 / 1024	18,000/2,000	1000/1024	16200/8000
<b>Number of VLANs</b>	4093	4093	4,096	1020	N/A
<b>ARP entries</b>	1500	1500	16,000	4,096	32000

	EX4300	EX4400	EX4400-24X	EX4400-48XP	EX4400-48MXP
					
<b>Form factor</b>	Fixed 1 U access	Fixed 1 U access	Fixed 1 U distribution/core	Fixed 1U access	Fixed 1 U access
<b>Port density</b>	1GbE and SFP+/QSFP+ uplink port options	EX4400-48F: 36 x 1GbE + 12 x 10GbE and 4 x 10/25GbE uplinks EX4400-24P/24T: 24 x 1GbE and 4 x 10/25GbE uplinks EX4400-48P/48T: 48 x 1GbE and 4 x 10/25GbE uplinks	24 x 1/10GbaseX, 2 x 100GbE/40GbE uplinks. Common EX4400 uplink modules including 4 x 25GbE MACsec AES256, 4 x 10GbE non-MACsec, and 1 x 100GbE MACsec AES256.	EX4400-48XP: 48 x 1GbE and 4 x 10/25GbE uplinks	EX4400-48MXP: 12x100M/1/2.5/5/10G + 36x1/2.5G
<b>Wired Assurance</b>	Yes	Yes	Yes	Yes	Yes

	EX4300	EX4400	EX4400-24X	EX4400-48XP	EX4400-48MXP
					
<b>Campus Fabrics</b>	Virtual Chassis	10-member Virtual Chassis, EVPN-VXLAN	EVPN-VXLAN, Virtual Chassis	10-member Virtual Chassis, EVPN-VXLAN	Virtual Chassis, EVPN-VXLAN
<b>Cloud Managed</b>	Yes	Yes	Yes	Yes	Yes
<b>Dimensions (W x H x D)</b>	17.4 x 1.7 x 16.4 in (44.2 x 4.3 x 41.7 cm) 1 rack unit	17.4 x 1.7 x 15.7 in (44.2 x 4.4 x 39.9 cm)	17.39 x 1.72 x 16.93 in (44.17 x 4.37 x 43 cm) 1 rack unit	17.4 x 1.7 x 15.7 in (44.2 x 4.4 x 39.9 cm)	17.4 x 1.7 x 15.7 in (44.2 x 4.4 x 39.9 cm)
<b>Backplane speed</b>	320 Gbps (Virtual Chassis)	400Gbps Virtual Chassis interconnect	400-Gbps Virtual Chassis interconnect	400Gbps Virtual Chassis interconnect	400Gbps Virtual Chassis interconnect
<b>Data rate</b>	EX4300-24P/24T: 448 Gbps EX4300-48P/48T: 496 Gbps EX4300-32F: 464 Gbps	EX4400-48F: 456/912 Gbps EX4400-24P/24T: 324/648 Gbps EX4400-48P/48T: 348/696 Gbps	1080 Gbps (bidirectional)	EX4400-48XP: 348/696 Gbps	EX4400-48MXP: 1020 Gbps
<b>Throughput</b>	EX4300-24P/24TF: 333 Mpps (wire speed) EX4300-48P/48T: 369 Mpps (wire speed) EX4300-32F: 345 Mpps (wire speed)	EX4400-48F: 714 Mpps EX4400-24P/24T: 333 Mpps EX4400-48P/48T: 369 Mpps	803 Mpps	EX4400-48XP: 517 Mpps	EX4400-48MXP: 758 Mpps
<b>Resiliency</b>	Internal, hot-swappable redundant power supply; field-replaceable fans; graceful Routing Engine switchover (GRES) in Virtual Chassis configuration	Redundant internal load-sharing power supplies; redundant variable-speed fans	Redundant internal load-sharing power supplies; redundant variable-speed fans	Redundant internal load-sharing power supplies; redundant variable-speed fans	Redundant internal load-sharing power supplies; redundant variable-speed fans
<b>Traffic monitoring</b>	sFlow	sFlow, IPFIX, flow based telemetry	sFlow, IPFIX, flow-based telemetry	sFlow, IPFIX, flow based telemetry	sFlow, IPFIX, flow based telemetry
<b>Quality-of-service (QoS) queues/port</b>	12	12 (8 unicast, 4 multicast)	12 (8 unicast, 4 multicast)	12 (8 unicast, 4 multicast)	12 (8 unicast, 4 multicast)
<b>MAC addresses</b>	64,000	112,000	112,000	112,000	112,000

	EX4300	EX4400	EX4400-24X	EX4400-48XP	EX4400-48MXP
					
<b>Jumbo frames</b>	9216 bytes	9216 bytes	9216 bytes	9216 bytes	9216 bytes
<b>IPv4 unicast/multicast routes</b>	32,000/8000	80,000	80,000	80,000	80,000
<b>IPv6 unicast/multicast routes</b>	18,000/4000	40,000	40,000	40,000	40,000
<b>Number of VLANs</b>	4093	4093	4093	4093	4093
<b>ARP entries</b>	64,000	24,000	24,000	24,000	24,000

## Aggregation and Core Switches

	EX4600	EX4650	EX9200	EX9250
				
<b>Form factor</b>	Fixed 1 U distribution/core	Fixed 1 U distribution/core	Modular 5, 8 or 16 U distribution/core	Fixed 1 or 3 U distribution/core
<b>Port density</b>	24 x 1/10GbE and 4 QSFP+ 40GbE (expansion slots)	48 x 10/25GbE and 8 x 40/100 options	120 x 100GbE, 480 x 10GbE, 440 x 1GbE	24 x 100GbE, 36 x 40GbE, 144 x 10GbE
<b>Wired Assurance</b>	Yes	Yes	N/A	N/A
<b>Campus Fabrics</b>	Virtual Chassis, MC-LAG, EVPN-VXLAN	Virtual Chassis, MC-LAG, ESI-LAG, EVPN-VXLAN	EVPN-VXLAN, MC-LAG, ESI-LAG	EVPN-VXLAN, ESI-LAG
<b>Cloud Managed</b>	Yes	Yes	N/A	N/A
<b>Dimensions (W x H x D)</b>	17.4 x 1.7 x 20.5 in (44.2 x 4.3 x 52.1 cm) 1 rack unit	17.36 x 1.72 x 20.48 in (44.09 x 4.37 x 52.02 cm) 1 rack unit	EX9204: 17.5 x 8.7 x 27.8 in (44.5 x 22.1 x 70.5 cm) 5 rack units EX9208: 17.5 x 14 x 27.8 in (44.5 x 35.6 x 70.5 cm) 8 rack units EX9214: 17.5 x 27.8 x 27.8 in (44.5 x 70.5 x 70.5 cm) 16 rack units	EX9251: 17.4 x 1.75 x 18 in (44.2 x 4.4 x 45.7 cm) EX9253: 17.4 x 5.25 x 30 in (44.2 x 13.3 x 76.2 cm)

	EX4600	EX4650	EX9200	EX9250
				
<b>Backplane speed</b>	960 Gbps	N/A	EX9204: Up to 1.6 Tbps per chassis EX9208: Up to 4.8 Tbps per chassis EX9214: Up to 13.2 Tbps per chassis	EX9251: 800 Gbps EX9253: 4.8 Tbps system capacity
<b>Data rate</b>	1.44 Tbps	2 Tbps	EX9200-40T: Up to 40 Gbps EX9200-40F: Up to 40 Gbps EX9200-32XS: Up to 240 Gbps EX9200-4QS: Up to 120 Gbps	EX9251: 400 Gbps EX9253: 2.4 Tbps
<b>Throughput</b>	1.07 Bpps	1.49 Bpps	Up to 240 Gbps per slot (full duplex) on all chassis	EX9251: 800 Gbps EX9253: 4.8 Tbps
<b>Resiliency</b>	Redundant internal load-sharing power supplies; redundant variable-speed fans	Redundant internal load-sharing power supplies; redundant variable-speed fans	4 power supply bays on each chassis for N+1 or N+N redundancy; field-replaceable fan trays; redundant Routing Engines and switch fabrics; graceful Routing Engine switchover (GRES)	EX9251: Dual power supply, up to 5 fans EX9253: 6 power supplies, 4 fans, redundant Routing Engines; graceful Routing Engine switchover (GRES)
<b>Traffic monitoring</b>	sFlow	sFlow	sFlow	sFlow
<b>Quality-of-service (QoS) queues/port</b>	8	8	8	8
<b>MAC addresses</b>	288,000	288,000	1,000,000	1,000,000
<b>Jumbo frames</b>	9216 bytes	9216 bytes	9192 bytes	9192 bytes
<b>IPv4 unicast/multicast routes</b>	128,000/104,000	360,000/104,000	256,000	256,000
<b>IPv6 unicast/multicast routes</b>	64,000/52,000	256,000/52,000	256,000	256,000
<b>Number of VLANs</b>	4096	4093	32,000	32,000
<b>ARP entries</b>	48,000	48,000	256,000	512,000