

NVIDIA Spectrum Ethernet Switches Product Guide

The NVIDIA Spectrum Ethernet switch portfolio delivers a scalable, high-performance networking foundation designed to support modern data center, enterprise, and edge environments. This product guide covers the range of NVIDIA managed switches offered by Lenovo:

- NVIDIA SN2201 1GbE Managed Switch – an access-layer platform optimized for out-of-band (OOB) management for infrastructure control, monitoring, and dedicated management networks
- NVIDIA SN3420 25GbE Managed Switch – a versatile top-of-rack solution ideal for modern server and storage connectivity
- NVIDIA SN4700 400GbE Managed Switch – a high-performance spine switch optimized for AI, HPC, and cloud-scale fabrics
- NVIDIA SN5610 800GbE Managed Switch – an ultra-high-bandwidth platform enabling next-generation data center fabrics

Together, these systems provide a consistent architecture that enables organizations to build efficient, low-latency networks optimized for cloud, AI, and high-performance computing (HPC) workloads. With support for NVIDIA Cumulus Linux, these switches enable a Linux-based, open networking model that supports standards-based protocols and integrates seamlessly with existing automation frameworks and DevOps workflows.

Available in both Port Side Exhaust (PSE) and opposite Port Side Exhaust (oPSE) airflow configurations, these switches ensure deployment flexibility to meet diverse data center design requirements. By combining high throughput, low latency, and advanced telemetry with the operational simplicity of Linux-based networking, NVIDIA Spectrum switches empower IT teams to build agile, future-ready Ethernet fabrics that can efficiently support evolving application demands.



Figure 1. NVIDIA SN4700 400GbE Managed Switch

Did you know?

NVIDIA Spectrum Ethernet switches are not just high-performance networking platforms—they are engineered as part of a tightly integrated, end-to-end AI networking stack. NVIDIA Spectrum switches are designed in conjunction with NVIDIA SuperNICs, DPUs, and the Spectrum-X architecture to optimize collective communication patterns common in AI and HPC workloads. This holistic approach enables more consistent latency, improved congestion control, and higher utilization across large-scale GPU clusters, helping organizations achieve faster time-to-insight and more predictable performance for distributed AI training and inference.

Ordering information

The following table lists the NVIDIA Ethernet switches orderable from Lenovo.

NVIDIA SN5600: The NVIDIA SN5600 800GbE switch is also currently available for ordering (model 7D5FCTONWW in oPSE airflow), however stock is limited. Contact your sales representative for more information. The SN5600 is not included in this product guide.

Table 1. Ordering information

Model	Description*	Rack Height	Port summary
7D5FCTOFWW	NVIDIA SN2201 1GbE Managed Switch with Cumulus (PSE)	1U	48x 1GbE 1GBASE-T ports + 4x 100GbE QSFP28 uplink ports
7D5FCTOGWW	NVIDIA SN2201 1GbE Managed Switch with Cumulus (oPSE)		
7D5FCTOKWW	NVIDIA SN3420 25GbE Managed Switch with Cumulus (PSE)	1U	48x SFP28 10/25GbE ports + 12x 100GbE QSFP28 uplink ports
7D5FCTOLWW	NVIDIA SN3420 25GbE Managed Switch with Cumulus (oPSE)		
7D5FCTODWW	NVIDIA SN4700 400GbE Managed Switch with Cumulus (PSE)	1U	32x 400GbE QSFP-DD ports
7D5FCTOEWW	NVIDIA SN4700 400GbE Managed Switch with Cumulus (oPSE)		
7D5FCTOOWW	NVIDIA SN5610 800GbE Managed Switch with Cumulus (oPSE)	2U	64x 800GbE OSFP ports + 2x 25GbE SFP28 ports

* PSE = Port Side Exhaust; oPSE = Opposite Port Side Exhaust

Lenovo EveryScale

Lenovo EveryScale is a framework for designing, manufacturing, integrating, and delivering data center solutions, with a focus on High Performance Computing (HPC), Technical Computing, and Artificial Intelligence (AI) environments.

With EveryScale, Lenovo pre-tests and validates a wide selection of Lenovo and third-party components, including NVIDIA Ethernet switches, to create a "Best Recipe" of components and firmware levels that work seamlessly together as a solution. From this testing, customers can be confident that these best-practice solutions run optimally for their workloads and are tailored to their specific needs.

Lenovo EveryScale hardware is pre-integrated, pre-cabled, and pre-loaded, optionally with an OS image, and is tested at the rack level during manufacturing. This process ensures reliable delivery and minimizes installation time in the customer data center.

With EveryScale, customers can focus their efforts on maximizing business value instead of consuming valuable resources to design, optimize, install, and support the infrastructure required to meet business demands.

Learn more by reading the [Lenovo EveryScale product guide](#).

Model summary

The NVIDIA switches offered by Lenovo are as follows:

- [NVIDIA SN2201 1GbE](#)
- [NVIDIA SN3420 25GbE](#)
- [NVIDIA SN4700 400GbE](#)
- [NVIDIA SN5610 800GbE](#)

NVIDIA SN2201 1GbE

The NVIDIA Spectrum SN2201 switch is a 1GbE top-of-rack (ToR) or out-of-band (OOB) management switch designed for cost-effective, high-density access connectivity in modern data centers. It offers up to 48x 1GBASE-T ports for server or management connections, along with 4x QSFP28 uplinks supporting up to 100GbE for aggregation into leaf-spine fabrics. Powered by the NVIDIA Spectrum ASIC, the SN2201 delivers wire-speed Layer 2 and Layer 3 performance, low latency, and advanced telemetry features, making it well-suited for enterprise IT, cloud, and hyperconverged environments.

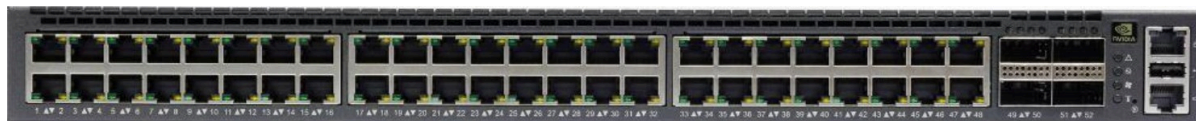


Figure 2. Front view of the NVIDIA SN2201

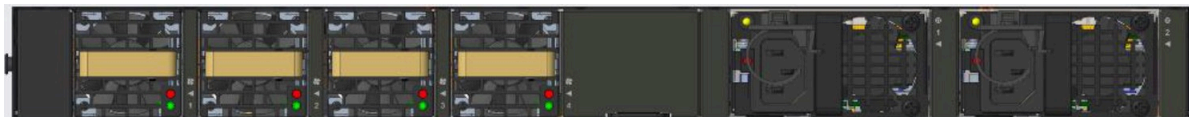


Figure 3. Rear view of the NVIDIA SN2201

For more information, see the [SN2201 datasheet](#) and [SN2201 user guide](#).

NVIDIA SN3420 25GbE

The NVIDIA Spectrum-2 SN3420 switch is a high-performance 1U Ethernet switch designed primarily for ToR deployments in enterprise and cloud data centers. It provides flexible 10/25GbE connectivity with 48x SFP28 ports for server access and 12x QSFP28 ports supporting up to 100GbE for uplinks and fabric connectivity. With non-blocking throughput, low latency, and support for advanced Layer 2/3 networking, RDMA over Converged Ethernet (RoCE), and telemetry features, the SN3420 enables efficient scaling of modern leaf-spine architectures.



Figure 4. Front view of the NVIDIA SN3420



Figure 5. Rear view of the NVIDIA SN3420

For more information, see the [SN3420 datasheet](#) and [SN3420 user guide](#).

NVIDIA SN4700 400GbE

The NVIDIA Spectrum-3 SN4700 is a high-density 400GbE switch optimized for spine and super-spine layers in large-scale data center networks. It features 32x QSFP-DD ports delivering up to 400GbE per port, enabling high-bandwidth, low-latency connectivity for AI, HPC, and cloud environments. Built on the Spectrum-3 ASIC, the SN4700 provides up to 12.8 Tb/s of switching capacity along with advanced telemetry, congestion management, and support for open networking operating systems such as Cumulus Linux. It is designed to deliver predictable wire-speed performance and scalability across modern leaf-spine fabrics.

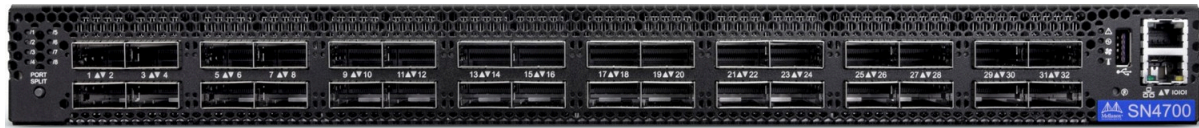


Figure 6. Front view of the NVIDIA SN4700

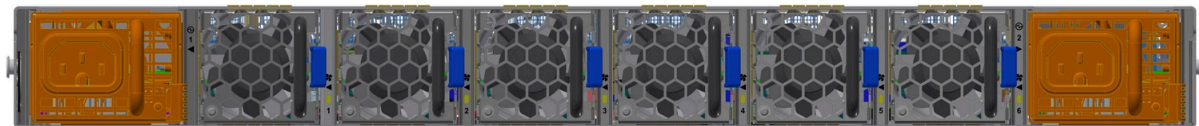


Figure 7. Rear view of the NVIDIA SN4700

For more information, see the [SN4700 datasheet](#) and [SN4700 user guide](#).

NVIDIA SN5610 800GbE

The NVIDIA Spectrum-4 SN5610 switch is an ultra-high-performance 800GbE platform designed for next-generation spine and AI fabric deployments. It delivers 64x OSFP ports supporting up to 800GbE, along with additional SFP28 ports for management connectivity, and can be split to support lower-speed Ethernet connections for flexible deployment. As part of the Spectrum-4 SN5000 series, the SN5610 provides industry-leading throughput, low latency, and advanced telemetry capabilities, enabling efficient scaling of AI-driven and cloud-scale infrastructures. It is a key component of NVIDIA Spectrum-X networking architectures for accelerated computing environments.

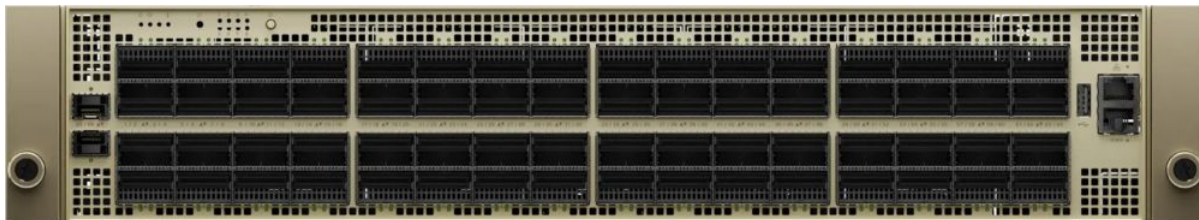


Figure 8. Front view of the NVIDIA SN5610



Figure 9. Rear view of the NVIDIA SN5610

For more information, see the [SN5610 datasheet](#) and [SN5610 user guide](#).

Specifications

The following table shows the specifications of each switch. There are two variants for each switch:

- **PSE** (Port Side Exhaust): Airflow is Back-to-front - Air enters from power side and exits at port side
- **oPSE** (Opposite / reversed airflow): Airflow is Front-to-back - Air enters from port side and exits at power side

Table 2. Specifications

Feature	SN2201 1GbE	SN3420 25GbE	SN4700 400GbE	SN5610 800GbE
Airflow	PSE or oPSE	PSE or oPSE	PSE or oPSE	oPSE only
Typical use	OOB management / ToR	ToR / leaf	Spine / super-spine	Spine / AI fabric
Form factor	1U	1U	1U	2U
Throughput (FD)	448 Gb/s	2.4 Tb/s	12.8 Tb/s	51.2 Tb/s
Ports (with default speeds)	<ul style="list-style-type: none"> • 48x 1GbE RJ45 • 4x 100GbE QSFP28 	<ul style="list-style-type: none"> • 48x 25GbE SFP28 • 12x 100GbE QSFP28 	<ul style="list-style-type: none"> • 32x 400GbE QSFP-DD 	<ul style="list-style-type: none"> • 64x 800GbE OSFP • 2x 25GbE SFP28
Additional ports	<ul style="list-style-type: none"> • 1x 1GbE mgmt • 1x console • 1x USB 	<ul style="list-style-type: none"> • 1x 1GbE mgmt • 1x console • 1x USB 	<ul style="list-style-type: none"> • 1x 1GbE mgmt • 1x console • 1x USB 	<ul style="list-style-type: none"> • 1x 1GbE mgmt • 1x console • 1x USB
Native speeds supported	1GbE to 100GbE	10/25GbE, 40/50/100GbE	Up to 400GbE	10GbE to 800GbE
Breakout options	QSFP28 breakout supported	QSFP28 breakout supported	QSFP-DD breakout supported	OSFP breakout to lower speeds
RoCEv2 support	No	Yes	Yes	Yes
Power supplies	2x hot-swap redundant AC power supplies (C14 sockets)	2x hot-swap redundant AC power supplies (C14 sockets)	2x hot-swap redundant AC power supplies (C16 sockets)	4x hot-swap N+N redundant AC power supplies (C16 sockets)
Fans	4x hot-swap N+1 redundant	5x hot-swap N+1 redundant	6x hot-swap N+1 redundant	5x hot-swap N+1 redundant
Network OS	NVIDIA Cumulus Linux	NVIDIA Cumulus Linux	NVIDIA Cumulus Linux	NVIDIA Cumulus Linux
Dimensions (H x W x D)	44mm x 428mm x 432mm 1.72" x 16.84" x 17"	44mm x 438mm x 465mm 1.72" x 17.24" x 18.29"	44mm x 428mm x 569mm 1.72" x 16.85" x 22.3"	87mm x 438mm x 788mm 3.39" x 17.2" x 31"
Weight	7.4 kg (16.3 lb)	8.5 kg (18.7 lb)	11.7 kg (25.8 lb)	23.5 kg (51.8 lb)

Transceivers

The following table lists the supported transceivers.

Table 3. Transceivers

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
1Gb Transceivers						
00FE333	A5DL	SFP 1000Base-T (RJ-45) Transceiver	4	60	32	2
10Gb Transceivers						
46C3447	5053	SFP+ SR Transceiver	4	60	32	2
25Gb Transceivers						
4TC7A69045	BF10	Lenovo Dual Rate 10G/25G SR SFP28 85C Transceiver	4	60	No	2
4TC7A88638	BYBJ	ThinkSystem Finisar Dual Rate 10G/25G SR SFP28 Transceiver	4	60	No	2
100Gb Transceivers						
4M27A67042	BFH1	Lenovo 100Gb SR4 QSFP28 Ethernet Transceiver	4	12	32	No
4TC7A86257	BVA4	Lenovo 100GBase-SR4 QSFP28 Transceiver	4	12	32	No
800Gb Transceivers with 2x 400Gb connections						
4TC7B09057	CB2U	Lenovo NVIDIA MMA4Z00-NS-T Ethernet OSFP Multi Mode Twin-Transceiver (Generic)	No	No	No	64
800Gb Transceivers						
4TC7A81740	BQJD	ThinkSystem NDRx2 OSFP800 IB Multi Mode Twin-Transceiver	No	No	No	64
Converters/Adapters						
4G17A10853	B306	Mellanox 100G QSFP28 to 25G SFP28 Cable Adapter	4	12	32	No

Networking cables

The following table lists the supported cables.

In this section:

- [Optical cables](#)
- [Copper cables](#)
- [RJ45 cables](#)

Optical cables

Table 4. Optical cables

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
MTP-4xLC OM3 MMF Breakout Cables (these cables require a transceiver)						
00FM412	A5UA	Lenovo 1m MPO-4xLC OM3 MMF Breakout Cable	4	60	32	No
00FM414	A5UC	Lenovo 5m MPO-4xLC OM3 MMF Breakout Cable	4	60	32	No
SFP+ 10Gb Active Optical Cables						
00YL634	ATYX	Lenovo 1M SFP+ to SFP+ Active Optical Cable	4	60	32	2
00YL637	ATYY	Lenovo 3M SFP+ to SFP+ Active Optical Cable	4	60	32	2
00YL640	ATYZ	Lenovo 5M SFP+ to SFP+ Active Optical Cable	4	60	32	2
00YL643	ATZ0	Lenovo 7M SFP+ to SFP+ Active Optical Cable	4	60	32	2
00YL646	ATZ1	Lenovo 15M SFP+ to SFP+ Active Optical Cable	4	60	32	2
00YL649	ATZ2	Lenovo 20M SFP+ to SFP+ Active Optical Cable	4	60	32	2
QSFP 40Gb Active Optical Cables						
00YL661	ATZ6	Lenovo 15m 40G QSFP+ to QSFP+ Active Optical Cable	4	12	32	No
00YL664	ATZ7	Lenovo 20m 40G QSFP+ to QSFP+ Active Optical Cable	4	12	32	No
QSFP 40Gb Breakout Active Optical Cables						
00YL667	ATZ8	Lenovo 1M QSFP+ to 4xSFP+ Active Optical Cable	No	No	32	No
00YL670	ATZ9	Lenovo 3M QSFP+ to 4xSFP+ Active Optical Cable	No	No	32	No
00YL673	ATZA	Lenovo 5M QSFP+ to 4xSFP+ Active Optical Cable	No	No	32	No
QSFP OM3 Optical Cables (these cables require a transceiver)						
00VX003	AT2U	Lenovo 10m QSFP+ MPO-MPO OM3 MMF Cable	4	12	32	No
00VX005	AT2V	Lenovo 30m QSFP+ MPO-MPO OM3 MMF Cable	No	No	32	No
SFP28 25Gb Active Optical Cables						
4X97A94008	AV1F	Lenovo 3m 25G SFP28 Active Optical Cable	4	60	32	2
4X97A94011	AV1G	Lenovo 5m 25G SFP28 Active Optical Cable	4	60	32	2
4X97A94012	AV1H	Lenovo 10m 25G SFP28 Active Optical Cable	4	60	32	2
4X97A94013	AV1J	Lenovo 15m 25G SFP28 Active Optical Cable	4	60	32	2

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
4X97A94702	AV1K	Lenovo 20m 25G SFP28 Active Optical Cable	4	60	32	No
QSFP28 100Gb Ethernet Active Optical Cables						
4X97A94703	B2UZ	Lenovo 1m 100G QSFP28 Active Optical Cable	4	12	32	No
4X97A94014	AV1L	Lenovo 3m 100G QSFP28 Active Optical Cable	4	60	32	No
4X97A94015	AV1M	Lenovo 5m 100G QSFP28 Active Optical Cable	4	12	32	No
4X97A94016	AV1N	Lenovo 10m 100G QSFP28 Active Optical Cable	4	12	32	No
4X97A94704	AV1P	Lenovo 15m 100G QSFP28 Active Optical Cable	4	12	32	No
4X97A94705	AV1Q	Lenovo 20m 100G QSFP28 Active Optical Cable	4	12	32	No
100G MPO OM4 MMF Cables (these cables require a transceiver)						
7Z57A03567	AV25	Lenovo 5m MPO-MPO OM4 MMF Cable	4	12	32	No
7Z57A03568	AV26	Lenovo 7m MPO-MPO OM4 MMF Cable	4	12	32	No
7Z57A03569	AV27	Lenovo 10m MPO-MPO OM4 MMF Cable	4	12	32	No
7Z57A03570	AV28	Lenovo 15m MPO-MPO OM4 MMF Cable	4	12	32	No
7Z57A03571	AV29	Lenovo 20m MPO-MPO OM4 MMF Cable	4	12	32	No
7Z57A03572	AV2A	Lenovo 30m MPO-MPO OM4 MMF Cable	4	12	32	No
100G Breakout OM4 MPO Cables (these cables require a transceiver)						
7Z57A03573	AV2B	Lenovo 1m MPO to 4x LC Breakout OM4 MMF Cable	No	No	32	No
7Z57A03574	AV2C	Lenovo 3m MPO to 4x LC Breakout OM4 MMF Cable	No	No	32	No
7Z57A03575	AV2D	Lenovo 5m MPO to 4x LC Breakout OM4 MMF Cable	4	12	32	No
(these cables require a transceiver)						
4Z57A10845	B2P9	Lenovo 0.5m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10846	B2PA	Lenovo 1m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10847	B2PB	Lenovo 3m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10848	B2PC	Lenovo 5m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10849	B2PD	Lenovo 10m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10850	B2PE	Lenovo 15m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10851	B2PF	Lenovo 25m LC-LC OM4 MMF Cable	4	60	32	2
4Z57A10852	B2PG	Lenovo 30m LC-LC OM4 MMF Cable	4	60	32	2
QSFP56 HDR InfiniBand / 200 GbE Optical Cables						
4Z57A14188	B4QW	3m Mellanox HDR IB Active Optical QSFP56 Cable	No	No	32	No
4Z57A14189	B4QX	5m Mellanox HDR IB Active Optical QSFP56 Cable	No	No	32	No
4Z57A14190	B4QY	10m Mellanox HDR IB Active Optical QSFP56 Cable	No	No	32	No
4Z57A14191	B4QZ	15m Mellanox HDR IB Active Optical QSFP56 Cable	No	No	32	No
4Z57A14192	B4R0	20m Mellanox HDR IB Active Optical QSFP56 Cable	No	No	32	No
NVIDIA NDR Multi Mode Fibre Optical Cables						
4X97A81748	BQJN	Lenovo 3m NVIDIA NDR Multi Mode Optical Cable	No	No	No	128

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
4X97A81749	BQJP	Lenovo 5m NVIDIA NDR Multi Mode Optical Cable	No	No	No	128
4X97A81750	BQJQ	Lenovo 7m NVIDIA NDR Multi Mode MPO12 APC Optical Cable	No	No	No	128
4X97A81751	BQJR	Lenovo 10m NVIDIA NDR Multi Mode Optical Cable	No	No	No	128
4X97A81752	BQJS	Lenovo 20m NVIDIA NDR Multi Mode Optical Cable	No	No	No	128
4X97A85349	BSN6	Lenovo 30M NVIDIA NDR Multi Mode MPO12 APC Optical Cable	No	No	No	128
NVIDIA NDR Multi Mode Fibre Optical Splitter Cables						
4X97A81836	BQK4	Lenovo 3m NVIDIA NDR to 2x NDR200 Multi Mode Optical Cable	No	No	No	128
4X97A81837	BQK5	Lenovo 5m NVIDIA NDR to 2x NDR200 Multi Mode Optical Cable	No	No	No	128
4X97A81838	BQK6	Lenovo 7m NVIDIA NDR to 2x NDR200 Multi Mode MPO12 APC Optical Cable	No	No	No	128
4X97A81839	BQK7	Lenovo 10m NVIDIA NDR to 2x NDR200 Multi Mode Optical Cable	No	No	No	128
4X97A81840	BQK8	Lenovo 20m NVIDIA NDR to 2x NDR200 Multi Mode Optical Cable	No	No	No	128
NVIDIA NDR NDRx2 OSFP800 to 2x HDR QSFP56 Optical Splitter Cables						
4X97A81844	BQKC	Lenovo 5m NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Active Optical Splitter Cable	No	No	No	64
4X97A81845	BQKD	Lenovo 10m NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Active Optical Splitter Cable	No	No	No	64
4X97A87753	BVB8	Lenovo 20M NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Active Optical Splitter Cable	No	No	No	64
4X97A87754	BVB9	Lenovo 30M NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Active Optical Splitter Cable	No	No	No	64

Copper cables

Table 5. Copper cables

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
QSFP+ 40Gb DAC Breakout Cables (QSFP+ to 4xSFP+)						
49Y7886	A1DL	1m QSFP+ DAC Break Out Cable	No	12	32	No
49Y7887	A1DM	3m QSFP+ DAC Break Out Cable	No	12	32	No
49Y7888	A1DN	5m QSFP+ DAC Break Out Cable	No	12	32	No
QSFP-to-QSFP 40Gb Cables						
49Y7890	A1DP	1m QSFP+ to QSFP+ Cable	No	12	32	No
49Y7891	A1DQ	3m QSFP+ to QSFP+ Cable	No	12	32	No
00D5810	A2X8	5m QSFP+ to QSFP+ Cable	No	12	32	No
00D5813	A2X9	7m QSFP+ to QSFP+ Cable	No	No	32	No
SFP+ 10Gb Passive DAC Cables						
00D6288	A3RG	0.5m Passive DAC SFP+ Cable	No	60	32	2
90Y9427	A1PH	1m Passive DAC SFP+ Cable	No	60	32	2
00AY764	A51N	1.5m Passive DAC SFP+ Cable	No	60	32	2
00AY765	A51P	2m Passive DAC SFP+ Cable	No	60	32	2
90Y9430	A1PJ	3m Passive DAC SFP+ Cable	No	60	32	2
90Y9433	A1PK	5m Passive DAC SFP+ Cable	No	60	32	2
00D6151	A3RH	7m Passive DAC SFP+ Cable	No	60	32	2
SFP+ 10Gb Active DAC Cables						
00VX111	AT2R	Lenovo 1m Active DAC SFP+ Cables	4	60	32	2
00VX114	AT2S	Lenovo 3m Active DAC SFP+ Cables	4	60	32	2
00VX117	AT2T	Lenovo 5m Active DAC SFP+ Cables	4	60	32	2
SFP28 25Gb Passive DAC Cables						
7Z57A03557	AV1W	Lenovo 1m Passive 25G SFP28 DAC Cable	4	60	32	2
7Z57A03558	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable	4	60	32	2
7Z57A03559	AV1Y	Lenovo 5m Passive 25G SFP28 DAC Cable	4	60	32	2
QSFP28 100Gb Ethernet Passive DAC Cables						
7Z57A03561	AV1Z	Lenovo 1m Passive 100G QSFP28 DAC Cable	4	12	32	No
7Z57A03562	AV20	Lenovo 3m Passive 100G QSFP28 DAC Cable	4	12	32	No
7Z57A03563	AV21	Lenovo 5m Passive 100G QSFP28 DAC Cable	4	12	32	No
QSFP28 100G-to-4x25G Ethernet Breakout Cables						
7Z57A03564	AV22	Lenovo 1m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	4	60	32	No
4Z57A85043	BS32	Lenovo 1.5m 100G to 4x25G Breakout SFP28 Breakout DAC Cable	4	60	32	No
4Z57A85044	BS33	Lenovo 2m 100G to 4x25G Breakout SFP28 Breakout DAC Cable	4	60	32	No

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
7Z57A03565	AV23	Lenovo 3m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	4	60	32	No
7Z57A03566	AV24	Lenovo 5m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable	4	60	32	No
QSFP56 HDR InfiniBand / 200 GbE Passive DAC Cables						
4Z57A14182	B4QQ	0.5m Mellanox HDR IB Passive Copper QSFP56 Cable	No	No	32	No
4Z57A14183	B4QR	1m Mellanox HDR IB Passive Copper QSFP56 Cable	No	No	32	No
4Z57A14184	B4QS	1.5m Mellanox HDR IB Passive Copper QSFP56 Cable	No	No	32	No
4Z57A14185	B4QT	2m Mellanox HDR IB Passive Copper QSFP56 Cable	No	No	32	No
NVIDIA NDRx2 OSFP800 Finned to NDRx2 OSFP800 Finned Copper Cables						
4X97A81744	BQJF	Lenovo 0.5m NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Passive Copper Cable	No	No	No	64
4X97A82957	BQJG	Lenovo 1m NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Passive Copper Cable	No	No	No	64
4X97A82958	BQJH	Lenovo 1.5m NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Passive Copper Cable	No	No	No	64
4X97A82959	BQJJ	Lenovo 2m NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Passive Copper Cable	No	No	No	64
4X97A81747	BQJK	Lenovo 3m NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Active Copper Cable	No	No	No	64
4X97A82960	BQJL	Lenovo 5M NVIDIA NDRx2 OSFP800 to NDRx2 OSFP800 Active Copper Cable	No	No	No	64
NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Splitter Copper Cables						
4X97A81827	BQJV	Lenovo 1m NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Passive Copper Splitter Cable	No	No	No	64
4X97A81828	BQJW	Lenovo 1.5m NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Passive Copper Splitter Cable	No	No	No	64
4X97A81829	BQJX	Lenovo 2m NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Passive Copper Splitter Cable	No	No	No	64
4X97A81830	BQJY	Lenovo 3m NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Passive Copper Splitter Cable	No	No	No	64
4X97B08451	CAGG	Lenovo 5M NVIDIA NDRx2 OSFP800 to 2x NDR OSFP400 Active Copper Splitter Cable Generic	No	No	No	64
NVIDIA NDRx2 OSFP800 to 4x NDR200 QSFP112 Splitter Copper Cables						
4X97A81832	BQK0	Lenovo 1m NVIDIA NDRx2 OSFP800 to 4x NDR200 QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A81833	BQK1	Lenovo 1.5m NVIDIA NDRx2 OSFP800 to 4x NDR200 QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A81834	BQK2	Lenovo 2m NVIDIA NDRx2 OSFP800 to 4x NDR200 QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A81835	BQK3	Lenovo 3m NVIDIA NDRx2 OSFP800 to 4x NDR200 QSFP112 Passive Copper Splitter Cable	No	No	No	64

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
NVIDIA NDR NDRx2 OSFP800 to 2x HDR QSFP56 Copper Splitter Cables						
4X97A81841	BQK9	Lenovo 1m NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Passive Copper Splitter Cable	No	No	No	64
4X97A81842	BQKA	Lenovo 1.5m NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Passive Copper Splitter Cable	No	No	No	64
4X97A81843	BQKB	Lenovo 2m NVIDIA NDRx2 OSFP800 to 2x HDR QSFP56 Passive Copper Splitter Cable	No	No	No	64
NVIDIA NDR NDRx2 OSFP800 to 4x HDR QSFP56 Copper Splitter Cables						
4X97A81846	BQKE	Lenovo 1m NVIDIA NDRx2 OSFP800 to 4x HDR100 QSFP56 Passive Copper Splitter Cable	No	No	No	64
4X97A81847	BQKF	Lenovo 1.5m NVIDIA NDRx2 OSFP800 to 4x HDR100 QSFP56 Passive Copper Splitter Cable	No	No	No	64
4X97A81848	BQKG	Lenovo 2m NVIDIA NDRx2 OSFP800 to 4x HDR100 QSFP56 Passive Copper Splitter Cable	No	No	No	64
NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable						
4X97A95308	C1V7	Lenovo 1m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A95309	C1V8	Lenovo 1.5m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A95310	C1V9	Lenovo 2m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A95311	C1VA	Lenovo 2.5m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A95312	C1VB	Lenovo 3m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Passive Copper Splitter Cable	No	No	No	64
4X97A95313	C1VC	Lenovo 4m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Active Copper Splitter Cable	No	No	No	64
4X97A95314	C1VD	Lenovo 5m NVIDIA Twin NDR OSFP112 to 2xNDR QSFP112 Active Copper Splitter Cable	No	No	No	64
Lenovo 400GbE QSFP-DD to 2 x 200GbE QSFP56 DAC Cables						
4X97B00137	C6RD	Lenovo 2m 400GbE QSFP-DD to 2 x 200GbE QSFP56 DAC Cable	No	No	32	No
4X97B00139	C6RC	Lenovo 3m 400GbE QSFP-DD to 2 x 200GbE QSFP56 DAC Cable	No	No	32	No

RJ45 cables

Table 6. RJ45 Cables

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
CAT6 Green cables						
00WE123	AVFW	0.75m Green Cat6 Cable	53	61	33	3
00WE127	AVFX	1.0m Green Cat6 Cable	53	61	33	3
00WE131	AVFY	1.25m Green Cat6 Cable	53	61	33	3
00WE135	AVFZ	1.5m Green Cat6 Cable	53	61	33	3
00WE139	AVG0	3m Green Cat6 Cable	53	61	33	3
CAT6 Blue cables						
90Y3721	A1MU	10m Blue Cat6 Cable	53	61	33	3
90Y3730	A1MX	25m Blue Cat6 Cable	53	61	33	3
CAT6 Yellow cables						
90Y3715	A1MS	10m Yellow Cat6 Cable	53	61	33	3
90Y3724	A1MV	25m Yellow Cat6 Cable	53	61	33	3
CAT5e Blue Cables						
00WE111	AVFT	0.75m Blue Cat5e Cable	53	No	33	No
00WE115	AVFU	1.0m Blue Cat5e Cable	53	No	33	No
00WE119	AVFV	1.25m Blue Cat5e Cable	53	No	33	No
CAT5e Green Cables						
40K5563	BQ6P	0.6m Green Cat5e Cable	No	No	33	No
00WE099	AVFQ	0.75m Green Cat5e Cable	53	No	33	No
00WE103	AVFR	1.0m Green Cat5e Cable	53	No	33	No
00WE107	AVFS	1.25m Green Cat5e Cable	53	No	33	No
40K5643	3797	e1350 1.5 Meter Green Ethernet Cable	53	61	33	3
40K5793	3798	e1350 3 Meter Green Ethernet Cable	53	61	33	3
40K5794	3799	10m Green Cat5e Cable	53	61	33	3
40K8869	3800	25m Green Cat5e Cable	53	61	33	3
CAT5e Yellow Cables						
40K8933	3791	e1350 .6 Meter Yellow Ethernet Cable	53	61	33	3
40K8951	3792	e1350 1.5 Meter Yellow Ethernet Cable	53	61	33	3
40K8957	BQ6Q	Ethe 3m Yellow	No	No	33	No
40K8801	3794	10 Meter Yellow Ethernet Cable	53	61	33	3
40K8807	3795	25m Yellow Cat5e Cable	53	61	33	3

Rack mount kit

The following table lists the optional rack mount kit for the NVIDIA switches.

SN5610 rack mount kit: The SN5610 includes the slide rails as standard, so a rack mount kit is not needed for this switch.

Table 7. Rack installation

Part number	Feature	Description	Maximum supported						
			NVIDIA SN2201 oPSE	NVIDIA SN2201 PSE	NVIDIA SN3420 oPSE	NVIDIA SN3420 PSE	NVIDIA SN4700 oPSE	NVIDIA SN4700 PSE	NVIDIA SN5610 oPSE
4XF7A85362	BSNA	NVIDIA SN2201 Enterprise Rack Mount Kit for Recessed Mounting	1	No	No	No	No	No	No
4XF7A85363	BSNB	NVIDIA SN2201 Enterprise Rack Mount Kit w/Air Duct	No	1	No	No	No	No	No
4M27A68446	BEGJ	NVIDIA MTEF-KIT-SP Rack Mount Kit	No	No	1	No	No	No	No
4M27A68447	BEGK	NVIDIA SN2F-KIT-SP Rack Mount Kit4xx/SN34xx 1U Rack Mount Kit w/Air Duct	No	No	No	1	No	No	No
4M27A16332	B5RW	Mellanox QM87xx Enterprise RMK for Recessed Mounting	No	No	No	No	1	No	No
4M27A16331	B5RV	Mellanox QM87xx Enterprise RMK w/Air Duct	No	No	No	No	No	1	No

Power cables

The following table lists the power cables that can be ordered with the NVIDIA switches.

Tip: The SN2201 and SN3420 use C13 power cables, whereas the SN4700 and SN5610 use C15 cables.

Table 8. Power cables

Part number	Feature	Description	Maximum supported			
			NVIDIA SN2201	NVIDIA SN3420	NVIDIA SN4700	NVIDIA SN5610
C13 to C14 line cords						
None	BPHZ	0.5m, 10A/100-250V, C13 to C14 Jumper Cord	2	2	No	No
39Y7937	6201	1.5m, 10A/100-250V, C13 to C14 Jumper Cord	2	2	No	No
4L67A08366	6311	2.8m, 10A/100-250V, C13 to C14 Jumper Cord	2	2	No	No
39Y7932	6263	4.3m, 10A/100-250V, C13 to C14 Jumper Cord	2	2	No	No
C15 to C14 line cords						
4L67A84863	BRQ8	0.5m, 10A/100-250V, C15 to C14 Jumper Cord	No	No	2	4
4L67A84862	BRQ7	1.5m, 10A/100-250V, C15 to C14 Jumper Cord	No	No	2	4
4L67A84861	BRQ6	2.8m, 10A/100-250V, C15 to C14 Jumper Cord	No	No	2	4
4L67A84860	BRQ5	4.3m, 10A/100-250V, C15 to C14 Jumper Cord	No	No	2	4
C13 to C20 line cords						
39Y7938	6204	2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	2	2	No	No
C15 to C20 line cords						
4L67A84859	BRQ4	1.5m, 10A/100-250V, C15 to C20 Jumper Cord	No	No	2	4

Operating environment

The NVIDIA switches have the following operating characteristics:

- Normal operating temperature range (sustained): 0°C to +40°C (32°F to +104°F)
- Shipping and storage temperature range: -40°C to +70°C (-40°F to +158°F)
- Normal operating humidity: 10% to 85%, non-condensing
- Non-operating humidity: 10% to 90%, non-condensing

Related publications and links

For more information, see these resources:

- Lenovo EveryScale product guide
<https://lenovopress.lenovo.com/lp0900-lenovo-everyyscale-lesi>
- NVIDIA Spectrum Network Switches
<https://www.nvidia.com/en-us/networking/ethernet-switching/>
- NVIDIA SN2201 datasheet
<https://nvdam.widen.net/s/llbvww5rfx/br-sn2000-series>
- NVIDIA SN3420 datasheet
<https://nvdam.widen.net/s/gbk7knpsfd/sn3000-series>
- NVIDIA SN4700 datasheet
<https://nvdam.widen.net/s/6269c25wv8/nv-spectrum-sn4000-product-brief>
- NVIDIA SN5610 datasheet
<https://nvdam.widen.net/s/mmvbnpk8qk/networking-ethernet-switches-sn5000-datasheet-us>
- NVIDIA Spectrum User Manuals
<https://networking-docs.nvidia.com/switches#nvidiatab-ethernet-switches>

Related product families

Product families related to this document are the following:

- [Ethernet Switches](#)

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