



NVIDIA SN2000 SWITCH SYSTEMS USER MANUAL

Ordering Information

10/25/40/50/100GbE Open Ethernet Switch Systems Models: SN2700, SN2740, SN2410, SN2201, SN2100, SN2010

Notice

This document is provided for information purposes only and shall not be regarded as a warranty of a certain functionality, condition, or quality of a product. Neither NVIDIA Corporation nor any of its direct or indirect subsidiaries and affiliates (collectively: "NVIDIA") make any representations or warranties, expressed or implied, as to the accuracy or completeness of the information contained in this document and assumes no responsibility for any errors contained herein. NVIDIA shall have no liability for the consequences or use of such information or for any infringement of patents or other rights of third parties that may result from its use. This document is not a commitment to develop, release, or deliver any Material (defined below), code, or functionality.

NVIDIA reserves the right to make corrections, modifications, enhancements, improvements, and any other changes to this document, at any time without notice.

Customer should obtain the latest relevant information before placing orders and should verify that such information is current and complete.

NVIDIA products are sold subject to the NVIDIA standard terms and conditions of sale supplied at the time of order acknowledgement, unless otherwise agreed in an individual sales agreement signed by authorized representatives of NVIDIA and customer ("Terms of Sale"). NVIDIA hereby expressly objects to applying any customer general terms and conditions with regards to the purchase of the NVIDIA product referenced in this document. No contractual obligations are formed either directly or indirectly by this document.

NVIDIA products are not designed, authorized, or warranted to be suitable for use in medical, military, aircraft, space, or life support equipment, nor in applications where failure or malfunction of the NVIDIA product can reasonably be expected to result in personal injury, death, or property or environmental damage. NVIDIA accepts no liability for inclusion and/or use of NVIDIA products in such equipment or applications and therefore such inclusion and/or use is at customer's own risk.

NVIDIA makes no representation or warranty that products based on this document will be suitable for any specified use. Testing of all parameters of each product is not necessarily performed by NVIDIA. It is customer's sole responsibility to evaluate and determine the applicability of any information contained in this document, ensure the product is suitable and fit for the application planned by customer, and perform the necessary testing for the application in order to avoid a default of the application or the product. Weaknesses in customer's product designs may affect the quality and reliability of the NVIDIA product and may result in additional or different conditions and/or requirements beyond those contained in this document. NVIDIA accepts no liability related to any default, damage, costs, or problem which may be based on or attributable to: (i) the use of the NVIDIA product in any manner that is contrary to this document or (ii) customer product designs.

No license, either expressed or implied, is granted under any NVIDIA patent right, copyright, or other NVIDIA intellectual property right under this document. Information published by NVIDIA regarding third-party products or services does not constitute a license from NVIDIA to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property rights of the third party, or a license from NVIDIA under the patents or other intellectual property rights of NVIDIA.

Reproduction of information in this document is permissible only if approved in advance by NVIDIA in writing, reproduced without alteration and in full compliance with all applicable export laws and regulations, and accompanied by all associated conditions, limitations, and notices.

THIS DOCUMENT AND ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL NVIDIA BE LIABLE FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF ANY USE OF THIS DOCUMENT, EVEN IF NVIDIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Notwithstanding any damages that customer might incur for any reason whatsoever, NVIDIA's aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms of Sale for the product.

Trademarks

NVIDIA, the NVIDIA logo, and Mellanox are trademarks and/or registered trademarks of NVIDIA Corporation and/or Mellanox Technologies Ltd. in the U.S. and in other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Copyright

© 2022 NVIDIA Corporation & affiliates. All Rights Reserved.

NVIDIA Corporation | 2788 San Tomas Expressway, Santa Clara, CA 95051

<http://www.nvidia.com>



Table of Contents

SN2700 Ordering Part Numbers 6

SN2410 Ordering Part Numbers 7

SN2100 Ordering Part Numbers 8

SN2010 Ordering Part Numbers 9

SN2201 Ordering Part Numbers10

The following table lists ordering information for the available systems.

Please pay attention to the airflow direction when ordering your system. For more details, see [Air Flow](#).

SN2700 Ordering Part Numbers

NVIDIA SKU	Legacy OPN	Marketing Description
920-9N101-00F4-0X0	MSN2700-BS2F	NVIDIA Spectrum based 40GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, Standard depth, P2C airflow, Rail Kit, RoHS6
920-9N101-00F4-0C0	MSN2700-BS2FC	NVIDIA Spectrum 40GbE 1U switch w/Cumulus Linux, 32 QSFP28 ports, 2 AC PSUs, x86 2-core, standard depth, P2C airflow, Rail Kit, RoHS6, (Cumulus License Key is required)
920-9N101-00R4-0X0	MSN2700-BS2R	NVIDIA Spectrum based 40GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, Standard depth, C2P airflow, Rail Kit, RoHS6
920-9N101-00F7-0X0	MSN2700-CB2F	Mellanox Spectrum based 100GbE 1U Open Ethernet Switch with Onyx, 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, short depth, P2C airflow, Rail Kit
920-9N101-00R7-0X0	MSN2700-CB2R	Spectrum based 100GbE, 1U Open Ethernet Switch with Onyx, 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, Short depth, Reverse airflow, Rail Kit, RoHS6
920-9N101-00F7-1C1	MSN2700-CSBFC	Mellanox Spectrum based 100GbE 1U Open Ethernet Switch with Cumulus Linux, 32 QSFP28 ports, 2 Power Supplies (DC), x86 CPU, standard depth, P2C airflow, Rail Kit
920-9N101-00F7-0X4	MSN2700-CS2F	NVIDIA Spectrum based 100GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, Standard depth, P2C airflow, Rail Kit, RoHS6
920-9N101-00F7-0C1	MSN2700-CS2FC	NVIDIA Spectrum 100GbE 1U switch w/Cumulus Linux, 32 QSFP28 ports, 2 AC PSUs, x86 2-core, standard depth, P2C airflow, Rail Kit, RoHS6, (Cumulus License Key is required)
920-9N101-00F7-0N1	MSN2700-CS2FO	NVIDIA Spectrum based 100GbE 1U Open Switch with ONIE, 32 QSFP28 ports, 2 Power Supplies (AC), Standard depth, x86 CPU, P2C airflow, Rail Kit, RoHS6
920-9N101-00R7-0X2	MSN2700-CS2R	NVIDIA Spectrum based 100GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 32 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, Standard depth, C2P airflow, Rail Kit, RoHS6
920-9N101-00R7-0C0	MSN2700-CS2RC	NVIDIA Spectrum 100GbE 1U switch w/Cumulus Linux, 32 QSFP28 ports, 2 AC PSUs, x86 2-core, standard depth, C2P airflow, Rail Kit, RoHS6, (Cumulus License Key is required)
920-9N101-00R7-0N0	MSN2700-CS2RO	NVIDIA Spectrum based 100GbE 1U Open Ethernet switch with ONIE, 32 QSFP28 ports, 2 power supplies (AC), x86 CPU, standard depth, C2P airflow, Rail Kit
920-9N101-00F7-1N0	MSN2700-CBBFO	NVIDIA Spectrum based 100GbE, 1U Open Ethernet Switch with ONIE, 32 QSFP28 ports, 2 power-supplies (DC), x86 CPU, short depth, P2C airflow, Rail Kit

SN2410 Ordering Part Numbers

NVIDIA SKU	Legacy OPN	Marketing Description
920-9N112-00F7-0X0	MSN2410-BB2F	Mellanox Spectrum based 10GbE/100GbE 1U Open Ethernet switch with Onyx, 48 SFP28 ports and 8 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, short depth, P2C airflow, Rail Kit
920-9N112-00F7-0C3	MSN2410-BB2FC	NVIDIA Spectrum 10GbE/100GbE switch w/Cumulus Linux, 48 SFP28 ports + 8 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, P2C air flow, Rail Kit, (Cumulus License Key is required)
920-9N112-00F7-0N3	MSN2410-BB2FO	NVIDIA Spectrum based 10GbE/100GbE 1U Open Ethernet switch with ONIE, 48 SFP28 ports, 8 QSFP28 ports, 2 power supplies (AC), x86 dual core, Short depth, P2C airflow, Rail Kit, RoHS6
920-9N112-00R7-0X2	MSN2410-BB2R	NVIDIA Spectrum based 10GbE/100GbE 1U Open Ethernet switch with NVIDIA Onyx (MLNX-OS), 48 SFP28 ports, 8 QSFP28 ports, 2 power supplies (AC), x86 dual core, Short depth, C2P airflow, Rail Kit, RoHS6
920-9N112-00R7-0N1	MSN2410-BB2RO	NVIDIA Spectrum based 10GbE/100GbE 1U Open Ethernet switch with ONIE, 48 SFP28 ports and 8 QSFP28 ports, 2 power supplies (AC), x86 CPU, short depth, C2P airflow, Rail Kit
920-9N112-00R7-0C3	MSN2410-BB2RC	NVIDIA Spectrum based 10GbE/100GbE 1U Open Ethernet switch with Cumulus Linux, 48 SFP28 ports and 8 QSFP28 ports, 2 power supplies (AC), x86 CPU, short depth, C2P airflow, Rail Kit
920-9N112-00F7-0X2	MSN2410-CB2F	NVIDIA Spectrum based 25GbE/100GbE 1U Open Ethernet switch with NVIDIA Onyx (MLNX-OS), 48 SFP28 ports, 8 QSFP28 ports, 2 power supplies (AC), x86 dual core, Short depth, P2C airflow, Rail Kit, RoHS6
920-9N112-00F7-0C2	MSN2410-CB2FC	NVIDIA Spectrum 25GbE/100GbE switch w/Cumulus Linux, 48 SFP28 ports + 8 QSFP28 ports, 2 AC PSUs, x86 2 core, short depth, P2C air flow, Rail Kit, (Cumulus License Key is required)
920-9N112-00F7-0N2	MSN2410-CB2FO	NVIDIA Spectrum based 25GbE/100GbE 1U Open Ethernet switch with ONIE, 48 SFP28 ports, 8 QSFP28 ports, 2 power supplies (AC), x86 dual core, Short depth, P2C airflow, Rail Kit, RoHS6
920-9N112-00R7-0X1	MSN2410-CB2R	NVIDIA Spectrum based 25GbE/100GbE 1U Open Ethernet switch with NVIDIA Onyx (MLNX-OS), 48 SFP28 ports, 8 QSFP28 ports, 2 power supplies (AC), x86 dual core, Short depth, C2P airflow, Rail Kit, RoHS6
920-9N112-00R7-0C2	MSN2410-CB2RC	NVIDIA Spectrum 25GbE/100GbE switch w/Cumulus Linux, 48 SFP28 ports + 8 QSFP28 ports, 2 AC PSUs, x86 2 core, short depth, C2P air flow, Rail Kit, (Cumulus License Key is required)
920-9N112-00R7-1C0	MSN2410-CBBRC	NVIDIA Spectrum based 25GbE/100GbE 1U Open Ethernet switch with Cumulus Linux, 48 SFP28 ports and 8 QSFP28 ports, 2 power supplies (DC), x86 CPU, short depth, C2P airflow, Rail Kit

SN2100 Ordering Part Numbers

NVIDIA SKU	Legacy OPN	Marketing Description
920-9N100-00F4-0X0	MSN2100-BB2F	Mellanox Spectrum based 40GbE 1U Open Ethernet Switch with Onyx, 16 QSFP28 ports, 2 Power Supplies (AC), x86 CPU, short depth, P2C airflow. Rail Kit must be purchased separately
920-9N100-00F4-0C0	MSN2100-BB2FC	NVIDIA Spectrum 40GbE 1U switch w/Cumulus Linux, 16 QSFP28 ports, 2 AC PSUs, x86 2 core, short depth, P2C airflow, Rails to be purchased separately, (Cumulus License Key is required)
920-9N100-00R4-0X0	MSN2100-BB2R	NVIDIA Spectrum based 40GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, C2P airflow, Rail Kit must be purchased separately, RoHS6
920-9N100-00R4-0N0	MSN2100-BB2RO	NVIDIA Spectrum based 40GbE 1U Open Ethernet switch with ONIE, 16 QSFP28 ports, 2 power supplies (AC), x86 CPU, short depth, C2P airflow. Rail Kit must be purchased separately
920-9N100-00F7-0X0	MSN2100-CB2F	NVIDIA Spectrum based 100GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, P2C airflow, Rail Kit must be purchased separately, RoHS6
920-9N100-00F7-0C0	MSN2100-CB2FC	NVIDIA Spectrum 100GbE 1U switch w/Cumulus Linux, 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, P2C airflow, Rails to be purchased separately, (Cumulus License Key is required)
920-9N100-00F7-0N0	MSN2100-CB2FO	NVIDIA Spectrum based 100GbE 1U Open Switch with ONIE, 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, P2C airflow, Rail Kit must be purchased separately, RoHS6
920-9N100-00R7-0X0	MSN2100-CB2R	NVIDIA Spectrum based 100GbE, 1U Open Ethernet Switch with NVIDIA Onyx (MLNX-OS), 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, C2P airflow, Rail Kit must be purchased separately, RoHS6
920-9N100-00R7-0C0	MSN2100-CB2RC	NVIDIA Spectrum 100GbE 1U switch w/Cumulus Linux, 16 QSFP28 ports, 2 AC PSUs, x86 2-core, short depth, C2P airflow, Rails to be purchased separately, (Cumulus License Key is required)
920-9N100-00R7-0N0	MSN2100-CB2RO	NVIDIA Spectrum based 100GbE 1U Open Ethernet switch with ONIE, 16 QSFP28 ports, 2 power supplies (AC), x86 CPU, short depth, C2P airflow. Rail Kit must be purchased separately

SN2010 Ordering Part Numbers

NVIDIA SKU	Legacy OPN	Marketing Description
920-9N110-00F7-0X2	MSN2010-CB2F	NVIDIA Spectrum-based 25GbE/100GbE, 1U Open Ethernet Switch with NVIDIA Onyx, 18 SFP28 and 4 QSFP28 ports, 2 Power Supplies (AC), short depth, x86 quad core, P2C airflow, Rail Kit must be purchased separately
920-9N110-00F7-0C3	MSN2010-CB2FC	NVIDIA Spectrum-based 25GbE/100GbE 1U switch w/Cumulus Linux, 18 SFP28 and 4 QSFP28 ports, 2 AC PSUs, x86 4-core, short depth, P2C airflow, Rails to be purchased separately, (Cumulus License is provided at no cost with purchase of SUP-SN2010-CL-XX)
920-9N110-00F7-0C0	MSN2010-CB2F3C	NVIDIA Spectrum based 25GbE/100GbE, 1U Open Ethernet switch with Cumulus Linux, 18 SFP28 and 4 QSFP28 ports, 2 power supplies (AC), x86 CPU, 32G RAM and 30G SSD, short depth, P2C airflow, Rail Kit must be purchased separately
920-9N110-00F7-0N0	MSN2010-CB2FO	NVIDIA Spectrum-based 25GbE/100GbE, 1U Open Ethernet Switch with ONIE, 18 SFP28 ports and 4 QSFP28 ports, 2 Power Supplies (AC), x86 quad core, short depth, P2C airflow, Rail Kit must be purchased separately
920-9N110-00R7-0X2	MSN2010-CB2R	NVIDIA Spectrum-based 25GbE/100GbE, 1U Open Ethernet Switch with NVIDIA Onyx, 18 SFP28 ports and 4 QSFP28 ports, 2 Power Supplies (AC), short depth, x86 quad core, C2P airflow, Rail Kit must be purchased separately
920-9N110-00R7-0C2	MSN2010-CB2RC	Spectrum-based 25GbE/100GbE 1U switch w/Cumulus Linux, 18 SFP28 and 4 QSFP28 ports, 2 AC PSUs, x86 4-core, short depth, C2P airflow, Rails to be purchased separately, (Cumulus License is provided at no cost with purchase of SUP-SN2010-CL-XX)
920-9N110-00R7-0N0	MSN2010- CB2RO	NVIDIA Spectrum based 25GbE/100GbE 1U Open Ethernet switch with ONIE, 18 SFP28 ports and 4 QSFP28 ports, 2 power supplies (AC), x86 CPU, short depth, C2P airflow. Rail Kit must be purchased separately

SN2201 Ordering Part Numbers

NVIDIA SKU	Legacy OPN	Marketing Description
920-9N110-00F1-0C0	MSN2201-CB2FC	Nvidia Spectrum based 1GBase-T/100GbE 1U Open Ethernet switch with Cumulus Linux, 48 RJ45 ports and 4 QSFP28 ports, Dual Power Supply (AC), x86 CPU, short depth, P2C airflow, 4-post Rail kit.
920-9N110-00F1-0N1	MSN2201-CB2FO	Nvidia Spectrum based 1GBase-T/100GbE 1U Open Ethernet switch with ONIE, 48 RJ45 ports and 4 QSFP28 ports, Dual Power Supply (AC), x86 CPU, short depth, P2C airflow, 4-post Rail kit.
920-9N110-00R1-0C0	MSN2201-CB2RC	Nvidia Spectrum based 1GBase-T/100GbE 1U Open Ethernet switch with Cumulus Linux, 48 RJ45 ports and 4 QSFP28 ports, Dual Power Supply (AC), x86 CPU, short depth, C2P airflow, 4-post Rail-kit.
920-9N110-00R1-0N1	MSN2201-CB2RO	Nvidia Spectrum based 1GBase-T/100GbE 1U Open Ethernet switch with ONIE, 48 RJ45 ports and 4 QSFP28 ports, Dual Power Supply (AC), x86 CPU, short depth, C2P airflow, 4-post Rail kit.