



SN3420-022

100G MILITARY SWITCH



- 48 Ports 10/25GbE / 12 Ports 40G/100G
- Scalable L2 and L3 Ethernet Switch
- Operating Temperature -30°C to +45°C

CUMULUS



SONiC

Key Features

(1) Layer 3 Features

- IPv4/v6 routing suite including OSPFv2, OSPFv3, and BGPv4/v6
- RDMA over Converged Ethernet (RoCEv2) support for Layer 2 and Layer 3
- Virtual routing and forwarding (VRF) and VRF route leaking
- Equal-cost multi-path (ECMP) and ECMP resilient hashing for IPv4 and IPv6 traffic
- Bidirectional forwarding detection (BFD) across all platform and interface types, IPv4 and IPv6, BGP and OSPF, VXLAN, BGP conditional route advertisement
- Protocol-independent multicast (PIM, PIM-SM, PIM-SSM)
- Policy-based routing
- Generic routing encapsulation (GRE) tunneling
- Precision time protocol (PTP) Boundary Clock
- VNI scaling: supports 6 bridges with up to 1,000 VNIs
- GTP Hashing
- Adaptive Routing with RoCEv2

(2) Layer 2 features

- Bridge management with STP (IEEE 802.1d). RSTP (IEEE 802.1w), PVRST, PVST, bridge assurance, BPDU guard, and BPDU filter
- VLANs. VLAN trunks (IEEE 802.1q). LACP (IEEE 802.3ad). LACP bypass, unicast/broadcast storm control, LLDP, CDP, IPv6 neighbor discovery, and IPv6 route advertisement
- MLAG (cladg daemon)
- IGMPv2/v3 snooping, MLDv1/v2 snooping, Optimized Multicast Flooding (OMF)
- Virtual router redundancy (VRR - active-active first hop redundancy protocol)
- LLDP DCB IEEE TLVs

(3) Management

- Object-oriented API-compatible switch management with NVIDIA User Experience (NVUE)
- ISSU: in-service software upgrades
- Warm boot on bonds
- Native Linux management tools, such as OpenSSH, SCP, and FTPS
- Automated install and provisioning: zero touch install and zero touch provisioning
- Management VRF
- DHCP and v4/v6 DHCP relays
- Authentication with LDAP and authorization with sudo NTP
- Interface configuration management (ifupdown2)
- Advanced management/orchestration through third-party add-on packages
- Snapshot and rollback of the entire system to eliminate risk from system updates

(4) Security

- Access control lists (ACLs) L2-L4 classification through IP/EP tables and CPU protection through hardware enforced ACL-based rate limiting DoS control
- Authenticate and authorize attached devices with 802.1x
- Kernel Address Space Randomization

(5) Key Capabilities

- Ethernet port speeds from 1Gbps to 100Gbps
- 12 x 100/40GbE QSFP28 ports and 48 x 1/10/25GbE SFP28 ports (All 12 QSFP28 ports support split x4 or x2 mode (12x4=48 breakout ports maximum))
- 42MB of fully-shared packet buffering
- 512K on-chip, dynamically shared forwarding table
- Deep visibility with 512k general purpose counters
- In-band network telemetry

Specifications

SYSTEM

Switching Capacity	4.8Tb/s
Processing Capacity	3.58Bpps
Forwarding Technology	Cut Through
Latency	425ns
System Memory	8GB
SSD Memory	32GB
Packet Buffer	42MB

I/O PORT

Ethernet Port	48 x 1/10/25GbE SFP28 12 x 40/100GbE QSFP28
IOIOI	1 x RS232 in RJ45, 115200 BAUD
MGMT	1 x RJ45
USB	1 x Type A USB 3.0
Power Input	1 x DC-IN with D38999 Connector

SOFTWARE

Supporting System	NVIDIA Cumulus-Linux SONiC Linux Switch and Dent NVIDIA Onyx ONIE
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POWER REQUIREMENT

Power Input	160-220 VDC (Option 1) / 100-240 VAC (Option 2) / 18-36 VDC (Option 3)
Typical Power Consumption	204W

MECHANICAL

Dimensions	438 x 500 x 88 mm (W x D x H)
Weight	14 kg
Chassis	Aluminum
Finish	Anodic Aluminum Oxide
Cooling	Air Cooling

ENVIRONMENTAL

Operating Temp.	-30 to +45°C (Ambient with Air Flow)
Storage Temp.	-40 to 70°C
Relative Humidity	10% to 85%, Non-Condensing

MIL-STD-810 ENVIRONMENT TESTING STANDARDS

Method 514, Vibration:	Category 24/Non-Operating (Category 20 & 24, Vibration)
Method 514, Vibration:	Category 20/Operating (Category 20 & 24, Vibration)
Method 516, Shock:	Procedure V Non-Operating (Mechanical Shock)
Method 516, Shock:	Procedure I Operating (Mechanical Shock)

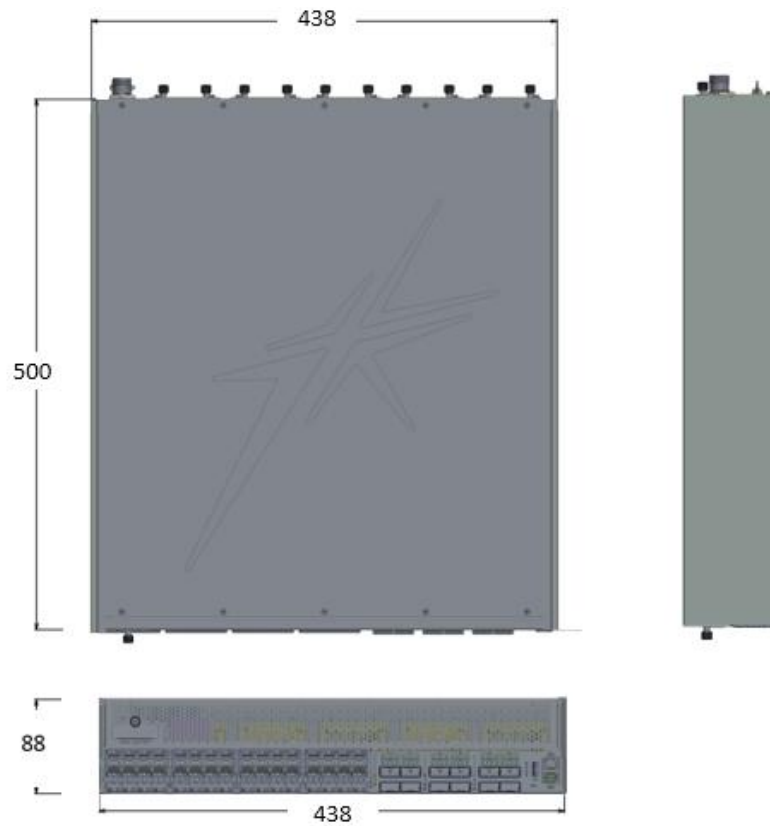
Ordering Information

SN3420-D22 - 25GbE 48SFP28 12QSFP28 Connector to Power Airflow Switch, Operation Temp. -30°C~45°C, Power Input 160-220 VDC, MIL-STD-461 EMI Filter (Option)

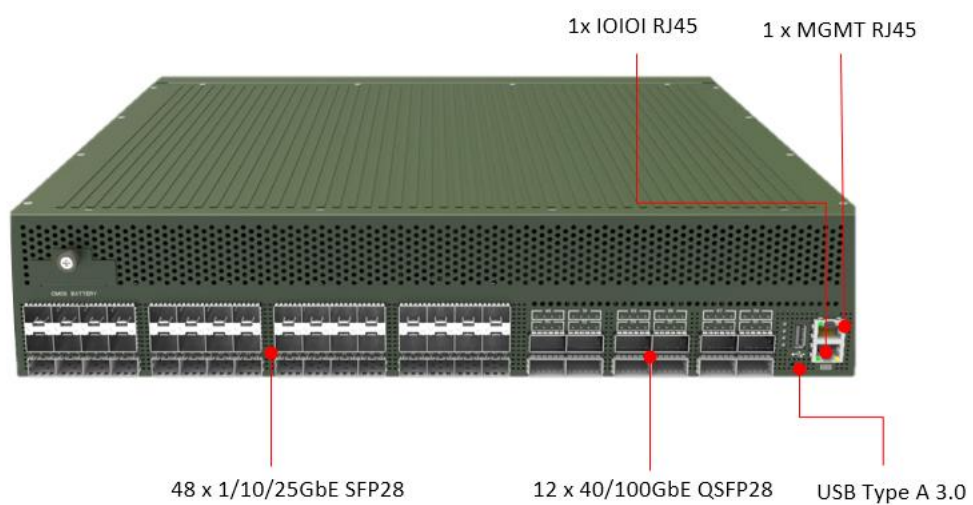
SN3420-D28 - 25GbE 48SFP28 12QSFP28 Connector to Power Airflow Switch, Operation Temp. -30°C~45°C, Power Input 18-36 VDC, MIL-STD-461 EMI Filter (Option)

SN3420-A10 - 25GbE 48SFP28 12QSFP28 Connector to Power Airflow Switch, Operation Temp. -30°C~45°C, Power Input 100-240 VAC/ Redundant

Dimensions



Appearance



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