

100G Data Center Switch

- Spine switch
- Broadcom Trident3-X7 Silicon
- Programmable pipelines
- SONiC-ready
- Ubuntu-ready
- NPB apps with InfiniCore



The Netberg Aurora 721 is a 100GbE switch suited for Top-of-Rack/Spine Datacenter, Enterprise, and CSP network deployments. It has 32 x 100GbE QSFP28 interfaces and supports up to 128 interfaces using DAC break-out cables.

The system uses Broadcom Trident3-X7 silicon that introduces data plane programmability. The programmable pipeline allows new features to be added after deployment using in-field upgrades, providing capex investment protection for operators.

Support for new overlays and tunneling such as GENEVE, NSH, VXLAN, GPE, MPLS, MPLS over GRE/UDP, GUE, ILA, and PPPoE, new instrumental features bring intelligence to the network and push service capacity to the next level.

Key Features & Benefits

- Spine switch supporting 100G uplinks.
- 32x QSFP28 switch ports. Total up to 128 ports via break-out cables.
- Switching silicon: 3.2Tbps Broadcom Trident3-X7 BCM56870.
- Line-rate L2/L3 forwarding and switching.
- Intel Atom C3508 quad-core processor for application deployment.
- Redundant hot-swappable 1+1 AC or DC power.
- Redundant hot-swappable 1+1 cooling.
- Pre-installed Open Network Install Environment (ONIE) automates the loading of compatible NOS as part of data center provisioning in the fashion that servers are provisioned.
- BMC-enabled

Network OS (NOS) options

- Ubuntu Linux with open Broadcom SDK for application development.
- SONiC offers a full suite of network functionality, like BGP and RDMA, that has been production-hardened in the data centers of some of the largest cloud service providers.
- InfiniCORE Network Visibility Studio transforms the Aurora 721 into a visibility powerhouse, leveraging the programmability in the Trident3-X7 chipset.

Ports

- Switch Ports:
32 x 100G QSFP28 ports
1 x 10G SFP+ management port
- Management Ports:
1 x RJ-45 serial console
1 x RJ-45 100/1000BASE-T management port
1 x USB 3.0 Type A storage port

Performance

- Switching silicon: 3.2Tbps Broadcom Trident3-X7 BCM56870
- Forwarding rate: 2Bpps
- Packet Buffer: 32MB
- Intel® Atom™ Processor C3508
- 8GB DDR4 ECC (up to 32GB)
- 64GB SSD

LED

- Power and System status LEDs per unit
- Link and Activity LEDs per port
- FAN Status LED per FAN
- PSU Status LED per PSU

Scalability

- MAC Addresses: 32K min./288K max.
- VLAN IDs: 4K
- Jumbo Frames: Up to 9416 bytes
- IPv4: 16K min./168K max. host entries; 32K LPM entries with TCAM-only mode
- IPv6: 8K min/100K max. host entries; IPv6/64: 16K, IPv6/128: 8K TCAM-only mode

BMC

- ASPEED AST2620

Ordering Information

Base model: Netberg Aurora 721 32x100G QSFP28, Intel C3508, 8GB DDR4/64GB SSD, rack mount kit

Part Number	PSU	Airflow
NBA721-AC-F	2x AC 750W	Front-to-Back
NBA721-AC-B	2x AC 750W	Back-to-Front
NBA721-DC-F	2x DC 750W	Front-to-Back
NBA721-DC-B	2x DC 750W	Back-to-Front

Accessories

Compatible Transceivers

- 10G SFP+ SR, 10G SFP+ LR, 100G QSFP28 SR4, 100G QSFP28 LR4, 100G QSFP28 ER4, 100G QSFP28 ZR4

Fan Modules

- FAN-NBA721-F, FtB airflow
- FAN-NBA721-B, BtF airflow

About us

Netberg provides innovative hardware solutions for data centers and enterprises worldwide. With vast expertise in hardware and software, we provide versatile, flexible, and scalable Ethernet switches, telecom solutions, and custom HW/SW products. More information about Netberg is available at www.netbergtw.com

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Physical and Environmental

- Dimensions (WxDxH): 440 x 480 x 44mm (17.32 x 17.32 x 1.72 in)
- Weight: 7.5kg (16.5lbs)
- Operating Temperature: 0°C to 45°C (32°F to 113°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

Power Specs

- 1+1 450W redundant, load sharing, hot-swappable PSU modules
- AC/HVDC input: 100-240V~, 10-5A/190-310V=, 5A (Inlet: IEC 60320 C14)
- DC input: -36 to -72V, 18A
- Typical power: 190 Watts (no transceivers)

Regulatory Compliance

- Safety
IEC 62368-1
- EMC
FCC Part 15, Subpart B, Class A
EN 61000-3-2:2014, Class A
EN 61000-3-3:2013
EN 55032:2015+AC:2016, Class A
EN 55024:2010+A1:2015
IEC 61000-4-2/3/4/5/6/8/11
EN 55035:2017
- Environment
Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)
RoHS-2.0 Compliant

Software

- Pre-installed Open Network Install Environment (ONIE)
- Compatible with: SONiC, Ubuntu Linux 20.04, InfiniCORE Network Visibility Studio

FtB airflow



BtF airflow



Power Supplies

- PSU-NAB721-ACF, 750W AC, FtB airflow
- PSU-NBA721-ACB, 750W AC, BtF airflow
- PSU-NBA721-DCF, 750W DC, FtB airflow
- PSU-NBA721-DCB, 750W DC, BtF airflow