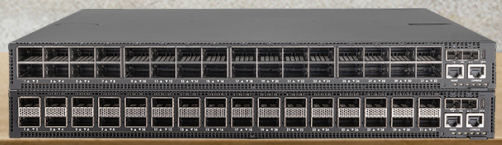
AIS800 Data Center Switch

Edge-corE NETWORKS

DATA CENTER SWITCH

AIS800-32O/AIS800-32D



The Edgecore AIS800-32O and AIS800-32D are high-performance, low latency switches for high-performance data centers.
Application Scenarios:

- ToR Switch
  A next-generation, highest-capacity switch for data center spine use case. Breakout options include 2 x 400G, 4 x 200G, and 8 x 100G per port, with a maximum of 160 logical ports. Offers reduced cost and power per bit. Scalable and enables migration from 400G ToR connectivity to 800G ToR connectivity in Cloud data centers
- AI/ML Clusters
  Standards-based (Ethernet) networking for AI/ML training, leveraging low latency and high-throughput RoCEv2. Reduces Job Completion Time (JCT) using the cognitive routing and congestion management capabilities of the switch. Fully programmable telemetry enables sophisticated on-chip applications for heightened network insight and efficient network management.
- High-Performance Computing
  The large number of high-capacity Ethernet ports enables server interfaces to transition to higher speeds and denser networks. Enables the virtualization of compute and storage with VxLAN switching and routing.
- Cloud Data Center Interconnect (DCI)
  Support for 400G QSFP-DD ZR/OpenZR+/+6dBm ZR+ and future-proof 800G OSFP ZR/ZR+/+6dBm for cloud DCI scenarios.

Key Features and Benefits

- OSFP800 or QSFP-DD800 switch ports, each supporting 1 x 800 GbE (106-Gb/s PAM4), or via breakout cables 2 x 400G GbE, 4 x 200 GbE, or 8 x 100 GbE.
- OSFP800 or QSFP-DD800 switch ports also support 1 x 400 GbE (106-Gb/s PAM4), 1 x 100 GbE (NRZ), and via breakout cables 2 x 200 GbE, 4 x 100 GbE, or 8 x 50 GbE.
- Up to 30 W power budget per QSFP800 and QSFP-DD800 port.
- Incorporates Broadcom Tomahawk 5 switch series silicon.
  - Highest Radix: Up to 160 logical ports on a single chip, low latency
  - Cognitive/Adaptive routing and Dynamic Load Balancing (DLB) and Global Load Balancing (GLB)
  - Advanced shared buffering
  - Programmable in-band telemetry
  - Supports end-to-end congestion control
  - Power efficient due to a monolithic 5nm die
  - Hardware-based link failover for network resiliency and reduced job completion time
  - Support for SRv6
  - Support for VxLAN RIOT
- BMC module with serial-over-LAN support
- Contains e-fuses to protect transceivers and internal components
- 1 RU form factor
- Supports hot/cold aisles with front-to-back/AFO/port intake airflow SKU and back-to-front/AFI/port exhaust airflow SKU
- All ports on front; PSUs and fans accessible from rear
- Hot-swappable, load-sharing, redundant 2400 W AC/DC PSUs
- 7 Hot-swappable fan modules with 6+1 redundant fans
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings

OPEN PLATINUM

OPEN Compute Project SOLUTION PROVIDER

Freedom of choice

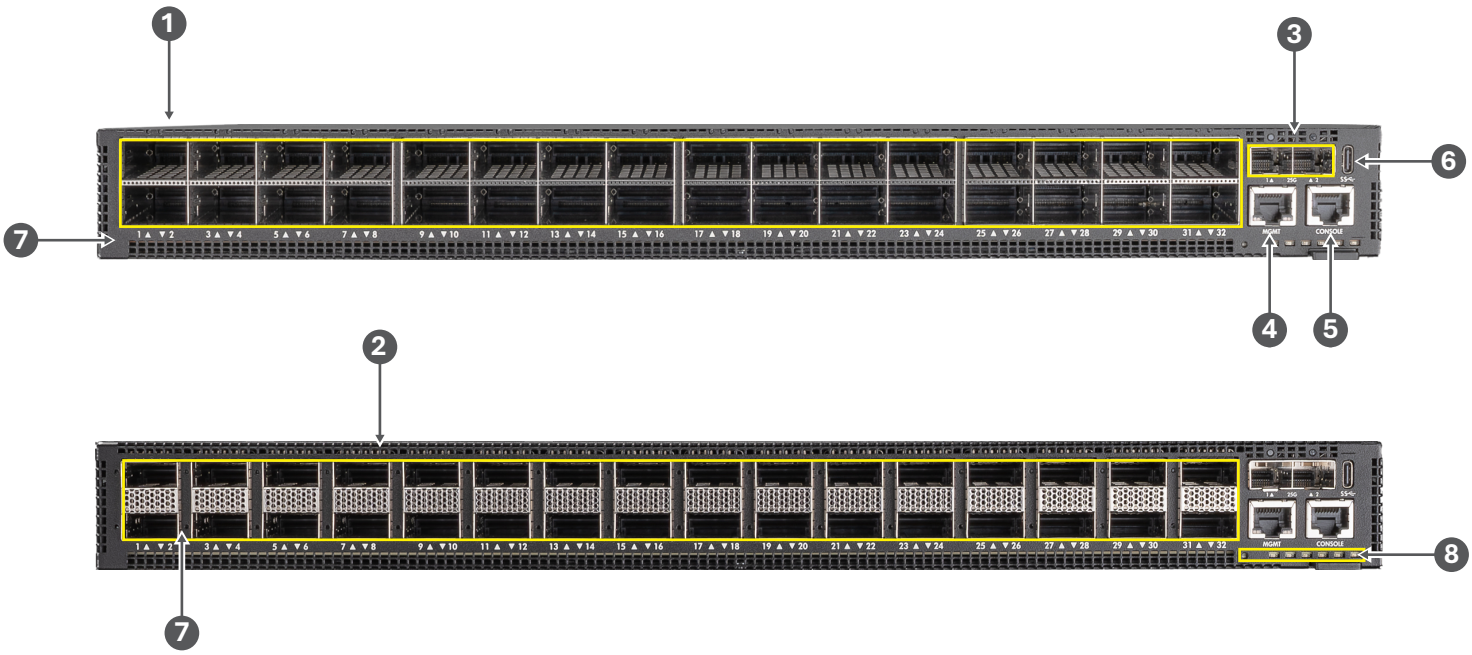
Greater control

Rapid innovation

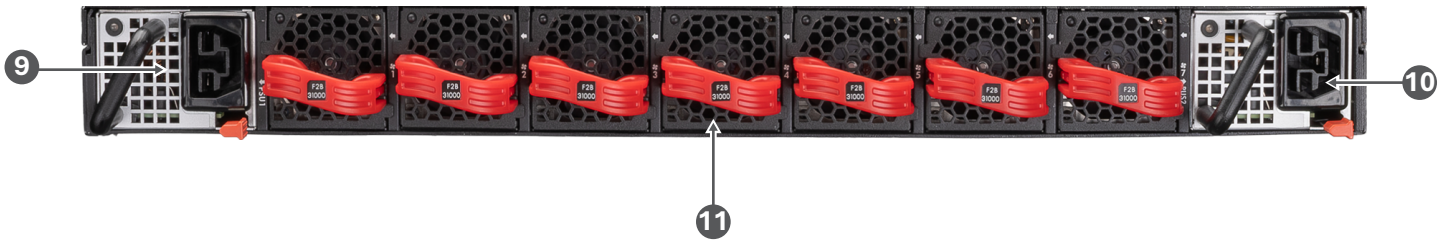
Free Software Included

onie

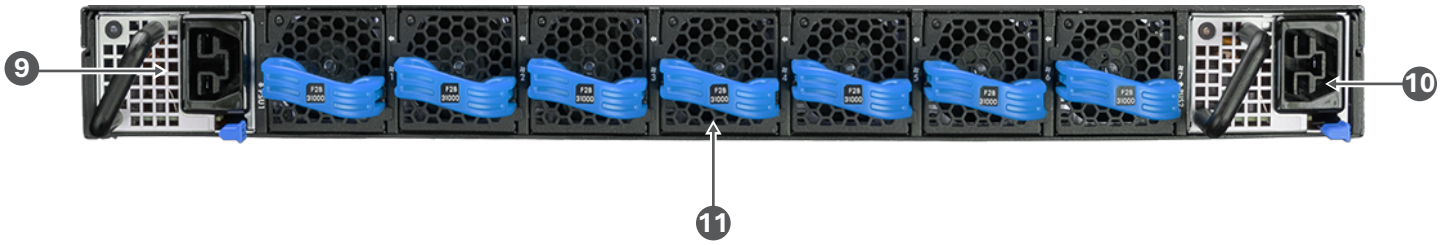
Interfaces



Airflow: Front-to-back



Airflow: Back-to-front



Description			
1.	32 x 800G OSFP800 ports	7.	Port indicators
2.	32 x 800G QSFP-DD800 ports	8.	System LEDs
3.	2 x 25G SFP28 ports	9.	PSU1
4.	RJ-45 management port	10.	PSU2
5.	RJ-45 console port	11.	7 Hot-swappable fan modules with 6+1 redundant fans
6.	USB 3.0 storage port		

Specifications

Ports
- Switch Ports: 32 x OSFP800 or QSFP-DD800 800GbE
- Logical Ports: Max. 160
- Port Modes:
  1 x 800G (8 lanes 100G PAM4)
  2 x 400G (4 lanes 100G PAM4) breakout
  4 x 200G (2 lanes 100G PAM4) breakout
  8 x 100G (1 lane 100G PAM4) breakout
  1 x 400G (8 lanes 50G PAM4)
  2 x 200G (4 lanes 50G PAM4) breakout
  4 x 100G (2 lanes 50G PAM4) breakout
  8 x 50G (1 lane 50G PAM4) breakout
  1 x 100G (4 lanes 25G NRZ)
- Management Ports on Port Side:
  1 x RJ-45 serial console
  1 x RJ-45 1000BASE-T management
  2 x SFP28 25G In-band management
  1 x USB 3.0 storage port
- Supported Transceivers and Cables:
  Note: 800G optics and detailed cabling information can be found at
  https://www.edge-core.com/products/transceivers-switch/
  https://www.edge-core.com/products/cables-switch/

Key Components
- Switch Silicon: BCM78902 Tomahawk 5
- CPU Module:
  Processor: Intel® Xeon® Processor D-1713NTE 4-Core 2.2 GHz
  SPI Flash: 64MB x 2
  Memory: 32GB DDR4 SO-DIMM with ECC
  Storage: 240G m.2 2280 NVMe SSD
  TPM: TPM2.0 SPI
- BMC: AST2620 with OpenBMC secured by AST1060 Root of Trust
- Timing and Sync: SyncE, IEEE 1588v2 PTP

Performance
- Switching Capability: 25.6 (51.2) Tbps full duplex
- Jumbo Frames: Up to 9416 Bytes
- Subject to NOS:
  VxLAN RIOT support
  SRv6 support
  GLB support

Physical and Environmental
- Dimensions (WxDxH): 43.84 x 58.9 x 4.3 cm (17.26 x 23.19 x 1.69 in.)
- Weight:
  AIS800-32O: 14.53 kg, with 2 PSUs and 7 fan modules installed
  AIS800-32D: 14.69 kg, with 2 PSUs and 7 fan modules installed
- Fans: 7 Hot-swappable fan modules with 6+1 redundant fans
- Storage Temperature: -40°C – 70°C (-40°F – 158°F)
- Operating Temperature (front-to-back): 0°C – 40°C (32°F – 104°F) at 6000 ft
- Operating Temperature (back-to-front): 0°C – 35°C (32°F – 95°F), *subject to used optics
- Operating Humidity: 5% – 95% non-condensing

Software
- Switch is loaded with Open Network Install Environment (ONIE) software installer
- Compatible with the following NOS options:
  Open source options, plus commercial NOS offerings.

System and Port LEDs
- Port LEDs: Link Status, Activity, Rate
- Management Port LEDs: Link Status, Activity
  RJ-45 Port: Link Status, Activity
- System LEDs: Locator, Diagnostic, PSU, Fan Status, Alarm
- Reset Button

Power
- PSUs: 2 redundant, load-sharing, hot-swappable 2400 W AC/DC
- AC PCU:
  AC input rating:
  200-240 VAC at 50-60Hz (2400 W max.)
  AC PSU Inlet: Anderson Saf D Grid
  Power efficiency: 91% ~ 96% (without fan)
- Power Draw: Full loading
  1600 W (100% traffic, 32 x 24 W optics)
  1254 W (100% traffic, 32 x 12 W optics)
- Power Budget:
  For all 32 ports all with per-port maximum 30 W capability on both OSFP version and QSFP-DD800 version and actual deployment population subject to total power distribution boundary and thermal considerations.

Regulatory
- Emissions:
  EN 55032 Class A
  AS/NZS CISPR32
  EN 61000-3-2
  EN 61000-3-3
  FCC Class A
  ICES-003
- Immunity:
  EN 300 386
  EN 55035
  IEC 61000-4-2/3/4/5/6/8/11
- Safety:
  UL (CSA 22.2 No 62368-1 & UL 62368-1)
  CB (IEC/EN 62368-1)
- Environmental:
  GR63-CORE (Pre-test)
- RoHS-2.0 Compliant
- Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)
- Country of Origin: Taiwan (TAA Compliant)

Ordering Information

Base Model: AIS800-32O; Intel® Xeon® Processor D-1713NTE 4-Core; 32-Port 800G OSFP800; ONIE Software Installer.				
Model Number	**Part Number**	**PSU**	**Airflow**	**Power Cord**
AIS800-32O-AF-US	FP6EC9632010Z	Dual AC PSUs	Front-to-back	US
AIS800-32O-AF-EU	FP6EC9632204Z	Dual AC PSUs	Front-to-back	EU
AIS800-32O-AF-UK	FP6EC9632304Z	Dual AC PSUs	Front-to-back	UK
AIS800-32O-AF-JP	FP6EC9632504Z	Dual AC PSUs	Front-to-back	JP
AIS800-32O-AF-UN	FP6EC9632014Z	Dual AC PSUs	Front-to-back	UN
AIS800-32O-AB-US	FP6EC9632402Z	Dual AC PSUs	Back-to-front	US
AIS800-32O-AB-EU	FP6EC9632203Z	Dual AC PSUs	Back-to-front	EU
AIS800-32O-AB-UK	FP6EC9632303Z	Dual AC PSUs	Back-to-front	UK
AIS800-32O-AB-JP	FP6EC9632503Z	Dual AC PSUs	Back-to-front	JP
AIS800-32O-AB-UN	FP6EC9632013Z	Dual AC PSUs	Back-to-front	UN
AIS800-32O-DF	FP6EC9632004Z	Dual DC PSUs	Front-to-back	N/A
AIS800-32O-DB	FP6EC9632005Z	Dual DC PSUs	Back-to-front	N/A
Base Model: AIS800-32D; Intel® Xeon® Processor D-1713NTE 4-Core; 32-Port 800G QSFP-DD800; ONIE Software Installer.				
Model Number	**Part Number**	**PSU**	**Airflow**	**Power Cord**
AIS800-32D-AF-US	FP6EC9632009Z	Dual AC PSUs	Front-to-back	US
AIS800-32D-AF-EU	FP6EC9632201Z	Dual AC PSUs	Front-to-back	EU
AIS800-32D-AF-UK	FP6EC9632301Z	Dual AC PSUs	Front-to-back	UK
AIS800-32D-AF-JP	FP6EC9632501Z	Dual AC PSUs	Front-to-back	JP
AIS800-32D-AF-UN	FP6EC9632011Z	Dual AC PSUs	Front-to-back	UN
AIS800-32D-AB-US	FP6EC9632401Z	Dual AC PSUs	Back-to-front	US
AIS800-32D-AB-EU	FP6EC9632202Z	Dual AC PSUs	Back-to-front	EU
AIS800-32D-AB-UK	FP6EC9632302Z	Dual AC PSUs	Back-to-front	UK
AIS800-32D-AB-JP	FP6EC9632502Z	Dual AC PSUs	Back-to-front	JP
AIS800-32D-AB-UN	FP6EC9632012Z	Dual AC PSUs	Back-to-front	UN
AIS800-32D-DF	FP6EC9632008Z	Dual DC PSUs	Front-to-back	N/A
AIS800-32D-DB	FP6EC9632001Z	Dual DC PSUs	Back-to-front	N/A
PSU FRUs (Power Cord Not Included)				
Model Number	**Part Number**	**PSU**	**Airflow**	**Region**
PSU-AC-2400W-F	F0TEC9632001A	AC	Front-to-back	Worldwide
PSU-AC-2400W-B	F0TEC9632004A	AC	Back-to-front	Worldwide
PSU-DC-2400W-F	F0TEC9632005A	DC	Front-to-back	Worldwide
PSU-DC-2400W-B	F0TEC9632006A	DC	Back-to-front	Worldwide
Fan FRUs				
Model Number	**Part Number**	**Airflow**		
FAN-1U-1X1P-B	F0TEC9632007A	Back-to-front		
FAN-1U-1x1P-F	F0TEC9632002A	Front-to-back		
Silding Rail				
Model Number	**Part Number**	**Description**		
RKIT-AI-1R-8-SLIDE	F0TEC9632003Z			

Warranty
Please check https://www.edge-core.com/supWP.php for the warranty terms in your country.

For More Information
To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

About Edgecore Networks Corporation
Edgecore Networks Corporation is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edgecore Networks Corporation delivers the software and systems that transform the way the world connects. Edgecore Networks Corporation serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore data center switches are developed and manufactured by Accton.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.