

# DATA CENTER SWITCH

## AIS800-640/AIS800-64D



The Edgecore AIS800-640 and AIS800-64D are high-performance, low latency switches for high-performance data centers.

Application Scenarios:

- Spine 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 320 logical ports. Offers reduced cost and power per bit. Scalable and enables migration to 400G leaf connectivity in 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.

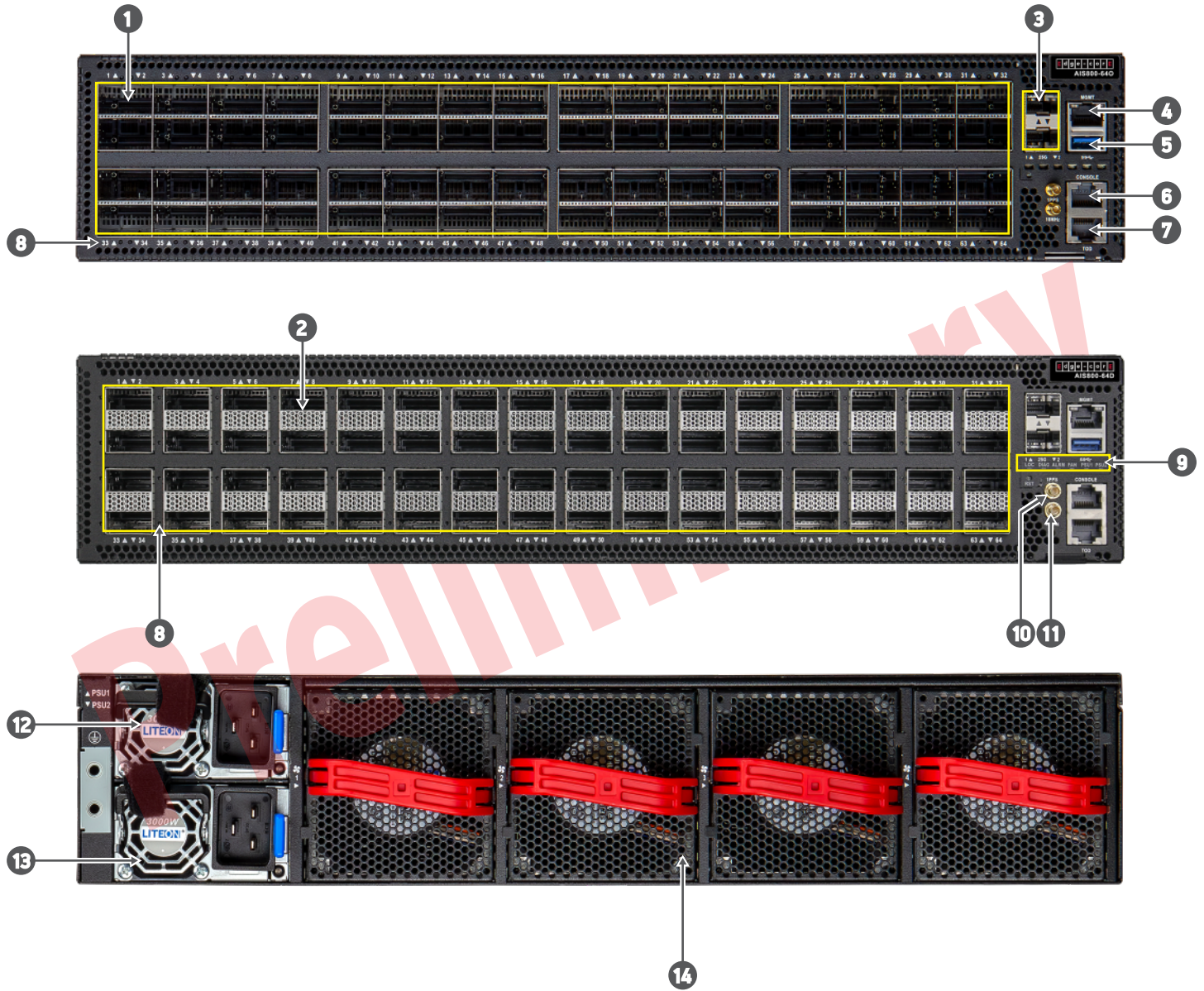
## Key Features and Benefits

- OSFP800 or QSFP-DD800 switch ports, each supporting 1 x 800 GbE (100G 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 (50G 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 24W power budget per QSFP800 and QSFP-DD800 port.
- Incorporates Broadcom Tomahawk 5 switch series silicon.
  - Highest Radix: Up to 320 logical ports on a single chip, low latency
  - Cognitive/adaptive routing and dynamic load balancing
  - 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
- BMC module with serial-over-LAN support
- SyncE and PTP support with 1PPS, 10MHz, and ToD connectors on the front panel
- Contains e-fuses to protect transceivers and internal components
- Standby power mode
- 2 RU form factor
- Supports hot/cold aisles with front-to-back airflow SKU.
- All ports on front; PSUs and fans accessible from rear.
- Hot-swappable, load-sharing, redundant 3000 W AC PSUs.
- 4 Hot-swappable fan modules with 7+1 redundant fans.
- Hardware switch pre-loaded with Open Network Install Environment (ONIE) for automated loading of compatible open source and commercial NOS offerings.





Interfaces



Description	
1. 64 x 800G OSFP800 ports	8. Port indicators
2. 64 x 800G QSFP-DD800 ports	9. System LEDs
3. 2 x 25G SFP28 ports	10. 1PPS connector
4. RJ-45 management port	11. 10 MHz connector
5. USB storage port	12. PSU1
6. RJ-45 console port	13. PSU2
7. ToD port	14. 4 Hot-swappable fan modules with 7+1 redundant fans

## Ports

- Switch Ports: 64 x OSFP800 or QSFP-DD800 800GbE
- Logical Ports: Max. 320
- 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 ASIC management
  - 1 x USB 3.0 storage port
- Supported Transceivers and Cables:  
TBD

## Key Components

- Switch Silicon: BCM78900 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
- BMC: AST2600 with OpenBMC secured by AST1060 Root of Trust
- Timing and Sync:
  - 1PPS Port, 10 MHz port, ToD port, SyncE, IEEE 1588v2 PTP

## Performance

- Switching Capability: 51.2 Tbps full duplex
- Jumbo Frames: up to 9416 Bytes
- Subject to NOS:
  - VXLAN RIOT support
  - SRv6 support

## Physical and Environmental

- Dimensions (WxDxH): 44 x 64.92 x 8.7 cm (17.32 x 25.56 x 3.43 in.)
- Weight: 21.5 kg (47.4 lb), with 2 PSUs and 4 fan modules installed
- Fans: 4 Hot-swappable fan modules with 7+1 redundant fans
- Storage Temperature: -40°C – 70°C (-40°F – 158°F)
- Operating Temperature: 0°C – 40°C (32°F – 104°F)
- Operating Humidity: 5% – 95% non-condensing
- Operating Altitude: 1800 m

## 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 3000 W AC
- AC PCU:
  - AC input ranges:  
200-240VAC at 50-60Hz (16A/3000 W max.)
  - AC Inlet: IEC 60320 C20
  - Power efficiency: >88%
- Power Draw:  
TBD (<2775 W)
- Power Budget:  
24 W on OSFP800 and QSFP-DD800 ports

## Regulatory

- Emissions:
  - EN 55032 Class A
  - AS/NZS CISPR32
  - EN 61000-3-2
  - EN 61000-3-3
  - FCC Class A
  - ICES-003
  - VCCI-CISPR32
- Immunity:
  - 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: AIS800-64O; Intel® Xeon® Processor D-1713NTE 4-Core; 64-Port 800G OSFP800; ONIE Software Installer.**

Model Number	Part Number	PSU	Airflow	Power Cord
AIS800-64O-O-AC-F	FP6EC9664001Z	Dual AC PSUs	Front-to-Back	Without power cord
AIS800-64O-O-AC-F-UN	FP6EC9664003Z	Dual AC PSUs	Front-to-Back	IEC 60320 C19-C20

**Base Model: AIS800-64D; Intel® Xeon® Processor D-1713NTE 4-Core; 64-Port 800G QSFP-DD800; ONIE Software Installer.**

Model Number	Part Number	PSU	Airflow	Power Cord
AIS800-64D-O-AC-F	FP6EC9664002Z	Dual AC PSUs	Front-to-Back	Without power cord
AIS800-64D-O-AC-F-UN	FP6EC9664004Z	Dual AC PSUs	Front-to-Back	IEC 60320 C19-C20

### PSU FRUs (Power Cord Not Included)

Model Number	Part Number	PSU	Airflow	Region
PS-2302-6L	F00ZZ9664001A	AC	Front-to-Back	Worldwide

### Fan FRUs

Model Number	Part Number	Airflow
FAN-2U-1x1B-F	F00ZZ9664002A	Front-to-Back

Preliminary

**Warranty**

Please check [www.edge-core.com](http://www.edge-core.com) 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](http://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](http://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.

© Copyright 2024 Edgecore Networks Corporation. The information contained herein is subject to change without notice. This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered by Edgecore Networks Corporation. Edgecore Networks Corporation shall not be liable for technical or editorial errors or omissions contained herein.

Preliminary