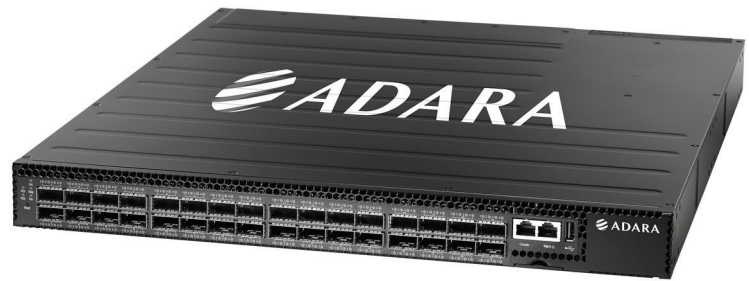


# ADARA Axis 6800 Series



## Product Highlights

### Performance

- Cost-effective, bare-metal switch infrastructure for data center fabric
- 32 fixed x 40 GbE QSFP+ switch ports in compact 1RU form factor, each supporting 40 GbE or 4 x 10 GbE via breakout cables. Maximum 24 x 40 GbE QSFP+ switch ports support breakout cables
- Layer 2 or Layer 3 forwarding of 1.28 Tbps full duplex

### Robust Hardware

- Hot-swappable, redundant PSUs
- Hot-swappable, redundant fans
- Hot/Cold Aisle with port-to-power and port-to-port airflow SKUs
- Management: Ethernet and console RJ-45 ports.
- Energy Efficiency: 227 W typical power consumption under line rate traffic using 24 x passive QSFP DAC, 8 x 40GBASE-SR4.

## Flexible high-performance switch for SDN applications.

The ADARA Axis 6800 Switch is a Top-of-Rack (TOR) or spine switch for high-performance data centers. In a compact 1RU form factor, the switch provides line-rate L2 and L3 switching across 32 x QSFP+ ports, supporting 32 x 40 GbE connections or 96 x 10 GbE + 8 x 40G connections. The AS6812-32X can be deployed as a TOR switch supporting 10 GbE or 40 GbE server connections, or as a spine switch supporting 10 GbE or 40 GbE spine interconnects.

ADARA software running on this switch provides software solutions including OpenFlow Controller, L2-L3 switching, and other SDN applications.

## Software Features

### L2 Features

- Auto-negotiation for port speed and duplex
- Flow control: IEEE 802.3x & back-pressure
- Switching mode: store-and-forward
- Spanning Tree Protocol:
  - 802.1D, 802.1w, & 802.1s
  - Spanning Tree Fast Forwarding
  - Edge port
  - Loop guard
  - BPDU filter/guard
  - Auto Edge
  - TCN guard
  - Root guard
- VLANs
  - IEEE 802.1Q tagged based
  - Port-based (up to 4094 VLANs)
  - Private VLAN
  - GARP/GVRP/GMRP
  - 802.1v protocol VLAN
  - Voice VLAN
  - MAC-based VLAN
  - IP-subnet VLAN
  - QinQ
- VTP v1/v2
- Storm control
  - Broadcast
  - Unknown multicast
  - Unknown unicast
- IGMP snooping
  - IGMP snooping v1/v2/v3
  - IGMP v1/v2 querier
  - IGMP immediate leave
- Link Aggregation
  - 802.3ad with LACP
  - Cisco EtherChannel Like
  - Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)
- Multi-chassis LAG (MLAG)
- Link state
- Port backup

### QoS

- Priority queues: 8 queues
- Scheduling for priority queue: WRR, Strict and hybrid (WRR+Strict)
- COS: 802.1p, IP Precedence, & DSCP
- DiffServ
- Port rate limit
- Auto VoIP
- iSCSI optimization

### Security

- Static and dynamic port security (MAC-based)
- 802.1x: port-based, MAC-based, auto VLAN assignment, QoS assignment, guest VLAN, unauthenticated VLAN
- ACL: L2/L3/L4
- IPv6 ACL: L3/L4
- RADIUS: authentication and accounting (up to 32 servers)
- TACACS+: authentication (up to 5 servers)
- HTTPS and SSL (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- SSH 1.5/v2.0 (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- User name and password: local authentication and remote authentication via RADIUS/TACACS+
- Denial of Service control

- Management IP filtering (SNMP/Web/Telnet/SSH)
- MAC filtering
- IP Source Guard
- Dynamic ARP inspection (DAI)
- DHCP snooping

### Management

- Industrial command-line interface
- CLI filtering
- Telnet/SSH
- Software download/upload: TFTP/Xmodem/FTP
- Configuration download/upload: TFTP/Xmodem/FTP
- Dual image supported
- SNMP v1/v2c/v3
- RMON 1, 2, 3 & 9
- BOOTP: client/relay
- DHCP: client/relay/option 82
- Auto-Installation
- Event/error log: local flash and remote server via system log (RFC3164)
- DNS: client/relay
- NTP/SNTP
- LLDP (802.1ab, Link Layer Discovery Protocol)
- CDP (Cisco Discovery Protocol) version 2
- Port mirroring: one to one & many to one
- sFlow (RFC 3176)
- IPv6 management:
  - IPv4/IPv6 Dual Stack
  - ICMPv6
  - ICMPv6 redirect
  - IPv6 Path MTU Discovery
  - IPv6 Neighbor Discovery
  - stateless auto-configuration
  - manual configuration
  - DHCPv6 (client)
  - SNMP/HTTP/SSH/Telnet over IPv6
  - IPv6 DNS resolver
  - IPv6 RADIUS/TACACS+ support
  - IPv6 Syslog support
  - IPv6 SNTP & NTP
  - IPv6 TFTP
  - IPv6 Ping

### Layer 3 Features

- IP Multinetting/CIDR
- /31 subnets
- ARP (static: 128, dynamic: 3968)
- Proxy ARP
- Local proxy ARP
- IRDP
- Static route
- Unicast Routing: RIP v1/v2, OSPF
- ECMP
- Multicast Routing: IGMP v1/v2/v3, DVMRP, PIM-DM/-SM
- VRRP
- Source IP Configuration
- Policy-based routing

### IPv6 Layer 3 Features

- IPv6 Layer 3 features
- Static route
- Unicast Routing: RIPng & OSPFv3
- Multicast Routing: MLD v1/v2, PIM-DM6/-SM6
- DHCPv6: relay

### Datacenter Features

- Congestion Notification
- Enhanced Transmission Selection
- Priority-based Flow Control
- Datacenter Bridging Extension
- FIP snooping

### VM Tracer Features

- VMware vSphere support
- VM Auto Discovery
- VM Adaptive Segmentation
- VM host view

### Ethernet Virtual Bridge

- Ethernet Virtual Bridging (EVB, IEEE 802.1Qbg)

## Hardware Specifications

### Switch Silicon: Broadcom BCM56860 Trident II+ 1.28 Tbps

#### Physical Ports

- 32 QSFP+ fixed ports: 40 GbE or 4 x 10 GbE per port

#### Management Ports on front panel:

- 1 x RJ-45 serial console
- 1 x RJ-45 100/1000BASE-T management
- 1 x USB Type A storage port

#### Performance

- Switching Capacity: 1.28 Tbps
- Forwarding Rate: 1.44 Bpps
- MAC Addresses: up to 288K
- VLAN IDs: 4K
- Jumbo Frames (9216 Bytes)
- Packet Buffer Size: 16 MB integrated packet buffer

#### Physical and Environmental

- Dimensions (WxDxH): 43.84 x 51.5 x 4.35 cm (17.26 x 20.28 x 1.71 in)
- Weight: 9.65 kg (21.27 lb), with two installed PSUs
- Fans: hot-swappable 4+1 redundant fans
- Operating Temperature: 0°C to 40°C
- Storage Temperature: -40°C to 70°C
- Operating Humidity: 5% to 95% non-condensing
- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48VDC. Input Voltage: 90 to 264 VAC at 50-60 Hz. -48 to -72 VDC.

#### EMI

- CE Mark (EN55022 Class A), FCC Part 15

Class A, VCCI Class A

#### Environmental

- Temperature: IEC 68-2-14
- Shock: IEC 68-2-29
- Vibration: IEC 68-2-36, IEC 68-2-6
- Drop: ISTA 2A
- RoHS-6 Compliant

#### Safety

- CB, EN60950, UL/CUL

## ADARA Management / Configuration Capabilities

ADARA Network Functions Virtualization Software	ADARA Software Defined Networking Software	ADARA Axis Switch
<b>Auto Configuration</b> <ul style="list-style-type: none"> <li>• Cloud Based</li> <li>• Local</li> <li>• Double Touch ICON               <ul style="list-style-type: none"> <li>- (Full Keyboard/Mouse not required)</li> </ul> </li> </ul>	<b>Auto Configuration</b> <ul style="list-style-type: none"> <li>• Cloud Based</li> <li>• Local</li> <li>• Double Touch ICON               <ul style="list-style-type: none"> <li>- (Full Keyboard/Mouse not required)</li> </ul> </li> </ul>	<b>Auto Configuration</b> <ul style="list-style-type: none"> <li>• From Bootup</li> </ul>
<b>Automated Management</b> <ul style="list-style-type: none"> <li>• Policy Engine Automated CLI Management</li> </ul>	<b>Automated Management</b> <ul style="list-style-type: none"> <li>• Policy Engine Automated CLI Management</li> </ul>	<b>Automated Management</b> <ul style="list-style-type: none"> <li>• Software Defined Networking</li> <li>• Policy Engine Automated CLI Management</li> </ul>
<b>Manual</b> <ul style="list-style-type: none"> <li>• CLI Management</li> <li>• GUI (drop down)</li> </ul>	<b>Manual</b> <ul style="list-style-type: none"> <li>• CLI Management</li> <li>• GUI (drop down)</li> </ul>	<b>Manual</b> <ul style="list-style-type: none"> <li>• CLI Management</li> </ul>
		<b>Auto Topology Discovery</b> <ul style="list-style-type: none"> <li>• Link Layer Discovery Protocol</li> <li>• Cisco Discovery Protocol</li> </ul>
		<b>Virtual Machine Auto Discovery</b>

### Your next step

ADARA solutions help businesses accelerate growth at a lower total cost of ownership. For more information about ADARA Networks solutions visit [www.adaranetworks.com](http://www.adaranetworks.com)

#### Corporate Headquarters

ADARA Networks  
 2150 N. First Street  
 San Jose, CA 95131, USA  
 Phone: 408/433-4900  
[www.adaranetworks.com](http://www.adaranetworks.com)

ADARA and the ADARA logo are trademarks or registered trademarks of ADARA Networks, Inc., in the United States and other countries. Third party brands, products or trademarks mentioned are the property of their respective owners. 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 or to be offered by ADARA Networks. ADARA Networks reserves the right to change, modify, transfer or otherwise revise this publication without notice.