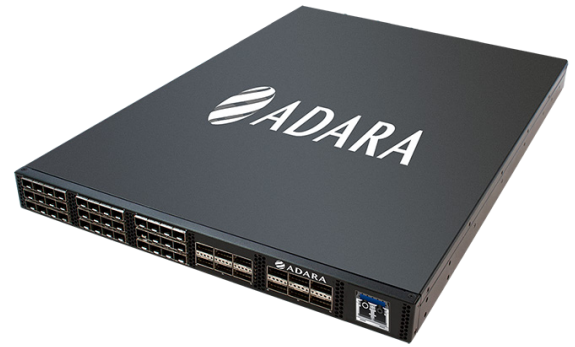


ADARA Axis 1148-25/100



Product Highlights

Performance

- 48 10GbE SFP+ and 24 10/40GbE QSFP+ ports, and 1 100 GBE port
- Non-blocking switching architecture (Broadcom Trident II)
- 1.28 terabits per second
- 960 Gbps of traffic
- 0.5 uSecond latency

Robust Hardware

- 1+1 hot-swappable power supplies
- Four hot-swappable fans
- Out-of-band management port

Flexible

- Up to 154 10GbE ports
- Modular control CPU (supports X86, MIPS, PPC and ARM)
- Optional data plane offload processor (up to 40Gbps)

Cost Effective

- Compact 1U form factor
- Advanced power efficiency

Flexible, high-performance switch for SDN applications.

The ADARA Axis 1148-25/100 switch is a modular 10/40/100GbE switching system based on the Broadcom StrataXGS Trident II switch SOC. The switch is compliant with version 1.0 of the Open Compute Project (OCP) Open Network Switch Specification. It is designed to be compatible with the 19" Enterprise Rack specification and the 21" OCP Open Rack specification.

The switch is optimized to provide high capacity switching for enterprise and service provider applications. ADARA software running on this switch provides software solutions including OpenFlow controller, L2-L3 switching, and other SDN applications. Modular pluggable CPU options make this platform highly versatile.

The ADARA Axis 1148-25/100 switch is optimized for cost and power and meets the requirements for Leaf and Spine Switches for use by large data center, cloud computing and telecom service provider networks. The small 1U form factor maximizes the space in the rack for compute and storage.

Each 40GbE port can be configured as four 10GbE ports, and the 100GbE port can be configured as ten 10GbE ports, resulting in a total of 154 ports of 10GbE. This port modularity allows for flexibility in network design to address a variety of applications and implementations. The modular control CPU is capable of supporting control plane processor architectures including X86, MIPS, PPC and ARM. The system supports an optional data-plane offload processor, capable of processing up to 40Gbps.

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
- sFlow (RFC 3164)
- 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 SNMP & 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

Physical Ports

- 48 ports of 10GbE and 24 ports of 40GbE and 1 port of 100GbE
- Support for SFP+ (SR or LR) and QSFP+ (SR or LR)
- 1 Serial console port
- 1 Ethernet management port

Performance

- Switching Capacity 1.28Tbps
- Forwarding Rate: 960Mpps
- Latency: less than 500 nanoseconds
- Memory (X86): 4G DDR3
- Flash (X86): 32G MSATA
- Optional Data Plane Processor (DPP) Module
 - based on Broadcom XLP432 CPU
 - Memory: 2G DDR3
 - Flash: 4G

Power

- 1+1 hot-swappable power supplies
- Maximum Power Consumption: 500 Watts

Cooling

- 4 hot-swappable fans
- Airflow: 200 lfm

Mechanical

- Dimensions in mm (HxWxD): 44.45 x 438.15 x 622.30
- Dimensions in inches (HxWxD): 1.75 x 17.25 x 24.50
- Weight: 24 lbs.

Environmental

- Operating Temperature 0 to 45 °C or 32 to 113 °F
- Operating Humidity 5 to 95%

Safety

- Pending Certification

EMC

- Pending Certification

ADARA Management / Configuration Capabilities

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

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

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