

Layer-3 Rack-mount Industrial Switch

AIES2000 Series



- **6 kV lightning protection**
- **IP40 protection with industrial fanless thermal design**
- **Supports STP / EAPS / ERPS ring protocols**
- **Virtual stacking capability**
- **Built-in Data Leakage Prevention**
- **SNMP and Pallas cloud platform**

ASCENT AIES2000 series is built on a high-performance hardware platform and the BDROS software system, to deliver robust Layer-2/Layer-3 routing and advanced industrial ring networking protocols. Designed for demanding industrial networks, the AIES2000 series adopts a die-cast aluminum enclosure and standard 19-inch rack-mount form factor, paired with redundant wide-voltage industrial power inputs to ensure long-term operational stability.

Using hardware-accelerated industrial Ethernet ring technology, the AIES2000 series achieves rapid fault recovery, with node-level self-healing under 5 milliseconds and ring-level convergence typically within 50 milliseconds. This guarantees uninterrupted service for latency-sensitive industrial applications.

Featuring a fully fanless thermal architecture, low power consumption, wide temperature tolerance, and strict EMC and anti-shock compliance, the AIES2000 series maintains reliable operation even in harsh field environments. With IP40 protection and flexible deployment capabilities, it is well suited for energy systems, transportation networks, industrial automation, environmental protection, and security or military-grade scenarios.

Key Features

- Lightning protection level: 6KV
- IP40 protection, industrial fanless thermal conduction
- Supports dual 220V wide-voltage industrial power input (DC model is optional)
- Business ports, management ports, power input terminals, and relay terminals are located on the front panel, complying with industrial operation specifications
- Supports STP/EAPS/ERPS
- Supports node self-healing time less than 5 milliseconds, and ring network self-healing time less than 50 milliseconds (typical value)
- Supports layer-3 static routing, dynamic routing (RIP, OSPF), Virtual Router Redundancy Protocol (VRRP)
- Supports virtual stacking
- Supports to form a self-healing ring between any two ports, and supports multiple independent self-healing rings
- Provides Data Leakage Prevention (DLP), to quickly recover from network failures
- Supports simple network management protocol (SNMP) and Pallas cloud-based operating platform
- The mean time between failures (MTBF): more than 800,000 hours

Model Lists



AIES2000-5024T8C4X

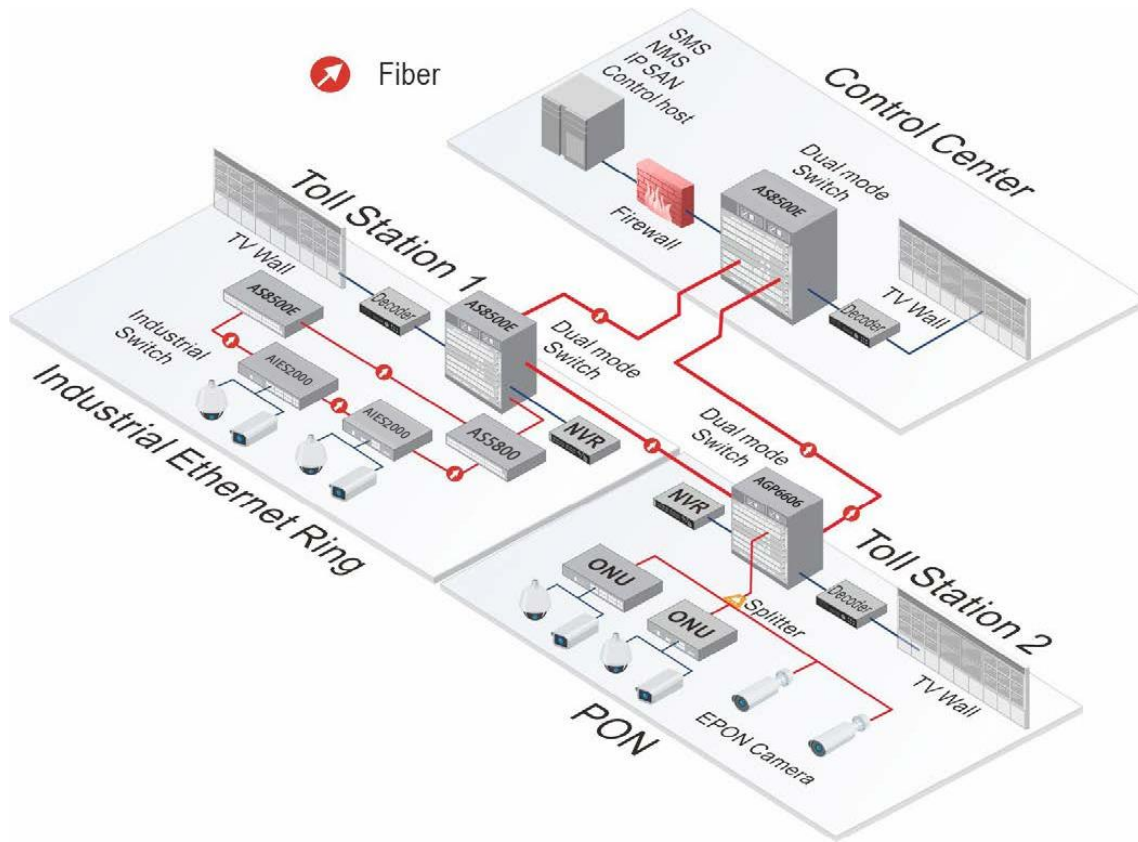
- 16-port Gigabit RJ45
- 8-port Gigabit RJ45/SFP Combo
- 4-port 10G/GE SFP+



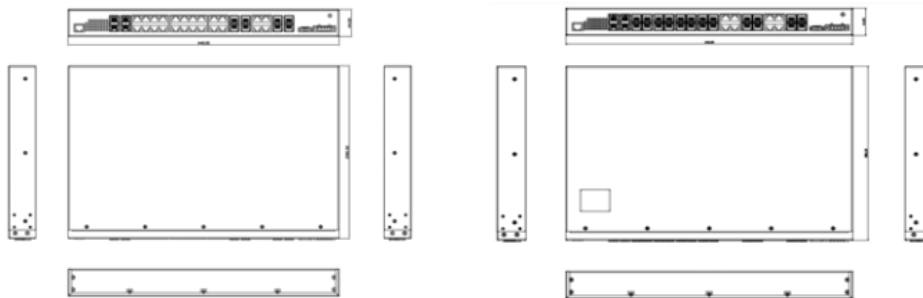
AIES2000-5024S8C4X

- 16-port Gigabit SFP
- 8-port Gigabit RJ45/SFP Combo
- 4-port 10G/GE SFP+

Application Diagram



Panel Diagram



AIES2000-5024T8C4X

AIES2000-5024S8C4X

Specifications

Product Characteristics

Item	Unit	Description	AIES2000-5024T8C4X	AIES2000-5024S8C4X
Gigabit Interface				
RJ45			16	8
SFP			8	16
10G/GE SFP+			4	4
Console (RJ45)			1	1
Backplane	Gbps	128	128	128
Forwarding Rate (With 64 Bytes)	Mpps	96	96	96
Chassis	Dimensions (WxDxH)	mm	440x280x44	440x280x44
	Weight(Empty)	kg	2.7	3
Package	Dimensions (WxDxH)	mm	576x448x94	576x448x94
	Weight	kg	3.5	3.8
Power Consumption	No-Load	W	15.5	20
	Full-Load	W	33.25	38.6
Power Supply		V	Dual AC or DC 100 to 240	Dual AC or DC 100 to 240
Total Output BTU (1000BTU/H=293W)			113.48	131.74
MTBF(H)			>800,000	>800,000
Forwarding Mode			Store-forward	Store-forward
Flash	MB		16	16
DRAM	MB		256	256
MAC	K		16	16
Buffer Size	MB		12	12
Jumbo Frame	K		9	9
Total SVI			64	64

Features	
Item	Description
VLAN	4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN, Voice-VLAN
Spanning Tree	802.1D (STP), 802.1W (RSTP) and 802.1S (MSTP) BPDU guard, root guard and loopback guard
Multicast	IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter
IP	Static route, RIP, OSPF IPv4/v6 dual stack
IPv6	ICMPv6, DHCPv6, ACLv6 and Telnet IPv6 neighbor discovery, Path MTU discovery MLD V1, MLD snooping IPv6 Static Routing, RIPng, OSPFv3 Manual tunnel, ISATAP tunnel, 6 to 4 tunnel
QoS	CAR, HQoS, MAC/IP/TCP/UDP/ VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping
Security	Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky DAI & IP source guard, PPPoE+, IEEE 802.1x, AAA, Radius and BDTacacs+ L2/L3/L4 ACL flow identification and Port security, IP+MAC+port binding filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc Broadcast/multicast/unknown unicast storm-control MD5, SHA-256, RSA-1024, AES256, etc
Virtualization	ASCENT Virtual Stacking System (BVSS) Up to 16 stacking units
DHCP	DHCP server/relay/client DHCP snooping/option82
Reliability	Static/LACP link aggregation, Interface backup EAPS and ERPS ISSU uninterrupted system upgrade BVSS, up to 16-units per stack VRRP UDLD
Management	Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON TFTP, FTP, SFTP NTP ZTP SPAN, RSPAN Dying gasp*
Environment	Operating temperature/humidity: -40 to 85°C ,10%-90% non-condensing Storage temperature/humidity: -40 to 85°C , 5%-95% non-condensing
Accessories	Power cord, rackmount kits, console cable

Ordering Information

Product name	Product description
AIES2000-5024T8C4X	16-Port Gigabit RJ45 + 8-Port Gigabit RJ45/SFP Combo + 4-Port 10G SFP+ L3-lite Stackable Managed Industrial Switch (supports industrial ring protection protocol, operating temperature: -40~85°C; dual industrial AC power input (90~260V), rack –mounted installation)
AIES2000-5024S8C4X	16-Port Gigabit SFP + 8-Port Gigabit RJ45/SFP Combo + 4-Port 10G SFP+ L3-lite Stackable Managed Industrial Switch (supports industrial ring protection protocol, operating temperature: -40~85°C; dual industrial AC power input (90~260V), rack –mounted installation)

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