

Multiservice 10GE Switches (w POE)



AS2400 Series

- **Supports up to 48 × GE TX ports and 6 × 10 GE SFP+ uplink ports**
- **Advanced hardware architecture and industry-leading port density**
- **Carrier-level reliability and QoS policies**
- **Layer-3 routing functions**
- **Versatile IPv6 solutions**
- **Perfect security mechanisms**

ACT AS2400 series Optical Fiber 10GE Switch is next-generation, high-performance, aggregation 10GE L3-lite switch which provide network operators and service providers with a cost-effective access layer for Fast Ethernet P2P services in Fiber to The Home/Business (FTTH & FTTB) networks.

AS2400 series includes standard non-POE and POE version with 5 basic models: AS2428E, AS2424S, AS2424E-POE, AS2448S and AS2448E-POE. The platform provides high-density ports with flexible configuration options and a user-friendly interface to allow operators to quickly and easily expand their existing networks and services.

AS2400 series is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet café and diskless working environment. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

AS2400 series offers compatibility with all existing Fast Ethernet or Gigabit Ethernet devices in the network. It provides high-performance switching and seamless cooperation with ACT routing and switching products. Combined with ACT's Video Overlay package, the AS2400 can provide the perfect end-to-end FTTX solution in offering advanced video, voice, and data services.

Key Features

- Industrial Ethernet ring with zero delay and zero packet loss
- Supports industry-level EAPS
- Supports telecom-level Ethernet ring protection protocol
- <50 ms protection shift time
- Supports In-Service Software Upgrade (ISSU)
- Supports various L2 multicast functions, including IGMP-snooping, fast-leave, and trans-VLAN multicast copy
- Supports management modes such as console port, Telnet, SSH, etc.
- Supports SNMP and WEB management mode
- Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP, or priority to better streamline carrier services
- Supports 8 priority queues per port
- Supports IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc
- Equipment-level security
- Support Ethernet standard 802.3u, 802.3x, 802.3ad, 802.1d, 802.1p, 802.1q, 802.1w, 802.1ad
- Supports security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+
- Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions
- AS2424E-4T-AC-POE and AS2448E-4T-AC-POE support IEEE 802.3af/at PoE standard
- Support downlink port speed of 100/1000M and upload port speed of 100/1000M and 10GE
- Support auto-negotiation and duplex.

Model Lists

AS2428E



- 24 GE TX ports
- 4 10GE/GE SFP+ ports

AS2424S



- 16 GE SFP ports,
- 8 GE SFP/TX combo ports
- 4 10GE/GE SFP+ ports

AS2424E-4T-AC-POE



- 24 GE POE ports
- 4 10GE/GE SFP+ ports

AS2448E



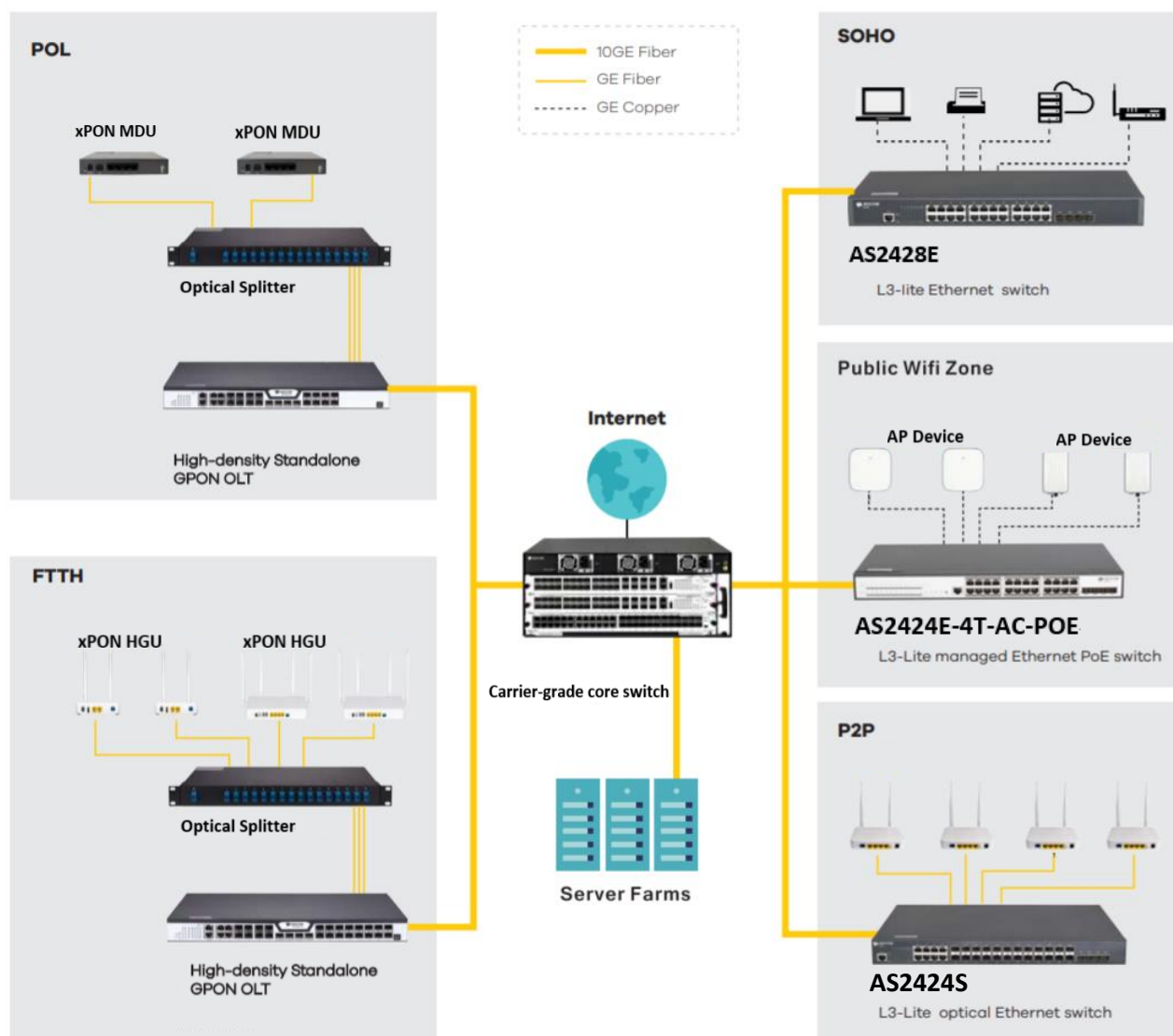
- 48-Port Gigabit RJ45
- 6-Port 10G/GE SFP+

AS2448E-4T-AC-POE



- 48-Port Gigabit RJ45
- 6-Port 10G/GE SFP+

Application Diagram



Specifications

Item	AS2428E	AS2424S	AS2424E-4T-AC-POE	AS2448E	AS2448E-4T-AC-POE
Gigabit Interface					
RJ45	24	8(Combo)	48	48	/
SFP	/	24	/	/	/
10GE/GE Interface	4	4	4	6	6
Console (RJ45)	1	1	1	1	1
Backplane (Gbps)	128	128	216	216	216
Forwarding Rate (Mpps)	96	96	132	162	162
Chassis					
Dimensions (W×D×H) (mm)	440 × 180 × 44	440 × 280 × 44	440 × 280 × 44	440 × 280 × 44	440 × 300 × 44
Weight (kg) (Empty)	2.6	4	4.3	4.3	4.3
Package					
Dimensions (W×D×H) (mm)	500 × 320 × 80	576 × 448 × 94	576 × 448 × 94	576 × 448 × 94	576 × 448 × 94
Weight (kg)	3.9	5.2	5.5	5.5	5.5
Power Consumption					
No-Load	<22 W	<18 W	<25 W	<25 W	<40 W
Full-Load	35 W	<38 W	<48 W	<48 W	<85 W
Power Supply					
AC: 100V-240V	45 W	45 W	50 W	50 W	150W
DC: 36V-72V					
Total Output BTU (1000BTU/H=293W)	153.58	153.58	163.82	163.82	511.49
Fan Number	/	2	2	2	2
Noise ³ (dBA)	0	45	45	45	45
MTBF (H)	>200,000	>200,000	>200,000	>200,000	>200,000
Forwarding Mode	Store-forward	Store-forward	Store-forward	Store-forward	Store-forward
Flash (MB)	16	16	16	16	16
DRAM (MB)	256	256	512	512	512
MAC	16K	16K	32K	32K	32K
Buffer Size (MB)	1.5	1.5	1.5	1.5	1.5
Interface VLAN	64	64	64	64	64
Routing Table	512	512	512	512	512
Jumbo Frame	9K	9K	9K	9K	9K

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, Support at least 2Gps
IP	Static route IPv4/v6 dual stack
IPv6	ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet IPv6 neighbor discovery, Path MTU discovery MLD V1, MLD snooping IPv6 Static Routing, RIPng, OSPFv3 · Manual tunnel, ISATAP tunnel, 6 to 4 tunnel
Certification	CE, FCC, ROHS
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 DHCP Snooping and option 82, DAI & IP source guard, PPPoE+ IEEE 802.1x, Radius and BDTacacs+ L2/L3/L4 ACL flow identification and 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.
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: 0 °C to +50 °C Operating humidity: 10% to 90% (non-condensing) Storage temperature: -20 °C to +70 °C Storage humidity: 5 % to 95 % (non-condensing)
Reboot Switch	After reboot not lose configuration, equipment operation stability
Unicast Switching Capacity	Support full duplex at least 3.2 Gbps

Accessories	Power cord, rackmount kits, console cable
Ethernet Support	Support Ethernet with IEEE 802.3z, 802.1ah, Fast Ethernet at 100Mbps with IEEE 802.3u. Ethernet over FiberOptic at 1 Gbit/s with IEEE802.3z. Ethernet to the Home with IEEE 802.1ah Support Ethernet Ring Protection Switching G.8032 with recovery timer less than 50ms Support STP with IEEE 802.1d; RSTP with IEEE 802.1w; MSTP with IEEE 802.1s Support Link Aggregation Group on Ethernet interfaces defined in IEEE 802.3ad Support QinQ IEEE 802.1ad Support VLAN mapping Support Port isolation within VLAN Support tag-based and port-based VLAN with IEEE 802.1q Support port rate limiting bandwidth on ethernet interface Support Ethernet Port mirror Support IPv6: For System management
Security Support	Support static MAC entry MAC Address Filtering based on matching the source MAC address or only match the destination MAC address or match the source and destination MAC address Restrict the number of unknown unicast/multicast/broadcast packet through Ethernet port per second Support Loop detection at port level (for e.g: fiber cable looped) Restrict the number of MAC address per port-based and VLAN-based Support Port security (sticky MAC) on ethernet interface Support Ethernet OAM - Connectivity Fault Management in IEEE 802.1 ag Support DHCP Snooping and IP Anti-spoofing Support DHCP option 82 Support PPPoE+ (allow authentication messages to carry user port information) Support 802.1x authentication Support local authentication with password encryption and authentication using TACACS, RADIUS
Multicast Support	Support IGMP v2, v3 Support IGMP snooping

	Support IGMP proxy
	Multicast VI.AN Register (MVR)
	Support Fast IGMP leave & Fast Join, and support
	Multicast traffic statistics on ethernet interface
QoS Support	Traffic Classification based on Source, Destination
	MAC, 802.1p, VLAN
System	Support console port for local login &
Management	configuration. Telnet/SSH/SSH2 for remote login &
	configuration by default IP OAM
	Limit the number of VTY connection and source IP
	address
	Support different user's operation modes
	Support SNMPv2 & SNMPv3 and support MIBs to
	collect, analyze and report accounting information
	Support system monitor (CPU load, Memory-usage,
	System temperature, Fan; interface status, rx-
	power/tx-power, log system (provide logging
	information for console, CLI, or remote logging
	server), command "Ping", "Tracert", "Debug",
	"display all configuration" and monitoring number
	of unicast, multicast, broadcast, errors, per
	interface
	Should be granted permission to each operation
	level based on CLI, RADIUS and TACACS
	Supports backup, restore configuration file and
	upgrading OS (Operating System) to update new
	features, via TFTP protocol, FTP.

Ordering Information

Product Name	Product Description
AS2428E-4T-AC	AS2400 Ethernet switch with 24 Gigabit TX ports, 4 10G SFP ports, one AC220V power supply (dual slots), 1U, 19-inch rack-mounted installation
AS2424S-4T-AC	AS2400 Ethernet switch with 24 GE SFP and 4 10GE ports (1 console port, 16 100M/1000M SFP ports, 8 100M/1000M SFP/TX combo ports, 4 10GE/GE SFP+ ports; one AC 220V power supply with dual slots, the cooling fan, 1U, standard 19-inch rack-mounted installation)
AS2424S-4T-DC	AS2400 Ethernet switch with 24 GE SFP and 4 10GE ports (1 console port, 16 100M/1000M SFP ports, 8 100M/1000M SFP/TX combo ports, 4 10GE/GE SFP+ ports; one DC 48V power supply with dual slots, the cooling fan, 1U, standard 19-inch rack-mounted installation)
AS2424E-4T-AC-POE	Ethernet switch with 24 GE POE ports and 4 10GE ports (1 console port, 24 GE POE ports, 4 10GE/GE SFP+ ports; 1 AC220V and 1 DC power supply, AC 370W POE power, or DC 740W POE power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
AS2448E-6T-AC	AS2400 Ethernet switch with 48 GE and 6 10GE/GE SFP+ ports (1 console port, 48 GE TX ports, 6 10GE/GE SFP+ ports, 100 to 240 VAC input, cooling fan, 1U, standard 19-inch rack-mounted installation)
AS2448E-6T-AC-POE	AS2400 Ethernet switch with 48 GE POE ports and 6 10GE ports (1 console port, 48 GE POE ports, 6 10GE/GE SFP+ ports; 1 AC220V and 1 DC power supply, AC 370W POE power, or DC 740W POE power, the cooling fan, 1U, standard 19-inch rack-mounted installation)
AS2424S-4T-DC2	AS2400 Ethernet switch with 16 GE SFP, 8 GE SFP/TX combo ports and 4 10GE ports Dual DC power supply

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