

## Fast Ethernet Layer 2 Switches Featuring Robust Security

The AX1200S series provides high connectivity, usability and interoperability that are all consistent through the AX family. The AX1200S has two 10/100/1000BASE-T ports and two 1000BASE-X (SFP) ports for uplinks, allowing for flexible network configuration based on each user's network environment combined with the upper AX series. The 1250S is a model for access switches resistant to heat, dripping water, and dust for use under severe environment, such as plants, railroads, and roads.



**AX1250S-24T2CH**

### Authentication and Security Functions

- Triple authentication
  - Capable of mixing three types of authentication (IEEE 802.1X/Web/MAC) for flexible, robust security based on each user environment and security policy.
- Fulfilling security function
  - Ensures security between local users by logically dividing a LAN, together with MAC VLANs, port VLANs, and protocol VLANs, and by performing granular access control with L2/L3/L4 level filtering.
  - Provides more solutions based on network authentication (e.g., DHCP Snooping and NAP cooperation).

### High Reliability and High Availability

- Various reliability improvement functions
  - Capable of configuring highly reliable networks with high-speed failure detection and redundant lines/routes/devices using link aggregation, RSTP, ALAXALA proprietary hot standby switch function GSRP Aware (Gigabit Switch Redundancy Protocol), UDLD, and L2 loop detection function.
  - Redundant uplink function allows for a redundant configuration without using a spanning tree.
  - Supports the ring protocol with which flexible, scalable, simple, and high-speed networks can be configured.
- QoS
  - Provides granular QoS, such as priority control for important packets and voice packets vulnerable to delays, and bandwidth control that allocates a fixed bandwidth to ports.
- Support for combo ports for gigabit uplinks
  - Capable of using two ports simultaneously by combining 10/100/1000BASE-T or 1000BASE-X (SFP) ports, responding to various network environments.

### Environment-Conscious Features

- Dripping water resistant
  - Designed with IP31 ingress protection defined in IEC 60529.
- Extended operation temperature range
  - Ensures operation under strict conditions from -10 °C to 50°C. (The operational temperature range for AX1240S is 0 °C to 45°C.)
- Fanless switch
  - Completely fanless design
  - The fanless architecture, which is free from dust accumulation and physically activated parts, reduces potential failures.
- Power saving
  - Supports the dynamic power saving function, reducing the device's power consumption according to a preset schedule.
  - Meets the energy consumption efficiency requirements defined in the Energy Saving Act.

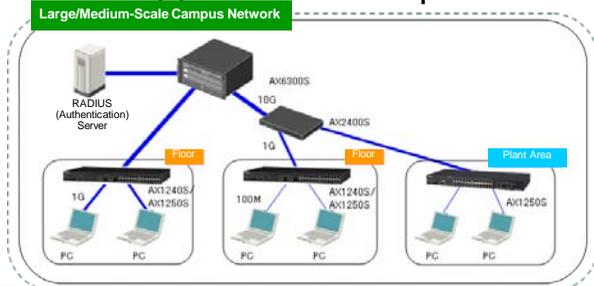
### Operation Management and Maintenance Function

- CLI compatible with advanced models
  - Supports CLI of the AX2400S series for integration of operation management and maintenance operability.
- Command-free maintenance function
  - Capable of log storage and firmware updates with an SD card, improving on-site maintainability.

### IPv6 Support

- Support for the IPv6 multicast cooperation function
  - Capable of MLD snooping that controls the transmission of IPv6 multicast packets.

# AX1250S Application Example



Application Example	Points
<b>1. Large-scale Campus Network</b> (Environment with strict temperature conditions) - Workgroup switch for terminal connections - Switch optimized for floor line aggregation with Fast Ethernet	<ul style="list-style-type: none"> <li>Operability consistent through the AX series lineup</li> <li>Fulfilling security/authentication functions (IEEE 802.1X/WEB/MAC)</li> <li>Stable operation and high availability functions (Autonomous Extensible Ring Protocol (transit node), GSRP-aware, link aggregation, RSTP, etc.)</li> <li>IPv6-enabled (MLD Snooping)</li> </ul>
<b>2. Medium/Small-Scale Campus Network</b> (Environment with strict temperature conditions) - Core switch (connected to basic routers for center connection) - Floor switch - Workgroup switch	

## AX1250S Product Specifications

Model		AX1250S-24T2CH
Performance	Maximum switching capacity	8.8 Gbps
	Maximum packet forwarding performance	6.5 Mpps
Port count	1000BASE-X (SFP) (SX/SX2/LX/LH/BX)	2 <sup>#1</sup>
	10/100/1000BASE-T	2 <sup>#1</sup>
	10/100BASE-TX [No PoE]	24
	10/100BASE-TX [PoE/PoE Plus]	-
Layer 2 functions	Maximum entry count	16,384
	VLAN	Port VLAN, Tag-VLAN (IEEE802.1Q), MAC VLAN, protocol VLAN
	Spanning tree protocol (STP)	STP(IEEE 802.1D), RSTP(IEEE 802.1w), MSTP(IEEE 802.1s), PVST+, BPDU filter, Port Fast, route guard, loop guard
	Multicast cooperation functions	IGMPv1/v2/v3snooping, MLDv1/v2snooping
Network functions	Ring protocol	Autonomous Extensible Ring Protocol <sup>#2</sup>
	Authentication functions	IEEE 802.1X authentication, Web authentication (dynamic VLAN mode/fixed VLAN mode), various Web authentication functions (URL redirection, screen editing, interim certificate), MAC authentication (dynamic VLAN mode/ fixed VLAN mode), multi-step authentication, fixed VLAN mode/dynamic VLAN mode mixed on the same port
	Security functions	DHCP snooping, interception of relay between ports, EAPOL forwarding, filtering, forced authentication, one-time password for Web authentication (RSA SecurID), single sign-on client for Web authentication
	QoS	IEEE802.1p, ToS/CoS mapping, shaping
Operation management functions	Reliability/operability improvement functions	Link aggregation (IEEE 802.3ad), storm control, jumbo frame, IEEE 802.3ah/UDLD, GSRP aware, GSRP aware extended function, L2 loop detection, uplink redundant, Ether OAM
	Operation management functions	SNMPv1/v2c, MIB II, RMON, syslog, telnet, ftp, port mirroring, NTP, ping, traceroute, logging (SD card), firmware update (SD card), RADIUS, LLDP, IPv4DHCP server, SSHv1/v2 <sup>#7</sup> , energy saving operation mode
Power saving function	Operation	CLI (AX2400S series base <sup>#3</sup> )
	Static power saving	Port power supply off
Equipment conditions	Dynamic power saving	Unit power control (scheduled sleep), port power supply off (scheduling), unused port power saving, secure wake-on-LAN
	Input voltage	AC 100-120 V/200-240 V
	Maximum input current (A)	0.18 @ AC 100 V 0.10 @ AC 200 V
	Maximum power consumption (W)	18/21 <sup>#4</sup>
	Maximum heat output (kJ/h)	65/76 <sup>#4</sup>
	PoE Feed	-
	Fan	None
	Outer dimensions (W x D x H (mm))	477 x 250 x 65
Items related to Energy Saving Act <sup>#5</sup>	Weight (kg), main unit only	3.0
	Energy consumption efficiency (W/Gbps)	Category A 3.9 (standard value 4.1)
	Maximum effective transmission speed (Gbps)	4.4
	Port speed/count at the time of measurement	1 Gbps
100 Mbps		24
Environment conditions	PoE Maximum power supplied (W)	-
	Ingress protection (IEC 60529)	IP31
	Permissible operation temperature range	-10°C to 50°C (0°C to 50°C at time of startup) <sup>#6</sup>
	Temperature when not operating (when not applying current)	-10°C to 50°C
	Temperature at storage and transport	-25°C to 60°C
	Permissible operation humidity range	10% to 90% (no condensation)
	Humidity when not operating (when not applying current)	8% to 90% (no condensation)
Humidity at storage and transport	5% to less than 100% (no condensation)	
Floating dust	Floating dust of about 10 microns or smaller: 0.15 mg/m <sup>3</sup> or smaller	

#1: 1000BASE-T and 1000BASE-X are mutually exclusive (i.e., they cannot be used simultaneously); #2: Only transit is supported; #3: May slightly vary because of functional differences from the upper series; #4: When using 2 1000BASE-LH (SFP) ports; #5: Value based on a measuring method defined by the Energy Saving Act (Japan); #6: For permissive operation temperature range when using SFP, see the AX1250S data sheet; #7: SSH function is subject to export control regulations, and may be excluded when exported.

**Caution** For your safety, please be sure to read the *Hardware Instruction Manual* and the *Safety Guide* beforehand.

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