

Datasheet

ALAXALA compact gigabit Layer 2 switch

AX2500S Series

1. Overview

The AX2500S series consists of the following eight models of ALAXALA compact, Gigabit Layer 2 switches. *Figure 1* through *Figure 5* show the appearance of each model in the AX2500S series.



Figure 1 AX2530S-24T (AC model)
AX2530S-24TD (DC model)



Figure 2 AX2530S-48T (AC model)
AX2530S-48TD (DC model)



Figure 3 AX2530S-24S4X (AC model)
AX2530S-24S4XD (DC model)



Figure 4 AX2530S-24T4X (AC model)



Figure 5 AX2530S-48T2X (AC model)

1.1 Product concept

The AX2500S series is a series of Gigabit Ethernet Layer 2 switches that achieve a fanless design (Note 1) to provide noise and dust control, while inheriting a variety of functionalities from the AX1200S series of Fast Ethernet Layer 2 switches such as enhanced authentication and power saving.

The AX2500S series is also a series of compact box-type LAN switches designed to meet the functionality requirements of enterprise networks and improve switching performance. Taking over the platform design of its predecessor, the AX2400S series, including SD card-based maintenance and power supply redundancy, the AX2500S series improves performance and capacity while enhancing redundancy and power saving functionality in the distribution switch.

The AX2500S series provides the following functionality to achieve a "guaranteed network":

- Support various types of network redundancy for highly reliable and highly available networking.
- Feature link aggregation and 10G ports which provide sufficient network capacity to meet increased traffic demands.
- Provide a guaranteed network to protect the entire range of traffic handled within a company (such as core work data, VoIP telephony data, teleconferencing, video streaming, and CAD data) using QoS technology and other functions.
- Safeguard networks by security functionality such as high-performance filtering and user authentication.
- Enable full-wire-rate packet forwarding.

(Note 1) The AX2530S-24T and AX2530S-24TD models. The AX2530S-48T and AX2530S-48TD are semi-fanless models.

1.2 Usage examples

The AX2500S series can be used as a distribution or floor switch in a local area network within an enterprise.

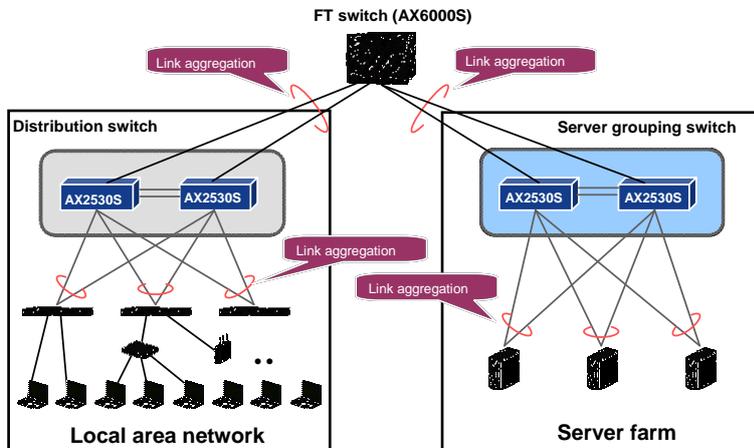


Figure 6 Example of use as a distribution switch

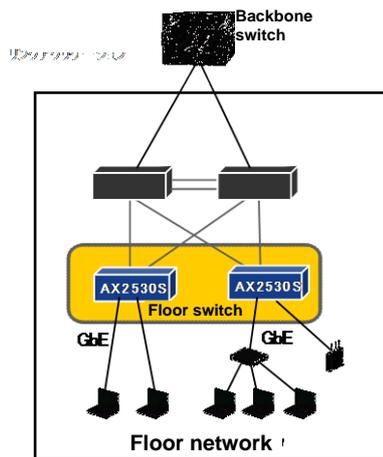


Figure 7 Example of use as a floor switch

Table 1 Switch usage example

Switch usage example		Point
Local area network	Distribution switch	<ul style="list-style-type: none"> - SML (Split Multi Link) functionality - 10G uplink - TCO reduction (power consumption)
	Floor switch	<ul style="list-style-type: none"> - Authentication functionality (triple authentication, multi-step authentication, quarantine server linkage) - Exclusion of terminals with fixed IP (DHCP snooping) - Redundancy (Autonomous Extensible Ring Protocol, GSRP aware, link aggregation, RSTP, uplink redundancy, etc.) - Multicast support (IGMP/MLD snooping) - L2 loop detection, storm control, etc. - TCO reduction (power consumption)

2. Features

2.1 Features of the AX2500S series

(1) Fanless design

- Fanless design (Note 1) in a Gigabit Ethernet Layer 2 switch
- Achieves a quiet office environment with fewer problems caused by dust being taken into the switch

(Note 1) The AX2530S-24T and AX2530S-24TD are true fanless models.

The AX2530S-48T and AX2530S-48TD are semi-fanless models on which the fan does not operate when it is running at normal temperatures (by enabling cooling fan control).

(2) High reliability for configuring mission-critical networks

- High product quality
 - High reliability assured through exacting component selection and strict design and testing standards
- Variety of redundant network configurations
 - SML (Split Multi Link) (Note 2) functionality for low-cost redundancy with a box-type switch
 - Standard functionality: Link aggregation (IEEE 802.3ad)
Rapid Spanning Tree Protocol (IEEE 802.1w, IEEE 802.1s)
 - Proprietary functionality: GSRP aware, Autonomous Extensible Ring Protocol (Ring Protocol),
SML (Split Multi Link), uplink redundancy (Note 3)
- L2 loop avoidance
 - The UDLD functionality prevents loops at a Spanning Tree Protocol or frame loss at link aggregation.
 - The Layer 2 loop detection functionality prevents loops by detecting improperly connected devices on the network.

(Note 2) A link aggregation is created by configuring redundant distribution switches as a single switch.

This functionality requires a separate advanced software upgrade license.

(Note 3) A redundant configuration can be achieved without using a Spanning Tree Protocol.

(3) Power saving

- Scheduling
 - The switch can automatically change to a sleep state for long holidays, Saturdays, Sundays, public holidays, and nights. It can be woken from such a sleep state according to specified schedules
 - The following LED operation and port power saving also can be set up by schedule settings.
 - Even in a sleep state, the switch can also be woken up remotely via a specific port by using WOL frame reception detection or link-up detection.
- Three different levels of LED control
 - Three different levels of LED brightness control: normal brightness, power saving brightness, (lower brightness than normal), and OFF
 - LEDs can be set to blink or turn on at normal brightness when a console connection is established, a port enters a link-up state, or an SD memory card is inserted. They can then be automatically turned off when any of these types of operations is completed.
- Port power saving
 - Power saving by powering down a port detected to be in a link-down state or configured to be shut down (using the `shutdown` configuration command) (Note 4)

(Note 4) For SFP only or shared SFP/SFP+ port, shutdown-based port power saving only is supported.

(4) Network authentication

- Exclusion of unauthorized users
 - Keeping personal PCs, which have no security management, from connecting to a network
 - Keeping third parties from accessing a network
- Protection of information on servers
 - Restricting departmental or other types of servers installed without permission from connecting to a network. These types of servers often have no appropriate access restrictions (or password protection).
 - If a server that does not have appropriate access restrictions is used without restrictions, it can lead to information leakage. It is necessary to prevent such server use on the network side.
 - Restricting unauthorized users from accessing servers.
To do so, the switch uses authentication in dynamic VLAN mode.
- Protection of client PCs
 - Protecting client PCs that lack sufficient access restrictions against unauthorized access, to prevent information leakage
- Traceability in the case of problems
 - The ability to investigate when and where unauthorized access occurred, based on a log of failed authentications
 - If a network is used improperly, the ability to investigate when and where such improper use occurred, based on a log of successful authentications
- Authentication in heterogeneous environments with different terminal types
 - Allows network authentication even in heterogeneous environments with different terminal types by supporting three different authentication methods (IEEE 802.1X authentication, Web authentication, and MAC-based authentication).
 - Support for multistep authentication that only allows network use when a combination of terminal authentication and user authentication is passed.
- Significant total cost reduction
 - Network authentication of terminals connected via a switching hub for small groups
Using a switching hub instead of a direct connection to a floor switch allows you to increase the number of network users at a low cost.
- One-time password authentication
 - RSA SecurID one-time password authentication-based Web authentication to increase network access security. This type of Web authentication supports initial PIN code registration and token code re-entry. (Note 5)

(Note 5) This functionality requires a separate advanced software upgrade license.

(5) Quarantine network

- Security Check
 - Quarantining PCs that violate security policy, such as those that have unauthorized software installed or unapplied patches, to prevent information leakage
 - The network prohibits access from infected PCs that may compromise information systems on business networks.
 - Centrally managing terminal security policies with a quarantine server to reduce operating costs
- Compatibility with a variety of quarantine systems
 - Microsoft NAP
 - NOSiDE (NTT Data)
 - JPI (Hitachi, Ltd.)
 - InfoCage (NEC)

(6) Robust security

- Advanced and fine-grained packet filtering
 - Hardware-based high-performance filtering processes
 - User-specifiable Layer 2/3 (IPv4/IPv6)/4 headers
 - Multi-condition-based scalability
- Layer 2-Virtual Private Network (L2-VPN) using VLAN tunneling
- Support for different types of VLAN (port VLAN, protocol VLAN, MAC VLAN, VLAN Tag)
- RADIUS-based switch login and password authentication
- Exclusion of unauthorized DHCP servers and terminals with fixed IP addresses
 - Robust security measures such as DHCP snooping, which excludes unauthorized DHCP servers and terminals with fixed IP addresses.

(7) Support for 10G uplinks

- By combining the AX3600S, AX3800S, AX6300S, AX6600S, AX6700S, or AX7800S series in a local area network, the series models provide a high-performance 10G network.
- Use of SFP+ as an optical transceiver in 10G Ethernet. Shared SFP/SFP+ port allows smooth migration from 1G to 10G Ethernet.

(8) Hardware-based, advanced QoS over Ethernet

- High-performance hardware-based QoS processing
- Detailed user-specifiable sets of parameters (for some Layer 2/3 (IPv4/IPv6)/4 headers)
- Precise QoS control
- Wide range of QoS control functionality
 - L2-QoS (IEEE 802.1p, bandwidth control, priority control, etc.), IP-QoS (Diff-Serv, priority control, etc.)
- Wealth of the hierarchical shaper functionality for an integrated voice and data network
 - Clear audio in which VoIP packets are preferentially transmitted

(9) High performance, high port density compact design and low environmental impact

- Up to 140 Gbit/s switching capacity (AX2530S-48T2X)
 - Two shared SFP/SFP+ port that each can support 1G and 10G Ethernet
 - Maximum of 48 10BASE-T/100BASE-TX/1000BASE-T ports
 - Maximum of four 1000BASE-X (SFP) ports (including two shared SFP/SFP+ port)
- Excellent performance
 - As a distribution or floor switch in local area networks
- Compact chassis
 - Compact chassis of 23.0 cm depth and 4.3 cm height (1U) (AX2530S-24T/AX2530S-24TD)
 - High port density, accommodating a maximum of 48 10BASE-T, 100BASE-TX, and 1000BASE-T ports (AX2530S-48T/AX2530S-48TD/AX2530S-48T2X)
- Low environmental impact through RoHS compliance

(10) Easy-to-operate user interface (configuration commands)

- Industry-standard command line interface
 - Uses common formats for entering commands and configuration information for improved usability.
 - Supports copying and pasting of configuration information

(11) Advanced network management, maintenance, and operation

- CFM (Connectivity Fault Management) (Ether OAM)
 - Connectivity monitoring and failure management are available at the Layer 2 level by performing continuity checks (CC), loopbacks, and linktraces.
- Offers IPv4/IPv6 Dual Stack and full network management functionality for IPv6 environments, including SNMP over IPv6.
- In addition to the basic MIB-II, supports a wide range of MIBs including IPv6 MIB and RMON.
- Supports port mirroring to monitor and analyze traffic (through both receiving and sending ports).
- Support for SD memory cards (Note 6)
 - Users can easily back up the configuration and save error information.
 - Maintenance tasks are simplified.
- The Ethernet ports, console port, and the memory card slot are all on the front panel.
- Device cooling system fit for stable operation
 - Front-side air intake and rear-side air exhaust cooling reduces the impact of other devices on the switch when it is installed in a rack, ensuring stable operation.
- Collection of more detailed flow statistics with sFlow.

(Note 6) In the manual for this series, the abbreviation "MC" is sometimes used when indicating an SD memory card or describing its use.

(12) Excellent cost performance

- Provides enough switching capacity for an enterprise network, with excellent performance
- Low power consumption-oriented architecture design and part selection, which contributes to TCO reduction after installation.

3. Specifications

3.1 Switch specifications

The AX2500S series offers the following models.

Table 2 and Table 3 show the specifications of AX2500S series switches.

Table 2 Switch specifications (1/2)

		Specifications						
Model name		AX2530S-24T	AX2530S-24TD	AX2530S-48T	AX2530S-48TD	AX2530S-24S4X	AX2530S-24S4XD	
Switching capacity		56 Gbit/s		104 Gbit/s		128 Gbit/s		
Packet processing performance (Mpacket/s) (Note 1)	Ethernet (Layer 2 forwarding)	41.6		77.3		95.2		
	Number of network interfaces	--		--		4 (Note 5)		
	10GBASE-SR/LR/ER (SFP+)	--		--		4 (Note 5)		
	10GBASE-CU(SFP+)	--		--		4 (Note 5)		
	1000BASE-SX/LX/BX /LH(SFP)	4		4		28(Note 6)		
	1000BASE-SX2(SFP)	4		4		24		
	10BASE-T/100BASE-TX/1000BASE-T(SFP) (Note 7)	4		4		28(Note 6)		
	100BASE-FX(SFP)	--		--		24		
	10BASE-T/100BASE-TX/1000BASE-T(UTP)	24		48		--		
Standard memory size		512 Mbyte						
Number of memory card slots		SD memory card x 1						
Power supply requirements	Voltage	Rated input voltage (V)	100 to 120 AC/ 200 to 240 AC	-48 DC	100 to 120 AC/ 200 to 240 AC	-48 DC	100 to 120 AC/ 200 to 240 AC	-48 DC
		Variation range (V) (Note 2)	90 to 132 AC/ 180 to 264 AC	-40 to -57 DC	90 to 132 AC/ 180 to 264 AC	-40 to -57 DC	90 to 132 AC/ 180 to 264 AC	-40 to -57 DC
	Frequency (Hz)	50/60	--	50/60	--	50/60	--	
	Maximum input current (A)	0.7 A @ 100 V AC 0.4 A @200 V AC	1.1 A @ -48 V DC	1.0 A @ 100 V AC 0.5 A @ 200 V AC	1.8 A @ -48 V DC	1.0 A @ 100 V AC 0.5 A @ 200 V AC	1.7 A @ -48 V DC	
	Maximum power consumption (W)	40	41	80	71	75	66	
Calorific power (kJ/h)	144		148	288	256	270	238	
Items of the Energy Saving Act (Note 3)	Energy efficiency (W/(Gbit/s))		Class A 1.2 (Reference value: 2.2)	Class A 1.4 (Reference value: 2.2)	Class A 1.4 (Reference value: 2.1)	Class A 1.3 (Reference value: 2.1)	Class A 0.9 (Reference value: 1.5)	Class A 0.8 (Reference value: 1.5)
	Maximum effective transmission speed		28.0 Gbit/s	28.0 Gbit/s	52.0 Gbit/s	52.0 Gbit/s	64.0 Gbit/s	64.0 Gbit/s
	Speed and number of ports when measuring	10 Gbit/s	--	--	--	--	4	4
1 Gbit/s		28	28	52	52	24	24	
Equipment requirements	External dimensions W x D x H (mm) (height [U])		445 x 230 x 43 (1U)		445 x 300 x 43 (1U)			
	Weight (kg) (main unit only)		3.0	3.0	4.2	4.2	3.9	3.9
Environmental requirements (Note 4)	Temperature	Acceptable operating range	0°C to 45°C		0°C to 50°C			
		When not operating (not energized)	-10°C to 60°C					
		During storage and transportation	-25°C to 65°C					
	Relative humidity	Acceptable operating range	10% to 90% (non-condensing)					
		When not operating (not energized)	8% to 90% (non-condensing)					
		During storage and transportation	5% to 90% (non-condensing)					
Suspended particulates		Suspended particulates smaller than approx. 10 microns; no more than 0.15 mg/m ³						
Vibration (m/s ²)		No more than 2.45						
Applicable standards	EMI standard		VCCI Class A					
	Harmonic current emission standard		JIS C61000-3-2					
	EMS standard		JEITA IT-3001A					
	Safety standard		UL60950-1 compliant					

Table 3 Switch specifications (2/2)

Specifications			AX2530S-24T4X	AX2530S-48T2X
Model name			AX2530S-24T4X	AX2530S-48T2X
Switching capacity			128 Gbit/s	140 Gbit/s
Packet processing performance (Mpacket/s) (Note 1)	Ethernet (Layer 2 forwarding)		95.2	104.1
Number of network interfaces	10GBASE-SR/LR/ER (SFP+)		4 (Note 5)	2 (Note 5)
	10GBASE-CU(SFP+)			
	1000BASE-SX/LX/BX /LH(SFP)		4 (Note 6)	4 (Note 8)
	1000BASE-SX2(SFP)		--	2
	10BASE-T/100BASE-TX/1000BASE-T(SFP) (Note 7)		4 (Note 6)	4 (Note 8)
	100BASE-FX(SFP)		--	--
10BASE-T/100BASE-TX/1000BASE-T(UTP)			24	48
Standard memory size			512 Mbyte	
Number of memory card slots			SD memory card x 1	
Power supply requirements	Voltage	Rated input voltage (V)	100 to 120 AC/200 to 240 AC	
		Variation range (V) (Note 2)	90 to 132 AC/180 to 264 AC	
	Frequency (Hz)		50/60	
	Maximum input current (A)		0.7 A @ 100V AC 0.4 A @ 200V AC	1.0 A @ 100V AC 0.5 A @ 200V AC
	Maximum power consumption (W)		57	85
Calorific power (kJ/h)			205	306
Items of the Energy Saving Act (Note 3)	Energy efficiency (W/(Gbit/s))		Class A 0.8 (Reference value: 1.5)	Class A 1.1 (Reference value: 1.7)
	Maximum effective transmission speed		64.0 Gbit/s	70.0 Gbit/s
	Speed and number of ports when measuring	10 Gbit/s	4	2
		1 Gbit/s	24	50
Equipment requirements	External dimensions W x D x H (mm) (height [U])		445 x 300 x 43 (1U)	
	Weight (kg) (main unit only)		3.9	4.2
Environmental requirements (Note 4)	Temperature	Acceptable operating range	0°C to 50°C	
		When not operating (not energized)	-10°C to 60°C	
		During storage and transportation	-25°C to 65°C	
	Relative humidity	Acceptable operating range	10% to 90% (non-condensing)	
		When not operating (not energized)	8% to 90% (non-condensing)	
		During storage and transportation	5% to 90% (non-condensing)	
	Suspended particulates		Suspended particulates smaller than approx. 10 microns: no more than 0.15 mg/m ³	
Vibration (m/s ²)		No more than 2.45		
Applicable standards	EMI standard		VCCI Class A	
	Harmonic current emission standard		JIS C61000-3-2	
	EMS standard		JEITA IT-3001A	
	Safety standard		UL60950-1 compliant	

(Note 1) Measurement conditions are as follows:

- Physical media: 1000BASE-T, 1000BASE-X, 10GBASE-R
- Packet type: Layer 2 forwarding without flooding
- Packet length: 64 bytes
- QoS and filters: Not set

(Note 2) This is the range within which normal operation is guaranteed.

(Note 3) These values are based on the measurement methods specified by the Energy Saving Act (Act on the Rational Use of Energy).

(Note 4) Do not install the Switch in the following locations. Failure to observe this caution might shorten the life of the Switch.

- Locations where the switch is exposed to hydrogen sulfide (as in a hot spring area) or salt (as in a sea shore area).

(Note 5) The number of available ports is reduced by the number of shared SFP/SFP+ port used for 1000BASE-X (SFP).

(Note 6) Four of the ports are shared SFP/SFP+ port. Therefore, the number of available ports is reduced by the number of shared SFP/SFP+ port used for 10GBASE-R (SFP+).

(Note 7) The SFP ports of the AX2530S-24T/-24TD/-48T/-48TD/-48T2X and the SFP/SFP+ shared port of each model support 1000BASE-T only.

(Note 8) Two of the ports are shared SFP/SFP+ port. Therefore, the number of available ports is reduced by the number of shared SFP/SFP+ port used for 10GBASE-R (SFP+).

3.2 Functionality

Table 4 shows the functionalities supported by the AX2500S series and their relevant standards.

Table 4 List of functionality

Category	Functionality		Relevant standards	Remarks	
LAN	Ethernet	10BASE-T/100BASE-TX/1000BASE-T	IEEE 802.3 IEEE 802.3u IEEE 802.3ab		
		10BASE-T/100BASE-TX/1000BASE-T (SFP)	IEEE 802.3 IEEE 802.3u IEEE 802.3ab	(Note 9)	
		100BASE-FX (SFP)	IEEE 802.3 IEEE 802.3u	(Note 8)	
		1000BASE-X (SX/LX)	IEEE 802.3z		
		1000BASE-X (SX2)	--	(Note 8)	
		1000BASE-X (BX-U/D)	IEEE 802.3ah		
		1000BASE-X (BX40-U/D)	--		
		1000BASE-X (LH)	--		
		10GBASE-R (SR/LR) (SFP+)	IEEE 802.3ae		
		10GBASE-R (ER) (SFP+)	IEEE 802.3ae		
		10GBASE-CU (SFP+)	--		
		Flow control	IEEE 802.3x		
		Auto negotiation extended functionality	10BASE-T/100BASE-TX/1000BASE-T downshift	--	(Note 1)
		IEEE 802.3ad link aggregation		IEEE 802.3ad	
Jumbo frame		--			
Layer 2 functionality	Transparent bridge		--		
	VLAN	Port VLAN	IEEE 802.1Q		
		VLAN tagging	IEEE 802.1Q		
		Protocol VLAN	--		
		MAC VLAN	--		
		Tag translation	--		
	VLAN tunneling		--		
	Inter-port relay blocking functionality		--		
	Spanning Tree Protocol	STP	IEEE 802.1D IEEE 802.1t		
		RSTP	IEEE 802.1w		
		MSTP	IEEE 802.1s		
		PVST+	--		
		BPDU filter	--		
		Loop guard	--		
	Uplink redundancy		--		
	Autonomous Extensible Ring Protocol		--		
	IGMP/MLD snooping		draft-ietf-magma-snoop-12.txt		
	IGMPv3 snooping				
	Storm control		--		
	IEEE 802.3ah, UDLD		IEEE 802.3ah		
L2 loop detection		--			
CFM (Connectivity Fault Management) (Ether OAM)		IEEE 802.1ag			
Additional functionality	Filters	Flow detection	Layer 2 conditions	--	
			Layer 3 conditions (IPv4)	--	
			Layer 3 conditions (IPv6)	--	
			Layer 4 conditions (IPv4)	--	
			Layer 4 conditions (IPv6)	--	
	QoS	Flow detection	Layer 2 conditions	--	
			Layer 3 conditions (IPv4)	--	
			Layer 3 conditions (IPv6)	--	
			Layer 4 conditions (IPv4)	--	
			Layer 4 conditions (IPv6)	--	
		Marking	User priority rewriting	--	
			DSCP updating	--	
			Priority determination	CoS mapping	--
	Drop control	Tail drop	--		

Category	Functionality		Relevant standards	Remarks			
	Shaper	Scheduling	PQ	--			
			WRR	--	WRR: Weighted (number of frames) round robin		
			WFQ	--			
			PQ + WRR	--			
		Port bandwidth control	--				
	Diff-Serv			--			
	Layer 2 authentication	IEEE 802.1X	Port-based authentication (static)	IEEE 802.1X RFC 2865 RFC 2866			
			Port-based authentication (dynamic)	RFC 2868 RFC 2869 RFC 3579 RFC 3580 RFC 3748			
		Web authentication	Fixed VLAN mode	URL redirection	--	(Note 2)	
				External web server redirection functionality		NEW	
				Keep Alive functionality			
				Internal DB			
				RADIUS linkage			
			Dynamic VLAN mode	URL redirection			
				External web server redirection functionality			NEW
				Internal DB			
				RADIUS linkage			
				URL to jump to after authentication	Specified URL Request URL before authentication		
		One-time password authentication		--		(Note 2) (Note 3)	
		MAC-based authentication	Fixed VLAN mode	Internal DB	--		
				RADIUS linkage	--		
				Dynamic VLAN mode	--		
			Dynamic VLAN mode	Internal DB	--		
	RADIUS linkage			--			
	Mixed authentication on a port	IEEE 802.1X/ Web authentication/ MAC-based authentication	--				
Common to authentication	Limited number of authentications	--					
	Forced authentication functionality	--		(Note 4)			
Multi-step authentication		--					
Dynamic ACL/QoS functionality		--		NEW			
Secure Wake-On-LAN		--		(Note 3)			
IPv6 host functionality		--					
IPv4 DHCP server functionality		RFC 2131 RFC 2132		DHCP option			
DHCP snooping		--					
Port mirroring	Local	--		(Note 11)			
Reliability	Environmental monitoring		--				
	Self-diagnosis (MD)		--				
	Switch redundancy switching functionality	GSRP aware	--				
	SML (Split Multi Link)		--		(Note 3)		
Network management	SNMP	v1, v2c	RFC 1155 RFC 1157 RFC 1901 RFC 1902 RFC 1903 RFC 1904 RFC 1905 RFC 1906 RFC 1907 RFC 1908 RFC 2578 RFC 2579 RFC 2580				

Category	Functionality		Relevant standards	Remarks	
		v3	RFC 3410 RFC 3411 RFC 3412 RFC 3413 RFC 3414 RFC 3415 RFC 3416 RFC 3417 RFC 3584		
	MIB-II, Interface MIB		RFC 1158 RFC 1213 RFC 2233 RFC 2863 RFC 3418	(Certain MIBs only)	
	IPv6 MIB		RFC 4022 RFC 4113 RFC 4293		
	dot1dBridgeMIB		RFC 1493 RFC 2674 RFC 4363		
	Ethernet MIB		RFC 1643		
	CFM-MIB		IEEE 802.1ag		
	RMON		RFC 1757 RFC 2819		
	Private MIB		--		(Note 5)
sFlow		RFC 3176			
Operation and maintenance	Operation terminal connection	Serial (Console)	--		
	Configuration	CLI	--		
	Security	Login authentication	Password	--	
			Host address	--	
			RADIUS	RFC 2865	
		One-time password authentication	--	(Note 3)	
		SSH (Ver.1/Ver.2)	RFC4251(Supported partially) RFC4252(Supported partially) RFC4253(Supported partially) RFC4254(Supported partially) RFC4716(Supported partially)	(Note 12)	
	Collection of management information	Display of switch/interface status		--	
		Operation message log		--	
		LLDP		IEEE 802.1AB/D6.0 IEEE 802.1AB-2005	
		Statistics on a line-by-line basis		--	
	NTP		RFC 2030	(Note 6)	
	Command-free maintenance functionality		--		
	Power saving functionality	LED automatic brightness change		--	
		Port power saving	Power saving for ports in the link-down status	--	(Note 10)
			Port shutdown (setting for not using ports)	--	
Dynamic power saving		Switch sleep	--	(Note 7)	
		Power saving for ports in the link-down status	--	(Note 10)	
		Port shutdown (setting for not using ports)	--		
	LED brightness control	--			
	Power consumption information indication	--			

Legend --: None

(Note 1) Hardware-based execution

(Note 2) SSL (Secure Socket Layer)-based encrypted communication is also supported.

(Note 3) To use one-time password authentication, secure Wake-On-LAN, or SML, the OS-L2A-U advanced software upgrade license is required.

(Note 4) Enabled only when RADIUS authentication is used.

(Note 5) AX2500S series switches do not support the following private MIBs:

- axsDHCP group
- axsGSRPMIB group
- axsOADP group
- axsFLOW group
- axs2430sManagement
- ICMP group (HP private MIB)

(Note 6) Only the Sntp client functionality is supported.

(Note 7) The wake-up option is supported.

(Note 8) Not functional on the shared SFP/SFP+ ports.

(Note 9) The SFP ports of the AX2530S-24T/-24TD/-48T/-48TD/-48T2X and the SFP/SFP+ shared port of each model support 1000BASE-T only.

(Note 10) Not applicable to the SFP and the shared SFP/SFP+ ports.

(Note 11) A maximum of two mirror ports can be set from Ver.3.3 (for mirroring sessions, only one pair can be set).

(Note 12) SSH is not supported in OS-L2B-A and OS-L2A-A.

4. Ordering Information

Table 5 Ordering Information

No.	Model name	Abbreviated name	Basic specifications
LAN switch			
1	AX-2530-24T-XX	25X-24T	AX2530S-24T basic model - Gigabit Ethernet: 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports AC power supply - Fanless
2	AX-2530-24TD-XX	25X-24TD	AX2530S-24TD basic model - Gigabit Ethernet: 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports DC power supply - Fanless Supported in Ver.3.5 and later
3	AX-2530-48T-XX	25X-48T	AX2530S-48T basic model - Gigabit Ethernet: 52 ports (48 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports AC power supply - Semi-fanless
4	AX-2530-48TD-XX	25X-48TD	AX2530S-48TD basic model - Gigabit Ethernet: 52 ports (48 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports DC power supply - Semi-fanless Supported in Ver.3.5 and later
5	AX-2530-24S4X-XX	25X-24S4X	AX2530S-24S4X basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 1000BASE-X (SFP) + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports AC power supply Supported in Ver. 3.1 and later
6	AX-2530-24S4XD-XX	25X-24S4XD	AX2530S-24S4XD basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 1000BASE-X (SFP) + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports DC power supply Supported in Ver.3.5 and later
7	AX-2530-24T4X-XX	25X-24T4X	AX2530S-24T4X basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports AC power supply Supported in Ver. 3.2 and later
8	AX-2530-48T2X-XX	25X-48T2X	AX2530S-48T2X basic model - Gigabit Ethernet: Up to 52 ports (48 ports for fixed 10/100/1000BASE-T + 2 ports for fixed 1000BASE-X (SFP) + 2 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 2 ports (2 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B-A) - SSH not supported - Supports AC power supply Supported in Ver. 3.2 and later

No.	Model name	Abbreviated name	Basic specifications
9	AX-2530-24T-BX	25B-24T	AX2530S-24T basic model - Gigabit Ethernet: 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports AC power supply - Fanless
10	AX-2530-24TD-BX	25B-24TD	AX2530S-24TD basic model - Gigabit Ethernet: 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports DC power supply - Fanless Supported in Ver.3.5 and later
11	AX-2530-48T-BX	25B-48T	AX2530S-48T basic model - Gigabit Ethernet: 52 ports (48 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports AC power supply - Semi-fanless
12	AX-2530-48TD-BX	25B-48TD	AX2530S-48TD basic model - Gigabit Ethernet: 52 ports (48 ports for fixed 10/100/1000BASE-T + 4 ports for 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports DC power supply - Semi-fanless Supported in Ver.3.5 and later
13	AX-2530-24S4X-BX	25B-24S4X	AX2530S-24S4X basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 1000BASE-X (SFP) + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports AC power supply Supported in Ver. 3.1 and later
14	AX-2530-24S4XD-BX	25B-24S4XD	AX2530S-24S4XD basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 1000BASE-X (SFP) + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports DC power supply Supported in Ver.3.5 and later
15	AX-2530-24T4X-BX	25B-24T4X	AX2530S-24T4X basic model - Gigabit Ethernet: Up to 28 ports (24 ports for fixed 10/100/1000BASE-T + 4 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 4 ports (4 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports AC power supply Supported in Ver. 3.2 and later
16	AX-2530-48T2X-BX	25B-48T2X	AX2530S-48T2X basic model - Gigabit Ethernet: Up to 52 ports (48 ports for fixed 10/100/1000BASE-T + 2 ports for fixed 1000BASE-X (SFP) + 2 ports for either 1000BASE-X (SFP) or 10GBASE-R (SFP+)) - 10 Gigabit Ethernet: Up to 2 ports (2 ports for either 10GBASE-R (SFP+) or 1000BASE-X (SFP)) - Equipped with L2 Basic software (OS-L2B) - SSH supported - Supports AC power supply Supported in Ver. 3.2 and later
Option			
1	AX-F0110-SD1GX	SD1G	1 GB SD memory card (Note 1)
2	AX-F0110-3D1CU30CX	SFPP-CU30C	30 cm direct attach cable for 10GBASE-CU Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.5 and later
3	AX-F0110-3D1CU1MX	SFPP-CU1M	1 m direct attach cable for 10GBASE-CU Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.1 and later
4	AX-F0110-3D1CU3MX	SFPP-CU3M	3 m direct attach cable for 10GBASE-CU Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.1 and later
5	AX-F0110-3D1CU5MX	SFPP-CU5M	5 m direct attach cable for 10GBASE-CU Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.1 and later

No.	Model name	Abbreviated name	Basic specifications
Optical transceiver			
1	AX-F6244-3S1SX	SFP-SX	SFP for 1000BASE-SX (MMF: 2 m to 550 m)
2	AX-F6244-3S1S2X	SFP-SX2	SFP for 1000BASE-SX2 (MMF: 2 m to 2 km)
3	AX-F6244-3S1LX	SFP-LX	SFP for 1000BASE-LX (MMF: 2 m to 550 m) (SMF: 2 m to 5 km)
4	AX-F6244-3SB1UX	SFP-BX1U	SFP for 1000BASE-BX10-U (SMF: 0.5 m to 10 km)
5	AX-F6244-3SB1DX	SFP-BX1D	SFP for 1000BASE-BX10-D (SMF: 0.5 m to 10 km)
6	AX-F6244-3SB4UX	SFP-BX4U	SFP for 1000BASE-BX40-U (SMF: 0.5 m to 40 km)
7	AX-F6244-3SB4DX	SFP-BX4D	SFP for 1000BASE-BX40-D (SMF: 0.5 m to 40 km)
8	AX-F6244-3S1LHX	SFP-LH	SFP for 1000BASE-LH (SMF: 2 m to 70 km)
9	AX-F6244-3S1TX	SFP-T	SFP for 10BASE-T/100BASE-TX/1000BASE-T (UTP: 100 m) Supported in Ver. 3.1.A and later
10	AX-F6244-3S1FX	SFP-FX	SFP for 100BASE-FX (MMF: 2 m to 2 km) Only available with the AX2530S-24S4X/-24S4XD (Note 2) Supported in Ver. 3.1 and later
11	AX-F0110-3P1SX	SFPP-SR	SFP+ for 10GBASE-SR (MMF: 2 m to 300 m) Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.1 and later
12	AX-F0110-3P1LX	SFPP-LR	SFP+ for 10GBASE-LR (SMF: 2 m to 10 km) Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.1 and later
13	AX-F0110-3P1EX	SFPP-ER	SFP+ for 10GBASE-ER (SMF: 2 m to 40 km) Only available with the AX2530S-24T4X/-48T2X/-24S4X/-24S4XD Supported in Ver. 3.2.B and later
Upgrade license			
1	AX-P2530-22AUX	OS-L2A-U	Advanced software upgrade license for the AX2500S series Provides the following advanced functionality: - Secure Wake-On-LAN - RSA SecurID linkage - SML (Split Multi Link)

(Note 1) No software or script is included in the SD memory card shipped with the switch.

(Note 2) Only available for dedicated 1000BASE-X (SFP) ports.

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ALAXALA Networks Corporation

<http://www.alaxala.com/en/>

Shinkawasaki Mitsui Bldg. West Tower,
1-1-2 Kashimada,
Saiwai-ku, Kawasaki-shi, Kanagawa 212-0058
Japan

Contact URL:

<http://www.alaxala.com/en/contact/>

Contact:

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