IE200 Series

Industrial Ethernet, Layer 2 Switches

Our ruggedized IE200 Industrial Ethernet switches are built for enduring performance in harsh environments, such as those found in manufacturing, transportation and physical security. Offering high throughput, rich functionality and advanced security features, IE200 switches deliver the performance and reliability demanded by industrial deployments in the Internet of Things (IoT) age.

Overview

The IE200 Series are wirespeed Layer 2 switches for industrial Ethernet applications. With a wide operating temperature range of between -40°C and 75°C, they tolerate harsh and demanding environments, such as those found in industrial and outdoor deployment.

Device management is provided via Industry-standard CLI, SNMP, Telnet, SSH, or Allied Telesis Management Framework™ (AMF). AMF is unique to Allied Telesis managed devices, offering simplified device provisioning, recovery and firmware upgrade management.

Performance

The IE200 Series of high performance and cost-effective managed switches meets the high reliability requirements of industrial network operations. These robust switches provide network managers with several key features, using the simple web-based management function, including port-based VLANs, IEEE 802.1p, QoS, port trunking/link aggregation, port mirroring, priority queues, and IEEE 802.1x security support. With support for up to 2K MAC addresses, the IE200 Series is the ideal option for integrating management into any network solution.

Securing the Network Edge

To ensure data protection, it is important to control network access. Protocols such as IEEE 802.1X port-based authentication guarantee that only known users are connected to the network. Unknown users who physically connect can be segregated into a pre-determined part of the network, offering network guests such benefits as Internet access, while ensuring the integrity of private network data.

Gigabit and Fast Ethernet Support

The IE200 Series SFP ports support both Gigabit and Fast Ethernet Small Form-Factor Pluggables (SFPs). This makes IE200 Series switches ideal for environments where Gigabit fiber switches will be phased in over time. This allows for connectivity to the legacy 100FX hardware until it is upgraded to Gigabit Ethernet.

Support for both speeds of SFPs allows organizations to stay within budget as they migrate to faster technologies.

High Network Resiliency

The IE200 Series supports highly stable and reliable network switching with a recovery time of less than 50ms. You can customize the IE200 with the most appropriate mechanism and protocol to prevent network connection failure. Choices include Allied Telesis Ethernet Protection Switched Ring (EPSRing™), and the standard ITU-T G.8032.

Configurable Power Budget

On the AT-IE200-6FP and AT-IE200-6GP, you can configure the overall power budget as well as the power feeding limit on a per-port basis, to establish a close relationship between the power sourcing feature with the real capabilities of the external Power Supply Unit (PSU).*

* Power supply must be compliant with local/national safety and electrical code requirements. Select the supply with the most appropriated output power derating curve.

Key Features

- AlliedWare Plus™ functionalities
- Allied Telesis Management Framework™ (AMF) node
- Industry-leading QoS
- Active Fiber Monitoring™
- Ethernet Protection Switched Ring (EPSRing™)
- Ethernet Ring Protection Switching (ITU-T G.8032)
- IEEE 802.3at PoE+ sourcing (30W)
- High Availability Network Power (HANP)
- Enhanced Thermal Shutdown
- Redundant power inputs
- Alarm Input/Output
- USB port for image/configuration backup, restore, and upgrade

Key Details

Allied Telesis Management Framework (AMF)

- Allied Telesis Management Framework (AMF) is a sophisticated suite of management tools that provide a simplified approach to network management. Common tasks are automated or made so simple that the every-day running of a network can be achieved without the need for highly-trained, and expensive, network engineers.
- Powerful features like centralized management, auto-backup, auto-upgrade, auto-provisioning and auto-recovery enable plug-and-play networking and zero-touch management.

High Availability

- EPSRing™ and ITU-T G.8032 allow to form a protected ring capable of recovery within as little as 50ms; These features are perfect for high performance and high availability.
- Spanning-Tree protocol compatible; RSTP; MSTP; static Link Aggregation Group (LAG) and dynamic Link Aggregation Control Protocol (LACP) support

Industry-leading Quality of Service (QoS)

- Comprehensive low-latency wire-speed QoS provides flow-based traffic management with full classification, prioritization, traffic shaping and min/max bandwidth profiles. Enjoy boosted network performance and guaranteed delivery of business-critical Ethernet services and applications. Time-critical services such as voice and video take precedence over non-essential services such as file downloads, maintaining responsiveness of your applications.

Active Fiber Monitoring

- Active Fiber Monitoring prevents eavesdropping on fiber communications by monitoring received optical power. If an intrusion is detected, the link can be automatically shut down, or an operator alert can be sent.

UniDirectional Link Detection

- UniDirectional Link Detection (UDLD) is useful for monitoring fiber-optic links between two switches that use two single-direction fibers to transmit and receive packets. UDLD prevents traffic from being sent across a bad link by blocking the ports at both ends of the link in the event that either the individual transmitter or receiver for that connection fails.

Link Layer Discovery Protocol – Media Endpoint Discovery (LLDP – MED)

- LLDP-MED extends LLDP basic network endpoint discovery and management functions. LLDP-MED allows for media endpoint specific messages, providing detailed information on power equipments, network policy, location discovery (for Emergency Call Services) and inventory.

Voice VLAN

- Voice VLAN automatically separates voice and data traffic into two different VLANs. This automatic separation places delay-sensitive traffic into a voice- dedicated VLAN, which simplifies QoS configurations.

Security (Tri-authentication)

- Authentication options on the IE200 Series also include alternatives to IEEE 802.1X port-based authentication, such as web authentication, to enable guest access and MAC authentication for endpoints that do not have an IEEE 802.1X supplicant. All three authentication methods—IEEE 802.1X, MAC-based and Web-based—can be enabled simultaneously on the same port for tri-authentication.

Access Control Lists (ACLs)

- AlliedWare Plus delivers industry-standard Access Control functionality through ACLs. ACLs filter network traffic to control whether routed packets are forwarded or blocked at the port interface. This provides a powerful network security mechanism to select the types of traffic to be analyzed, forwarded, or influenced in some way.

Dynamic Host Configuration Protocol (DHCP) Snooping

- DHCP servers allocate IP addresses to clients, and the switch keeps a record of addresses issued on each port. IP source guard checks against this DHCP snooping database to ensure only clients with specific IP and/or MAC address can access the network. DHCP snooping can be combined with other features, like dynamic ARP inspection, to increase security in layer 2 switched environments, and also provides a traceable history, which meets the growing legal requirements placed on service providers.

PoE and PoE+

- IE200 is a Power over Ethernet PoE Power Sourcing Device (PoE PSD) which is compliant with IEEE802.3af, IEEE802.3at standards. Each port provides either 15.40W PoE with 12.95W available to the powered device (IEEE802.3af, IEEE802.3at Type 1), or 30.00W PoE+ with 25.50W available to the powered device (IEEE802.3at Type 2). Practical use is to support PTZ cameras with heater/blowers for outdoor application, enhanced infrared lighting, lighting controller and LED lighting fixtures, Remote Point of Sale (POS) kiosks, network switches, as well as other devices.
- IE200 allows the configuration of the overall power budget as well as the power feeding limit on port basis; that establishes a close relationship between power sourcing feature with the real capabilities of the external PSU.

High Availability Network Power (HANP)

- Enabling the unique High Availability Network Power (HANP) feature, the switch retains PoE sourcing during restart events, such as those due to operator command, software exception, watchdog timeout or diagnostic failures.
- The restart event is not propagated to the end devices, and camera operation is not affected.

Alarm Input/Output

- Alarm Input/Output are useful for security integration solution; they respond to events instantly and automatically by a pre-defined event scheme, and notify alert message to the monitoring control center. The 2-pin terminal blocks may be connected to sensors and actuator relays. Alarm Input receives signal from external devices like motion sensor and magnets; that will trigger subsequent actions if something changes. Alarm output controls external device upon a event (i.e. sirens, strobes, PTZ camera).

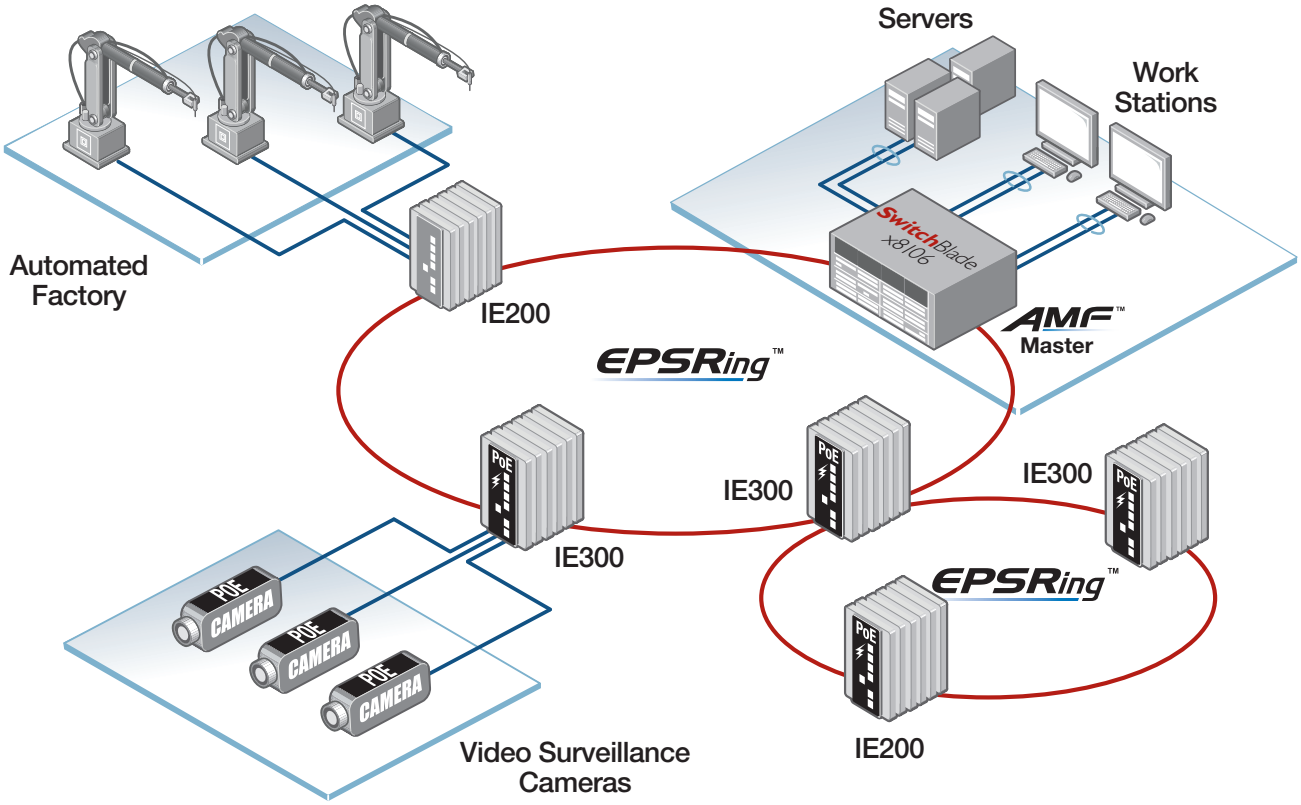
Enhanced Thermal Shutdown

- The enhanced Thermal Shutdown feature acts when the switch exceeds the safe operating temperature; different stages allow to preserve services and prevent damage. When the operating temp reaches critical levels, the system cuts the PoE sourcing to non-critical interfaces first, then to critical interfaces; if the temp still increases, then all services will be disabled and the system will enter the standby mode. The system restores operation when the temperature returns at acceptable levels.

Premium Software License

- By default, the IE200 Series offers a comprehensive Layer 2 feature set that includes IPv6 management features. The feature set can easily be upgraded with premium software licenses.

Key Solutions



Ethernet Protection Switched Ring (EPSRing™) and ITU-T G.8032 provide high speed resilient ring connectivity; this diagram shows the IE Series in a double ring network topology.

The IE Series operates at a large -40°C to +75°C temperature range and allows deployment in outdoor and harsh industrial environments.

PoE models feed 30 Watts per port and support remotely controlled pan, tilt and zoom (PTZ) video cameras.

The PoE models of IE200 feed 30 Watts per port and support remotely controlled video cameras (PTZ - Pan, Tilt, Zoom).

Management can be automated with the Allied Telesis Management Framework™ (AMF).

Specifications

PRODUCT	10/100T (RJ-45) COPPER PORTS	10/100/1000T (RJ-45) COPPER PORTS	100/1000X SFP PORTS	SWITCHING FABRIC	FORWARDING RATE (64-BYTE PACKETS)	POE SOURCING PORTS	POE BUDGET
AT-IE200-6FP-80	4	-	2	4.8Gbps	3.57Mpps	4	120W
AT-IE200-6FT-80	4	-	2	4.8Gbps	3.57Mpps	-	-
AT-IE200-6GP-80	-	4	2	12.0Gbps	8.93Mpps	4	120W
AT-IE200-6GT-80	-	4	2	12.0Gbps	8.93Mpps	-	-

Performance

MAC address	2K entries
Packet Buffer	256 KBytes (2 Mbits)
Priority Queues	4
Simultaneous VLANs	4K
VLANs ID range	1 – 4094
Jumbo frames	9KB jumbo packets
Multicast groups	1K (layer 2), 256 (layer 3)

Other Interfaces

Type	Serial console (UART)
Port no.	1
Connector	RJ-45 female
Type	USB2.0 (Host Controller Class)
Port no.	1
Connector	Type A receptacle
Type	Alarm Input
Port no.	1
Connector	2-pin Terminal Block
Type	Alarm Output
Port no.	1
Connector	2-pin Terminal Block
Type	Power Input
Port no.	2
Connector	2-pin Terminal Block

Reliability

- Modular AlliedWare™ operating system
- Redundant power input
- Full environmental monitoring of temperature and internal voltages. SNMP traps alert network managers in case of any failure
- Enhanced Thermal Shutdown

Flexibility and Compatibility

- Gigabit SFP ports supports any combination of Allied Telesis 10Mbps, 100Mbps and 1Gbps SFP modules listed in this document under Ordering Information

Diagnostic Tools

- Active Fiber Monitoring detects tampering on optical links
- Automatic link flap detection and port shutdown
- Built-In Self Test (BIST)
- Cable fault locator (TDR)
- Event logging via Syslog over IPv4
- Find-me device locator
- Optical Digital Diagnostic Monitoring (DDM)
- Ping polling and TraceRoute for IPv4 and IPv6
- UniDirectional Link Detection (UDLD)

IPv4 Features

- DHCP client

IPv6 Features

- DHCPv6 client
- IPv6 hardware ACLs
- Device management over IPv6 networks with SNMPv6, Telnetv6 and SSHv6

Management

- Front panel 3 LED provides at-a-glance PSU status and fault information
- Allied Telesis Management Framework (AMF) node
- Console management port on the front panel for ease of access
- Eco-friendly mode allows ports and LEDs to be disabled to save power
- Industry-standard CLI with context-sensitive help
- Powerful CLI scripting engine
- Built-in text editor
- Event-based triggers allow user-defined scripts to be executed upon selected system events
- SNMPv1/v2c/v3 support
- Comprehensive SNMP MIB support for standards based device management
- USB interface allows software release files, configurations and other files to be stored for backup and distribution to other devices
- Recessed Reset button

Quality of Service

- 4 priority queues with a hierarchy of high priority queues for real-time traffic, and mixed scheduling, for each switch port
- Limit bandwidth per port or per traffic class down to 64kbps
- Wirespeed traffic classification with low latency essential for VoIP and real-time streaming media applications
- Policy-based QoS based on VLAN, port, MAC and general packet classifiers
- Policy-based storm protection
- Extensive remarking capabilities
- Taildrop for queue congestion control
- Strict priority, weighted round robin or mixed scheduling
- IP precedence and DiffServ marking based on layer 2, 3 and 4 headers

Resiliency Features

- Control Plane Prioritization (CPP) ensures the CPU always has sufficient bandwidth to process network control traffic
- Ethernet Protection Switched Rings (EPSRing™) with SuperLoop Protection (SLP)
- Ethernet Ring Protection Switching (ITU-T G.8032)
- Loop protection: loop detection
- Link Aggregation Control Protocol (LACP)
- Multiple Spanning Tree Protocol (MSTP)
- PVST+ compatibility mode
- Rapid Spanning Tree Protocol (RSTP)
- Spanning Tree Protocol (STP) with root guard

Multicasting

- Internet Group Membership Protocol (IGMPv1/v2/v3)
- IGMP snooping with fast leave and no timeout feature
- IGMP static groups
- Multicast Listener Discovery (MLDv1/v2)
- MLD snooping

Security Features

- Access Control Lists (ACLs) based on layer 3 and 4 headers
- Configurable ACLs for management traffic
- Authentication, Authorization and Accounting (AAA)
- Bootloader can be password protected for device security
- BPDU protection
- DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI)
- Dynamic VLAN assignment
- Network Access and Control (NAC) features manage endpoint security
- Secure Copy (SCP)
- Strong password security and encryption
- TACACS+authentication and accounting
- Tri-authentication: MAC-based, web-based and IEEE 802.1X
- Auth-fail and guest VLANs

Environmental Specifications

Operating temp.	-40°C to 75°C (-40°F to 167°F)
Storage temp.	-40°C to 85°C (-40°F to 185°F)
Operating humidity	5% to 95% non-condensing
Storage humidity	5% to 95% non-condensing
Operating altitude	up to 3,000 m (9,843 ft)

Mechanical

EN 50022, EN 60715 Standardized mounting on rails

Environmental Compliance

RoHS
China RoHS
WEEE

Electrical/Mechanical Approvals

Compliance Mark	CE, FCC
Safety	EN/IEC/UL 60950-1 A2 EN/IEC/UL 60950-22 CAN/CSA-22.2 no. 60950-1 CAN/CSA-22.2 no. 60950-22
EMC	ICES-003 EN55024 EN55032 Class A EN61000-3-2 EN61000-3-3 EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 EN61000-4-11 FCC Part 15B, Class A VCCI, Class A
Shock	EN60068-2-27 EN60068-2-31
Vibration	EN60068-2-6
Traffic Control	NEMA TS2

Physical Specifications

PRODUCT	WIDTH	HEIGHT	DEPTH	WEIGHT	ENCLOSURE	MOUNTING	PROTECTION RATE
AT-IE200-6FP-80	95 mm (3.74 in)	159 mm (6.25 in)	134 mm (5.28 in)	1.5 Kg (3.2 lb)	aluminum shell	DIN rail, wall mount	IP30, IP31*
AT-IE200-6FT-80	55 mm (2.17 in)	159 mm (6.25 in)	134 mm (5.28 in)	0.9 Kg (2.0 lb)	aluminum shell	DIN rail, wall mount	IP30, IP31*
AT-IE200-6GP-80	95 mm (3.74 in)	159 mm (6.25 in)	134 mm (5.28 in)	1.5 Kg (3.2 lb)	aluminum shell	DIN rail, wall mount	IP30, IP31*
AT-IE200-6GT-80	55 mm (2.17 in)	159 mm (6.25 in)	134 mm (5.28 in)	0.9 Kg (2.0 lb)	aluminum shell	DIN rail, wall mount	IP30, IP31*

* with additional cover tool

Power Characteristics

PRODUCT	INPUT VOLTAGE	COOLING	NO POE LOAD			FULL POE LOAD			MAX POE POWER	MAX POE SOURCING PORTS		
			MAX POWER CONSUMPTION	MAX HEAT DISSIPATION	NOISE	MAX POWER CONSUMPTION	MAX HEAT DISSIPATION	NOISE		POE (15W)	POE+ (30W)	HI-POE (60W)
AT-IE200-6FP-80	24~48V DC	fanless	35W		-	155W *	120 BTU/hr	-	120W	4	4	-
AT-IE200-6FT-80	12~48V DC	fanless	32W	110 BTU/hr	-	-	-	-	-	-	-	-
AT-IE200-6GP-80	24~48V DC	fanless	35W		-	155W *	120 BTU/hr	-	120W	4	4	-
AT-IE200-6GT-80	12~48V DC	fanless	32W	110 BTU/hr	-	-	-	-	-	-	-	-

* include PD's consumption and margin

Standards and Protocols

AlliedWare Plus Operating System

Version 5.4.7*

* Available in Q1 2017

Authentication

RFC 1321 MD5 Message-Digest algorithm
RFC 1828 IP authentication using keyed MD5

Encryption

FIPS 180-1 Secure Hash standard (SHA-1)
FIPS 186 Digital signature standard (RSA)
FIPS 46-3 Data Encryption Standard (DES and 3DES)

Ethernet Standards

IEEE 802.1AX Link aggregation (static and LACP)
IEEE 802.2 Logical Link Control (LLC)
IEEE 802.3 Ethernet
IEEE 802.3ad Static and dynamic link aggregation
IEEE 802.3af Power over Ethernet (PoE)
IEEE 802.3at Power over Ethernet plus (PoE+)
IEEE 802.3az Energy Efficient Ethernet (EEE)
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow control - full-duplex operation
IEEE 802.3z 1000BASE-X

IPv4 Standards

RFC 791 Internet Protocol (IP)
RFC 792 Internet Control Message Protocol (ICMP)
RFC 826 Address Resolution Protocol (ARP)
RFC 894 Standard for the transmission of IP datagrams over Ethernet networks
RFC 919 Broadcasting Internet datagrams
RFC 922 Broadcasting Internet datagrams in the presence of subnets
RFC 932 Subnetwork addressing scheme
RFC 950 Internet standard subnetting procedure
RFC 951 Bootstrap Protocol (BootP)
RFC 1042 Standard for the transmission of IP datagrams over IEEE 802 networks
RFC 1071 Computing the Internet checksum
RFC 1122 Internet host requirements
RFC 1191 Path MTU discovery
RFC 1256 ICMP router discovery messages
RFC 1518 An architecture for IP address allocation with CIDR
RFC 1519 Classless Inter-Domain Routing (CIDR)
RFC 1542 Clarifications and extensions for BootP
RFC 1918 IP addressing

IPv6 Standards

RFC 1981 Path MTU discovery for IPv6
RFC 2460 IPv6 specification
RFC 2464 Transmission of IPv6 packets over Ethernet networks
RFC 3484 Default address selection for IPv6
RFC 4007 IPv6 scoped address architecture
RFC 4193 Unique local IPv6 unicast addresses
RFC 4291 IPv6 addressing architecture
RFC 4443 Internet Control Message Protocol (ICMPv6)
RFC 4861 Neighbor discovery for IPv6
RFC 4862 IPv6 Stateless Address Auto-Configuration (SLAAC)
RFC 5014 IPv6 socket API for source address selection
RFC 5095 Deprecation of type 0 routing headers in IPv6
RFC 5175 IPv6 Router Advertisement (RA) flags option
RFC 6105 IPv6 Router Advertisement (RA) guard

Management

AMF MIB and SNMP traps
AT Enterprise MIB
Optical DDM MIB
SNMPv1, v2c and v3
IEEE 802.1ABLink Layer Discovery Protocol (LLDP)

RFC 1155	Structure and identification of management information for TCP/IP-based Internets
RFC 1157	Simple Network Management Protocol (SNMP)
RFC 1212	Concise MIB definitions
RFC 1213	MIB for network management of TCP/IP-based Internets: MIB-II
RFC 1215	Convention for defining traps for use with the SNMP
RFC 1227	SNMP MUX protocol and MIB
RFC 1239	Standard MIB
RFC 1724	RIPv2 MIB extension
RFC 2011	SNMPv2 MIB for IP using SMIv2
RFC 2012	SNMPv2 MIB for TCP using SMIv2
RFC 2013	SNMPv2 MIB for UDP using SMIv2
RFC 2096	IP forwarding table MIB
RFC 2578	Structure of Management Information v2 (SMIv2)
RFC 2579	Textual conventions for SMIv2
RFC 2580	Conformance statements for SMIv2
RFC 2674	Definitions of managed objects for bridges with traffic classes, multicast filtering and VLAN extensions
RFC 2741	Agent extensibility (AgentX) protocol
RFC 2787	Definitions of managed objects for VRRP
RFC 2819	RMON MIB (groups 1,2,3 and 9)
RFC 2863	Interfaces group MIB
RFC 3164	Syslog protocol
RFC 3411	An architecture for describing SNMP management frameworks
RFC 3412	Message processing and dispatching for the SNMP
RFC 3413	SNMP applications
RFC 3414	User-based Security Model (USM) for SNMPv3
RFC 3415	View-based Access Control Model (VACM) for SNMP
RFC 3416	Version 2 of the protocol operations for the SNMP
RFC 3417	Transport mappings for the SNMP
RFC 3418	MIB for SNMP
RFC 3621	Power over Ethernet (PoE) MIB
RFC 3635	Definitions of managed objects for the Ethernet-like interface types
RFC 3636	IEEE 802.3 MAU MIB
RFC 4188	Definitions of managed objects for bridges
RFC 4318	Definitions of managed objects for bridges with RSTP
RFC 4560	Definitions of managed objects for remote ping,traceroute and lookup operations
RFC 6527	Definitions of managed objects for VRRPv3

Multicast Support

IGMP query solicitation
IGMP snooping (IGMPv1, v2 and v3)
IGMP snooping fast-leave
IGMP/MLD multicast forwarding (IGMP/MLD proxy)
MLD snooping (MLDv1 and v2)

RFC 1112	Host extensions for IP multicasting (IGMPv1)
RFC 2236	Internet Group Management Protocol v2 (IGMPv2)
RFC 2710	Multicast Listener Discovery (MLD) for IPv6
RFC 3306	Unicast-prefix-based IPv6 multicast addresses
RFC 3376	IGMPv3
RFC 3810	Multicast Listener Discovery v2 (MLDv2) for IPv6
RFC 3956	Embedding the Rendezvous Point (RP) address in an IPv6 multicast address
RFC 4541	IGMP and MLD snooping switches
RFC 4604	Using IGMPv3 and MLDv2 for source-specific multicast
RFC 4607	Source-specific multicast for IP

Quality of Service (QoS)

IEEE 802.1p	Priority tagging
RFC 2211	Specification of the controlled-load network element service
RFC 2474	DiffServ precedence for eight queues/port
RFC 2475	DiffServ architecture
RFC 2597	DiffServ Assured Forwarding (AF)
RFC 2697	A single-rate three-color marker
RFC 2698	A two-rate three-color marker
RFC 3246	DiffServ Expedited Forwarding (EF)

Resiliency

IEEE 802.1ag	CCP Connectivity Fault Management - Continuity Check Protocol (CCP)
IEEE 802.1D	MAC bridges
IEEE 802.1s	Multiple Spanning Tree Protocol (MSTP)
IEEE 802.1w	Rapid Spanning Tree Protocol (RSTP)
ITU-T G.8032	Ethernet ring protection switching

Security

SSH remote login
SSLv2 and SSLv3
TACACS+ accounting and authentication
IEEE 802.1X authentication protocols (TLS, TTLS, PEAP, MD5)
IEEE 802.1X multi-supplicant authentication
IEEE 802.1X port-based network access control

RFC 2818	HTTP over TLS ("HTTPS")
RFC 2865	RADIUS
RFC 2866	RADIUS accounting
RFC 2868	RADIUS attributes for tunnel protocol support
RFC 3280	Internet X.509 PKI Certificate and Certificate Revocation List (CRL) profile
RFC 3546	Transport Layer Security (TLS) extensions
RFC 3579	RADIUS support for Extensible Authentication Protocol (EAP)
RFC 3580	IEEE 802.1x RADIUS usage guidelines
RFC 3748	PPP Extensible Authentication Protocol (EAP)
RFC 4251	Secure Shell (SSHv2) protocol architecture
RFC 4252	Secure Shell (SSHv2) authentication protocol
RFC 4253	Secure Shell (SSHv2) transport layer protocol
RFC 4254	Secure Shell (SSHv2) connection protocol
RFC 5246	TLS v1.2

Services

RFC 854	Telnet protocol specification
RFC 855	Telnet option specifications
RFC 857	Telnet echo option
RFC 858	Telnet suppress go ahead option
RFC 1091	Telnet terminal-type option
RFC 1350	Trivial File Transfer Protocol (TFTP)
RFC 1985	SMTP service extension
RFC 2049	MIME
RFC 2131	DHCPv4 (client)
RFC 2132	DHCP options and BootP vendor extensions
RFC 2616	Hypertext Transfer Protocol - HTTP/1.1
RFC 2821	Simple Mail Transfer Protocol (SMTP)
RFC 2822	Internet message format
RFC 3046	DHCP relay agent information option (DHCP option 82)
RFC 3315	DHCPv6 client
RFC 4330	Simple Network Time Protocol (SNTP) version 4
RFC 5905	Network Time Protocol (NTP) version 4

VLAN Support

IEEE 802.1Q	Virtual LAN (VLAN) bridges
IEEE 802.1v	VLAN classification by protocol and port
IEEE 802.3ac	VLAN tagging

Voice over IP (VoIP)

LLDP-MED ANSI/TIA-1057
Voice VLAN

Ordering Information

NAME	DESCRIPTION	INCLUDES
AT-FL-IE2-L2-01	IE200 series Layer-2 Premium license	▶ EPSR Master ▶ VLAN double tagging (QinQ) ▶ UDLD
AT-FL-IE2-G8032	IE300 series license for ITU-T G.8032 and Ethernet CFM	▶ ITU-T G.8032 ▶ Ethernet CFM

Switches

AT-IE200-6FP-80
4x 10/100T,
2x 100/1000X SFP,
Industrial Ethernet, Layer 2 Switch, PoE+ Support

AT-IE200-6FT-80
4x 10/100T,
2x 100/1000X SFP,
Industrial Ethernet, Layer 2 Switch

AT-IE200-6GP-80
4x 10/100/1000T,
2x 100/1000X SFP,
Industrial Ethernet, Layer 2 Switch, PoE+ Support

AT-IE200-6GT-80
4x 10/100/1000T,
2x 100/1000X SFP,
Industrial Ethernet, Layer 2 Switch

Supported SFP Modules

Refer to the installation guide for the recommended Max. Operating Temperature according to the selected SFP module.

1Gbps SFP modules

AT-SPBD10-13
1000LX single-mode BiDi SFP, 10 km

AT-SPBD10-14
1000LX single-mode BiDi SFP, 10 km

AT-SPBD20-13/I
Small Form Pluggable, 20 km, industrial temperature

AT-SPBD20-14/I
Small Form Pluggable, 20 km, industrial temperature

AT-SPEX
1000X (LC) SFP, 2 km

AT-SPLX10
1000LX (LC) SFP, 10 km

AT-SPLX10/I
1000LX (LC) SFP, 10km, industrial temperature

AT-SPLX40
1000LX (LC) SFP, 40 km

AT-SPSX
1000SX (LC) SFP, 550 m

AT-SPSX/I
1000SX (LC) SFP, 550 m, industrial temperature

AT-SPTX
1000T SFP, 100 m

AT-SPZX80
1000ZX (LC) SFP, 80 km

100Mbps SFP modules

AT-SPFX/2
100FX (LC) SFP, 2 km

AT-SPFX/15
100FX (LC) SFP, 15 km

AT-SPFXBD-LC-13
100FX (LC) single-mode BiDi SFP, 15 km

AT-S PFXBD-LC-15
100FX (LC) single-mode BiDi SFP, 15 km

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