CentreCOM® GS970EMX Series

Gigabit Layer 3 Lite Access Switches with 10 Gigabit Uplinks

The Allied Telesis CentreCOM GS970EMX series Layer 3 Lite switches provide Gigabit connectivity with 10 Gigabit copper and fiber uplinks. They feature a comprehensive feature-set making them ideal for secure and cost-effective access in small to medium business networks.

Overview

The Allied Telesis GS970EMX series provide high availability, security, and a basic L3 feature set. With Multi-Gigabit and 10 Gigabit copper and fiber uplinks, and a compact fanless design providing silent operation and flexible deployment, they are ideal for the edge of modern business networks.

Network Management

The GS970EMX Series support the AlliedWare Plus™ advanced operating system for consistent management across all devices. The industry-standard Command Line Interface (CLI) reduces time and cost, while the web-based Graphical User Interface (GUI) is built in for easy-to-use visual management.

Network Security

Network security is guaranteed, with powerful control over network traffic types, secure management options, and other multi-layered security features built right in.

Network Access Control (NAC) gives unprecedented control over user access to the network, in order to mitigate threats to network infrastructure.

802.1x port-based authentication, in partnership with standards-compliant dynamic VLAN assignment, checks a user's adherence to network security policies and either grants access or offers remediation. Tri-authentication ensures the network is only accessed by known users and devices, and secure access is available for guests.

Protection from malicious network attacks is provided by security features such as DHCP snooping, STP root guard, BPDU protection, and access control lists. Each of these can be configured to perform a variety of actions upon detection of a suspected attack.

Stackable

Create a VCStack™ of up to four GS970EMX/20 or GS970EMX/28 switches with 40 Gbps of stacking bandwidth. VCStack provides a highly-available system in which network resources are spread out across stacked units, minimizing the impact should any link or unit fail.

Reliability

The GS970EMX Series support Ethernet Protection Switched Ring (EPSRing™), which prevents loops in ring-based networks. EPSR offers rapid detection and extremely fast failover in the event of a link or node failure, with recovery in as little as 50 milliseconds.

The GS970EMX Series can act as the EPSR master with a premium license, ensuring resiliency in Ethernet ring-based networks.

Comprehensive Security

As AMF Plus members, the GS970EMX Series is compatible with our AMF-Security solution, which enables a self-defending network. The AMF–Sec controller responds immediately to any internal malware threats by instructing the GS970EMX to isolate the affected part of the network, and quarantine the suspect device.

ECO Friendly

The GS970EMX Series support Energy Efficient Ethernet, which automatically reduces the power consumed by the switch whenever there is no traffic on a port.

The GS970EMX Series are fanless, providing silent operation, which makes them ideal for desktop or work area deployment.

Key Features

- AlliedWare Plus operating system
- Autonomous Management Framework Plus (AMF Plus) edge node
- Vista Manager EX compatible
- AMF-Security compatible
- 1/2.5/5/10 Multi-Gigabit copper uplink ports
- 1/10G SFP/SFP+ fiber uplink ports
- EPSRing™ for resilient high-speed ring-based networks
- EPSR Master
- VCStack up to 4 units (20 and 28 port models)
- Energy Efficient Ethernet
- Active Fiber Monitoring
- Static and dynamic routing
- Fan-less design for silent operation
- Web-based Device GUI
- Multicast Source Discovery Protocol (MSDP)
- Link Monitoring

Product Specifications

PRODUCT	10/100/1000T (RJ-45) COPPER PORTS	1/2.5/5/10GT COPPER PORT	1/10G SFP+ PORT	TOTAL PORTS	STACKING PORTS	SWITCHING FABRIC	FORWARDING RATE
GS970EMX/10	8	1	1	10	-	56Gbps	41.6Mpps
GS970EMX/20	16	2	2	20	4	72Gbp	83.3Mpps
GS970EMX/28	24	2	2	28	4	128Gbp	95.2Mpps

Physical Specifications

PRODUCT	WIDTH X DEPTH X HEIGHT	MOUNTING	WEIGHT		PACKAGED DIMENSIONS
			UNPACKAGED	PACKAGED	
GS970EMX/10	263 x 179 x 38 mm (10.35 x 7.04 x 1.497 in)	Rack-mount	1.6 kg (3.53 lb)	2.98 kg (6.57 lb)	462 x 258 x 107 mm (18.19 x 10.15 x 4.21 in)
GS970EMX/20	341 x 231 x 44 mm (13.42 x 9.09 x 1.73 in)	Rack-mount	3.0 kg (6.61 lb)	4.42 kg (9.74 lb)	530 x 360 x 120 mm (20.86 x 14.17 x 4.72 in)
GS970EMX/28	341 x 231 x 44 mm (13.42 x 9.09 x 1.73 in)	Rack-mount	3.1 kg (6.84 lb)	4.42 kg (9.74 lb)	530 x 360 x 120 mm (20.86 x 14.17 x 4.72 in)

Latency (microseconds)

PRODUCT	PORT SPEED				
	100MBPS	1GBPS	2.5GBPS	5GBPS	10GBPS
GS970EMX/10	6.22	3.68	3.24	2.68	1.73
GS970EMX/20	7.32	3.73	3.48	3.13	1.87
GS970EMX/28	7.18	3.71	3.39	3.04	1.82

Power Characteristics

PRODUCT	MAX POWER CONSUMPTION (W)	MAX HEAT DISSIPATION (BTU/H)
GS970EMX/10	19	65
GS970EMX/20	28	96
GS970EMX/28	33	114

Specifications

Performance

- Supports 10KB L2 jumbo frames for 2.5G connections, or 12KB for all other connection speeds
- Wire speed multicasting
- 4094 configurable VLANs
- Up to 16K MAC addresses
- 1GB DDR3 SDRAM, 256MB NAND flash memory
- Packet buffer memory: 2MB

Reliability

- Modular AlliedWare Plus operating system
- Temperature and internal voltages. SNMP traps alert network managers in case of any failure

Expandability

- Stack up to four units in a VCStack (GS970EMX/20 and GS970EMX/28 only)
- Premium license for additional features

Flexibility and Compatibility

- 10G SFP+ ports will support any combination of Allied Telesis 1000Mbps SFP and 10GbE SFP+ modules and direct attach cables listed in this document under Ordering Information
- The 1/2.5/5/10G Multi-Gigabit port enables flexible uplink options, and support for legacy cabling
- Port speed and duplex configuration can be set manually or by auto-negotiation

Diagnostic Tools

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

IP Features

- RIP, OSPF, and Static routing for IPv4
- IPv6 static routing
- Device management over IPv6 networks with SNMP, Telnet, SSH
- IPv6 hardware ACLs
- Log to IPv6 hosts with Syslog
- DHCP Client

Management

- Allied Telesis Autonomous Management Framework™ Plus (AMF Plus) enables powerful centralized management and zero-touch device installation and recovery
- Manage the GS970EMX Series switches with Vista Manager EX—our graphical single-pane-of glass monitoring and management tool for AMF Plus networks, which also supports wireless and third party devices
- From AW+ 5.5.2-2, an AMF Plus license operating in the network provides all standard AMF network management and automation features, and also enables the AMF Plus intent-based networking features menu in Vista Manager EX (from version 3.10.1 onwards)
- AMF Security (AMF-Sec) enables a self-defending network—managing the GS970EMX (or other AMF Plus switches) to automatically block the spread of malware by quarantining suspect end devices
- Industry-standard CLI with context-sensitive help
- Built-in text editor and powerful CLI scripting engine
- Comprehensive SNMP MIB support for standards-based device management
- Console management port on the front panel for ease of access
- Event-based triggers allow user-defined scripts to be executed upon selected system events
- Eco-friendly mode allows ports and LEDs to be disabled to save power
- USB interface allows software release files, configurations and other files to be stored for backup and distribution to other devices
- Front panel 7-segment LED provides at-a-glance status and fault information
- Web-based Graphical User Interface (GUI)

Quality of Service

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

Resiliency Features

- EPSRing (Ethernet Protection Switched Rings) with Super Loop Protection (SLP) and enhanced recovery
- STP root guard
- Loop protection: thrash limiting and loop detection
- Dynamic link failover (host attach)
- Control Plane Prioritization (CPP) ensures the CPU always has sufficient bandwidth to process network control traffic
- PVST+ compatibility mode
- BPDU forwarding

Security Features

- MAC address filtering and MAC address lock-down

- Port-based learn limits (intrusion detection)
- Access Control Lists (ACLs) based on layer 3 and 4 headers
- Private VLANs provide security and port isolation for multiple customers using the same VLAN
- Secure Copy (SCP)
- BPDU protection
- Network Access and Control (NAC) features manage endpoint security
- Dynamic VLAN assignment
- Tri-authentication: MAC-based, web-based and IEEE 802.1x
- DoS attack blocking and virus throttling
- DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI)
- Strong password security and encryption
- Auth fail and guest VLANs
- Secure File Transfer Protocol (SFTP) client
- Authentication, Authorisation and Accounting (AAA)
- Bootloader can be password protected for device security
- Configurable ACLs for management traffic
- RADIUS group selection per VLAN or port

Environmental Specifications

- Operating temperature range: 0°C to 50°C (32°F to 122°F)
- Storage temperature range: -25°C to 70°C (-13°F to 158°F)
- Operating relative humidity range: 5% to 90% non-condensing
- Storage relative humidity range: 5% to 95% non-condensing
- Operating altitude range: Up to 3,048 meters maximum (10,000 ft)

Electrical Approvals and Compliances

EMC:

- EN55032 class A

EMI:

- FCC part15 Subpart B/ Class A
- ICES-003:2016, Issue6 Class A
- EN55032:2012 / AC: 2013 Class A
- CISPR 32:2012 ClassA
- RCM AS/NZS CISPR 32 : 2013 Class A
- EN 61000-3-2
- EN 61000-3-3

EMS:

- EN 55024: 2010
- EN 55035: 2017

Safety Standards

- UL62368-1(cULus),
- EN/IEC62368-1(UL-CB/EU)
- EN/IEC 60825-1 (Laser Safety)
- ISO/IEC 15408
- CE
- EAC
- UKCA
- NOM

Restrictions on Hazardous Substances (RoHS) Compliance

- EU RoHS compliant
- China RoHS compliant

Standards and Protocols

Authentication

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

Cryptographic Algorithms

FIPS Approved Algorithms

Encryption (Block Ciphers):

- AES (ECB, CBC, CFB and OFB Modes)
- 3DES (ECB, CBC, CFB and OFB Modes)

Block Cipher Modes:

- CCM
- CMAC
- GCM
- XTS

Digital Signatures & Asymmetric Key Generation:

- DSA
- ECDSA
- RSA

Secure Hashing:

- SHA-1
- SHA-2 (SHA-224, SHA-256, SHA-384. SHA-512)

Message Authentication:

- HMAC (SHA-1, SHA-2(224, 256, 384, 512)

Random Number Generation:

- DRBG (Hash, HMAC and Counter)

Non FIPS Approved Algorithms

RNG (AES128/192/256)
DES
MD5

Encryption (management traffic only)

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 802.2 Logical Link Control (LLC)
IEEE 802.3 Ethernet
IEEE 802.3ab 1000BASE-T
IEEE 802.3ae 10 Gigabit Ethernet
IEEE 802.3az Energy Efficient Ethernet (EEE)
IEEE 802.3bz 2.5GBASE-T and 5GBASE-T ("multi-gigabit")
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow control - full-duplex operation
IEEE 802.3z 1000BASE-X

IPv4 Features

RFC 768 User Datagram Protocol (UDP)
RFC 791 Internet Protocol (IP)
RFC 792 Internet Control Message Protocol (ICMP)
RFC 793 Transmission Control Protocol (TCP)
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 1027 Proxy ARP
RFC 1035 DNS client
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 1591 Domain Name System (DNS)
RFC 1812 Requirements for IPv4 routers
RFC 1918 IP addressing
RFC 2581 TCP congestion control

IPv6 Features

RFC 1981 Path MTU discovery for IPv6
RFC 2460 IPv6 specification
RFC 2464 Transmission of IPv6 packets over Ethernet networks
RFC 2711 IPv6 router alert option
RFC 3484 Default address selection for IPv6
RFC 3587 IPv6 global unicast address format
RFC 3596 DNS extensions to support IPv6
RFC 4007 IPv6 scoped address architecture
RFC 4193 Unique local IPv6 unicast addresses
RFC 4213 Transition mechanisms for IPv6 hosts and routers
RFC 4291 IPv6 addressing architecture
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

AT Enterprise MIB including AMF Plus MIB and SNMP traps
Optical DDM MIB
SNMPv1, v2c and v3
IEEE 802.1AB Link 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 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 2819 RMON MIB (groups 1,2,3 and 9)
RFC 2863 Interfaces group MIB
RFC 3176 sFlow: a method for monitoring traffic in switched and routed networks
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 3635 Definitions of managed objects for the Ethernet-like interface types

RFC 3636 IEEE 802.3 MAU MIB
RFC 4022 MIB for the Transmission Control Protocol (TCP)
RFC 4113 MIB for the User Datagram Protocol (UDP)
RFC 4188 Definitions of managed objects for bridges
RFC 4292 IP forwarding table MIB
RFC 4293 MIB for the Internet Protocol (IP)
RFC 4318 Definitions of managed objects for bridges with RSTP
RFC 4502 RMON 2
RFC 4560 Definitions of managed objects for remote ping, traceroute and lookup operations
RFC 5424 The Syslog protocol

Multicast Support

Bootstrap Router (BSR) mechanism for PIM-SM
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 2715 Interoperability rules for multicast routing protocols
RFC 3376 IGMPv3
RFC 3618 Multicast Source Discovery Protocol (MSDP)
RFC 3810 Multicast Listener Discovery v2 (MLDv2) for IPv6
RFC 3956 Embedding the Rendezvous Point (RP) address in an IPv6 multicast address
RFC 3973 PIM Dense Mode (DM)
RFC 4541 IGMP and MLD snooping switches
RFC 4601 Protocol Independent Multicast - Sparse Mode (PIM-SM): protocol specification (revised)
RFC 4604 Using IGMPv3 and MLDv2 for source-specific multicast
RFC 4607 Source-specific multicast for IP

Open Shortest Path First (OSPF)

OSPF link-local signaling
OSPF MD5 authentication
Out-of-band LSDB resync
RFC 1245 OSPF protocol analysis
RFC 1246 Experience with the OSPF protocol
RFC 1370 Applicability statement for OSPF
RFC 1765 OSPF database overflow
RFC 2328 OSPFv2
RFC 2370 OSPF opaque LSA option
RFC 3101 OSPF Not-So-Stubby Area (NSSA) option
RFC 3509 Alternative implementations of OSPF area border routers
RFC 3623 Graceful OSPF restart
RFC 3630 Traffic engineering extensions to OSPF

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 Features

IEEE 802.1AXLink aggregation (static and LACP)
IEEE 802.1D MAC bridges
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
IEEE 802.3adStatic and dynamic link aggregation

Routing Information Protocol (RIP)

RFC 1058 Routing Information Protocol (RIP)
RFC 2082 RIP-2 MD5 authentication
RFC 2453 RIPv2

Security Features

SSH remote login
SSLv2 and SSLv3
TACACS+ Accounting, Authentication and Authorization (AAA)
IEEE 802.1X Authentication protocols (TLS, TTLS, PEAP and MD5)
IEEE 802.1X Multi-supplicant authentication
IEEE 802.1X Port-based network access control
RFC 2560 X.509 Online Certificate Status Protocol (OCSP)
RFC 2818 HTTP over TLS ("HTTPS")
RFC 2865 RADIUS authentication
RFC 2866 RADIUS accounting
RFC 2868 RADIUS attributes for tunnel protocol support
RFC 2986 PKCS #10: certification request syntax specification v1.7
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 Transport Layer Security (TLS) v1.2
RFC 5280 X.509 certificate and Certificate Revocation List (CRL) profile
RFC 5425 Transport Layer Security (TLS) transport mapping for Syslog
RFC 5656 Elliptic curve algorithm integration for SSH
RFC 6125 Domain-based application service identity within PKI using X.509 certificates with TLS
RFC 6614 Transport Layer Security (TLS) encryption for RADIUS
RFC 6668 SHA-2 data integrity verification for SSH

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 3315 DHCPv6 client
RFC 3633 IPv6 prefix options for DHCPv6
RFC 3646 DNS configuration options for DHCPv6
RFC 4330 Simple Network Time Protocol (SNTP) version 4
RFC 5905 Network Time Protocol (NTP) version 4

VLAN Support

Generic VLAN Registration Protocol (GVRP)
IEEE 802.1Q Virtual LAN (VLAN) bridges
IEEE 802.1v VLAN classification by protocol and port
IEEE 802.3acVLAN tagging

Voice over IP (VoIP)

LLDP-MED ANSI/TIA-1057
Voice VLAN

Feature Licenses

NAME	DESCRIPTION	INCLUDES	STACK LICENSING
AT-FL-G97EMX-01	GS970EMX Premium license	▶ Static Route[1] (128 routes) ▶ RIP[1] (256 routes) ▶ OSPFv2[1] (128 routes) ▶ PIMv4-SM, DM and SSM v4 ▶ EPSR Master[2]	▶ One license per stack member

[1] The standard switch software supports 16 Static, RIP, and OSPF routes
[2] The standard switch software supports EPSR transit mode

Ordering Information

Model availability can vary between regions. Please check to see which models are available in your region.

AT-GS970EMX/10-xx
8-port 10/100/1000T switch with 1x 1/2.5/5/10 Gigabit copper uplink, 1x SFP/SFP+ slot, and a single fixed power supply

AT-GS970EMX/20-xx
16-port 10/100/1000T switch with 2x 1/2.5/5/10 Gigabit copper uplinks, 2x SFP/SFP+ slots, and a single fixed power supply

AT-GS970EMX/28-xx
24-port 10/100/1000T switch with 2x 1/2.5/5/10 Gigabit copper uplinks, 2x SFP/SFP+ slots, and a single fixed power supply

Where xx = 10 for US power cord
30 for UK power cord
40 for Australian power cord
50 for European power cord

AT-RKMT-J05
Rack Mount Tray for GS970EMX/10

AT-RKMT-J13
Rack Mount Kit for GS970EMX/20 and GS970EMX/28

AT-BRKT-J23
Wall mount kit for GS970EMX/10

AT-BRKT-J24
Wall mount kit for GS970EMX/20 and GS970EMX/28

AT-VT-Kit3
Management Cable (USB to Serial Console)

AT-STND-J03
Stand-kit for GS970EMX/20 and GS970EMX/28

10G SFP+ Modules

Any 10G SFP+ module or cable can be used for stacking with the front panel 10G ports

AT-SP10SR
10GSR 850 nm short-haul, 300 m with MMF

AT-SP10SR/I
10GSR 850 nm short-haul, 300 m with MMF industrial temperature

AT-SP10LRa/I
10GLR 1310 nm medium-haul, 10 km with SMF industrial temperature

AT-SP10TM
1G/2.5G/5G/10G, 100m copper, TAA[3]

AT-SP10BD10/I-12
10 GbE Bi-Di (1270 nm Tx, 1330 nm Rx) fiber up to 10 km industrial temperature, TAA[3]

AT-SP10BD10/I-13
10 GbE Bi-Di (1330 nm Tx, 1270 nm Rx) fiber up to 10 km industrial temperature, TAA[3]

AT-SP10BD20-12
10 GbE Bi-Di (1270 nm Tx, 1330 nm Rx) fiber up to 20 km, TAA[3]

AT-SP10BD20-13
10 GbE Bi-Di (1330 nm Tx, 1270 nm Rx) fiber up to 20 km, TAA[3]

AT-SP10TW1
1 meter SFP+ direct attach cable

AT-SP10TW3
3 meter SFP+ direct attach cable

1000Mbps SFP Modules

AT-SPSX
1000SX GbE multi-mode 850 nm fiber up to 550 m

AT-SPEX
1000X GbE multi-mode 1310 nm fiber up to 2 km

AT-SPLX10a
1000LX GbE single-mode 1310 nm fiber up to 10 km

AT-SPLX10/I
1000LX GbE single-mode 1310 nm fiber up to 10 km, industrial temperature

AT-SPLX40
1000LX GbE single-mode 1310 nm fiber up to 40 km

AT-SPBD10-13
1000LX (LC) GbE Bi-Di (1310 nm Tx, 1490 nm Rx) fiber up to 10 km

AT-SPBD10-14
1000LX (LC) GbE Bi-Di (1490 nm Tx, 1310 nm Rx) fiber up to 10 km

AT-SPBD20-13/I
1000BX GbE Bi-Di (1310 nm Tx, 1490 nm Rx) fiber up to 20 km

AT-SPBD20-14/I
1000BX GbE Bi-Di (1490 nm Tx, 1310 nm Rx) fiber up to 20 km

AT-SPBD40-13/I
1000LX (LC) GbE single-mode Bi-Di (1310 nm Tx, 1490 nm Rx) fiber up to 40 km, industrial temperature

AT-SPBD40-14/I
1000LX (LC) GbE single-mode Bi-Di (1490 nm Tx, 1310 nm Rx) fiber up to 40 km, industrial temperature

AT-SPTX
10/100/1000 TX (RJ45), up to 100 m

[3] Trade Act Agreement compliant

617-000689 RevF