CentreCOM® GS970M Series
Managed Gigabit Ethernet Switches

The Allied Telesis CentreCOM GS970M Series of Layer 3 Gigabit switches offer an impressive set of features in a compact design, making them ideal for applications at the network edge.

Overview
Allied Telesis CentreCOM GS970M Series switches provide an excellent access solution for today’s networks, supporting Gigabit to the desktop for maximum performance. The Power over Ethernet Plus (PoE+) models provide an ideal solution for connecting and remotely powering wireless access points, IP video surveillance cameras, and IP phones. The GS970M models feature 8, 16 or 24 Gigabit ports, and 2 or 4 SFP uplinks, for secure connectivity at the network edge.

Management
- Allied Telesis Autonomous Management Framework™ (AMF) enables powerful centralized management and zero-touch device installation and recovery
- 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
- Comprehensive SNMP MIB support for standards-based device management
- Built-in text editor
- Event-based triggers allow user-defined scripts to be executed upon selected system events
- SD/SDHC memory card socket allows software release files, configurations and other files to be stored for backup and distribution to other devices
- Configurable logs and triggers provide an audit trail of SD card insertion and removal

Quality of Service (QoS)
- Eight 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
- Dynamic link failover (host attach)
- EPSRing™ (Ethernet Protection Switched Rings) with enhanced recovery
- Loop protection: loop detection and thrash limiting
- PVST+ compatibility mode

Security Features
- Access Control Lists (ACLs) based on Layer 2, 3 and 4 headers
- Configurable auth-fail and guest VLANs
- 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
- MAC address filtering and MAC address lock-down
- Network Access and Control (NAC) features manage endpoint security
- Port-based limit limits (intrusion detection)
- Private VLANs provide security and port isolation for multiple customers using the same VLAN
- Secure Copy (SCP)
- Strong password security and encryption
- Tri-authentication: MAC-based, Web-based and IEEE 802.1x

Specifications
Performance
- Supports 10K jumbo frames
- Wirespeed multicasting
- Up to 16K MAC addresses
- 512MB DDR SDRAM (GS970M non PoE)
- 256MB DDR SDRAM (GS970M PS)
- 4094 configurable VLANs (GS970M non PoE)
- 2048 configurable VLANs (GS970M PS)
- 64MB flash memory
- Packet Buffer memory: 1.5MB

Diagnostic tools
- Active Fiber Monitoring detects tampering on optical links
- Built-In Self Test (BIST)
- Find-me device locator
- Cable fault locator (TDR)
- Optical Digital Diagnostics Monitoring (ODM)
- Automatic link flap detection and port shutdown
- Ping polling for IPv4 and IPv6
- Port and VLAN mirroring (RSPAN)
- TraceRoute for IPv4 and IPv6

IP Features
- IPv4 static routing and RIP
- Device management over IPv6 networks with SNMPv6, Telnetv6, SSHv6
- NTPv6 client

Key Features
- Modular AlliedWare Plus operating system
- Allied Telesis Autonomous Management Framework (AMF) edge node
- Eco-friendly
- IPv6 features
- IEEE 802.1x/MAC/Web authentication support
- Graphical User Interface (GUI) for easy management
- L3 features supported
  - Static routing
  - RIP
**Product Specifications**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>10/100/1000T (RJ-45) COUPE PORTS</th>
<th>100/1000X SFP PORTS</th>
<th>TOTAL PORTS</th>
<th>POE+ ENABLE PORTS</th>
<th>SWITCHING FABRIC</th>
<th>FORWARDING RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS970M/10PS</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>0</td>
<td>20Gbps</td>
<td>14.9Mpps</td>
</tr>
<tr>
<td>GS970M/10</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>-</td>
<td>20Gbps</td>
<td>14.9Mpps</td>
</tr>
<tr>
<td>GS970M/18PS</td>
<td>16</td>
<td>2</td>
<td>18</td>
<td>16</td>
<td>36Gbps</td>
<td>26.8Mpps</td>
</tr>
<tr>
<td>GS970M/18</td>
<td>16</td>
<td>2</td>
<td>18</td>
<td>-</td>
<td>36Gbps</td>
<td>26.8Mpps</td>
</tr>
<tr>
<td>GS970M/28PS</td>
<td>24</td>
<td>4</td>
<td>28</td>
<td>24</td>
<td>56Gbps</td>
<td>41.7Mpps</td>
</tr>
<tr>
<td>GS970M/28</td>
<td>24</td>
<td>4</td>
<td>28</td>
<td>-</td>
<td>56Gbps</td>
<td>41.7Mpps</td>
</tr>
</tbody>
</table>

**Physical specifications**

**Power characteristics**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>WIDTH X DEPTH X HEIGHT</th>
<th>WEIGHT</th>
<th>PACKAGED DIMENSIONS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS970M/10PS</td>
<td>210 x 275 x 42.5 mm (8.27 x 10.83 x 1.67 in)</td>
<td>2.1 kg (4.6 lb)</td>
<td>43 x 36 x 15 cm (16.93 x 14.17 x 5.90 in)</td>
<td>3.45 kg (7.6 lb)</td>
</tr>
<tr>
<td>GS970M/10</td>
<td>265 x 180 x 42.5 mm (10.43 x 7.08 x 1.67 in)</td>
<td>1.5 kg (3.3 lb)</td>
<td>43 x 36 x 15 cm (16.93 x 14.17 x 5.90 in)</td>
<td>2.85 kg (6.3 lb)</td>
</tr>
<tr>
<td>GS970M/18PS</td>
<td>341 x 231 x 44 mm (13.42 x 9.09 x 1.73 in)</td>
<td>3.0 kg (6.6 lb)</td>
<td>43 x 36 x 15 cm (16.93 x 14.17 x 5.90 in)</td>
<td>3.45 kg (6.8 lb)</td>
</tr>
<tr>
<td>GS970M/18</td>
<td>341 x 231 x 44 mm (13.42 x 9.09 x 1.73 in)</td>
<td>2.4 kg (5.3 lb)</td>
<td>43 x 36 x 15 cm (16.93 x 14.17 x 5.90 in)</td>
<td>4.0 kg (8.8 lb)</td>
</tr>
<tr>
<td>GS970M/28PS</td>
<td>440 x 290 x 44 mm (17.32 x 11.42 x 1.73 in)</td>
<td>4.7 kg (10.4 lb)</td>
<td>53 x 43 x 15 cm (20.86 x 16.93 x 5.90 in)</td>
<td>6.35 kg (14.0 lb)</td>
</tr>
<tr>
<td>GS970M/28</td>
<td>341 x 231 x 44 mm (13.42 x 9.09 x 1.73 in)</td>
<td>2.4 kg (5.3 lb)</td>
<td>43 x 36 x 15 cm (16.93 x 14.17 x 5.90 in)</td>
<td>4.0 kg (8.8 lb)</td>
</tr>
</tbody>
</table>

**Latency (microseconds)**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>PORT SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS970M/10</td>
<td>55µs, 7.8µs, 3.4µs</td>
</tr>
<tr>
<td>GS970M/18</td>
<td>56µs, 7.9µs, 3.4µs</td>
</tr>
<tr>
<td>GS970M/28</td>
<td>59µs, 8.6µs, 4.3µs</td>
</tr>
</tbody>
</table>

**Cryptographic Algorithms**

- **Non FIPS Approved Algorithms**
  - RNG (AES128/192/256)
  - DES
  - MD5

- **FIPS Approved Algorithms**
  - AES (ECB, CBC, CFB and OFB Modes)
  - 3DES (ECB, CBC, CFB and OFB Modes)

- **Block Cipher Modes**
  - ECB
  - CBC
  - CFB
  - OFB

- **Message Authentication**
  - SHA-2 (SHA-224, SHA-256, SHA-384, SHA-512)

- **Random Number Generation**
  - DRBG (Hash, HMAC and Counter)

**IPv4 Features**

- RFC 768: User Datagram Protocol (UDP)
- RFC 791: 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

**IPv6 Features**

- RFC 922: Broadcasting Internet datagrams in the presence of subnets
- RFC 932: Subnetwork addressing scheme
- RFC 950: Internet standard subnetting procedure
- 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 1518: An architecture for IPv6 address allocation with CIDR
- RFC 1519: Classless Inter-Domain Routing (CIDR)
- RFC 1812: Requirements for IPv4 routers
- RFC 1981: Path MTU discovery
- RFC 2453: TCP congestion control

**IPv6 Features**

- RFC 919: IPv6 global unicast address format
- RFC 3596: DNS extensions to support IPv6
- RFC 4007: IPv6 scoped address architecture
- RFC 2581: TCP congestion control

**IPv6 Features**

- RFC 2460: IPv6 specification
- RFC 2464: Transmission of IPv6 packets over Ethernet networks
- RFC 3484: Default address selection for IPv6
- RFC 3587: IPv6 global unicast address format
- RFC 3596: DNS extensions to support IPv6
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Multicast Support
- IGMP query solicitation
- IGMP snooping (IGMPv1, v2 and v3)
- IGMP snooping fast-leave
- MLD snooping (MLDv1 and v2)
- RFC 2715 Interoperability rules for multicast routing protocols
- RFC 3306 Unicast prefix-based IPv6 multicast addresses
- RFC 4541 IGMP and MLD snooping switches

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 2687 A single-rate three-color marker
- RFC 2998 A two-rate three-color marker
- RFC 3246 DiffServ Expedited Forwarding (EF)

Resiliency Features
- IEEE 802.1AB Link 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 802.3ad Static 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
- IEEE 802.1X multi-supplicant authentication
- IEEE 802.1X authentication protocols (TLS, TLS, PEAP and MD5)
- IEEE 802.1x multi-suppliant authentication
- IEEE 802.1X port-based network access control
- RFC 2580 X.509 Online Certificate Status Protocol (OCSP)
- RFC 2818 HTTP over TLS (HTTPS*)
- RFC 2865 RADIUS authentication
- RFC 2998 PKCS#10: certificate request syntax specification
- RFC 3546 Transport Layer Security (TLS) extensions
- 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 5636 Elliptic curve algorithm integration for SSH
- RFC 6125 Domain-based application service identity within PKI using X.509 certificates with TLS

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

Voice over IP (VoIP)
- LLDP-MED ANSI/TIA-1057

Environmental Specifications
- Operating ambient temp. -0°C to 50°C (32°F to 113°F)
- Storage temp. -25°C to 70°C (-13°F to 158°F)
- Operating humidity 5% to 90% non-condensing
- Storage humidity 5% to 95% non-condensing
- Maximum operating Altitude 3,000 m (9,462 ft)
- Maximum Non operating Altitude 4,000 m (13,100 ft)

Safety and Electromagnetic Emissions
- EMI (Emissions) : FCC Class A, EN55022 Class A, EN61000-3-2, EN61000-3-3, VCCI Class A, CISPR Class A
- EMC (Immunity) : EN55024
- Electrical and Laser Safety : EN60950-1 (TUV), UL 60950-1 (UL), EN60825-1
- Compliance Marks : UL, CUL, UL-EU, CE

Restrictions on Hazardous Substances (RoHS) Compliance
- EU RoHS compliant
- China RoHS compliant

Country of origin
- China
CentreCOM GS970M Series | Managed Gigabit Ethernet Switches

Ordering Information

AT-GS970M/10PS-R
L3 switch with 8 x 10/100/1000T PoE ports and 2 x 100/1000X SFP ports with rack mount kit

AT-GS970M/10
L3 switch with 8 x 10/100/1000T ports and 2 x 100/1000X SFP ports

AT-GS970M/18PS-R
L3 switch with 16 x 10/100/1000T PoE ports and 2 x 100/1000X SFP ports with rack mount kit

AT-GS970M/18
L3 switch with 16 x 10/100/1000T ports and 2 x 100/1000X SFP ports

AT-GS970M/28PS
L3 switch with 24 x 10/100/1000T PoE ports and 4 x 100/1000X SFP ports

AT-GS970M/28
L3 switch with 24 x 10/100/1000T ports and 4 x 100/1000X SFP ports

AT-RKMT-J05
Rack mount kit for GS970M/10

AT-RKMT-J13
Rack mount kit for GS970M/18 and 18PS

AT-RKMT-J14
Rack mount kit for GS970M/10PS

AT-RKMT-J15
Rack mount shelf kit for two GS970M/10 units

AT-BRKT-J23
Wall mount kit for GS970M/10

AT-BRKT-J24
Wall mount kit for GS970M/18, 28, 10PS, 18PS and 28PS

SFP modules

AT-SPFX/2
100FX multi-mode 1310 nm fiber up to 2 km

AT-SPFX/15
100FX single-mode 1310 nm fiber up to 15 km

AT-SPFXBD-LC-13
100BX Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 10 km

AT-SPFXBD-LC-15
100BX Bi-Di (1550 nm Tx, 1310 nm Rx) fiber up to 10 km

AT-SPTX
1000T 100 m copper

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

AT-SPSX/I
1000SX GbE multi-mode 850 nm fiber up to 550 m industrial temperature

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

AT-SPLEX10
1000LX GbE single-mode 1310 nm fiber up to 10 km

AT-SPLEX10/I
1000LX GbE single-mode 1310 nm fiber up to 10 km industrial temperature

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

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

AT-SPLEX40
1000LX GbE single-mode 1310 nm fiber up to 40 km

AT-SPZX80
1000ZX GbE single-mode 1550 nm fiber up to 80 km

AT-SPBD20-13/I
1000BX GbE Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 20 km, industrial temperature

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

Feature Licenses

<table>
<thead>
<tr>
<th>NAME</th>
<th>DESCRIPTION</th>
<th>INCLUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-FL-GS97-UDLD</td>
<td>UniDirectional Link Detection</td>
<td>UDLD</td>
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