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.

**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 (O_DM)
  - 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

**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 (hot 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 link 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**

**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**
CentreCOM GS970M Series | Managed Gigabit Ethernet Switches

Product Specifications

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>10/100/1000T (RJ-45) COPPER PORTS</th>
<th>10G/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

<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>4.35 kg (9.6 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></td>
<td>10Mbps</td>
</tr>
<tr>
<td>GS970M/10</td>
<td>55µs</td>
</tr>
<tr>
<td>GS970M/18</td>
<td>56µs</td>
</tr>
<tr>
<td>GS970M/28</td>
<td>59µs</td>
</tr>
</tbody>
</table>

Power characteristics

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>NO POE LOAD</th>
<th>FULL POE+ LOAD</th>
<th>MAX POE POWER</th>
<th>MAX POE PORTS AT 15W PER PORT</th>
<th>MAX POE+ PORTS AT 30W PER PORT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX POWER CONSUMPTION</td>
<td>MAX HEAT DISSIPATION</td>
<td>NOISE</td>
<td>MAX POWER CONSUMPTION</td>
<td>MAX HEAT DISSIPATION</td>
</tr>
<tr>
<td>GS970M/10PS</td>
<td>16W</td>
<td>55 BTU/hr</td>
<td>33 dBa</td>
<td>180W</td>
<td>126 BTU/hr</td>
</tr>
<tr>
<td>GS970M/10</td>
<td>16W</td>
<td>55 BTU/hr</td>
<td>Fanless</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GS970M/18PS</td>
<td>21W</td>
<td>72 BTU/hr</td>
<td>34 dBa</td>
<td>330W</td>
<td>169 BTU/hr</td>
</tr>
<tr>
<td>GS970M/18</td>
<td>18W</td>
<td>61 BTU/hr</td>
<td>29 dBa</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GS970M/28PS</td>
<td>37W</td>
<td>127 BTU/hr</td>
<td>33 dBa</td>
<td>520W</td>
<td>303 BTU/hr</td>
</tr>
<tr>
<td>GS970M/28</td>
<td>26W</td>
<td>89 BTU/hr</td>
<td>34 dBa</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Cryptographic Algorithms

- FIPS Approved Algorithms
  - 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)
  - HMAC (SHA-1, SHA-224, 256, 384, 512)
  - Random Number Generation:
    - DRBG (Hash, HMAC and Counter)

Non FIPS Approved Algorithms

- MD5
- RSA

- Encryption (Block Ciphers):
  - AES (ECB, CBC, CFB and OFB Modes)
  - 3DES (ECB, CBC, CFB and OFB Modes)

- Ethernet
  - IEEE 802.2 Logical Link Control (LLC)
  - IEEE 802.3 Ethernet
  - IEEE 802.3a/1000BASE-T
  - 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/1000BASE-X
  - IEEE 802.3x Flow control - full-duplex operation

- 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 Secure Hashing
  - RFC 1034 Domain Name System (DNS)
  - RFC 1035 Dynamic Host Configuration Protocol (DHCP)
  - RFC 1036 DNS Servers and Resource Records (RRs)
  - RFC 1037 DNS Messages
  - RFC 1038 DNS Authority and DNS Resolution
  - RFC 1039 DNS DNS Security (DNSSEC)

IPv6 Features

- RFC 1981 Path MTU discovery
- RFC 1982 Communication Internet checksum
- RFC 1983 Classless Inter-Domain Routing (CIDR)
- RFC 1984 Requirements for IPv4 routers
- RFC 1985 IPv4 addressing
- RFC 2481 TCP congestion control

IPv6 Features

- RFC 2486 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
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 (GoS)
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 2698 A single-rate three-color marker
RFC 3246 DiffServ Expedited Forwarding (EF)

Resiliency Features
IEEE 802.1QagLink aggregation (static and LACP)
IEEE 802.1Q Static and dynamic link aggregation
IEEE 802.1Q MAC bridges
IEEE 802.1x Multiple Spanning Tree Protocol (MSTP)
IEEE 802.1x 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 RIP-2

Security Features
SSH remote login
SSLv2 and SSLv3
TACACS+ Accounting, Authentication and Authorisation (AAA)
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 2885 RADUS authentication
RFC 2886 RADUS accounting
RFC 2896 PKCS #10: certificate request syntax specification v1.7
RFC 3546 Transport Layer Security (TLS) extensions
RFC 3580 IEEE 802.1x RADUS 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 5661 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

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 2816 Hypertext Transfer Protocol - HTTP/1.1
RFC 2821 Simple Mail Transfer Protocol (SMTP)
RFC 2822 Internet message format
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 802.1x VLAN classification by protocol and port
IEEE 802.3ac VLAN tagging

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

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 95% non-condensing
Storage humidity 5% to 95% non-condensing
Maximum operating Altitude 3,000 m (9,642 ft)
Maximum Non operating Altitude 4,000 m (13,100 ft)

Safety and Electromagnetic Emissions
EMI (Emissions) : FCC Class A, EN60022 Class A,
EN61000-3-2, EN61000-3-3,
VCCI Class A, CISPR Class A
EDM (Immunity) : China RoHS compliant

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

Country of origin
► China
Ordering Information

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

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

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

**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-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-SPLX10**
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-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-SPLX40**
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>
</tr>
</tbody>
</table>