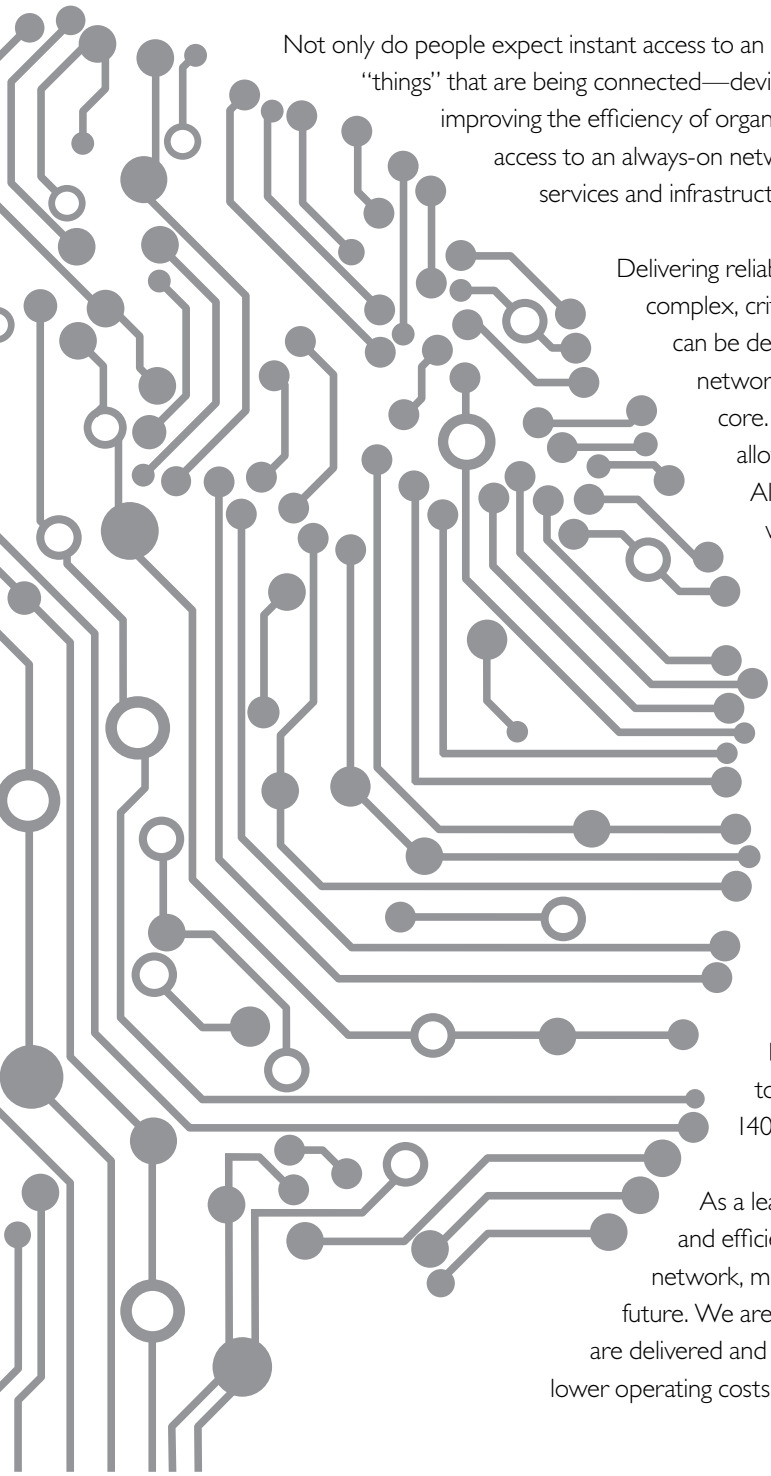
Allied Telesis™

Product Catalog

Issue 16

Smarter Solutions for a Smarter World

Our world is increasing in complexity. Organizations are changing at an ever-increasing rate. Businesses face an uphill battle to adapt to change, and to stay ahead of the competition. At the same time, our cities are increasingly becoming more populated; and with this growth, issues such as demand on resources and public safety become a key focus for government and civic leaders.



Not only do people expect instant access to an always-on network, but there is a rapidly increasing number of "things" that are being connected—devices that deliver information to enable smarter decisions to be made, improving the efficiency of organizations and cities, alike. Like people, these devices require instant access to an always-on network. Unlike people, these devices are a critical component of various services and infrastructure that must always be available.

Delivering reliable connectivity for everything from enterprise organizations to complex, critical infrastructure projects is not a trivial task. Ensuring new services can be deployed quickly, that changes can be made simply, and that the network "just works" requires intelligent technology from the edge to the core. Technology that delivers value and reduces operational expenditure, allowing more to be done with less. That superior technology has made Allied Telesis the default standard for many organizations around the world today.

Allied Telesis has engineered advanced networking products and technologies for more than a quarter of a century. Our solutions-based philosophy of producing products that deliver value to our customers, together with extensive service and support, has resulted in Allied Telesis solutions being deployed globally—in organizations of all types and sizes. With a portfolio of products and technologies providing end-to-end networking solutions for enterprise, government, service provider, and critical infrastructure customers, Allied Telesis is the smarter choice.

As a major networking industry manufacturer, Allied Telesis is committed to providing our customers with solutions designed and built to the highest standards and quality. Our manufacturing conforms to ISO 9001 standards and all of our facilities adhere to the strict ISO 14001 standard to ensure a healthier planet.

As a leading provider of networking solutions, Allied Telesis enables reliable and efficient delivery of a broad variety of services over a single, unified network, meeting the demands of today's organizations, both now and into the future. We are committed to innovating the way in which services and applications are delivered and managed, resulting in smarter solutions, delivering increased value and lower operating costs.

Table of Contents

NETWORK SMARTER

Coming Soon...

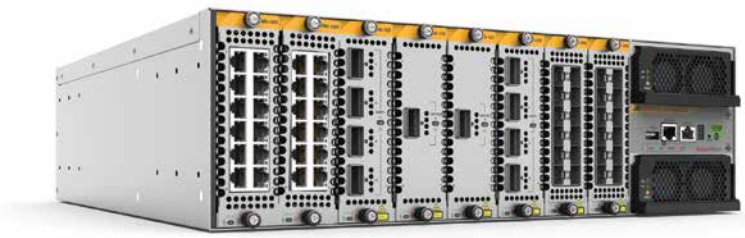
NEW

SwitchBlade® x908 GEN2

CORE CHASSIS SWITCHES

Following on from the incredible success of the SwitchBlade x908, the upcoming Generation 2 builds on the popular modular design, with performance to satisfy the most demanding network applications and traffic requirements.

New expansion modules (XEMs) will support today's fastest Ethernet standards, with 100G, 40G and 10G/1G options. The ability to use any combination of XEMs, as well as stack up to four units, will make the SwitchBlade x908 GEN2 the most flexible and powerful 3RU switching solution available.



Available end-2017, highlights include:

- Large network support
- High-speed – hot-swap XEM modules for 100G, 40G and 10G/1G
- High bandwidth – each slot delivers 320G bandwidth (2.64Tbps total)
- Resilient – stack up to four units using any bandwidth, including fiber for long distance
- Reliable – dual hot-swap PSUs and fan modules

x550 Series

10 GIGABIT INTELLIGENT SWITCHES

The x550 Series of compact 10 Gigabit switches provide an ideal solution for 10G aggregation with 40G uplinks in larger networks, or a resilient 10G network core for smaller networks with stacked units providing high availability.

The x550 Series is highly versatile, with models with copper ports (x550-18XTQ), fiber ports (x550-18XSQ) and a mix of both (x550-18XSPQ). The x550-18XSPQ is ideal for wireless AP connectivity, with Power over Ethernet to simplify deployment and operation, and 2.5G to maximize performance.

Available mid-2017 onwards, other highlights include:

- Compact design
- Resilient – stackable to four units over long distance
- Advanced – Layer 3 features (with Premium license)
- Reliable – 0°C to 50°C operation, and front to back cooling
- Flexible – 1G/10G fiber, 1G/10G copper and 40G ports
- PoE+ – full 30 watts per port (XSPQ model only, available 2018)

Allied Telesis

Smart Network Management

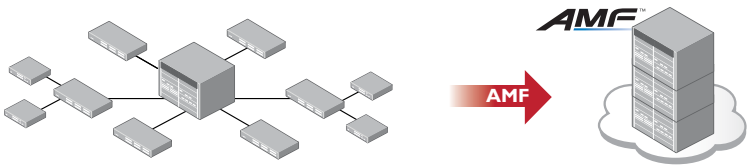
Managing a modern network is complex and time consuming. So it's important that the tools you use are able to help you visualize your network and identify issues before they become major problems. Allied Telesis range of network management tools deliver comprehensive visualization in combination with intelligent technologies, such as AMF and SES, and are proven to save you time and money.

ALLIED TELESIS MANAGEMENT FRAMEWORK

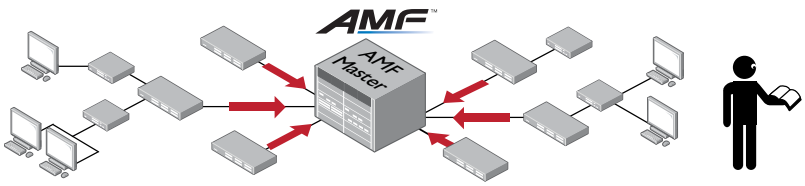
AMF is an intelligent and scalable network management platform. It supports Allied Telesis switching, firewall, and wireless products, as well as a wide range of third-party devices—including video surveillance cameras and IP phones—for truly inclusive network automation. Reducing network running costs by automating and simplifying many day-to-day tasks, AMF allows skilled staff to be better utilized.

Save time and reduce costs by up to 60% with AMF

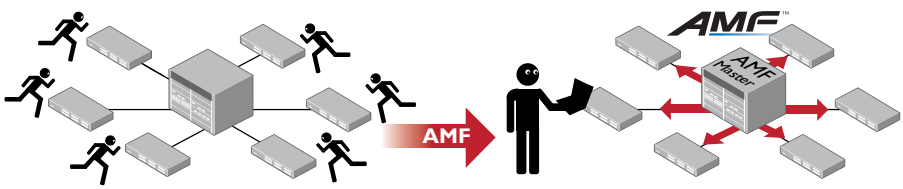
CENTRALIZED MANAGEMENT Manage the entire network as a single virtual device.



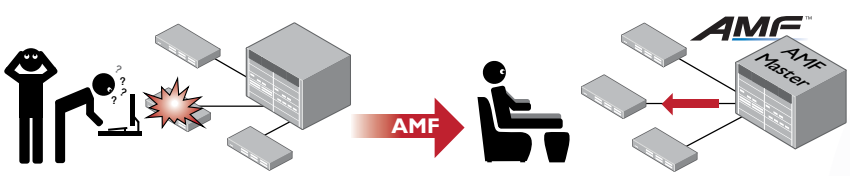
AUTO-BACKUP Automatically backup the entire network daily for peace-of-mind networking.



AUTO-UPGRADE Upgrade the network with a single command.



AUTO-PROVISIONING AND AUTO-RECOVERY Plug-and-Play additions or replacements.



Business Value Through Automation

AMF delivers immediate value to businesses of all sizes, with centralized network management able to treat a network of any size as a single, converged entity. This reduces cost and complexity by delivering:

- **Centralized management** of many or all devices right across the network—locally or world-wide.
- **Network automation**, with zero-touch or one-touch backup, provisioning, upgrade, and recovery.
- **Network intelligence** reacts to changes in the network and automatically changes the topology.
- **Smart commands** allow network problems to be quickly identified and issues resolved.

AMF saves time and money!

Simplify Your Network

Software Defined Networking (SDN) is moving networking towards the ideal combination of optimal network utilization and centralized management. An integral part of the Allied Telesis SDN solution, AMF delivers powerful management capabilities that are easy to use, and reduce the time and skill required to maintain the network. Configuration and firmware files are regularly backed up, network expansion is automated, and device recovery is fully zero-touch.

Graphical Management and Monitoring

Allied Telesis Vista Manager EX provides visual management of an AMF network, automatically creating a complete topology map of switches, firewalls and wireless access points. Vista Manager EX facilitates simple management of many, or all, network devices at once. It also monitors up-to-date network status, and provides alerts and actionable reporting for the timely resolution of any network problems.

VISTA MANAGER EX

Flexible Deployment

AMF can be deployed with network management integrated right into the Allied Telesis switching or firewall hardware, with licensing options for any size network. Alternately, AMF Cloud offers all of the functionality of integrated hardware-based management, with the advantages of private or public cloud access and flexibility. Powerful benefits include lower cost of entry, scalability, and cloud-based backup for peace of mind networking

Fully Scalable

AMF can manage networks that span different locations in different time zones, supporting multi-site businesses. Whether your network spans the campus, or the continent, AMF is simple to use. Support business growth locally, and in remote locations, with plug-and-play simplicity. With an AMF Controller, extend the benefits of AMF network intelligence to thousands of network switches, firewalls, and third-party devices.

AMF™ CLOUD

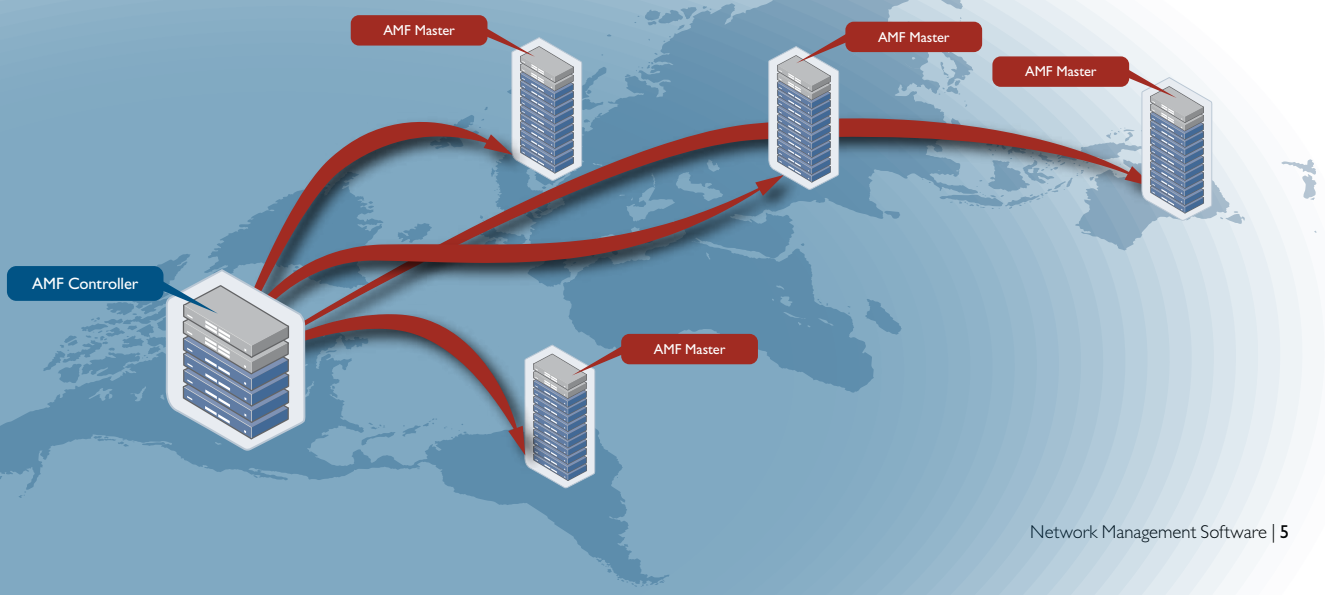
AMF Cloud allows the AMF Master and/or Controller to be virtual appliances, rather than integrated into an Allied Telesis switch or firewall. AMF Cloud offers all of the functionality of integrated hardware-based AMF network management, with the advantages of cloud-based access and flexibility.

Supported AMF Devices

PRODUCT	AMF NODE	AMF MASTER	AMF CONTROLLER
AMF Cloud		■	■
Switches			
SwitchBlade x8100 (CFC960)	■	■	■
SwitchBlade x8100 (CFC400)	■	■	
SwitchBlade x908	■	■	
DC2552XS/L3	■	■	
x930 Series	■	■	
x900 Series	■		
x610 Series	■	■	
x510 Series	■	■	
IX5-28GPX	■		
x310 Series	■		
x230 Series	■		
x210 Series	■		
IE510-28GSX	■		
IE300 Series	■		
IE200 Series	■		
CentreCOM XS900MX Series*	■		
CentreCOM GS900MX Series*	■		
CentreCOM GS970M Series*	■		
CentreCOM FS980M Series*	■		
Firewalls			
AR4050S UTM firewall	■	■	
AR3050S UTM firewall	■		
AR2050V VPN firewall	■		
AR2010V VPN firewall	■		

*CentreCOM products support AMF edge.

AMF™



VISTA Manager EX

NETWORK MONITORING AND MANAGEMENT

VISTA MANAGER EX

Vista Manager EX is a state-of-the-art network monitoring and management tool for Allied Telesis Management Framework (AMF) networks. Vista Manager EX automatically creates a complete topology map of switches, firewalls and wireless access points, and enables easy management of many, or all, network devices at once.

Vista Manager EX provides a broad view of the complete network including third party devices such as security cameras.

Intuitive usability and simple navigation means comprehensive network information is just a click away, easing the burden of network management, while the dashboard allows monitoring of up-to-date network status, and provides actionable reporting for the timely resolution of any network problems.

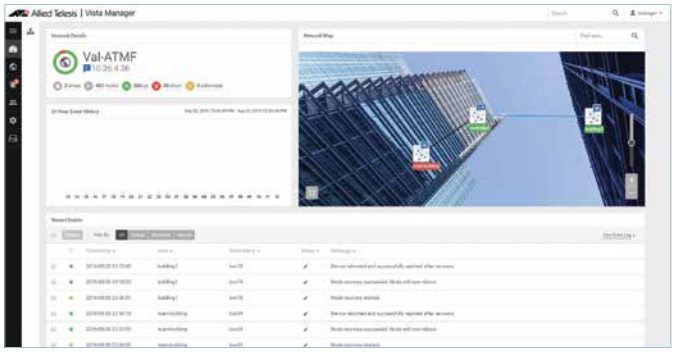
Powerful features like automated network backup and upgrade, and configuration of any group of network devices, or even all devices, simplifies network management. Automated device recovery enables zero-touch replacement with new devices simply appearing in Vista Manager. The power of AMF and Vista Manager EX combine to ease the burden of administration and support plug-and-play networking.

Wireless management allows control of Allied Telesis wireless access points, with floor maps to visualize placement, while our Autonomous Wave Controller (AWC) reduces costs by automatically optimizing wireless output and channel selection. The substantial growth in the number of devices accessing corporate networks wirelessly has made the convergence of wired and wireless networks into a single cohesive solution imperative for modern businesses. Vista Manager EX supports this growth with its single-pane-of-glass interface for managing the entire network.

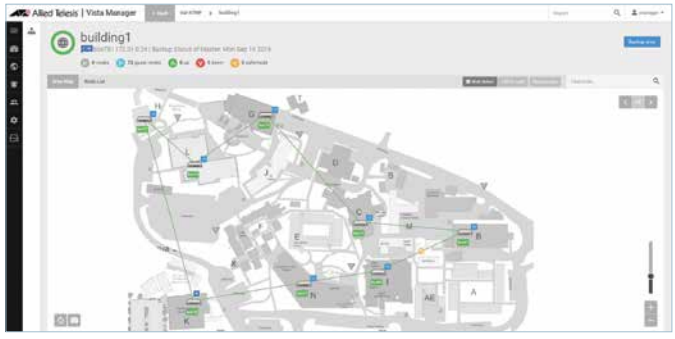
Today's corporate network often includes third party devices such as security cameras for digital surveillance and ensuring a safe working environment. Vista Manager EX supports third party devices as guests, and details of these devices and their deployment can be viewed for a more complete network overview.

Features

- Intuitive graphical interface
- Manages Allied Telesis switches, firewalls, and wireless access points
- Support 3rd party devices such as security cameras
- Autonomous topology maps
- Automatic network backup/restore
- Network software management
- Secure SSH management
- Windows OS server support
- SNMP device management coming during 2017



The overview dashboard provides at-a-glance status of network health with actionable reporting.



Add an image to the map view to provide context for your network layout.

SECURE ENTERPRISE SOFTWARE DEFINED NETWORKING

Allied Telesis Secure Enterprise SDN (SES) is a state-of-the-art network management and security solution. It provides what enterprises consistently tell us they need: reduced network management costs, increased network security and an improved end-user experience. SES is the only commercially available SDN solution that improves all these areas: it reduces network management costs by removing duplication of effort; it increases network security by automating responses to security threats; and it improves end-user experience because people no longer have to wait for network changes to be made manually.

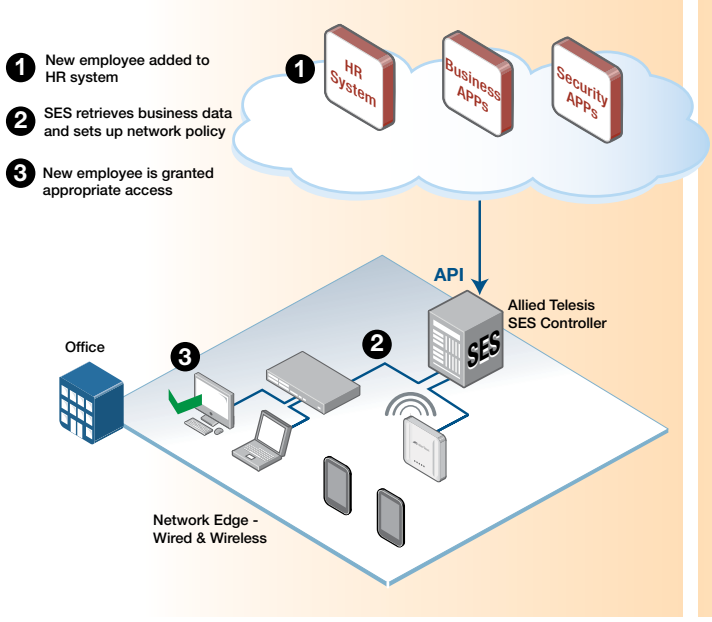
SES comprises an intelligent, fully-featured SDN controller. It reduces manual effort and cost in two ways: firstly, it reads data from business applications and automatically changes the network configuration to match, and secondly, it works with security applications to instantly respond to alerts and block the movement of threats anywhere within your wired or wireless network.

The SES controller includes powerful northbound APIs that collect real-time data from business applications. SES analyses this data to decide if network configurations need to be altered to reflect new business rules. For example, when new employees join the company, their details are entered to the HR system. SES detects this and automatically instructs the network to grant the new users the appropriate level of network access.

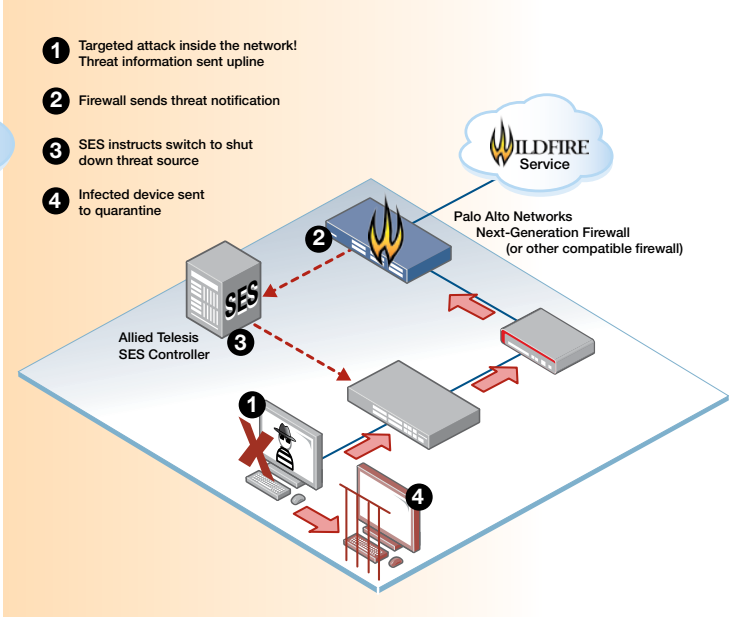
SES also improves the security of the network by actively responding to threats and taking immediate action to prevent their spread. Most Intrusion Detection Systems (IDS) can only warn if a threat has been found, they cannot act to block the offending traffic. By the time the operator reacts to the warning, the damage may have escalated. SES works with industry-leading IDS tools to immediately and automatically block the affected network ports when a threat is detected. Responses are configurable and comprehensive logging provides a clear audit trail of the actions taken.

SES interoperates with networks containing compatible OpenFlow switches and a range of physical and virtual firewall products. There is no need for a forklift upgrade of the network to take advantage of the benefits of SES – it can interoperate with a wide range of existing equipment.

SES is an innovative SDN solution delivering real value by removing duplication and reducing network operating costs, while constantly monitoring for threats and instantly protecting the network. While other SDN solutions provide esoteric solutions for obscure networking problems, SES delivers true business value every day.



Business applications drive network change



Threats are detected and automatically blocked

AlliedView NMS

SERVICE PROVIDER EDITION

AlliedView NMS takes the complexity out of performing routine tasks. It provides a unified management platform for network, element and service management, using an intuitive GUI for diagnostics, network mapping, alarm reporting, and more. AlliedView NMS supports more than 200 different Allied Telesis products, including switches, routers, multiservice access, and fiber- or copper-based gateways.

Scalable Architecture

AlliedView NMS is a Java-based application suite that supports both Java and HTML clients. The core services include a relational database and may be deployed on a dedicated Windows server, or in a virtual server environment. The server supports core functions such as discovery of managed objects, receiving and processing alarm information and notifications, data collection, report generation, and status polling.

Auto-Discovery Features

AlliedView NMS performs active auto-discovery of every network element whenever a new element or device is added to the network. Auto-discovery features go beyond merely capturing hardware inventory populated in the network, to providing detailed network topology and configuration information.

Network Mapping

AlliedView NMS provides the ability to create and maintain a logical network map, including sites and locations where each piece of equipment resides, and to actually create an overlay of the network on a geographic network map.

Features

- Intuitive graphical interface
- Drill-down functionality
- MIB browser
- MIB compiler
- GUI snapshot utility
- RMON 4 group support
- Supports NMS alarms
- Supports SNMP v1, v2c and v3
- VLAN management
- QoS management
- Multi-platform
- HP OpenView, Tivoli NetView, Ipswitch
- WhatsUp and SNMPc interoperability
- Supports Allied Telesis managed devices

Zero Touch Service Provisioning

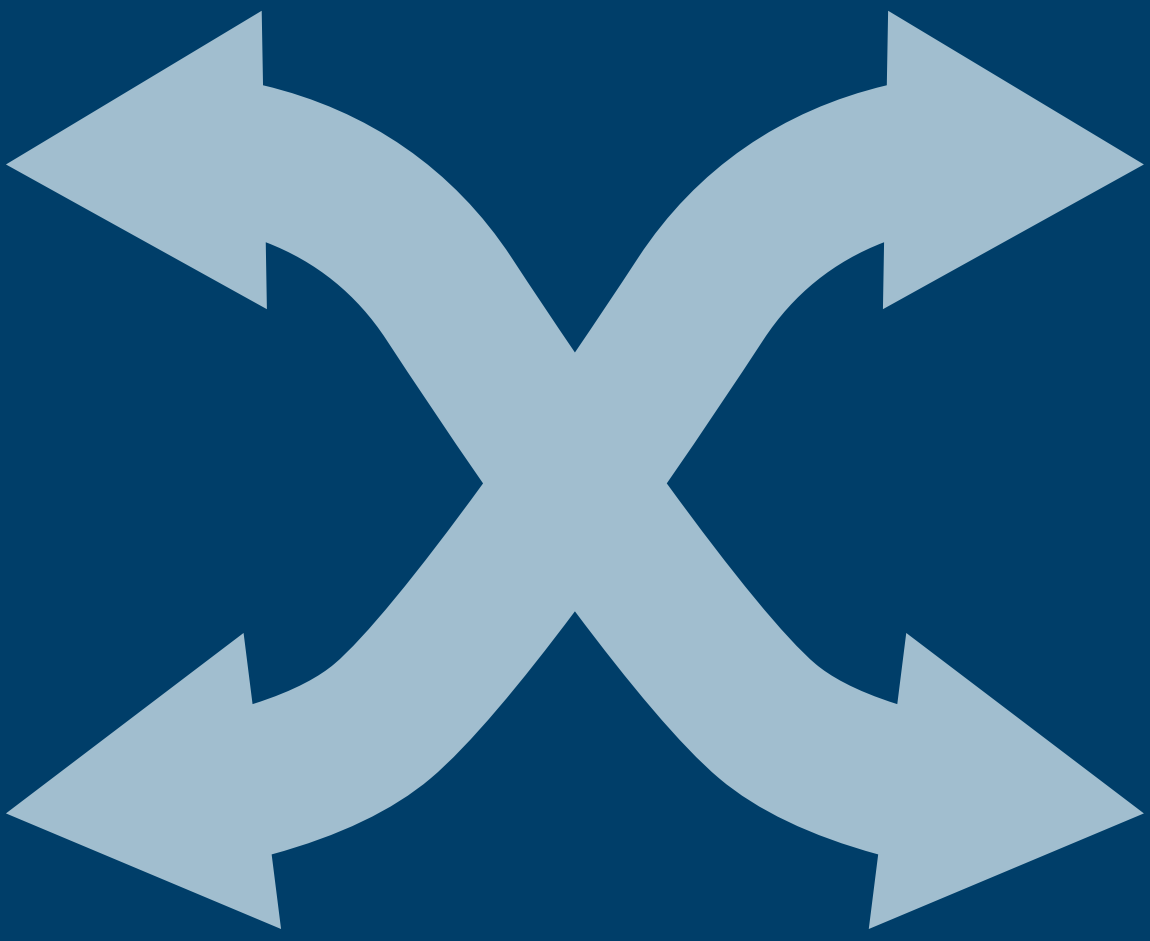
AlliedView NMS has streamlined the provisioning process through its "one-touch provisioning" feature. Each type of service, port or link can be assigned its own profile and the profile can be applied to each subscriber line, port, or link in a single keystroke. In a large service network the time savings are tremendous, as is the reduction in configuration errors.

Network Upgrades

AlliedView NMS allows software and firmware upgrades to be made network-wide on either a scheduled or unscheduled basis. Its up-to-date inventory of all the equipment in the network, as well as release level of the software and firmware, makes it the tool to manage periodic upgrades.

Allied Telesis™

Switches



Allied Telesis engineers high-performance, high-quality, future-proof products to meet requirements for enterprise, campus, branch, and private cloud networks of various sizes.

Allied Telesis SwitchBlade and xSeries switches, with the AlliedWare Plus™ operating system, provide scalable and versatile switching solutions for today's enterprise and service provider networks from edge to core. These switches, featuring Allied Telesis Management Framework™ (AMF), decrease network operating expenses by automating and simplifying many day-to-day tasks. Allied Telesis also produces top-of-rack switches for the enterprise data center market, extended temperature products for industry, and unmanaged and WebSmart switches for small and medium business.

SwitchBlade® x8100 Series

CORE CHASSIS SWITCHES

SwitchBlade x8100 Series core chassis switches are primarily engineered for medium to large enterprise networks — but are equally at home in the enterprise data center. They are designed to deliver high availability, maximum performance, future scalability, and high port count in compact, eco-friendly packages.

Advanced Operating System

The SwitchBlade x8100 Series features the AlliedWare Plus operating system, providing users with advanced Layer 3 functionality and an industry-standard Command Line Interface (CLI).

High Availability Architecture

The SwitchBlade x8100 Series is designed to deliver high availability for mission-critical applications found in data centers, hospitality, government, and financial institutions. Dual redundant control/fabric modules inter-connecting through redundant paths to all the line cards ensure continuous operation even in the event of a fabric failure or a firmware upgrade. Dual redundant power supplies ensure maximum system up-time, while two PoE power supplies ensure continuous power to the end-points.

Small Physical Size

The SwitchBlade x8112 packs up to 400 Gigabit, 120 x 10G or 2 x 40G Ethernet ports into a single, compact 7RU-high chassis.

The 6-slot SwitchBlade x8106 chassis is the ultimate choice in compact flexibility. It is designed to provide high-density Gigabit, 10 Gigabit or 40 Gigabit connectivity in 4RU and has the same high availability architecture as the SwitchBlade x8112.

Scalable Architecture

The SwitchBlade x8100 Series guarantees performance for medium and large network core solutions.

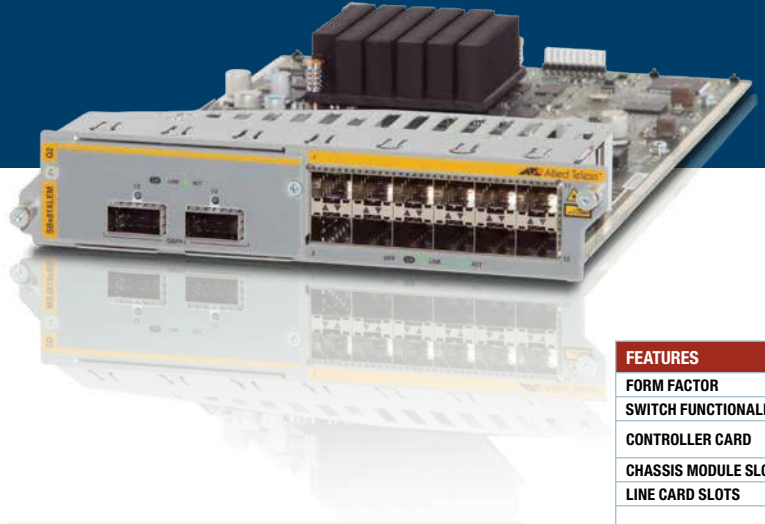
With CFC960 control cards, two chassis can be stacked together into a single virtual unit using VCStack Plus.™ This creates a powerful and completely resilient network core, which can even be distributed over long distance.

In-Service Software Upgrade (ISSU)

In-Service Software Upgrade (ISSU) increases network uptime by enabling a customer to upgrade the software running on their chassis without disrupting network traffic. This means that upgrades and maintenance tasks can be completed without having to schedule an outage. ISSU can be used on any SwitchBlade x8100 system with two CFC960 controller cards installed, and is compatible with VCStack Plus so that software upgrades can be performed hitlessly across two chassis to further reduce downtime.

EPSRing

Putting a ring of Ethernet switches at the core of a network is a simple way to increase the network's resilience. Such a network is no longer susceptible to a single point of failure. Traditionally, spanning tree-based technologies are used to protect rings, but they are relatively slow to recover from link failure. This can create problems for applications that have strict loss requirements, such as voice and video traffic, where the speed of recovery is highly significant. Allied Telesis Ethernet Protection Switched Ring (EPSRing) provides high-speed (~50ms) reconfigurations in the event of a failure, ensuring no noticeable loss of service.



SwitchBlade x8100 Series Components

- **SBx8106**
  Rackmount 6-slot chassis including fan tray
- **SBx8112**
  Rackmount 12-slot chassis including fan tray
- **SBx81CFC400**
  Control/fabric module with 400Gbps of switching performance
- **SBx81CFC960**
  Control/fabric module with 960Gbps of switching performance and 4-port 10GbE SFP+
- **SBx81XS6**
  6-port 10GbE SFP+ Ethernet line card
- **SBx81XS16**
  16-port 10GbE SFP+ Ethernet line card
- **SBx81GT24**
  24-port 10/100/1000T Ethernet line card
- **SBx81GT40**
  40-port 10/100/1000T RJ point five Ethernet line card
- **SBx81GP24** PoE+
  24-port 10/100/1000T PoE+ Ethernet line card
- **SBx81GS24a**
  24-port SFP Ethernet line card
- **SBx81XLEM** NEW
  Modular 40G line card with 12 x 100/1000X SFP
- **SBx81XLEM/XS8** NEW
  8 x 10G SFP+ module for the SBx81XLEM line card
- **SBx81XLEM/Q2** NEW
  2 x 40G QSFP+ module for the SBx81XLEM line card
- **SBx81XLEM/XT4** NEW
  4 x 1/10G RJ-45 module for the SBx81XLEM line card
- **SBx81XLEM/GT8** NEW
  8 x 10/100/1000T RJ-45 module for the SBx81XLEM line card
- **SBxPWRSYS2**
  1200W AC system power supply
- **SBxPWRSYS1-80**
  1200W DC system power supply
- **SBxPWRPOE1** PoE+
  1200W AC PoE+ power supply
- **FL-CFC400-01**
  Premium feature license for CFC400
- **FL-CFC960-01**
  Premium feature license for CFC960
- **FL-CF9-VCSPL**
  VCStack Plus license for CFC960

FEATURES		SBx8112 (PoE+ AMF eco)	SBx8106 (PoE+ AMF eco)
FORM FACTOR		Rackmount	
SWITCH FUNCTIONALITY		Advanced Layer 3	
CONTROLLER CARD		CFC400 CFC960	
CHASSIS MODULE SLOTS		12	6
LINE CARD SLOTS		10	4 (5 with one CFC)
CARDS/MODULES	10/100/1000T ports	24 × RJ-45 (SBx81GT24) 24 × PoE+ (SBx81GP24) 40 × RJ point five (SBx81GT40)	
	100/1000X SFP ports	24 × SFP (SBx81GS24a)	
	10G ports	6 × 10G SFP+ (SBx81XS6) 16 × 10G SFP+ (SBx81XS16)	
	40G ports	2 x 40G QSFP+ (SBx81XLEM + Q2)	
POWER SUPPLY	PSU type	Dual system hot-swappable internal Dual PoE+ hot-swappable internal	
	-48vDC PSU option	■	
	Additional PSU	SBxPWRSYS2 / SBxPWRPOE1	
POWER OVER ETHERNET	IEEE 802.3at (PoE+)	■	
	PoE+ enabled ports	240	120
	Max PoE+ power	2400W	
	Max full power ports (boost power)	80	
ENVIRONMENTAL	Cooling	Hot-swappable fan tray	
	Temperature range	0°C to 40°C	
MANAGEMENT	Web GUI	■	
	CLI / Telnet / SNMP	■	
	IPv6 management	■	
	DHCPv4 / v6 server	■	
	AMF Master	■	
	AMF Controller	■ (CFC960 only)	
NETWORK RESILIENCE	Spanning Tree	■	
	Link aggregation (LACP)	■	
	EPSRing	■	
	VCStack Plus	■ (CFC960 only)	
	ISSU	■ (CFC960 only)	
	VRRPv3	■	
QoS	IEEE 802.1p priority queues	8	
SECURITY	IEEE 802.1Q VLANs	4K	
	RADIUS / TACACS+	■	
	SSH / SSL	■	
	IEEE 802.1x	■	
	DoS protection	■	
	DHCP snooping	■	
ROUTING	Static routes v4 / v6	■	
	RIP / RIPng	■	
	OSPFv2 / v3	■	
	VRF Lite	■ (CFC960 only)	
	BGP4 / BGP4+	■	
MULTICASTING	IGMPv1 / v2 / v3	■	
	MLDv1 / v2	■	
	PIMv4 / PIMv6	■	
	PIM-SSM	■	

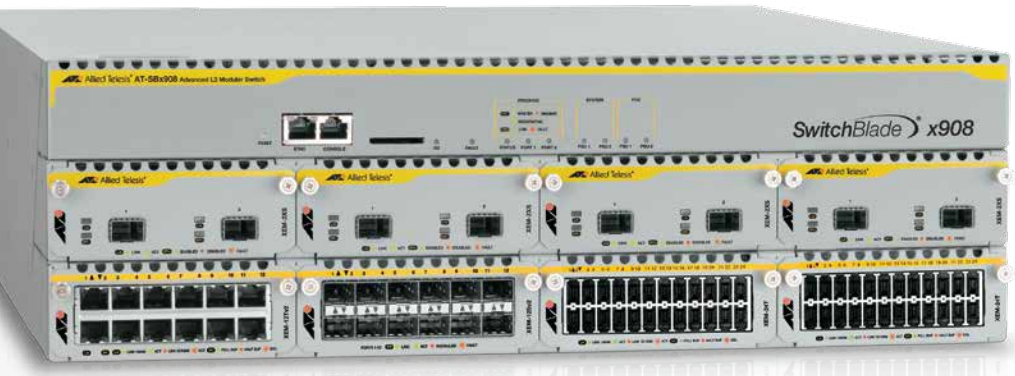
SwitchBlade x8100 AMF Licenses

Licenses available for the SwitchBlade x8100 controller cards.

CONTROLLER CARD	AMF MASTER		AMF CONTROLLER
SBx81CFC400	FL-CF4-AM40-1YR FL-CF4-AM80-1YR	FL-CF4-AM40-5YR FL-CF4-AM80-5YR	n/a
SBx81CFC960	FL-CF9-AM40-1YR FL-CF9-AM80-1YR FL-CF9-AM120-1YR	FL-CF9-AM40-5YR FL-CF9-AM80-5YR FL-CF9-AM120-5YR	FL-CF9-AC10 FL-CF9-AC30 FL-CF9-AC60

SwitchBlade® x908

ADVANCED LAYER 3 MODULAR COMPACT SWITCH



The SwitchBlade x908 8-slot industry-leading modular compact switch is the ideal solution for the small to medium modern enterprise network core where reliability, resiliency, and high performance are the key requirements.

Advanced Operating System

The SwitchBlade x908 features the AlliedWare Plus operating system, which combines superior networking functionality and strong management capabilities with the exceptional performance that today's networks demand. As a standards-based implementation, it also assures full interoperability with other major network equipment, and features enhanced usability for a superior customer experience.

Virtual Chassis Stacking (VCStack™)

VCStack provides excellent resiliency by creating a single "virtual chassis" from two SwitchBlade x908 physical devices, using dedicated high-speed stacking links. VCStack provides a highly available system where network resources are spread out across stacked units, reducing the impact should one of the stacked units fail. Switch ports may be aggregated on different units, for high availability. VCStack delivers a resilient solution at a fraction of the cost of a full chassis-based system, and the stack may be managed as a single network node, greatly simplifying management tasks.

Active-Active Architecture

The Active-Active architecture allows two SwitchBlade x908 chassis to be inter-connected via a passive 160Gbps rear panel connector, allowing the two switches to communicate. This architecture ensures that edge devices, which are connected to both switches, can continue to operate even in the event of a single SwitchBlade x908 failure. This architecture, unlike some competitive Active-Redundant architectures, ensures users achieve the full 100% utilization of their purchased network components for the maximum time, thus decreasing Total Cost of Ownership (TCO).

Ethernet Protection Switched Rings (EPSRing™)

The use of the SwitchBlade x908, in conjunction with other EPSRing-enabled devices, provides a 10Gbps high-bandwidth resilient ring backbone capable of providing sub 50ms failover. This architecture is perfect for the backbone core of any enterprise or service provider network, as it allows nearly hit-free networking to be accomplished, and is suitable for the delivery of voice, video, and data.

Allied Telesis Management Framework (AMF)

AMF is a sophisticated suite of management tools that simplifies network management. The SwitchBlade x908 can act as an AMF Master (license required), to control a network of AMF nodes and provide a central point for network management and configuration backups.

High Availability

The SwitchBlade x908 was designed with reliability in mind. With dual power supplies, fan modules, and a comprehensive range of expansion modules (XEMs) — all hot-swappable — the network can be maintained and reconfigured when necessary without affecting uptime.

Scalable

The SwitchBlade x908 supports up to eight XEM expansion modules, allowing the user to change the configuration of his network as needed. Each SwitchBlade x908 can support up to 192 Gigabit ports or up to 16 x 10GbE ports, while stacking two chassis, to build a resilient core that doubles the number of ports.

SwitchBlade x908 Components

- **SBx908**
  Rackmount 8-slot chassis including fan module
- **XEM-2XS**
  2-port 10GbE SFP+ expansion module
- **XEM-2XP**
  2-port 10GbE XFP expansion module
- **XEM-12Sv2**
  12-port SFP expansion module
- **XEM-12Tv2**
  12-port 10/100/1000T expansion module
- **XEM-24T**
  24-port 10/100/1000T RJ point five expansion module
- **PWR05**
  AC load sharing system power supply
- **PWR05-80**
  DC load sharing system power supply
- **HS-STK-CBL**
  650 mm high-speed stacking cable
- **FAN03**
  Spare fan module
- **FL-RADIUS-FULL**
  Local RADIUS server (license up to 5000 users and 1000 NAS) †
- **FL-SBx9-01**
  Advanced Layer 3 feature license
- **FL-SBx9-02**
  IPv6 feature license
- **FL-SBx9-AM40***
  AMF master license for up to 40 nodes
- **UTP/RJ.5-100-A-008**
  RJ point five to RJ-45 1 m Ethernet cables (pack of eight)
- **UTP/RJ.5-300-A-008**
  RJ point five to RJ-45 3 m Ethernet cables (pack of eight)

* 1 year/5 year license

† One basic license includes 100 users and 24 NAS

Allied Telesis delivers increased port density with the addition of the latest Ethernet connectivity technology, RJ point five. These half-size copper Gigabit port connectors allow twice the port density of the current RJ-45 standard connectors, ideal for the aggregation of large numbers of Gigabit links.

Enterprise Applications

The SwitchBlade x908 is the ideal enterprise switch for small- to medium-sized network installations, but is also at home in larger distributed campus-type networks, when individual switches are connected using EPSRing technology.

MEF Certified

The SwitchBlade x908 has been certified by the Metro Ethernet Forum (MEF) certification program, which tests products for conformance to the strict requirements of carrier Ethernet. Compliance with this certification makes the deployment of this chassis a much easier option for Network Service Providers (NSPs).

Small Physical Size

The SwitchBlade x908 packs a remarkable amount of networking performance into a small, 3RU-high box. Taking up no more rack space than three simple "pizza box" switches, the SwitchBlade x908 provides users with unrivaled reliability and flexibility.

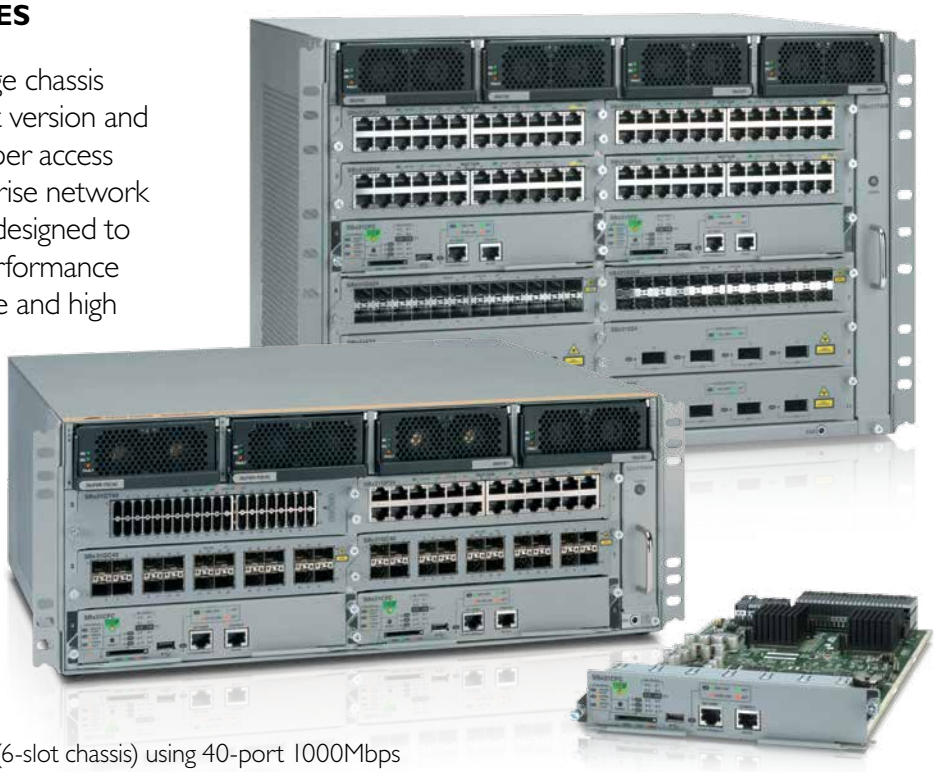
AMF

FEATURES		SBx908
FORM FACTOR		Rackmount / stack
SWITCH FUNCTIONALITY		Advanced Layer 3
CHASSIS MODULE SLOTS		8
CARDS/MODULES	10/100/1000T ports	12 × RJ-45 (XEM-12Tv2) 24 × RJ point five (XEM-24T)
	100/1000X SFP ports	12 × 1000X SFP (XEM-12Sv2)
	10G ports	2 × 10G XFP (XEM-2XP) 2 × 10G SFP+ (XEM-2XS) 2 × 10G RJ-45 (XEM-2XT)
POWER SUPPLY	PSU type	Dual hot-swappable internal
	-48vDC PSU option	■
	Additional PSU	PWR05
SCALABILITY	MAC address table size	16K / 64K
	Stacking (VCStack)	■ (2)
	Stacking bandwidth	160G
ENVIRONMENTAL	Cooling	Hot-swappable fan modules
	Temperature range	0°C to 40°C
MANAGEMENT	Web GUI	■
	CLI / Telnet / SNMP	■
	IPv6 management	■
	DHCPv4 / v6 server	■
	Allied Telesis Management Framework (AMF)	■
NETWORK RESILIENCE	Spanning Tree	■
	Link aggregation (LACP)	■
	EPSRing	■
	VRRPv3	■
QoS	IEEE 802.1p priority queues	8
SECURITY	IEEE 802.1Q VLANs	4K
	RADIUS / TACACS+	■
	SSH / SSL	■
	IEEE 802.1x	■
	DoS protection	■
	DHCP snooping	■
ROUTING	Static routes v4 / v6	■
	RIP / RIPng	■
	OSPFv2 / v3	■
	BGP4 / BGP4+	■
	Policy-based routing	■
	VRF Lite	■
MULTICASTING	IGMPv1 / v2 / v3	■
	MLDv1 / v2	■
	PIMv4 / PIMv6	■
	PIM-SSM	■

SwitchBlade® x3100 Series

ACCESS EDGE CHASSIS SWITCHES

The SwitchBlade x3100 Series access edge chassis switch is available in either a 12- or 6-slot version and primarily targeted for service provider fiber access networks. Equally at home in the enterprise network edge or in the data center, the switch is designed to deliver high availability and maximum performance with a wirespeed non-blocking backplane and high port count.



FTTx Service Provider Applications

The SwitchBlade x3100 is a versatile, carrier-class FTTx platform for delivering Gigabit services to residential, Multi-Dwelling Unit (MDU) and business customers in the last mile. It features redundant power supplies, controllers, and WAN ports to ensure reliability standards in carrier networks are met, along with powerful sub-50 millisecond failover protection using EPSRing for link level protection. The Series is available with AC or DC power options.

As a FTTx platform, the SwitchBlade x3100 can support a maximum of 440 ports (12-slot chassis) or 200 ports (6-slot chassis) using 40-port 1000Mbps CSFP-based line cards (SBx31GC40). It can also support redundant 10G uplinks using 4 ports on the CFC960 or 6-port SFP+-based line cards (SBx31XS6). Both the CFC and the line card support LAG and EPSR on uplinks when used as transport. The SwitchBlade x3100 can act as an aggregation hub for last-mile FTTx applications using 10G line cards. It features 80 Gigabit non-blocking throughput to each slot, thus providing a maximum level of performance for FTTx services, both 1G and 10G. Coupled with ultra-fast 960G central fabric controllers (CFC960), FTTx services can operate at wirespeed connectivity.

FEATURES		SBx3112 SBx3106	SBx3112-96POE+	SBx3112-8XR	SBx3112-12XS-80	SBx3112-6XS-80	SBx3112-B01-80
		PoE+ eco	PoE+ eco	PoE+ eco	PoE+ eco	PoE+ eco	PoE+ eco
PRODUCT		Chassis with fan tray	Chassis bundle	Chassis bundle	Chassis bundle	Chassis bundle	Chassis bundle
SWITCH FUNCTIONALITY		Layer 2+	Layer 2+	Layer 2+	Layer 2+	Layer 2+	Layer 2+
ACCESSORIES	Controller Fabric Card (CFC)		1 × SBx31CFC400	2 × SBx31CFC400	2 × SBx31CFC400	1 × SBx31CFC400	2 × SBx31CFC960
	24 × 10/100/1000T PoE+		4 × SBx31GP24				
	4 × XFP (10GbE)			2 × SBx31XZ4			
	6 × SFP+ (10GbE)				2 × SBx31XS6	1 × SBx31XS6	
	System power supply		1 × SBxPWRSYS2	2 × SBxPWRSYS2	2 × SBxPWRSYS1-80 (DC)	1 × SBxPWRSYS1-80 (DC)	2 × SBxPWRSYS1-80
	PoE power supply		1 × SBxPWRPOE1				
	Fan tray		Included in chassis	Included in chassis	Included in chassis	Included in chassis	
POWER SUPPLY	PSU type	Dual internal hot-swap	Dual internal hot-swap	Dual internal hot-swap	Dual internal hot-swap	Dual internal hot-swap	
	-48vDC PSU option	■	■	■	■	■	
POWER OVER ETHERNET	IEEE 802.3at Class 4 and 802.3af Class 3	■	■	■	■	■	■
	Max PoE-enabled ports (per chassis)		96				
	Max IEEE 802.3at ports (per chassis)		80				
	Max IEEE 802.3af ports (per chassis)		200				
	Mode		A				
ENVIRONMENTAL	Cooling	Hot-swappable fan tray	Hot-swappable fan tray	Hot-swappable fan tray	Hot-swappable fan tray	Hot-swappable fan tray	Hot-swappable fan tray
	Temperature range	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
MANAGEMENT	CLI / Telnet / SNMP / NMS	■	■	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	■	■
	Link aggregation (LACP)	■	■	■	■	■	■
	EPSRing	■	■	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K	4K	4K	4K
	VLAN double tagging (Q-in-Q)	■	■	■	■	■	■
	RADIUS / TACACS+ / SSH	■	■	■	■	■	■

FEATURES		SwitchBlade x3112 Line Cards					
		SBx31GP24	SBx31GT24	SBx31GT40	SBx31GS24	SBx31GC40	SBx31XS6
COPPER	10/100/1000T or 10/100/1000T plus PoE+	24					
	10/100/1000T		24	40			
FIBER	100MB / 1 Gigabit SFP				24		
	1 Gigabit CSFP / SFP					40 (20 CSFP slots)	
	10G SFP+						6

FEATURES		SBx3106	SBx3112
POWER SUPPLY	AC	SBxPWRSYS2-xx	
	DC	SBxPWRSYS1-80	
	PoE	SBxPWRPOE1-xx	
CENTRAL FABRIC CONTROL	Primary	SBx31CFC960	
	Secondary	SBx31CFC960	
UPLINK AND TRANSPORT	Slots	4	8
	Number of ports	32	68
	Port speed	10Gbps	
LINE CARDS	Slots	4	8
	FTTx	160 (200 one controller only)	400 (440 one controller only)
	Ethernet	160 (200 one controller only)	400 (440 one controller only)
TEMPERATURE RANGE		0°C to 40°C	

An evolution of the Allied Telesis tried and tested iMAP carrier-grade platform, the SwitchBlade x3100 delivers true IP Triple Play services such as IPTV, VoIP, Tiered High Speed Internet Access (HSIA), and other cloud-based services such as Over-the-Top video, remote storage and backup, and cloud computing.

Raw performance combined with high availability also allows it to be deployed as both end-of-row and aggregation in data center applications, and in campus applications as the ultimate in network edge connectivity.

High-Availability Architecture

The SwitchBlade x3100 is designed to deliver 99.999% reliability, while offering high availability with sub-millisecond hitless failover for mission-critical applications where uptime is essential such as data centers, hospitality, government, financial institutions, and medical institutions.

Dual redundant management/fabric modules inter-connecting through redundant paths to the line cards over a passive backplane, and dual redundant power options, ensure maximum system up-time. Power is delivered via up to two system power supplies and two Power over Ethernet supplies to ensure continual operation.

Power over Ethernet Plus (PoE+)

The SwitchBlade x3100 supports IEEE 802.3at PoE+ (30W) to enable customers to future-proof their networks. PoE+ provides greater power for applications such as IP surveillance cameras supporting pan, tilt, and zoom, IP video phones, RFID readers, Point-of-Sale, or wireless access points.

Secure Management

Only authorized administrators can access the management interface of the SwitchBlade x3100. Protocols such as SSH provide an encrypted interface for both local and remote connections, with out-of-band management achieved through a dedicated Gigabit port if required.

Securing the Network Edge

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

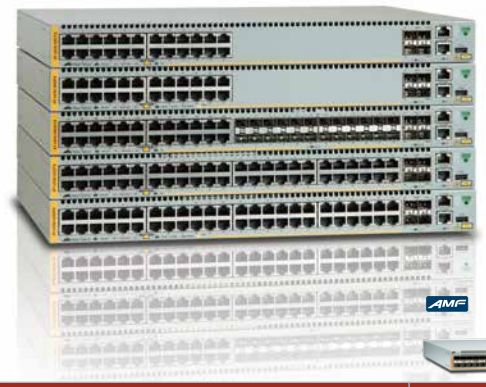
Secure Differentiation

QoS schemes for SwitchBlade x3100 access solutions are designed to ensure that application performance and availability are not impacted with network growth. Features such as IEEE 802.1p/Q enable tiered data services for residential, business, and enterprise users to prioritize real-time applications such as IP phones and IP cameras.

Environmentally Friendly

In keeping with the Allied Telesis commitment to environmentally friendly processes and products, the SwitchBlade x3100 is designed to reduce power consumption and minimize hazardous waste. Features include the use of high-efficiency power supplies and low-power chip sets. The switches also include an eco-friendly button on the front panel, allowing conservation of additional power by turning off all diagnostic LED indicators when they are not required.

Core and Distribution



x930 Series

Allied Telesis x930 Series switches are a high-performing and feature-rich choice for today's networks. With a range of 24- and 48-port models with 10 Gigabit uplink ports, the option of PoE+, and the power of Allied Telesis Virtual Chassis Stacking (VCStack), the x930 Series has the flexibility and performance for demanding aggregation and distribution applications.

FEATURES		DC2552XS/L3	x930-28GTX x930-28GPX	x930-28GSTX	x930-52GTX x930-52GPX	
FORM FACTOR		Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack	
SWITCH FUNCTIONALITY		Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	
PORTS AND MEDIA SUPPORT	10/100/1000T ports		24	24 combo	48	
	100/1000X SFP ports			24 combo		
	1G/10G SFP+ ports	48 (64 with breakout cable)	4	4	4	
	40G QSFP+ ports	4	2 (StackQS)	2 (StackQS)	2 (StackQS)	
	Expansion module bays		1	1	1	
POWER SUPPLY	PSU type	Dual internal hotswap	Dual internal hotswap	Dual internal hotswap	Dual internal hotswap	
	-48vDC PSU option		■ (PWR250-80)	■ (PWR250-80)	■ (PWR250-80)	
	Redundant power supply	N/A	N/A	N/A	N/A	
	Additional PSU	PWR06	PWR150 PWR250 PWR800 PWR1200	PWR150 PWR250 PWR800 PWR1200	PWR150 PWR250 PWR800 PWR1200	
POWER OVER ETHERNET	IEEE 802.3af (PoE)		■ (GPX model only)		■ (GPX model only)	
	IEEE 802.3at (PoE+)		■ (GPX model only)		■ (GPX model only)	
	PoE-enabled ports		24 (GPX model only)		48 (GPX model only)	
	Max PoE+ power		720W (GPX model only)		1440W (GPX model only)	
	Max full power PoE+ ports		24 (GPX model only)		48 (GPX model only)	
SCALABILITY	MAC address table size	128K	64K	64K	64K	
	Stacking (VCStack)	■ 2	■ 8	■ 8	■ 8	
	Long-distance VCStack	■ 2	■ 8	■ 8	■ 8	
	Stacking bandwidth	160G (QSFP+)	40G (SFP+) 160G (StackQS)	40G (SFP+) 160G (StackQS)	40G (SFP+) 160G (StackQS)	
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fan	
	Temperature range	0°C to 40°C	0°C to 45°C (GPX); to 50°C (GTX)	0°C to 50°C	0°C to 45°C (GPX); to 50°C (GTX)	
MANAGEMENT	Web GUI		■	■	■	
	CLI / Telnet / SNMP	■	■	■	■	
	IPv6 management	■	■	■	■	
	DHCPv4 / v6 server	■	■	■	■	
	AMF Master	■	■	■	■	
	AMF Member	■	■	■	■	
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	
	Link aggregation (LACP)	■	■	■	■	
	EPSRing	■	■	■	■	
	VRRPv3	■	■	■	■	
QoS	IEEE 802.1p priority queues	8	8	8	8	
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K	4K	
	RADIUS / TACACS+	■	■	■	■	
	SSH / SSL	■	■	■	■	
	IEEE 802.1x	■	■	■	■	
	DoS protection	■	■	■	■	
	DHCP snooping	■	■	■	■	
ROUTING	Static routes v4 / v6	■	■	■	■	
	RIP / RIPng	■	■	■	■	
	OSPFv2 / v3	■	■	■	■	
	BGP4 / BGP4+	■	■	■	■	
	Policy-based routing	■	■	■	■	
	VRF Lite	■	■	■	■	
MULTICASTING	IGMPv1 / v2 / v3	■	■	■	■	
	MLDv1 / v2	■	■	■	■	
	PIMv4 / PIMv6	■	■	■	■	
	PIM-SSM / PIM-SSMv6	■	■	■	■	
SDN	OpenFlow	■	■	■	■	

Distribution and Intelligent Edge

x510 Series

The Allied Telesis x510 Series of stackable Gigabit switches includes a full range of security and resiliency features. With a choice of 24- and 48-port models with 10 Gigabit uplinks, PoE+, and fiber, combined with the power of VCStack, they offer a versatile solution for applications at the network edge.

x510-28GTX x510-28GPX x510DP-28GTX	x510-28GSX	x510-52GTX x510-52GPX x510DP-52GTX	x510L-28GT x510L-28GP	x510L-52GT x510L-52GP*	IX5-28GPX
Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack	Desktop / rackmount / stack
Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3
24		48	24	48	24
	24				
4 (2 if stacked)	4 (2 if stacked)	4 (2 if stacked)	4 (2 if stacked) 10G license required	4 (2 if stacked) 10G license required	4 (2 if stacked)
Dual fixed internal (dual hotswap x510DP only)	Dual fixed internal	Dual fixed internal (dual hotswap x510DP only)	Single fixed internal	Single fixed internal	Dual hotswap internal
	■				
					PWR800
■ (GPX model only)		■ (GPX model only)	■ (GP model only)	■ (GP model only)	■
■ (GPX model only)		■ (GPX model only)	■ (GP model only)	■ (GP model only)	■
24 (GPX model only)		48 (GPX model only)	24 (GP model only)	48 (GP model only)	24
370W (GPX model only)		370W (GPX model only)	185W (GP model only)	185W (GP model only)	720W
12 (GPX model only)		12 (GPX model only)	6 (GP model only)	6 (GP model only)	24
16K	16K	16K	16K	16K	16K
■ (4)	■ (4)	■ (4)	■ (4)	■ (4)	■ (4)
■ (4)	■ (4)	■ (4)	■ (4)	■ (4)	■ (4)
40G (2 × SFP+)	40G (2 × SFP+)	40G (2 × SFP+)	40G (2 × SFP+)	40G (2 × SFP+)	40G (2 × SFP+)
Fan	Fan	Fan	Fan	Fan	Fan
0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 50°C
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
8	8	8	8	8	8
4K	4K	4K	4K	4K	4K
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	
■	■	■	■	■	
■	■	■	■	■	
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	
■	■	■	■	■	
■	■	■	■	■	

* Not available in North America

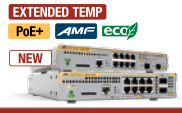
Intelligent Edge

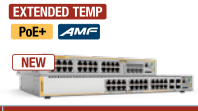
x230 Series

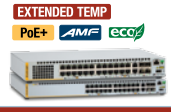
Allied Telesis x230 Series switches provide an excellent access solution for today's networks, supporting Gigabit to the desktop for demanding applications. Compact PoE models enable easy deployment, while connecting and remotely powering devices such as wireless access points, and IP video surveillance cameras at the network edge.

x310 Series

Allied Telesis x310 Series provide high performing Fast Ethernet access for today's networks. The ability to stack up to four units, and PoE models that can power edge devices, ensures a flexible and scalable edge solution for Enterprise networks.







FEATURES		x230-10GT x230-10GP	x230-18GT x230-18GP	x230-28GT x230-28GP	x310-26FT x310-26FP	x310-50FT x310-50FP
FORM FACTOR		Desktop / rackmount	Desktop / rackmount	Desktop / rackmount	Desktop / rackmount	Desktop / rackmount
SWITCH FUNCTIONALITY		Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3 upgradeable to advanced Layer 3	Basic Layer 3 upgradeable to advanced Layer 3
PORTS AND MEDIA SUPPORT	10/100/1000T	8	16	24	24 10/100TX	48 10/100TX
	100/1000X SFP ports	2	2	4	2	2
POWER SUPPLY	PSU type	Single fixed internal	Single fixed internal	Single fixed internal	Fixed internal	Fixed internal
POWER OVER ETHERNET	IEEE 802.3af (PoE)	■ (GP only)	■ (GP only)	■ (GP only)		
	IEEE 802.3at (PoE+)	■ (GP only)	■ (GP only))	■ (GP only)	■ (FP only)	■ (FP only)
	PoE+ enabled ports	8 (GP only)	16 (GP only)	24 (GP only)	24 (FP only)	48 (FP only)
	Max PoE+ power	124W (GP only)	247W (GP only)	370W (GP only)	370W (FP only)	370W (FP only)
	Max full power ports (30W)	4 (GP only)	8 (GP only)	12 (GP only)	12 (FP only)	12 (FP only)
SCALABILITY	MAC address table size	16K	16K	16K	16K	16K
	Stacking (VCStack)				■ (4)	■ (4)
	Stacking bandwidth				4G (2 × SFP DAC)	4G (2 × SFP DAC)
ENVIRONMENTAL	Cooling	Fanless (GT) / Fan (GP)	Fan	Fan	Fanless (FT) / Fan (FP)	Fan
	Temperature range	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 40°C (FT) / 50°C (FP)	0°C to 50°C
MANAGEMENT	Web GUI	■	■	■	■	■
	CLI / Telnet / SNMP	■	■	■	■	■
	IPv6 management	■	■	■	■	■
	DHCPv4 / v6 server				■ (client only)	■ (client only)
	AMF Member	■ (client only)	■ (client only)	■ (client only)	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	■
	Link aggregation (LACP)	■	■	■	■	■
	EPSRing	■	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K	4K	4K
	RADIUS / TACACS+	■	■	■	■	■
	SSH / SSL	■	■	■	■	■
	IEEE 802.1x	■	■	■	■	■
	DoS protection	■	■	■	■	■
	DHCP snooping	■	■	■	■	■
ROUTING	Static routes v4 / v6	■ (v4 only)	■ (v4 only)	■ (v4 only)	■	■
	RIP / RIPng	■ (RIP only)	■ (RIP only)	■ (RIP only)	■	■
	OSPFv2 / v3				■	■
MULTICASTING	IGMPv1 / v2 / v3	■ (snooping)	■ (snooping)	■ (snooping)	■	■
	MLDv1 / v2	■ (snooping)	■ (snooping)	■ (snooping)	■	■
	PIMv4 / PIMv6				■	■
	PIM-SSM / PIM-SSMv6				■	■
SDN	OpenFlow	■	■	■	■	■

CentreCOM 10 Gigabit Edge

CentreCOM™ is the Allied Telesis global brand of cost-effective switches for customers who need to manage their network communications with a minimal investment. CentreCOM 10 Gigabit Ethernet switches provide advanced management and security features to the edge while cost-effectively enhancing delivery of converged data.

XS900MX Series

The XS900MX Series are the ideal 10G access switches for enterprise networks or anywhere a relay switch with 10G uplink is required. The switches also make the ideal core or aggregation switch, to connect servers and storage in a small network. Available with a mix of copper and fiber 10G connectivity options, the XS900MX Series enable a highly flexible and reliable network, which can easily scale to meet increasing traffic demands.

Enterprise networks can benefit from 10 Gigabit aggregation of edge switches, as well as automated network management and zero-touch recovery with the Allied Telesis Management Framework (AMF). The XS916 Series offers a scalable 10 Gigabit solution to meet the increasing traffic demands of today's online services and applications.

FEATURES		XS916MXS	XS916MXT
SWITCH FUNCTIONALITY		Basic Layer 3	Basic Layer 3
PORTS AND MEDIA SUPPORT	100M/1G/10G RJ-45	12	4
	1G/10G SFP/SFP+	4	12
SCALABILITY	MAC address table size	16K	16K
	Stacking (VStack)	■ (2)	■ (2)
	Stacking bandwidth	40G (2 x SFP+)	40G (2 x SFP+)
ENVIRONMENTAL	Cooling	Fan	Fan
	Temperature range	0°C to 50°C	0°C to 50°C
MANAGEMENT	Web GUI	■	■
	CLI / Telnet / SNMP	■	■
	IPv6 management	■	■
	AMF	Edge node	Edge node
NETWORK RESILIENCE	Spanning Tree	■	■
	Link aggregation (LACP)	■	■
	EPSRing	■	■
QoS	IEEE 802.1p priority queues	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K
	RADIUS / TACACS+	■	■
	SSH / SSL	■	■
	IEEE 802.1x	■	■
	DHCP snooping	■	■
ROUTING	Static routes v4	■	■
	RIP	■	■
MULTICASTING	IGMPv1 / v2 / v3	■ (snooping)	■ (snooping)
	MLDv1 / v2	■ (snooping)	■ (snooping)

CentreCOM Gigabit Edge

GS900MX/MPX Series

Allied Telesis CentreCOM GS900MX/MPX Series switches are cost effective, fully managed, and provide scalable deployment options. With a choice of 24- and 48-port 10/100/1000T versions with 10G uplinks, Power over Ethernet (PoE), plus the ability to stack up to four units, the GS900MX/ GS900MPX Series switches are ideal for demanding applications at the edge of the network.

SFP/SFP+ Optics

Learn more about Allied Telesis pluggable optics on page 54.

		GIGABIT ETHERNET			
FEATURES		**GS924MX**	**GS924MPX**	**GS948MX**	**GS948MPX**
SWITCH FUNCTIONALITY		Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3
PORTS AND MEDIA SUPPORT	10/100/1000T	24 + 2 combo	24 + 2 combo	48 + 2 combo	48 + 2 combo
	SFP	2 combo (100/1000X)	2 combo (100/1000X)	2 combo (100/1000X)	2 combo (100/1000X)
	SFP+	2 (if not stacked)	2 (if not stacked)	2 (if not stacked)	2 (if not stacked)
POWER SUPPLY		Single fixed internal	Single fixed internal	Single fixed internal	Single fixed internal
POWER OVER ETHERNET	Power over Ethernet (PoE)		■		■
	PoE ports		24		48
	IEEE 802.3af Class 3 (15.4W)		24		24
	IEEE 802.3at Class 4 (30W)		12		12
	PoE budget		370W		370W
SCALABILITY	MAC address table size	16K	16K	16K	16K
	Stacking	■ (4)	■ (4)	■ (4)	■ (4)
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fan
	Eco-friendly	■	■	■	■
	Temperature range	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C
MANAGEMENT	Web	■	■	■	■
	CLI / Telnet / SNMP	■	■	■	■
	IPv6	■	■	■	■
	AMF	Edge node	Edge node	Edge node	Edge node
NETWORK RESILIENCE	Spanning Tree	■	■	■	■
	Link aggregation (LACP)	■	■	■	■
	EPSRing	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K	4K
	IEEE 802.1x	■	■	■	■
	MAC-based authentication	■	■	■	■
	Web-based authentication	■	■	■	■
	RADIUS / IEEE 802.1x	■	■	■	■
	TACACS	■	■	■	■
	SSH / SSL	■	■	■	■
	DHCP snooping	■	■	■	■
ROUTING	Static routes v4 / v6	■ (v4 only)	■ (v4 only)	■ (v4 only)	■ (v4 only)
	RIP / RIPng	■ (RIP only)	■ (RIP only)	■ (RIP only)	■ (RIP only)
MULTICASTING	IGMPv1 / v2 / v3	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)
	MLDv1 / v2	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)

GS970M Series

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 are ideal solution for connecting and remotely powering wireless access points, IP video surveillance cameras, and IP phones.

	GIGABIT ETHERNET					
	GS970M/10PS	GS970M/18PS	GS70M/28PS	GS970M/10	GS970M/18	GS970M/28
	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3
	8	16	24	8	16	24
	2	2	4	2	2	4
	Single fixed internal	Single fixed internal	Single fixed internal	Single fixed internal	Single fixed internal	Single fixed internal
	■	■	■			
	8	16	24			
	8	16	24			
	4	8	12			
	124W	247W	370W			
	16K	16K	16K	16K	16K	16K
	Fan	Fan	Fan	Fanless	Fan	Fan
	■	■	■	■	■	■
	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	Edge node	Edge node	Edge node	Edge node	Edge node	Edge node
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	8	8	8	8	8	8
	4K	4K	4K	4K	4K	4K
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■ (v4 only)	■ (v4 only)	■ (v4 only)	■ (v4 only)	■ (v4 only)	■ (v4 only)
	■ (RIP only)	■ (RIP only)	■ (RIP only)	■ (RIP only)	■ (RIP only)	■ (RIP only)
	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)
	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)

CentreCOM Fast Ethernet Edge

Allied Telesis CentreCOM Fast Ethernet edge switches provide security, performance and flexibility at an affordable price. These switches are ideal for the enterprise edge market, traditionally used in defense, government, campus, and security applications. With Power over Ethernet models providing connectivity for IP cameras, IP phones, and wireless access points.

FS970M Series

The Allied Telesis FS970M Series of high performance Fast Ethernet switches provides advanced enterprise features at an affordable investment level to improve the delivery of converged data. The FS970M Series is ideal for branch offices or the wiring closet of larger offices. The state-of-the-art QoS capability of this product ensures reliable delivery of advanced network services, such as voice, while effectively controlling the continually increasing traffic needs of today's networks.

SFP/SFP+ Optics
Learn more about Allied Telesis pluggable optics on page 54.

		FAST ETHERNET FIBER		
FEATURES		**FS970M/16F8-LC**	**FS970M/16F8-SC**	**FS970M/24F**
SWITCH FUNCTIONALITY		Basic Layer 3	Basic Layer 3	Basic Layer 3
PORTS AND MEDIA SUPPORT	10/100TX	8	8	
	10/100/1000T	2 (combo)	2 (combo)	2 (combo)
	SFP	2 combo (100/1000X)	2 combo (100/1000X)	2 combo (100/1000X)
	100FX	16 (LC) MMF	16 (SC) MMF	24 (LC) MMF
POWER OVER ETHERNET	IEEE 802.3af (PoE)			
	IEEE 802.3at (PoE+)			
	PoE enabled ports			
	Max PoE power			
	Max PoE+ enabled ports			
POWER SUPPLY	PSU type	2 fixed internal	2 fixed internal	2 fixed internal
SCALABILITY	MAC address table size	16K	16K	16K
	Stacking (VCStack)			
	Stacking bandwidth			
ENVIRONMENTAL	Cooling	Fan	Fan	Fan
	Variable-speed fan	■	■	■
	Eco-friendly	■	■	■
	Temperature range	0°C to 40°C	0°C to 40°C	0°C to 40°C
MANAGEMENT	Web GUI			
	CLI / Telnet / SNMP	■	■	■
	IPv6 management			
	AMF			
NETWORK RESILIENCE	Spanning Tree	■	■	■
	Link aggregation (LACP)	■	■	■
	EPSRing			
QoS	IEEE 802.1p priority queues	8	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K
	RADIUS / TACACS	■	■	■
	SSH/SSL	■	■	■
	IEEE 802.1x	■	■	■
	DHCP snooping	■	■	■
ROUTING	Static routes v4	■	■	■
	RIP	■	■	■
MULTICASTING	IGMPv1 / v2 / v3	■ (snooping)	■ (snooping)	■ (snooping)
	MLDv1 / v2			

FS980M Series

The FS980M Series switches provide high-performance Fast Ethernet connectivity right where you need it—at the network edge. Flexible and robust, this series provides total security and management features for enterprises of all sizes. Power over Ethernet (PoE) models enable connecting and powering edge devices in video surveillance and Point of Sale (POS) applications.

	FAST ETHERNET COPPER							
	FS980M/9	FS980M/18	FS980M/28	FS980M/52	FS980M/9PS	FS980M/18PS	FS980M/28PS	FS980M/52PS
	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3	Basic Layer 3
	8	16	24	48	8	16	24	48
	1 combo	2 combo			1 combo	2 combo		
	1 combo	2 combo	4	4	1 combo	2 combo	4	4
					■	■	■	■
					■	■	■	■
					8	16	24	48
					150W	250W	375W	375W
					4	8	12	12
	16K	16K	16K	16K	16K	16K	16K	16K
			■ (4) *	■ (4) *			■ (4) *	■ (4) *
			4G (2 x SFP)	4G (2 x SFP)			4G (2 x SFP)	4G (2 x SFP)
	Fanless	Fanless	Fanless	Fan	Fan	Fan	Fan	Fan
	■	■	■	■	■	■	■	■
	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	Edge node	Edge node	Edge node	Edge node	Edge node	Edge node	Edge node	Edge node
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	8	8	8	8	8	8	8	8
	4K	4K	4K	4K	4K	4K	4K	4K
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)
	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)	■ (snooping)

* 4 units stacking is supported in 5.4.7 or later

WebSmart

Allied Telesis WebSmart switches perform a dual role in providing connectivity for a variety of computer networks. For small office networks, they provide security and data priority, allowing the deployment of Voice over IP and similar applications. In larger networks, WebSmart switches provide security, authentication, and data priority — but at a lower cost point than a fully-managed device.

Simple Configuration

Allied Telesis WebSmart switches may be used directly from the box, with no additional configuration. Additional features can be enabled using a simple Graphical User Interface (GUI) management system, allowing less technical users to configure the devices.

Affordable Solutions

Allied Telesis WebSmart switches offer a solution with key "managed switch" features — without the price tag associated with managed switches.

These switches are perfect for budget-sensitive companies looking for advanced features such as Quality of Service (QoS), port mirroring, Virtual LAN (VLAN), and Power over Ethernet (PoE). In addition, WebSmart switches may be used on the edge of a large managed network while still providing high levels of security.

		FAST ETHERNET			
FEATURES		**FS750/20**	**FS750/28**	**FS750/28PS**	**FS750/52**
PORTS AND MEDIA SUPPORT	10/100TX	16	16	24	24
	10/100/1000T	2+2 (combo)	2+2 (combo)	2+2 (combo)	2+2 (combo)
	SFP	2 combo	2 combo	2 combo	2 combo
	100FX SFP support	■	■	■	■
POWER SUPPLY		Internal	Internal	Internal	Internal
POWER OVER ETHERNET	Power over Ethernet (PoE)			■	
	PoE enabled ports			24	
	IEEE 802.3af (PoE)			■	
	IEEE 802.3at (PoE+)			■	
	Max PoE power			193W	
	Max PoE+ enabled ports			4 (port 1-4)	
SCALABILITY	MAC address table size	8K	8K	8K	16K
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fan	Fanless
	Eco-friendly	■	■	■	■
	Temperature range	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
MANAGEMENT	Web	■	■	■	■
	SNMPv1 / v2	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■
	Rapid Spanning Tree	■	■	■	■
	Link aggregation (LACP)	■	■	■	■
	IGMP snooping (v1 / v2)	■	■	■	■
	Port setting (speed, availability, flow control)	■	■	■	■
QoS	IEEE 802.1p priority queues	4	4	4	4
SECURITY	IEEE 802.1Q VLANs	256	256	256	256
	IEEE 802.1x	■	■	■	■
	RADIUS / DHCP client	■	■	■	■
OTHER	Jumbo frames (9K)	■	■	■	■
	Port mirroring	■	■	■	■
	MAC filtering / ingress / egress rate limiting / broadcast storm control	■	■	■	■
IDEAL ENVIRONMENT		Home office / SMB / security at the edge	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge
CUSTOMER'S NEEDS		Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network

FS750 Series

The FS750 Series Fast Ethernet WebSmart switches offer the simplicity of unmanaged switches with the performance and reliability of managed switches, providing an ideal solution for integrating management at the edge of the network. Minimizing power consumption through high efficiency power supplies and low power chipsets, the FS750 Series at the network edge are the ideal cost-effective solution for small businesses.

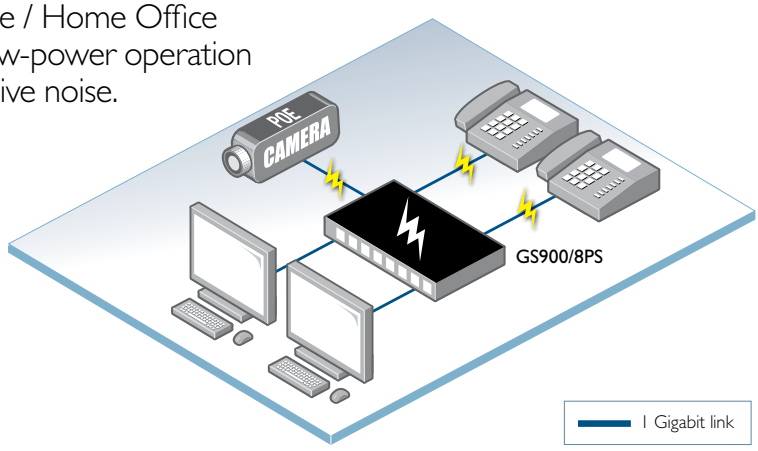
GS950 Series

The Allied Telesis GS950 Series of PoE+ power Gigabit WebSmart switches deliver up to 30 watts per port to support video surveillance and security cameras, wireless access points, IP phones, and other PoE-powered devices. The GS950 Series also features IPv6 management and TACACS+ to add an extra layer of security.

	GIGABIT ETHERNET							
	GS950/8	GS950/10PS	GS950/16	GS950/16PS	GS950/24	GS950/28PS	GS950/48PS	GS950/48
	6+2 (combo)	8+2 (combo)	14+2 (combo)	14+2 (combo)	20+4 (combo)	24	44+4 (combo)	44+4 (combo)
	2 combo	2 combo	2 combo	2 combo	4 combo	4	4 combo	4 combo
	■	■	■	■	■	■	■	■
	Internal	Internal	Internal	Internal	Internal	Internal	Internal	Internal
		■		■		■	■	
		8		16		24	24	
		■		■		■	■	
		■		■		■	■	
		75W		185W		185W	370W	
		2		6		4	12	
	8K	8K	8K	8K	8K	8K	8K	8K
	Fanless	Fanless	Fanless	Fan	Fanless	Fan	Fan	Fan
	■	■	■	■	■	■	■	■
	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
	■	■	■	■	■	■	■	■
	■ v3	■ v3	■ v3	■ v3	■ v3	■ v3	■ v3	■ v3
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
		■		■		■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	4	4	4	4	4	4	4	4
	256	256	256	256	256	256	256	256
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge
	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network

Unmanaged

Unmanaged switches are simple to deploy, requiring no user setup — making them the ideal solution for Small Office / Home Office (SOHO) applications. Their silent, eco-friendly, low-power operation ensures both minimal running costs and no intrusive noise.



Auto-Negotiation and Auto MDI/MDI-X

Allied Telesis unmanaged copper switch ports support auto-negotiation and auto MDI/MDI-X, enabling them to interface with legacy Ethernet and Fast Ethernet products without the need for special cables or user configuration.

Fanless Design

All Allied Telesis unmanaged switches feature a fanless design. This quiet operation makes them perfectly suited for use in home and small-office installations.

		GIGABIT ETHERNET				
FEATURES		**GS900/8PS**	**GS910/5**	**GS910/5E**	**GS910/8**	
PORTS AND MEDIA SUPPORT	10/100/1000T	8	5	5	8	
	SFP	1				
POWER SUPPLY		Internal	Internal	External (high efficiency)	Internal	
POWER OVER ETHERNET	Power over Ethernet (PoE)	■				
	PoE ports	4				
	IEEE 802.3af Class 3 (15.4W)	4				
	IEEE 802.3at Class 4 PoE+ (30W)	2				
	PoE budget	75W				
SCALABILITY	MAC address table size	8K	2K	2K	4K	
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless	Fanless	
	Eco-friendly	■	■	■	■	
IDEAL ENVIRONMENT		SOHO / network edge	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge	
CUSTOMER'S NEEDS		High performance / Plug and Play / low maintenance / cost-effective / simple to install / centralized power	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	

		FAST ETHERNET		
FEATURES		**FS705LE**	**FS705EFC/SC**	**FS708LE**
PORTS AND MEDIA SUPPORT	10/100TX	5	4	8
	100FX		1 × SC, MMF	
	SFP (1000X)			
POWER SUPPLY		External (high efficiency)	External (high efficiency)	External (high efficiency)
POWER OVER ETHERNET	Power over Ethernet (PoE)			
	PoE ports			
	IEEE 802.3af Class 3 (15.4W)			
	PoE budget			
SCALABILITY	MAC address table size	2K	4K	4K
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless
	Eco-friendly	■	■	■
IDEAL ENVIRONMENT		SOHO / network edge	Edge switch on fiber-based network	SOHO / network edge
CUSTOMER'S NEEDS		Plug and Play / cost-effective / simple to install	Interface to fiber / backbone network / longer than 100 m cable runs / cost-effective / simple to install	Plug and Play / cost-effective / simple to install

GS910 Series

The Allied Telesis GS910 Series offers unmanaged Gigabit switching The GS910 Series delivers the gigabit performance demanded by today's high-bandwidth applications, such as video, graphics and industrial design. Compact design and silent operation enable deployment in work areas.

GS920 Series

The Allied Telesis GS920 Series offers secure gigabit switching solutions for the desktop and small networks. Front-panel DIP switches provide configuration of commonly used features – network device management made easy.

	GIGABIT ETHERNET					
	GS910/8E	GS910/16	GS910/24	GS920/8	GS920/16	GS920/24
	8	16	24	8	16	24
	External (high efficiency)	Internal	Internal	Internal	Internal	Internal
	4K	8K	8K	4K	8K	8K
	Fanless	Fanless	Fanless	Fanless	Fanless	Fanless
	■	■	■	■	■	■
	POS and retail / home office / SMB / security cameras / security at the edge	Home office / SMB / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge	POS and retail / home office / SMB / security cameras / security at the edge
	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network	Security and video surveillance / management at the edge / basic, entry-level security / Web-based management / copper Ethernet at the edge of the fiber network



	FAST ETHERNET				
	FS708/POE	FS708LE/POE	FSW708*	FS716L	FS724L
	8	8	8	16	24
	1				
	Internal	External	Internal	Internal	Internal
	■	■			
	8	4			
	4	2			
	65W	31W			
	8K	1K	1K	8K	8K
	Fanless	Fanless	Fanless	Fanless	Fanless
	■	■	■	■	■
	Small office network with wireless, IP cameras	Small office network with wireless, IP cameras	Small office network	Small office network	Small office network
	Ability to power wireless access points, cameras, etc. / interface to fiber backbone network / longer than 100 m cable runs / cost-effective / simple to install	Ability to power wireless access points, cameras, etc. / cost-effective / simple to install	Plug and Play / cost-effective / simple to install	Plug and Play / cost-effective / simple to install	Plug and Play / cost-effective / simple to install

*FSW708 available in Asia/Pacific only

Industrial Switches

Our ruggedized 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, IE switches deliver the performance and reliability demanded by industrial deployments in the Internet of Things (IoT) age.

		INDUSTRIAL ETHERNET						
FEATURES		**IA708C**	**IA810M**	**IFS802SP IFS802SP/POE(W)**	**IE200-6FP IE200-6FT**	**IE200-6GP IE200-6GT**	**IE300-12GP IE300-12GT**	**IE510-28GSX**
FORM FACTOR		DIN rail/wall mount	DIN rail/wall mount	DIN rail / wallmount	DIN rail / wallmount	DIN rail / wallmount	DIN rail / wallmount	Desktop / rackmount / stack
SWITCH FUNCTIONALITY		Layer 2	Layer 2	Layer 2	Basic Layer 2, upgradable	Basic Layer 2, upgradable	Basic Layer 3, upgradable	Basic Layer 3, upgradable
PORTS AND MEDIA SUPPORT	10/100TX	8	8	8	4			
	10/100/1000T			2 combo		4	8	
	100/1000X SFP		2(100FX LC)	2 combo	2	2	4	24
	1G/10G SFP+							4 (2 if stacked)
POWER SUPPLY	PSU type	DC powered device	DC powered device	DC powered device	DC powered device	DC powered device	DC powered device	DC powered device
	Redundant power supply			■	■	■	■	■
POWER OVER ETHERNET	IEEE 802.3af (PoE)			■ (POE(W))	■ (6FP)	■ (6GP)	■ (12GP)	
	IEEE 802.3at (PoE+)				■ (6FP)	■ (6GP)	■ (12GP)	
	PoE enabled ports			8 (POE(W))	4 (6FP)	4 (6GP)	8 (12GP)	
	Max PoE power			123.2W (POE(W))	120W (6FP)	120W (6GP)	240W (12GP)	
	Max PoE+ enabled ports				4 (6FP)	4 (6GP)	8 (12GP)	
	High-PoE (60W) enabled ports						4 (12GP)	
SCALABILITY	MAC address table size	8K	8K	8K	2K	2K	16K	16K
	Stacking (VCStack)							■ (4)
	Long-distance VCStack							■ (4)
	Stacking bandwidth							40G (2 x SFP+)
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless	Fanless	Fanless	Fanless	Fan
	Temperature range	-10°C to 70°C	0°C to 60°C (vertical locating) 0°C to 50°C (horizontal locating)	-10°C to 60°C -40°C to 75°C (POE(W))	-40°C to 75°C	-40°C to 75°C	-40°C to 75°C	-40°C to 75°C
MANAGEMENT	Web GUI		■	■	■	■		■
	CLI / Telnet / SNMP		■	■	■	■	■	■
	IPv6 management				■	■	■	■
	DHCPv4/v6 server			■ (v4 only)			■	■
	AMF Member				■	■	■	■
NETWORK RESILIENCE	Spanning Tree		■	■	■	■	■	■
	Link aggregation		■ (static)	■ (LACP)	■	■	■	■
	EPSRing		■ (aware)		■	■	■	■
	ITU-T G.8032 with Ethernet CFM				■	■	■	■
	VRRPv3						■	■
QoS	IEEE 802.1p priority queues		8	4	8	8	8	8
SECURITY	IEEE 802.1Q VLANs		256	256	4K	4K	4K	4K
	RADIUS / TACACS+			■ (RADIUS only)	■	■	■	■
	SSH / SSL				■	■	■	■
	IEEE 802.1x			■	■	■	■	■
	DoS protection				■	■	■	■
	DHCP snooping				■	■	■	■
ROUTING	Static routes v4 / v6						■	■
	RIP / RIPng						■	■
	OSPFv2 / v3						■	■
	Policy-based routing							■
MULTICASTING	IGMPv1 / v2 / v3		■ (snooping only)	■ (snooping without v3)	■ (snooping)	■ (snooping)	■	■
	MLDv1 / v2				■ (snooping)	■ (snooping)	■	■
	PIMv4 / PIMv6						■	■
	PIM-SSM / PIM-SSMv6						■	■

Allied Telesis™

Security Appliances

The comprehensive, high-performance Allied Telesis AR Series features UTM Firewalls and conventional secure VPN routers. Both product types offer functions such as advanced routing, QoS, IPv6, and advanced security, which includes firewall and VPN services. AR Series products are able to deliver the breadth of functionality that small- and medium-sized businesses require at a price point they can afford, and with a proven reliability that makes Allied Telesis a trusted networking partner.

Firewalls

Allied Telesis UTM (Unified Threat Management) and VPN firewalls are an ideal integrated security platform for today's networks. Application-aware firewall, threat protection and secure remote access is combined with routing and switching, to provide an innovative high-performance solution.

AMF™

AlliedWare Plus™ OPERATING SYSTEM

Deep Packet Inspection (DPI) Firewall

The Allied Telesis firewall is a next-generation, Deep Packet Inspection (DPI) engine that provides real-time, Layer 7 classification of network traffic. Rather than being limited to filtering packets based on protocols and ports, the firewall can determine the application associated with the packet. This allows enterprises to differentiate business-critical from non-critical applications, and enforce security and acceptable use policies in ways that make sense for the business.

Best-of-Breed Security

Allied Telesis integrated security platforms utilize best-of-breed security providers for the ultimate in up-to-the-minute protection from all known threats. Flexible licensing options make it easy to choose the right combination of security features to best meet business needs.

	UTM FIREWALLS		VPN FIREWALLS	
PERFORMANCE	**AR4050S**	**AR3050S**	**AR2050V**	**AR2010V**
FIREWALL THROUGHPUT (RAW)	1.9Gbps	750Mbps	750Mbps	750Mbps
FIREWALL THROUGHPUT (APP CONTROL)	1.8Gbps	700Mbps		
CONCURRENT SESSIONS	300,000	100,000	100,000	100,000
NEW SESSIONS PER SECOND	12,000	3,600	3,600	3,600
IPS THROUGHPUT	750Mbps	220Mbps	200Mbps	200Mbps
IP REPUTATION THROUGHPUT	1Gbps	350Mbps		
MALWARE PROTECTION THROUGHPUT	1.3Gbps	300Mbps		
VPN THROUGHPUT	1Gbps	400Mbps	400Mbps	400Mbps

Easy to Manage

Allied Telesis firewalls run the advanced AlliedWare Plus fully featured operating system. The comprehensive Graphical User Interface (GUI) provides a single-pane-of-glass interface, with the dashboard providing at-a-glance status of threat detection and protection. The GUI centralizes management of the integrated components, to control and protect online business resources and applications.

High Performance

High performance is guaranteed by harnessing the power of multi-core processors and application acceleration engines. This dramatically increases throughput and enables simultaneous packet inspection.

Sophisticated Application Control

The Internet has evolved exponentially. Whereas once it simply provided pages to be browsed, it now offers applications that enable people to interact, with services such as collaborative document creation, social networking, video conferencing, cloud-based storage, banking, and much more.

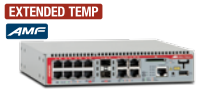
Organizations must be able to control the applications that their people use, and how they use them. Allied Telesis UTM and VPN firewalls provide the visibility and control that are necessary to safely navigate the increase in online applications used for effective business today.

Intrusion Detection and Prevention Systems (IDS/IPS)

IDS/IPS is an intrusion detection and prevention system that can protect networks from malicious traffic. IDS/IPS monitors inbound and outbound traffic, and identifies threats which may not be detected by the firewall alone.

IP Reputation

IP reputation is becoming increasingly popular as a method of improving the success of intrusion prevention by reducing false positives. IP reputation provides an extra variable to the prevention decision, which allows drop rules to be actioned only if the reputation of the website exceeds a chosen threshold.



		UTM FIREWALLS		VPN FIREWALLS	
FEATURES		**AR4050S**	**AR3050S**	**AR2050V**	**AR2010V**
FORM FACTOR		Desktop / rackmount	Desktop / rackmount	Desktop / rackmount	Desktop / DIN rail
WAN PORTS	10/100/1000T	2 combo	2 combo	1	1
	100/1000X (SFP)	2 combo	2 combo		
	WAN bypass	2	2	1	1
LAN PORTS	10/100/1000T	8	8	4	1
MEDIA SUPPORT	USB port	1	1	1	1
	SDHC slot	1	1		
POWER SUPPLY		Fixed internal	Fixed internal	Fixed internal	AC adapter or DC inlet
ENVIRONMENTAL	Temperature range	0°C to 50°C	0°C to 50°C	0°C to 45°C	0°C to 50°C
	Cooling	Speed-controlled fan	Speed-controlled fan	Fanless	Fanless
PERFORMANCE	CPU	Quad-core 1.5GHz	Dual-core 800MHz	Dual-core 800MHz	Dual-core 800MHz
	RAM	2 GB	1 GB	512 MB	512 MB
	Throughput	See table on page 26	See table on page 26	See table on page 26	See table on page 26
MANAGEMENT	Console port	RJ-45	RJ-45	RJ-45	RJ-45
	Web-based GUI	■	■	■	■
	CLI	■	■	■	■
	SNMP	■	■	■	■
	Telnet / SSH	■	■	■	■
	AMF	■ (Master support)	■	■	■
NETWORK RESILIENCE	VRRP and VRRPv3	■	■	■	■
	Spanning Tree	■	■	■	■
THREAT PROTECTION	Anti-virus	■			
	Anti-malware	■	■		
	IDS / IPS	■	■	■	■
	IP reputation	■	■		
	Automatic threat updates	■	■		
SECURITY	IEEE 802.1Q VLANs	■	■	■	■
	RADIUS / TACACS+	■	■	■	■
QoS		■	■	■	■
FIREWALL	Firewall	■	■	■	■
	Application control	■	■		
	URL filter (URL black list)	■	■	■	■
	Web content control and IP reputation	■	■		
	Traffic shaping	■	■	■	■
	DMZ	■	■	■	■
	Port forwarding	■	■	■	■
	Dynamic NAPT	■	■	■	■
TUNNELLING	IPsec VPN tunnels	■	■	■	■
	SSL / TLS VPN tunnels	■	■	■	■
	L2TPv3	■	■	■	■
	GRE	■	■	■	■
ROUTING	Static routing	■	■	■	■
	RIP / RIPng	■	■	■	■
	OSPFv2 / OSPFv3	■	■	■	■
	BGP4 / BGP4+	■	■	■	■
	IGMP	■	■	■	■
	PIMv4 / PIMv6	■	■	■	■
	Bridging (LAN / WAN)	■	■	■	■
	PPPoE	■	■	■	■
	DHCPv4/v6 client, server, relay	■	■	■	■

Secure VPN Routers

Allied Telesis WAN and Internet multiservice access VPN routers include solutions for T1/E1, ISDN, xDSL, and leased-line connections.

		SECURE MODULAR VPN ROUTERS		SECURE xDSL ROUTER
FEATURES		**AR415S**	**AR750S**	**AR440S**
FORM FACTOR		Desktop / rackmount	Desktop / rackmount	Desktop / wallmount / rackmount
PORTS AND MEDIA SUPPORT	10/100TX	1 (WAN) + 4 (LAN)	2 (WAN) + 5 (LAN)	5 (LAN)
	xDSL (WAN)			ADSL2/2+ (Annex A)
	Async port	1	1	1
	PIC bays (unpopulated)	1	2	1
OPTIONAL PIC CARDS	T1/E1 WAN	AR020	AR020	AR020
	BRI - ISDN (S/T)	AR021S	AR021S	AR021S
	2Mbps sync port	AR023	AR023	AR023
	4 x async	AR024	AR024	AR024
	2 x FXS VoIP	AR027		AR027
POWER SUPPLY		Fixed internal	Fixed internal	Fixed internal
ENVIRONMENTAL	Indoor / outdoor usage	Indoor	Indoor	Indoor
	Temperature range	0°C to 40°C	0°C to 40°C	0°C to 50°C
MANAGEMENT	Web	■	■	■
	CLI access	Async, Telnet	Async, Telnet	Async, Telnet
	SNMP	v2 and v3	v2 and v3	v2 and v3
NETWORK RESILIENCE	VRRP	■	■	■
QoS	IEEE 802.1p priority queues	■	■	■
	Queueing mechanisms	■	■	■
	Priority mechanisms	■	■	■
SECURITY	IEEE 802.1Q VLANs	64	64	64
	RADIUS	■	■	■
	SSL	■	■	■
	IEEE 802.1x	■	■	■
	DoS protection	■	■	■
	Firewall	4000 sessions (FL18B) 8000 sessions (FL18C)	■	■
OTHER	DMZ	■	■	■
	MAC filter	■	■	■
	IP / TCP / UDP filter	■	■	■
	URL filter	■	■	■
	Peer-to-peer protocols detection	■	■	■
	Encryption (DES, 3DES, AES)	■	■	■
	UPnP	■	■	■
	VPN concurrent tunnels	1 - standard 5 - FL19B, 10 - FL19C 25 - FL19D, 50 - FL19E	250	100
ROUTING	RIPv1 and v2	■	■	■
	IPv4	■	■	■
	IPv6	AR400-ADVL3UPGRD	AR700-ADVL3UPGRD	AR400-ADVL3UPGRD
	OSPF	■	■	■
	NAT / NAPT	■	■	■
	NAT VPN pass-through (sessions)	■	■	■
	PPPoE / PPTP / L2TP	■	■	■
	DHCP client / server / relay	■	■	■
	WAN load balancing	FL15 (option)	Included	FL15 (option)
	Server load balancing	AR400-ADVL3UPGRD	AR700-ADVL3UPGRD	AR400-ADVL3UPGRD
	BGP-4	AR400-ADVL3UPGRD	AR700-ADVL3UPGRD	AR400-ADVL3UPGRD
IDEAL ENVIRONMENT		Medium business	Medium business	Branch office
CUSTOMER'S NEEDS		Remote access	Remote access	Head office connectivity

Allied Telesis™

Wireless

The broad portfolio of Allied Telesis wireless products provides customers with high performance and low operating costs. Optimized for deployment across most environments, Allied Telesis wireless solutions are ideal for every application — from offices to classrooms, from distributed retail stores to large hospitals and campuses, and from warehouses to convention centers and sports arenas/stadiums. Advanced software features and a broad range of accessories meet the demands of SOHO to enterprise-class networks.

TQ Series

WIRELESS ACCESS POINTS

Allied Telesis TQ Series wireless access points support the latest IEEE 802.11ac standards, doubling the raw wireless capacity available with an IEEE 802.11n access point. With flexible deployment modes: standalone, AP-cluster, or controlled by the UWC WLAN controller, TQ Series access points are suitable for a wide variety of environments — from small offices to large campuses.

		ACCESS POINTS AND ROUTERS	
FEATURES		**TQ4400e**	**TQ4600**
FORM FACTOR		Pole / wallmount	Desktop / wallmount / ceiling mount
PORTS AND MEDIA SUPPORT	Ethernet	1 x 10/100/1000T	1 x 10/100/1000T
	Wireless radio	1 × IEEE 802.11a/n/ac (2x2 MIMO 867Mbps) 1 × IEEE 802.11b/g/n (2x2 MIMO : 300Mbps)	1 × IEEE 802.11a/n/ac (3x3 MIMO 1300Mbps) 1 × IEEE 802.11b/g/n (3x3 MIMO : 450Mbps)
POWER SUPPLY		IEEE 802.3at PoE (PD)	External or IEEE 802.3af/at PoE (PD)
ENVIRONMENTAL	Indoor / outdoor usage	Outdoor	Indoor
	Temperature range	-40°C to 65°C	0°C to 40°C
SCALABILITY	Clustering	Up to 16 members (recommend: 10)	Up to 16 members (recommend: 10)
MANAGEMENT	Operations management	Standalone / controlled mode	Standalone / controlled mode
	Web-based GUI	HTTP, HTTPS	HTTP, HTTPS
	SNMP	v1, v2c	v1, v2c
SECURITY	RADIUS / IEEE 802.1x / SSL	■	■
	Encryption AES	AES	AES
	MAC filtering	■	■
BRIDGING	VLAN	■	■
WIRELESS	IEEE 802.11e (WMM)	■	■
	IEEE 802.11i (enhanced security)	■	■
	Mode: infrastructure	Access point	Access point
	Wireless Distribution System (WDS)	■	■
	Captive portal	via UWC via Vista Manager EX	via UWC via Vista Manager EX
	Dynamic channel planning	■	■
	Multiple SSID	32	32
	VLAN to SSID mapping	■	■
	Regulatory domain compliance	■	■
	Rogue AP detection	■	■
	Antenna	2 × 2.4GHz (5dBi) / 2 × 5GHz (7dBi), external antennas	3 × 2.4GHz (3.17dBi) / 3 × 5GHz (4.15dBi), omni embedded
	Antenna diversity mode	■	■
	Wi-Fi certified	■	■
AMF		■ Guest node	■ Guest node
SDN / OPENFLOW			■ License: AT-TQ4600-OF13
IDEAL ENVIRONMENT		Enterprise / campus	Enterprise / campus
CUSTOMER'S NEEDS		Outdoor wireless bridge / hotspot	User access (BYOD) / indoor wireless bridge / hotspot

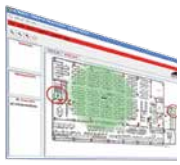
Wireless Controllers

CONTROLLER FOR ACCESS POINTS

The Allied Telesis Unified Wireless Controller is the single point of management for the operation, administration, and maintenance of all access points in an enterprise. The UWC controller is available as either a hardware appliance or hosted software for cloud-based applications.

Key features of the UWC include:

- Simplified Plug-and-Play access ports
- RF management and control
- Wireless Intrusion Prevention System
- Security safeguards
- Resilience
- Seamless mobility
- Client location tracking
- Graphic visualization



		SOFTWARE APPLIANCE	HARDWARE APPLIANCE
FEATURES		**UWC-Install + UWC-BaseST**	**UWC-60-APL**
FORM FACTOR		Virtual machine software	Desktop, 1RU
DEPLOYMENT MODE	Data forwarding	Distributed, centralized	
	Grouping / clustering	RF group, mobility group	
	Wireless network topology	Access point, WDS	
SCALABILITY	Clients per AP	200	
	Clients per controller	8000	
	APs per controller	10, upgradable up to 200	10, upgradable up to 60
	Groups	255	
	Controllers per group	64	
	APs per group	2000	
	WLANs	64	
	VLANs	4096	
	AP profiles	16	
	Network profile	64	
PORTS AND MEDIA SUPPORT	Ethernet	1 × vNIC	6 × 1000T
	Serial		1
	USB		2
POWER SUPPLY			AC/DC adapter
ENVIRONMENTAL	Temperature range		5°C to 40°C
	Cooling		Fan
MANAGEMENT	RF coverage hole arrangement	■	
	Self-recovery of AP fault	■	
	RF interference mitigation	■	
	Dynamic Tx power adjustment	■	
	Dynamic channel selection	■	
	Client load balancing	■	
	Plug and Play / discovery mechanism	Layer 2 and Layer 3	
	Client location service	■	
HIGH AVAILABILITY	Adaptive AP operations mode	■	
	Controller redundancy	N:N	
ROUTING	Bridging	■	
	Routing	■	
	Mobility	Layer 2 and Layer 3, Fast BSS transition	
NETWORKING	Client load balancing	■	
	Wireless Multimedia Media (WMM)	■	
	Optimized video streaming	■	
	Rate limiting	■	
	MAC layer QoS	■	
SECURITY	Access Control List (ACL)	■	
	Guest access	Captive portal, Web authentication	
	Intrusion detection / prevention system	Wireless IDS (wIDS), rogue AP detection, rogue client	
IDEAL ENVIRONMENT		Small to mid-sized enterprise	
CUSTOMER'S NEEDS		Cloud-based application	Dedicated server model
		User access (BYOD) / Hotspot / centralized WLAN management	

MWS Series

WIRELESS ACCESS POINTS

Allied Telesis MWS Series wireless access points are a cost-effective solution for small to medium networks, with an intuitive GUI for easy management. They offer simultaneous dual-band support of the 2.4GHz and 5GHz frequencies, increasing bandwidth, and providing a high-quality network that prioritizes traffic to minimize interference.

The MWS Series is equipped with advanced encryption and authentication IEEE 802.11i capabilities. These APs protect WLANs by segmenting public and private access with multiple Service Set Identifications (SSIDs) and VLAN Tagging. Rogue access point detection prevents unauthorized entry to the wireless network.

		WIRELESS ACCESS POINTS		
FEATURES		**MWS600AP***	**MWS1750AP***	**MWS2533AP***
FORM FACTOR		Desktop / wallmount / ceiling mount	Desktop / wallmount / ceiling mount	Desktop / wallmount / ceiling mount
PORTS AND MEDIA SUPPORT	Ethernet	1 x 10/100/1000T	1 × 10/100/1000T	2 x 10/100/1000T
	Wireless radio	2 x IEEE 802.11n spatial streams 300Mbps throughput at 2.4GHz (IEEE 802.11n) 300Mbps throughput at 5GHz (IEEE 802.11n)	3 x IEEE 802.11n/ac spatial streams 450Mbps throughput at 2.4GHz (IEEE 802.11n) 1.3Gbps throughput at 5GHz (IEEE 802.11ac)	4 x IEEE 802.11n/ac spatial streams 600Mbps throughput at 2.4GHz (IEEE 802.11n) 1.7Gbps throughput at 5GHz (IEEE 802.11ac)
POWER SUPPLY		IEEE 802.3at PoE+ (PD)	IEEE 802.3at PoE+ (PD)	External or IEEE 802.3at PoE+ (PD)
ENVIRONMENTAL	Indoor / outdoor usage	Indoor	Indoor	Indoor
	Temperature range	0°C to 40°C	0°C to 40°C	PoE: 0°C to 50°C AC adapter: 0°C to 45°C
MANAGEMENT	Operations management	Standalone	Standalone	Standalone
	Web-based GUI	HTTP, HTTPS	HTTP, HTTPS	HTTP, HTTPS
	SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3
SECURITY	Authentication	IEEE 802.1x	IEEE 802.1x	IEEE 802.1x
	Encryption	AES / TKIP	AES / TKIP	AES / TKIP
	MAC filtering	■	■	■
BRIDGING	VLAN	■	■	■
WIRELESS	IEEE 802.11e (WMM)	■	■	■
	Mode: infrastructure	Access point	Access point	Access point
	Multiple SSID	32	32	32
	VLAN to SSID mapping	■	■	■
	Rogue AP detection	■	■	■
	Antenna	Embedded	Embedded	Embedded
	Antenna diversity mode	■	■	■
	Wi-Fi certified	■	■	■
IDEAL ENVIRONMENT		Small / medium business	Small / medium business	Small / medium business

*Not available in NA/CSA

Wireless Accessories

Allied Telesis offers a variety of wireless network accessories, including antennas, power supplies, service modules, splitters, mounting hardware, and cabling.

PoE MODE
A: Feeding and receiving power on data pairs
B: Feeding and receiving power on spare pairs

PSE
Power Sourcing Equipment feeding power to a Powered Device.

PD
Powered Device receives power from Power Sourcing Equipment.

WMM
Wireless Multimedia is a Wi-Fi Alliance interoperability certification that provides basic Quality of Service (QoS) to applications running over Wi-Fi.

WISP
Wireless Internet Service Provider.

CLIENT (STA) MODE
The equipment's wireless interface can be configured to operate as a wireless client connecting to any other access points.

IEEE 802.11f (IAPP)
Inter Access Point Protocol simplifies and speeds roaming between two access points.

WLL
Wireless Local Loop defines the wireless access of customer's premises to the Telco operator network.

FULL HOTSPOT
The equipment is able to implement a full-featured hotspot system including wireless access, Web page management, multiple virtual hotspots on a single radio interface, RADIUS server, and customer's profile management application.

PoE

		PSE PoE		PD PoE
FEATURES		**6101G**	**6101GP**	**6102G**
FORM FACTOR		Desktop	Desktop	Desktop / wallmount
PORTS AND MEDIA SUPPORT	10/100/1000T	1	1	1
POWER SUPPLY	PSU type	Fixed internal	Fixed internal	PoE
POWER OVER ETHERNET	IEEE 802.3af	■	■	■
	IEEE 802.3at		■	
	PoE-enabled ports	1	1	1
	Max number of full power ports	1	1	1
	Mode	B	B	A or B
	PoE power	15.4W	30W	10W
	DC out (vDC)			5 / 7.5 / 9 / 12
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless
MANAGEMENT		Unmanaged	Unmanaged	Unmanaged
CUSTOMER'S NEEDS		Feeding protected PoE to any Fast and Gigabit Ethernet equipment without having to replace non-PoE switches	Feeding protected PoE to any Fast and Gigabit Ethernet equipment without having to replace non-PoE switches	Makes any non-PoE equipment capable of PoE up to Gigabit Ethernet speed / extract power from a PoE line and supply 5 / 7.5 / 9 or 12vDC to any equipment

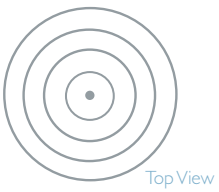
Accessories

		COAX CABLES		
FEATURES		**AN0001**	**AN0002**	**AN0003**
ENVIRONMENTAL	Indoor / outdoor usage	■	■	■
ANTENNA GAIN (dBi)		2.4GHz, 5GHz	2.4GHz, 5GHz	2.4GHz, 5GHz
INSERTION LOSS (dB)	@ 2.4GHz	-1.6	-1.9	-2.4
	@ 5GHz	-3.6	-3.5	-3.9
CONNECTOR		2 × type N male	2 × type N male	2 × type N male
COMPATIBLE EQUIPMENT	TQ4400e	■	■	■

Antennas


FEATURES		AN2458-10DP	AN5158-16DP	AN5158-19DP
ENVIRONMENTAL	Indoor / outdoor usage	■	■	■
TYPE		Panel, MIMO	Sector, MIMO	Panel, MIMO
FREQUENCY RANGE		2400~2500 MHz 4900~5850 MHz	5150~5850 MHz	4900~5850 MHz
POLARIZATION	Vertical / horizontal	■	■	■
GAIN		8 dBi @ 2.4GHz 10 dBi @ 5GHz	16 dBi	19 dBi
BEAMWIDTH	Vertical	57° @ 2.4GHz 42° @ 5GHz	11°	23°
	Horizontal	90° @ 2.4GHz 70° @ 5GHz	120°	80°
CONNECTOR		2 × type N female	2 × type N female	2 × type N female
COMPATIBLE EQUIPMENT	TQ4400e	■	■	■

Antenna Types



Omni
Omnidirectional antennas radiate power uniformly in every direction on the horizontal plane. Most access points and client devices have omnidirectional antennas.

Panel
A flat antenna with a radiation lobe similar to a cone. It is directional and is normally used for point-to-point links or at the end-points of a point-to-multipoint network.

Sector
A flat antenna with a radiation lobe similar to a cone with an elliptical footprint. It is directional and is normally used in the central site of a point-to-multipoint network.

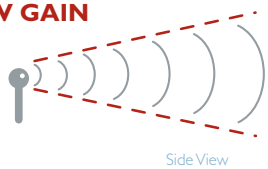
Parabolic
A dish-shaped, directional antenna with a radiation lobe similar to that of a panel antenna. It is usually larger than a panel and has a higher gain. Parabolic antennas are suitable for long-distance, point-to-point links.

Gain
Gain expresses how much an antenna enhances its transmitted and received signals relative to a simple dipole. Gain is expressed in dB and is logarithmic.

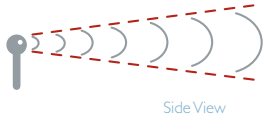
Polarization
Polarization defines the position in space of electrical and magnetic fields. The best signal transfer happens when both transmitting and receiving antennas have the same polarization. A 90° difference between transmitting and receiving antennas may produce up to -30dB of signal attenuation.

Loss
Loss is the attenuation or reduction in power of a system, expressed in dB. All cables and connector devices have a loss variable and must be considered when designing a wireless system, especially when directional antennas are used.

LOW GAIN



HIGH GAIN



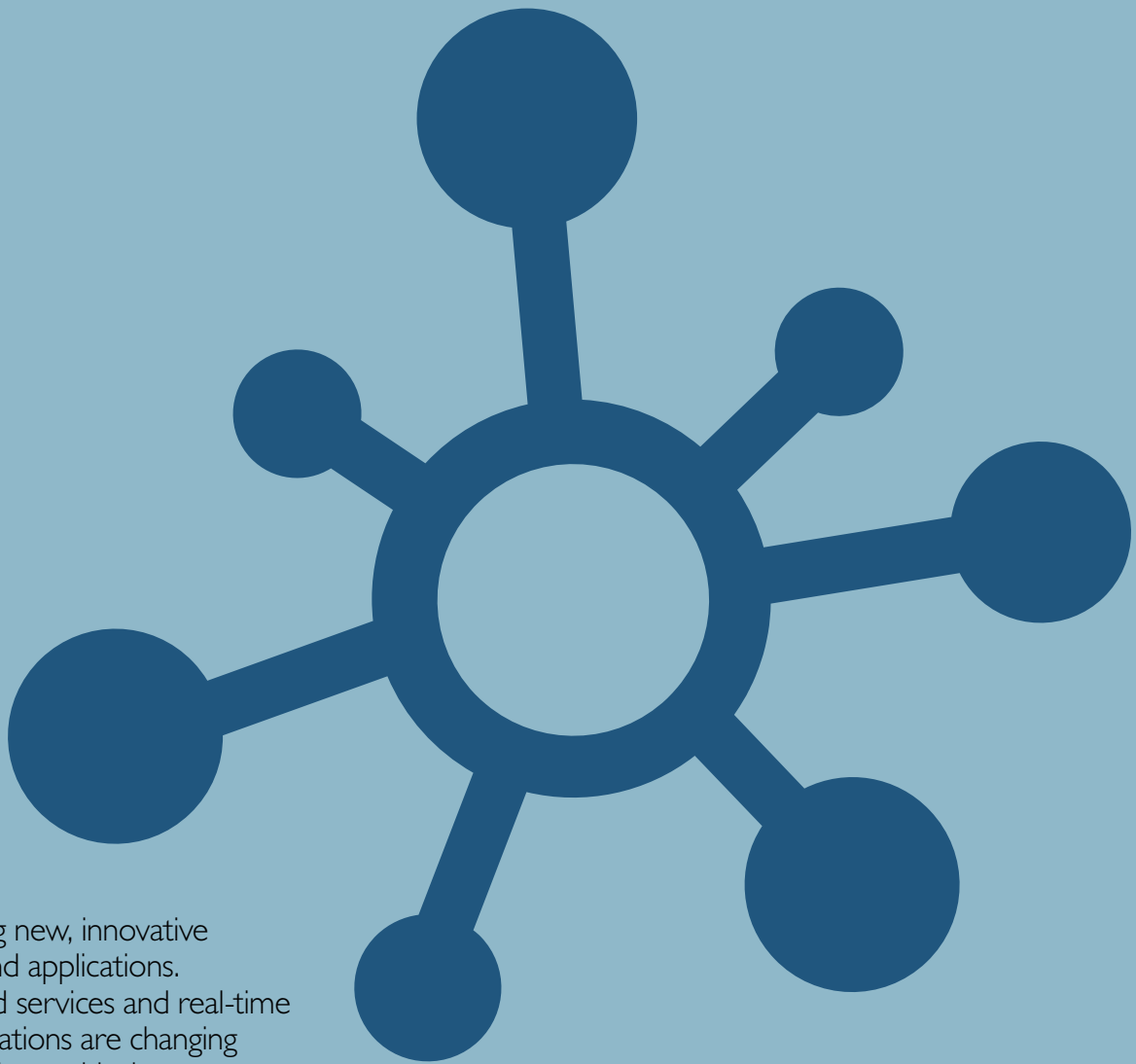
An omnidirectional antenna concentrates the signal in a 360° belt around it. The higher the gain, the thinner the belt, resulting in a better signal far from the antenna — but a narrower communication area.

Panel and parabolic antennas have a nearly circular footprint. Low gain panels can be used for both short distance point-to-point and point-to-multipoint links, such as wireless coverage for user access. High-gain panel and parabolic antennas produce a focused beam, and are typically deployed in medium- to long-distance point-to-point links.

A sector antenna footprint is a horizontal ellipse with a width of 30°, 60°, 90°, or 120°. High gain sector antennas have a vertically thinner footprint while keeping the same horizontal width, suited for the central site of a point-to-multipoint link or coverage of a certain "sector" in mobile networks.

Allied Telesis™

Multiservice Access



IP is driving new, innovative services and applications. Converged services and real-time communications are changing lifestyles, along with the type of network required to deliver them. Service providers face the challenge of re-architecting the access network to meet today's IP-driven broadband service, such as IP Triple Play, and at the same time try to anticipate the requirements for the "next new service." Selecting the best platform and technology becomes critical to protecting investments and responding competitively to new service needs.

The rapid changes from broadcast to on-demand video and from surfing the Web to content sharing have not only increased demands for bandwidth, but created greater needs to manage converged IP services. If a service provider is to capitalize on the revenue opportunities derived from multimedia services and satisfied consumer needs, an intelligent home gateway approach becomes essential.

Multiservice Access Platform (iMAP)

The Allied Telesis integrated Multiservice Access Platform (iMAP™) is the benchmark of true next-generation IP access solutions, fulfilling all of today's critical broadband service needs — and designed to evolve with new service demands.

As the world's communications systems move to an all IP and Ethernet access network with IP/MPLS core, the Allied Telesis iMAP represents the first and only true IP access platform designed for this purpose. Its unique carrier-grade IP/Ethernet capabilities are suitable for any provider building an IP access network. Industry-leading capabilities position the iMAP as the access network for alternative and emerging carriers, Independent Operating Companies (IOCs), PTTs, ILECs, ISPs, public utilities, and private organizations such as hospitals, hotels, and Multi-Tenant Units/Multi-Dwelling Units (MTU/MDU).

Chassis




FEATURES		MicroMAP 9001	MiniMAP 9100	iMAP 9700		iMAP 9810	
PART NUMBER		TN-254-80	TN-9101 / 2 / 3	TN-250G-B		TN-253G	
PHYSICAL HEIGHT			1RU	9RU		3RU	
POWER SUPPLY	Single AC		TN-9102	Requires additional TN-R113		Requires additional TN-R113	
	Dual AC (option)	Future	TN-9103	Requires additional TN-R113 and TN-R114		Requires additional TN-R113 and TN-R114	
	Dual DC	Standard	TN-9101	Standard		Standard	
CONTROLLER CARDS	Primary fabric controller	Not required	CFC12	CFC56	CFC56	CFC100	CFC100
	Optional redundant controller	Not required		CFC56	CFC56	CFC100	CFC100
NETWORK TRANSPORT	Slots	None integrated into chassis	None – transport on CFC12 fabric	2	2	2	2
	Model	None	CFC12 fabric	XE1S	XE6	XE1S	XE6
	Uplink ports	4 × SFP 1/2.5G	4 × SFP + 2 × 10/100/1000T	1 × SFP+	6 × SFP+	1 × SFP+	6 × SFP+
	Uplink speed		Gigabit	10GbE	10GbE	10GbE	10GbE
CHANNEL UNIT SLOTS		1	3	17	15 (when dual XE6 installed, 14 with dual-fabric cards)	8	6 (when dual XE6 installed)
MAX PORTS	xDSL		72	408	360	192	144
	POTS		72	408	360	192	144
	T1/E1		24	136	120	64	48
	Dual fiber (100Mbps)		30	170	150	80	60
	BiDi fiber (100Mbps)		60	340	300	192	120
	BiDi fiber (1000Mbps)		72	408	360	192	144
	10/100TX (copper)		30	170	150	80	60
	Gigabit SFP		24	136	120	64	48
	GEPON		192	1088	960	512	384
	UDSL24	24	N/A	N/A	192		
TEMPERATURE RANGE		-40°C to 65°C	-40°C to 65°C (TN-9102/3 AC version: 0°C to 55°C)	-40°C to 65°C		-40°C to 65°C	

One Access Platform, Any Service

The iMAP product family is designed to support IP Triple Play services using Ethernet technology. With redundant Gigabit Ethernet connections, or 10 Gigabits on the iMAP 9810 to each line card from the control modules, there is ample bandwidth and throughput for all current and future services and access technologies. The central fabric control cards enable multiple 10 Gigabit uplink and transport capability, ensuring future capacity and performance needs are addressed without requiring a major hardware upgrade.

Multiple Services, Diversified and Increased Revenues

In addition to traditional and enhanced ADSL/ADSL2+ and VDSL2, the iMAP provides the capability to offer revenue-generating residential and business services such as FTTx, T1/E1, G.SHDSL, and POTS — all from the same platform. With features like Ethernet Protection Switched Rings, iMAPs can be networked together with full redundancy and sub-50ms switchover times, ensuring carrier-grade 99.999% availability and maximum uptime.

Controller Cards



FEATURES		CFC12	CFC56	CFC100
PART NUMBER		TN-408	TN-407	TN-409
CHASSIS COMPATIBLE	MiniMAP 9100	■		
	iMAP 9700		■	
	iMAP 9810			■
PERFORMANCE	Switching fabric	12Gbps	56Gbps	100Gbps
	EPSR	■	■	■
	VLANs per port	4K	4K	4K
	Per VLAN rate limiting	■	■	■
UPLINKS	SFP (1000Mbps)	4		
	10/100/1000T	2		
SECURITY	Upstream forwarding only	■	■	■
	ACL support	■	■	■
QoS	Priority queues	8	8	8
	Priority scheduling	■	■	■

Channel Units


FEATURES		POTS24C	UDSL24
PART NUMBER		TN-143	TN-146-A
COPPER	POTS	24	
	ADSL (Annex A)		24
	VDSL2 (Annex A)		24
PHYSICAL	Single / double width channel unit	Single	Single
SALES REGION		All	All



FEATURES		GE24BX	GE8	GEPON
PART NUMBER		TN-144	TN-117	TN-118
	100/1000Mbps BiDi, SMF	24 (20 km)		
	SFP (1000Mbps)		8	
	GEPON			2
PHYSICAL	Single / double width channel unit	Single	Single	Single
SALES REGION		All	All	All

intelligent Multiservice Gateways (iMG)

Moving from a "dumb pipe" to a service-oriented connection requires having both management and functionality at both the access side and the terminal side. Whether a single-family home or MDU, with the home gateway located outdoors or within the residence, service providers need management, control, and provisioning capabilities. Allied Telesis iMG products for DSL and fiber applications are designed as extensions of the Allied Telesis access platform, with unified management functionality and features.

AlliedView™ NMS

Allied Telesis Network Management Software tools can help visualize and plan for network growth while maintaining the health and performance of the network. *See page 8.*

Fiber-based iMGs offer Gigabit or 100 Megabit-to-the-home service and include such features as GR909 testing, TDR wire analysis, and HPNA endpoint analysis. In addition, the iMGs support Layer 3 capabilities, whole home service, and Microsoft Mediaroom.

Allied Telesis iMG ONT products provide a smarter, feature-rich, flexible approach to delivering subscriber services, and are critical to a service provider wanting to deliver reliable, high-quality, high-revenue services.

FEATURES		iMG634 Series	iMG634W Series	iMG1405	iMG1405W	iMG1425	iMG1425W	iMG1425RF
ENVIRONMENTAL	Indoor usage	■	■	■	■	■	■	■
	Outdoor usage							
UPLINK	ADSL2+ Annex A	iMG634A-R2	iMG634WA-R2					
	ADSL2+ Annex B	iMG634B-R2	iMG634WB-R2					
	Ethernet 100Mbps copper	■	■					
	Ethernet 100Mbps fiber (SMF)							
	Ethernet 100Mbps fiber (BiDi)							
	Ethernet 100Mbps fiber SFP module							
	Ethernet 1000Mbps fiber (BiDi)			■ SFP	■ SFP	■ SFP	■ SFP	■ SFP
LAN INTERFACE	10/100TX	4	4	3	3	3	3	3
	10/100/1000T			2	2	2	2	2
	T1/E1							
	Wireless IEEE 802.11b/g		■					
	Wireless IEEE 802.11b/g/n				■		■	
	HPNAv3.1							
WAN PORT	Copper / fiber	Copper	Copper	Fiber	Fiber	Fiber	Fiber	Fiber
CATV RF OVERLAY	High output power							■
PHONE INTERFACES	FXS	2	2			2	2	2
	PSTN lifeline	■	■			■	■	■
VoIP PROTOCOLS	SIP / MGCP	■	■			■	■	■
CONSOLE INTERFACE	RS232 RJ-45 connector	■	■					
	USB			■	■	■	■	■
QoS	IEEE 802.1p priority queues	■	■	■	■	■	■	■
	IEEE 802.1Q VLANs mgmt	■	■	■	■	■	■	■
MANAGEMENT	AlliedView NMS	■	■	■	■	■	■	■
	TR-069			■	■	■	■	■
	SNMPv1, v2 and v3	■	■	■	■	■	■	■
	Telnet, Web, GUI, CLI	■	■	■	■	■	■	■
	Remote software upgrade	■	■	■	■	■	■	■
ACCESSORY AVAILABLE	Fiber outlet kit iMG001							
	Battery backup iMG008	■	■	■	■	■	■	■
	Outdoor case EN-SFR-ONT							

The iMG family of full-featured indoor and outdoor gateways support xDSL and fiber (FTTH) options, all designed with the features, management, and IP functionality needed to deliver the "connected home." As the name implies, intelligent Multiservice Gateway products are fully featured for delivering multimedia services such as broadcast and streaming IP video, Internet data, analog voice, and VoIP from a single subscriber line to multiple devices in the home.

Features and functionality between the iMAP access family, or the SwitchBlade x3112 and iMG home gateway family, are intelligently integrated with Allied Telesis AlliedView NMS for end-to-end management and diagnostics. This ensures every service is manageable all the way to the subscriber, eliminating the "holes" often caused by using "dumb" devices that merely terminate subscriber lines. Consequently, less time is spent on provisioning, and unnecessary truck rolls are reduced — leading to lower OPEX and greater customer satisfaction.









	iMG1525	iMG1525RF	iMG2426F	iMG2504	iMG2522	iMG2524	iMG2524F	iMG2524H	iMG746MOD
	■	■	■	■	■	■	■	■	■
			■	■	■	■	■	■	■
							■	■	
	■	■							■
			■ SFP						■
	■ (20 km)	■ (20 km)	■ SFP	■ (20 km)	■ (20 km)	■ (20 km)	■ (20 km)	■ (20 km)	■
									6
	5	5	6	4	4	4	4	4	1
									■
								■	
	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber
		■					■		
	2	2	2		2	2	2	2	4
	■	■			■	■	■	■	■
	■	■	■		■	■	■	■	■
									■
	■	■	■	■		■	■	■	
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	
	■	■			■				
	■	■	■	■		■	■	■	
			■	■	■	■	■	■	

iMG Feature Matrix

MODEL	DEPLOYMENT		WAN							POTS	LAN ETHERNET		LAN — OTHER					
	Outdoor	Indoor	xDSL	100X	100/1000X	GE	FTTX	EPON	GPON	FXO	10/100	10/100/1000	T1/E1	VDSL	G.Fast	RF	HPNA	Wireless
iMG746MOD	■	■		■		■		■		4	6	1	2				■	
iMG1405		■				■ (SFP)					2	3						
iMG1405W		■				■ (SFP)					2	3						IEEE 802.11
iMG1425		■				■ (SFP)				2	2	3						
iMG1425W		■				■ (SFP)				2	2	3						IEEE 802.11
iMG1425RF		■				■ (SFP)				2	2	3				■		
iMG1525		■			■					2		5						
iMG1525RF		■			■					2		5				■		
iMG2426F	■	■		■		■		■		2		6						
iMG2504	■	■			■							4						
iMG2522	■	■				■				2		2						
iMG2524	■	■				■				2		4						
iMG2524F	■	■			■							4						
iMG2524H	■	■			■					2		4					■	

Allied Telesis™

Media Converters

Allied Telesis media converters extend network distances by adding fiber and VDSL (via coax and telephone-grade twisted pair) only where it is needed. This enables customers to keep pace with changing technology and to integrate high-bandwidth devices into the network without changing the entire network infrastructure. From standalone units to chassis-based blades, Allied Telesis media converters are highly configurable to meet every need.

Standalone








EXTENDED TEMP

EXTENDED TEMP

		ETHERNET AND FAST ETHERNET STANDALONE MEDIA CONVERTERS							
FEATURES		**MC13**	**MC101XL**	**MC102XL**	**MC103XL**	**MC103LH**	**MC104XL**	**MC115XL**	**MC116XL**
PORTS	Port 1	10T	100TX	100TX	100TX	100TX	100FX MMF (SC)	10T or 100TX	10T or 100TX
	Port 2	10FL (ST)	100FX (ST)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	10FL (ST) or 100SX (ST)	10FL (SC) or 100SX (SC)
	Type	MMF	MMF	MMF	SMF	SMF	SMF	MMF	MMF
IEEE STANDARD		10FL	100FX	100FX	100FX	100FX	100FX	100SX	100SX
Tx WAVELENGTH		850 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	850 nm	850 nm
Rx WAVELENGTH		850 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	850 nm	850 nm
MAX DISTANCE		2 km	2 km	2 km	15 km	40 km	15 km	2 km	2 km
FUNCTIONALITY	Rate and speed								
	MissingLink support		■	■	■	■	■	■	■
	Smart MissingLink support								
	Max frame size	9KB	9KB	9KB	9KB	9KB	9KB	9KB	9KB
	Diagnostic LEDs	6	7	7	7	7	7	8	8
POWER SUPPLY	PSU type	External	External	External	External	External	External	External	External
	Multi-region	■				■	■	■	■
	Compatible with MCR12 12-slot chassis	■	■	■	■	■	■	■	■
	Compatible with MCR1 1-slot chassis	■	■	■	■	■	■	■	■

Allied Telesis media converters enable the connection of disparate cabling types in networks where many cabling types exist. Network segments may also operate at different speeds, and media converters can be used to convert between speeds. Typically, media converters are used to connect copper and fiber-optic cabling that coexist in a network. Converters exist in a variety of standalone, multi-port, and modular forms. These different physical forms address the need for different applications and conversion densities.

MMC

The Allied Telesis MMC Series of Fast Ethernet mini media converters leverages its smaller size to not only help the environment with a small carbon footprint, but also to save space in its working environment. Despite its compact size, the MMC Series delivers all the power and functionality of standard size media converters.

PoE

Allied Telesis PC PoE Series switches are the ideal solution for powering remote devices such as IP phones, video cameras, wireless access points, etc., which are more than 100 m from a Power over Ethernet switch.

Desktop Powered

The Allied Telesis DMC1000 Series of Gigabit mini media converters are among the smallest media converters in the market today. At just 1.25 in wide x 3.6 in deep x 0.85 in high, these media converters can easily fit into the palm of your hand. In addition to being compact — with a small carbon footprint — the DMC1000 Series can also be powered with the included micro USB to USB cable, and plugged directly into a laptop or PC. This saves installation time and cabling as there are no further power requirements necessary.

ETHERNET AND FAST ETHERNET STANDALONE MEDIA CONVERTERS

	FS201	FS202	FS232	FS232/1	F232/2	FS238A/1	FS238B/1
	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX
	100FX (ST)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)
	MMF	MMF	MMF	SMF	SMF	BiDi - SMF	BiDi - SMF
	100FX	100FX	100FX	100FX	100FX	100FX	100FX
	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1550 nm
	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1550 nm	1310 nm
	2 km	2 km	2 km	15 km	40 km	15 km	15 km
	■	■	■	■	■	■	■
	■	■	■	■	■	■	■
			■	■	■	■	■
	1532 bytes	1532 bytes	1532 bytes	1532 bytes	1532 bytes	1532 bytes	1532 bytes
	7	7	9	9	9	9	9
	External	External	External	External	External	External	External
	■	■	■	■	■	■	■
	MCR12	MCR12	MCR12	MCR12	MCR12	MCR12	MCR12
	■	■	■	■	■	■	■

FAST ETHERNET AND GIGABIT ETHERNET STANDALONE MINI MEDIA CONVERTERS

FEATURES		MMC200/LC	MMC200/SC	MMC200/ST	MMC2000/LC	MMC2000/SC	MMC2000/SP	MMC2000/ST
PORTS	Port 1	10/100TX	10/100TX	10/100TX	10/100/1000T	10/100/1000T	10/100/1000T	10/100/1000T
	Port 2	100FX (LC)	100FX (SC)	100FX (ST)	1000SX (LC)	1000SX (SC)	100/1000 SFP	1000SX (ST)
	Type	SMF	SMF	SMF	SMF	SMF	SMF / MMF	MMF
IEEE STANDARD		100FX	100FX	100FX	1000SX	1000SX	100FX / 1000X	1000SX
Tx WAVELENGTH		1310 nm	1310 nm	1310 nm	850 nm	850 nm	Depends on SFP	850 nm
Rx WAVELENGTH		1310 nm	1310 nm	1310 nm	850 nm	850 nm	Depends on SFP	850 nm
MAX DISTANCE		2 km	2 km	2 km	550 m	550 m	Depends on SFP	550 m
FUNCTIONALITY	Rate and speed	■	■	■	■	■	■	■
	Smart MissingLink support	■	■	■	■	■	■	■
	Max frame size	10KB	10KB	10KB	10KB	10KB	10KB	10KB
	Diagnostic LEDs	4	4	4	4	4	4	4
	Smark Link restoration	■	■	■	■	■	■	■
POWER SUPPLY	PSU type	External	External	External	External	External	External	External
	Multi-region	■	■	■	■	■	■	■
	Compatible with a rackmount chassis	MMCR18	MMCR18	MMCR18	MMCR18	MMCR18	MMCR18	MMCR18

GIGABIT ETHERNET STANDALONE MEDIA CONVERTERS

FEATURES		GS2002/SP	MMC6005	MMC6006	MC1004	MC1008/SP
PORTS	Port 1	10/100/1000T	10/100/1000T	10/100/1000T	1000T	1000T
	Port 2	SFP 100/1000X	RJ-11 VDSL/2	BNC VDSL/2	1000SX (SC)	SFP
	Fiber type	LC*			MMF	LC*
IEEE STANDARD		1000SX and LX			1000SX	1000SX and LX
Tx WAVELENGTH		Depends on SFP			850 nm	Depends on SFP
Rx WAVELENGTH		Depends on SFP			850 nm	Depends on SFP
MAX LINK DISTANCE		Depends on SFP	3 km	2 km	550 m	Depends on SFP
FUNCTIONALITY	Rate and speed	■	■	■		
	MissingLink support	■			■	■
	Smart MissingLink support	■	■	■	■	■
	Max frame size	1536 bytes			9KB	9KB
	Diagnostic LEDs	11	4	4	8	8
	Smark Link restoration		■	■		
POWER SUPPLY	PSU type	External	External	External	External	External
	Multi-region	■	■	■		■
	Compatible with a rackmount chassis	■	■	■		■
	Compatible with MCR1 1-slot chassis	■			■	■

* Dependant on SFP

Desktop Powered

		FAST ETHERNET AND GIGABIT DESKTOP USB POWERED					
FEATURES		**DMC100/LC**	**DMC100/SC**	**DMC100/ST**	**DMC1000/LC**	**DMC1000/SC**	**DMC1000/ST**
PORTS	Port 1	100TX	100TX	100TX	1000T	1000T	1000T
	Port 2	100FX (LC)	100FX (SC)	100FX (ST)	1000SX (LC)	1000SX (SC)	1000SX (ST)
	Type	MMF	MMF	MMF	MMF	MMF	MMF
IEEE STANDARD		100FX	100FX	100FX	1000SX	1000SX	1000SX
Tx WAVELENGTH		1310 nm	1310 nm	1310 nm	850 nm	850 nm	850 nm
Rx WAVELENGTH		1310 nm	1310 nm	1310 nm	850 nm	850 nm	850 nm
MAX DISTANCE		2 km	2 km	2 km	550 m	550 m	550 m
FUNCTIONALITY	Smart MissingLink support	■	■	■	■	■	■
	Max frame size	16KB	16KB	16KB	16KB	16KB	16KB
	Diagnostic LEDs	4	4	4	4	4	4
	Smark Link restoration	■	■	■	■	■	■
POWER SUPPLY	PSU type	External	External	External	External	External	External

MissingLink

The Allied Telesis MissingLink™ feature enables media converters to pass the link status of their connections and thereby trigger corrective action when a problem on a link is detected.

For example, if the twisted-pair cable to the 10/100TX port on an Allied Telesis media converter were to fail, the unit would respond by dropping the link on the 100FX fiber-optic port.

Most managed devices, such as switches and routers, can be configured to take a specific recovery action in the event of the loss of connection on a port. In some cases, the unit can be configured to seek a redundant path to a disconnected end-node or send out a trap to a network management station, and so alert the network administrator of the problem.

Smart MissingLink

The Allied Telesis Smart MissingLink™ feature has identical operation to MissingLink, with an added link failure alert system. If any of the media converter ports fail, the link LED will begin to flash. This aids with diagnostics, allowing network administrators to more quickly locate and rectify the fault.

Smart Link Restoration

Smart Link restoration allows the devices, in the cases of power failure, link loss or other interrupted service, to automatically restore the link without the need to restart/reset them.

Redundancy

In many cases, Allied Telesis media converters are critical components in a network, carrying data between sites over long distances. It is imperative that all efforts are taken to ensure reliability of the network, and thus a network design with redundancy is mandatory. The components most likely to fail are the power supplies. The majority of Allied Telesis media converters can be deployed with hot-swappable, hot-removable power supplies to ensure maximum uptime.

Universal Power Supply

For customers already using Allied Telesis media converters, replacement power adapters are available.

- **MCPWR**
  Universal, high-efficiency external power adapter

		SUPERSPEED USB 3.1/USB-C TO FIBER MEDIA CONVERTERS			
FEATURES		**UMC200/SC**	**UMC200/ST**	**UMC2000/LC**	**UMC2000/SC**
PORTS	Port 1	USB 3.1/USB-C	USB 3.1/USB-C	USB 3.1/USB-C	USB 3.1/USB-C
	Port 2	100FX (SC)	100FX (ST)	1000SX (LC)	1000SX (SC)
	Type	MMF	MMF	MMF	MMF
IEEE STANDARD		100FX	100FX	1000SX	1000SX
Tx WAVELENGTH		1310 nm	1310 nm	850 nm	850 nm
Rx WAVELENGTH		1310 nm	1310 nm	850 nm	850 nm
MAX DISTANCE		2 km	2 km	550 m	550 m
FUNCTIONALITY	Smart MissingLink support	■	■	■	■
	Max frame size	16KB	16KB	16KB	16KB
	Diagnostic LEDs	4	4	4	4
	Smark Link restoration	■	■	■	■
	Wake-on-LAN	■	■	■	■
POWER SUPPLY		USB 3.0/C	USB 3.0/C	USB 3.0/C	USB 3.0/C

PoE & Industrial

PoE

Allied Telesis PC PoE Series switches are the ideal solution for powering remote devices such as IP phones, video cameras, wireless access points, etc., which are more than 100 m from a Power over Ethernet switch.

		GIGABIT ETHERNET STANDALONE MEDIA CONVERTERS				FAST ETHERNET STANDALONE	
FEATURES		**PC2000/LC**	**PC2000/SC**	**PC2000/SP**	**PC2002POE**	**PC232/POE**	**PC200/SC**
PORTS	Port 1	10/100/1000T	10/100/1000T	10/100/1000T	10/100/1000T	10/100TX	10/100TX
	Port 2	1000SX (LC)	1000SX (SC)	SFP 100/1000X	SFP 100/1000X	100FX	100FX
	Fiber type	LC	SC	LC*	LC*	SC	SC
IEEE STANDARD		1000SX	1000SX	100FX and 1000X	100FX and 1000X	100FX	100FX
Tx WAVELENGTH		850 nm	850 nm	Depends on SFP	Depends on SFP	1310 nm	1310 nm
Rx WAVELENGTH		850 nm	850 nm	Depends on SFP	Depends on SFP	1310 nm	1310 nm
MAX FIBER DISTANCE		550 m	550 m	Depends on SFP	Depends on SFP	2 km	2 km
FUNCTIONALITY	Rate and speed	■	■	■	■	■	■
	MissingLink support				■	■	■
	Smart MissingLink support	■	■	■	■	■	■
	Max frame size	10 KB	10 KB	10 KB	1536 bytes	1916 bytes	10KB
	Diagnostic LEDs	6	6	6	15	13	6
	Smark Link restoration	■	■	■			
POWER OVER ETHERNET	PoE-enabled ports	1	1	1	1	1	1
	Max no. of full power ports	1	1	1	1	1	1
	Mode	Mode A	Mode A	Mode A	Mode A	A	A
	PoE power	IEEE 802.3at (30W)	IEEE 802.3at (30W)	IEEE 802.3at (30W)	IEEE 802.3af (15W)	IEEE 802.3af (15W)	IEEE 802.3af (15W)
POWER SUPPLY	PSU type	Internal	Internal	Internal	Internal	Internal	Internal
	Multi-region	■	■	■			■

* Dependant on SFP

Industrial

Allied Telesis industrial Ethernet media converters offer an operating range from -40° to 75°C. The temperature-hardened IMC Series features Plug-and-Play and auto-negotiation.

		INDUSTRIAL MEDIA CONVERTERS			
FEATURES		**IMC1000TP/SFP**	**IMC1000T/SFP**	**IMC100T/SCMM**	**IMC100T/SCSM**
PORTS	Port 1	10/100/1000T	10/100/1000T	10/100TX	10/100TX
	Port 2	1000X SFP	100/1000X SFP	100FX (SC)	100FX (SC)
	Fiber type	Depends on SFP	Depends on SFP	MMF	SMF
IEEE STANDARD		100FX and 1000X	1000X	100FX	100FX
Tx WAVELENGTH		Depends on SFP	Depends on SFP	1310 nm	1310 nm
Rx WAVELENGTH		Depends on SFP	Depends on SFP	1310 nm	1310 nm
MAX FIBER DISTANCE		Depends on SFP	Depends on SFP	2 km	30 km
FUNCTIONALITY	Rate and speed	■	■	■	■
	Max frame size	9K	9K	9K	9K
	Diagnostic LEDs	4	6	7	7
POWER OVER ETHERNET	IEEE 802.3at Class 4	■			
	PoE+ enabled ports	1			
	Max no. of full power ports	1			
	Mode	Mode A			
	PoE power	30W			
POWER SUPPLY	PSU type	External	External	External	External

Mounting Hardware

The majority of unmanaged Allied Telesis MC, GS, and FS Series media converters can be mounted in a number of ways.

Desktop

All Allied Telesis media converters have the option to be fitted with rubber feet. These allow the product to be positioned on the desktop.

Wall

A standalone media converter or switch can be easily mounted on a wall or under a table using this wallmount fixture.

- **WLMT**
  Wallmount fixture (supplied in packages of 10)

DIN Rail

This universal bracket allows a wide range of Allied Telesis media converters and media/rate converters to be mounted onto an industry-standard 35 mm DIN rail.

- **DINRAIL1-010**
  Mounting kit (supplied in packages of 10)

Rack

Larger multi-channel and modular media converters ship with 19" rackmount kits. Smaller media converters may also be rackmounted in a number of ways:

- **MCR1** chassis
  This small chassis can be rackmounted, and allows a single standalone media converter or 2-port switch to be powered by an internal power supply. It is available with either AC or -48vDC power supply.

- **MCR12** chassis
  This chassis allows mounting of up to 12 standalone media converters or switches. The chassis supports optional redundant power supplies and can be AC or DC powered.

- **TRAY1** and **TRAY4**
  These simple trays allow one to four standalone media converters to be mounted into a rack.

MMC Rack

- **MMCR18** NEW
  This chassis allows mounting of up to 18 standalone MMC Series media converters. The chassis supports optional redundant power supplies and can be AC or DC powered. Standard, 19-inch, rack.

Converteon

MANAGED MEDIA CONVERSION SYSTEM

The Converteon™ family provides the next generation of managed media conversion. Expandable from a single unit to a modular 18-slot chassis, Converteon primarily provides Fast Ethernet and Gigabit-rate media conversion. Support for IEEE 802.3ah Ethernet in the First Mile (EFM) makes Converteon ideal for both service providers and the enterprise.

▸ CV1000
1-slot chassis

» External power adapter
» Silent, fanless design
» Standalone or wallmount

▸ CV1203
2-slot chassis

» External power adapters (one as standard)
» Resilient power adapters (CV1200PSU)
» Supports dying gasp
» Standalone or wallmount

▸ CV5001
18-slot rackmount chassis

» Optional redundant power supply
» Optional Telnet and SNMP management (CV5M02)
» Optional redundant management with the addition of a second management module (CV5M02)
» Hot-swappable blades
» Field-serviceable power supplies and fans
» Hot-swappable power supply modules (CV5001AC-60 and CV5001DC-80)
» Resilient power supply modules (maximum of two)

SFP and SFP+ Optics
Learn more about Allied Telesis pluggable optics on page 54.

FEATURES		CONVERTEON MODULES			
		CM301	CM302	CM3K0S	CV1KSS
PORTS	Port 1	10/100TX	10/100TX	10/100/1000T	SFP
	Port 2	100FX (ST)	100FX (SC)	100/1000X SFP	SFP
	Fiber type	MMF	MMF	Depends on SFP	Depends on SFP
IEEE STANDARD		100FX	100FX	1000X	1000X
Tx WAVELENGTH		1310 nm	1310 nm		1310 nm
Rx WAVELENGTH		1310 nm	1310 nm		1310 nm
MAX FIBER DISTANCE		2 km	2 km	Depends on SFP	Depends on SFP
FUNCTIONALITY	Media type	■	■	■	■
	Rate and speed	■	■	■	
	MissingLink support	■	■	■	■
	Smart MissingLink support	■	■	■	■
	Max frame size	10KB	10KB	10KB	9KB
	Diagnostic LEDs	9	9	9	5
	Rate limiting	■	■	■	■
OAM	Dying gasp support	■	■	■	
	Management	■	■	■	
ECO-FRIENDLY		■	■	■	

Chassis-Based

▸ MCF2000
Multi-channel manageable media converter

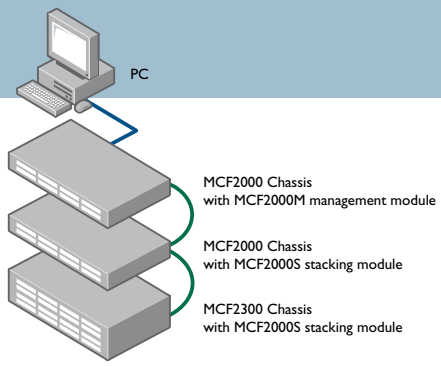
The MCF2000 provides ultra high-density, modular, multi-channel media conversion, with high availability and is ideal for fiber deployments. The units can be used unmanaged, or SNMP managed with the installation of the optional management module.

» Small, 1RU chassis
» High-density conversion, with up to 24 Fast Ethernet channels
» Hot-swappable media blades (maximum of two)
» Hot-swappable management module (MCF2000M)
» Stack multiple chassis using stacking modules (MCF2000S)
» Hot-swappable power supply modules (MCF2000AC)
» Resilient power supply modules
» Hot-swappable fan module for use when only one power module is installed (MCF2KFAN)
» Operates in unmanaged and managed modes

▸ MCF2300
4-slot chassis

The MCF2300 is an end-to-end managed media conversion system. Holding one to four multi-channel blades, the 3RU chassis provides a maximum of 48 independent channels. An optional management module provides control of the chassis, while dual hot-swappable power modules ensure maximum system uptime.

» 3RU chassis
» High-density conversion, with up to 48 Fast Ethernet channels
» Hot-swappable media blades (maximum of four)
» Hot-swappable management module (MCF2000M)
» Stack multiple chassis using stacking modules (MCF2000S)
» Hot-swappable power supply modules (MCF2300AC)
» Resilient power supply modules
» Hot-swappable fan module (MCF2300FAN)
» Operates in unmanaged and managed modes



Stacking MCF2x00 Chassis

The MCF2000 and MCF2300 can be stacked together to provide a single management entity for the complete stack of up to eight chassis or a maximum of 16 media blades. One chassis has a SNMP management module installed, and this interconnects with the other chassis that are fitted with a stacking module.



		MODULES FOR MCF2x00 CHASSIS		
FEATURES		**MCF2012LC**	**MCF2012LC/1**	**MCF2032SP**
PORTS	Port 1	12 × 10/100TX	12 × 10/100TX	12 × 10/100/1000T
	Port 2	12 × 100FX (LC)	12 × 100FX (LC)	12 × SFP
	Fiber type	MMF	SMF	Depends on SFP
IEEE STANDARD		100FX	100FX	100/1000X
Tx WAVELENGTH		1310 nm	1310 nm	Depends on SFP
Rx WAVELENGTH		1310 nm	1310 nm	Depends on SFP
MAX FIBER DISTANCE		2 km	15 km	Depends on SFP
FUNCTIONALITY	Media type	■	■	■
	Rate and speed	■	■	■
	MissingLink support	■	■	■
	Smart MissingLink support	■	■	■
	Max frame size	1632 bytes	1632 bytes	10KB
	Diagnostic LEDs	■	■	■

Allied Telesis

Transceiver Modules

Allied Telesis optics provide fiber and copper connectivity for the full range of Allied Telesis product lines. Pluggable transceivers allow one product the flexibility to expand by media type (copper or fiber), speed (Fast Ethernet and 1, 10, or 40 Gigabit), and/or distance (220 m to 80 km).

Allied Telesis offers SFP, CSFP, XFP, SFP+, and QSFP+ pluggable transceivers, which comply with industry networking regulations. This compliance allows Allied Telesis pluggable optics to be used on any industry-standard networking equipment.

Pluggable Transceivers

SFP Series (SP)

The SP Series delivers flexible, full-duplex Ethernet connectivity. These hot-swappable fiber interfaces simply plug into an SFP slot on Allied Telesis products that are SFP compatible. Configurations can be optimized to meet a variety of distance and service requirements.

CSFP Series

The CSFP Series offers two channel Bi-Directional SFP designed expressly for high-speed communication applications. This hot-pluggable transceiver simply plugs into a CSFP slot on an Allied Telesis product for convenient transmission capacity upgrade.

QSFP Series (QSFP+)

The QSFP Series offers the latest industry-standard 40 Gigabit Ethernet connectivity in a flexible, small form factor. It is ideal for Datacom/Telecom switch and router connections, as well as data aggregation, backplane, proprietary protocol, and high-density applications. This hot-swappable transceiver simply plugs into a QSFP slot on any compatible Allied Telesis product.

	GIGABIT FIBER TRANSCEIVERS				
FEATURES	**SPSX**	**SPSX/I**	**SPEX**	**SPLX10**	**SPLX10/I**
FORM FACTOR	SFP	SFP	SFP	SFP	SFP
FIBER TYPE	MMF	MMF	MMF	SMF	SMF
NUMBER OF FIBERS	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)
SPEED	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps
DIGITAL DIAGNOSTICS MONITORING (DDM)		■			■
Rx WAVELENGTH	850 nm	850 nm	1310 nm	1310 nm	1310 nm
Tx WAVELENGTH	850 nm	850 nm	1310 nm	1310 nm	1310 nm
MAX DISTANCE	220 / 550 m	220 / 550 m	2 km	10 km	10 km
CONNECTOR TYPE	LC	LC	LC	LC	LC
TEMPERATURE	0°C to 70°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C	-40°C to 85°C

	FAST ETHERNET FIBER TRANSCEIVERS			
FEATURES	**SPFX/2**	**SPFXBD-LC-13**	**SPFXBD-LC-15**	**SPFX/15**
FORM FACTOR	SFP	SFP	SFP	SFP
FIBER TYPE	MMF	SMF	SMF	SMF
NUMBER OF FIBERS	2 (Rx, Tx)	1 (BiDi)	1 (BiDi)	2 (Rx, Tx)
SPEED	100Mbps	100Mbps	100Mbps	100Mbps
Rx WAVELENGTH	1310 nm	1550 nm	1310 nm	1310 nm
Tx WAVELENGTH	1310 nm	1310 nm	1550 nm	1310 nm
MAX DISTANCE	2 km	15 km	15 km	15 km
CONNECTOR TYPE	LC	LC - BiDi	LC - BiDi	LC
TEMPERATURE	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C

QSFP+ Cables

- **QSFP1CU**
  QSFP+ 1 m cable
- **QSFP3CU**
  QSFP+ 3 m cable

Breakout Cables

- **QSFP-4SFP10G-3CU**
  QSFP+ port to 4 × 10G ports, 3 m
- **QSFP-4SFP10G-5CU**
  QSFP+ port to 4 × 10G ports, 5 m

Optical Cables

- **MTP12-1**
  MTP cable for QSFP+ Series, 1 m
- **MTP12-5**
  MTP cable for QSFP+ Series, 5 m

	40 GIGABIT FIBER (QSFP+)	
FEATURES	**QSFPSR4**	**QSFPLR4**
FORM FACTOR	QSFP+	QSFP+
FIBER TYPE	MMF	SMF
COPPER TYPE		
NUMBER OF FIBERS	2 (Rx, Tx)	2 (Rx, Tx)
SPEED	40G	40G
DIGITAL DIAGNOSTICS MONITORING (DDM)	■	■
Rx WAVELENGTH	850 nm	4 CWDM lanes*
Tx WAVELENGTH	850 nm	4 CWDM lanes*
MAX DISTANCE	Up to 150 m	Up to 10 km
CONNECTOR TYPE	MPO	LC
TEMPERATURE	0°C to 70°C	0°C to 70°C

* Central wavelengths of the 4 CWDM channels - 1271, 1291, 1311 and 1331 nm

SP10 Series (SFP+)

The SP10 Series offers customers a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise, and service provider transport applications. These hot-swappable devices plug into an Ethernet SFP+ port and have the smallest 10G form factor in the industry. Configurations can be optimized to meet a variety of distance and service requirements.





	GIGABIT FIBER TRANSCEIVERS				COMPACT GIGABIT FIBER (CSFP)	
	SPBD10-13	SPBD10-14	SPLX40	SPZX80	SPBD20DUAL-14	SPBD40DUAL-14
	SFP	SFP	SFP	SFP	CSFP	CSFP
	SMF	SMF	SMF	SMF	SMF	SMF
	1 (BiDi)	1 (BiDi)	2 (Rx, Tx)	2 (Rx, Tx)	2 (BiDi)	2 (BiDi)
	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps
			■	■	■	■
	1490 nm	1310 nm	1310 nm	1550 nm	1310 nm	1310 nm
	1310 nm	1490 nm	1310 nm	1550 nm	1490 nm	1490 nm
	10 km	10 km	40 km	80 km	20 km	40 km
	LC - BiDi	LC - BiDi	LC	LC	2 × LC	2 × LC
	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C	-40°C to 85°C	-40°C to 85°C

	COPPER RJ-45 TRANSCEIVERS	
FEATURES	SPTX	SP10T
FORM FACTOR	SFP	SFP+
SPEED	10/100/1000T	100M / 1G / 10G BaseT
MAX DISTANCE	100 m	30 m
CONNECTOR TYPE	RJ-45	RJ-45
TEMPERATURE	0°C to 70°C	-5°C to 85°C

EXTENDED TEMPERATURE

Allied Telesis supports a wide range of industrial temperature optical accessories for use in all its extended and industrial temperature products. All optical accessories support operating temperatures of -40°C to 85°C.

- **SPSX/I**
  1000SX SFP for multi-mode fiber
- **SPLX10/I**
  1000LX SFP for single-mode fiber (10 km)
- **SP10SR/I**
  10G SFP+ for multi-mode fiber (300 m)
- **SP10LR/I**
  10G SFP+ for single-mode fiber (10 km)
- **SP10ER40/I**
  10G SFP+ for single-mode fiber (40 km)
- **SP10ZR80/I**
  10G SFP+ for single-mode fiber (80 km)
- **SPBD20-13/I**
  1 Gigabit SFP, for single-mode fiber (20 km)
- **SPBD20-14/I**
  1 Gigabit SFP, for single-mode fiber (20 km)
- **SPBD40-13/I**
  1 Gigabit SFP, for single-mode fiber (40 km)
- **SPBD40-14/I**
  1 Gigabit SFP, for single-mode fiber (40 km)




	10 GIGABIT FIBER TRANSCEIVERS (SFP+)									
	SP10SR	SP10SR/I	SP10LR	SP10LR/I	SP10LRM	SP10ER40/I	SP10ZR80/I	SP10TW1	SP10TW3	SP10TW7
	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+
	MMF	MMF	SMF	SMF	MMF	SMF	SMF			
								Twinax	Twinax	Twinax
	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)			
	10G	10G	10G	10G	10G	10G	10G	10G	10G	10G
	■	■	■	■	■	■	■			
	850 nm	850 nm	1310 nm	1310 nm	1310 nm	1550 nm	1550 nm			
	850 nm	850 nm	1310 nm	1310 nm	1310 nm	1550 nm	1550 nm			
	300 m	300 m	10 km	10 km	Up to 220 m	40 km	80 km	1 m	3 m	7 m
	LC	LC	LC	LC	LC	LC	LC			
	0°C to 70°C	-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C	-40°C to 85°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C	0°C to 70°C

Network Service Provider Transceivers

	GIGABIT OPTICS (NSP)			
FEATURES	**SPBD20-13/I**	**SPBD20-14/I**	**SPBD40-13/I**	**SPBD40-14/I**
FORM FACTOR	SFP	SFP	SFP	SFP
FIBER TYPE	SMF	SMF	SMF	SMF
NUMBER OF FIBERS	1 (BiDi)	1 (BiDi)	1 (BiDi)	1 (BiDi)
SPEED	1000Mbps	1000Mbps	1000Mbps	1000Mbps
DDM	■	■	■	■
Rx WAVELENGTH	1550 nm	1310 nm	1490 nm	1310 nm
Tx WAVELENGTH	1310 nm	1490 nm	1310 nm	1490 nm
MAX DISTANCE	20 km	20 km	40 km	40 km
CONNECTOR TYPE	SC	SC	LC	LC
TEMPERATURE	-40°C to 95°C	-40°C to 95°C	-40°C to 85°C	-40°C to 85°C

iMG Transceivers

- **TN-P015-A**
  SC, Gigabit/100M, 20 km SFP, Tx 1310, Rx 1480 - 1560, use with iMG1400 Series
- **SPBD20EPON-13/I**
  20 km, bi-directional, 1 Gigabit GEPON SFP for iMG2426F

TAA Compliant Transceiver Modules

Allied Telesis provides many options for Trade Act Compliant (TAA) optics. These products are manufactured in TAA compliant countries and continue our commitment to providing a wide range of offerings for any network requirement.

Transceivers that can be ordered in TAA compliant versions are noted with **TAA**.

Allied Telesis

Network Adapters

From 100Mbps to 10 Gigabit, Allied Telesis seamlessly connects desktops, laptops, servers, and thin clients with a continually expanding portfolio of high-quality, reliable, and cost-effective network adapters.

With the addition of the 2911 Series multi-port Gigabit and 10 Gigabit server network adapters, Allied Telesis has optimized adapters for virtualization. Using multi-port cards in virtualized environments is critical to applications in order to provide redundancy and data connectivity for these workloads. The priority queuing offered by Allied Telesis server network adapters can help set up networks based on specific needs. The comprehensive diagnostics and configuration software suite (Broadcom Advanced Control Suite) provides system administrators and engineers with a powerful tool to analyze interface cards and review specific data.

As the worldwide leader in fiber adapter cards Allied Telesis continues to offer the highest-quality cards at competitive prices. All Allied Telesis server adapters are Citrix, VMware, and Microsoft Hyper-V qualified.

Laptop Adapters

		FAST ETHERNET FIBER	GIGABIT FIBER
FEATURES		**2814FX**	**2874SX**
BUS TYPE		ExpressCard/34 (54 compatible)	ExpressCard/34 (54 compatible)
PORTS AND MEDIA SUPPORT	100FX	SC	
	1000X		SC
QoS	IEEE 802.1p priority queues	■	■
PERFORMANCE	TCP/IP checksum CPU offload	■	■
MANAGEMENT	Managed boot agent (PXE remote boot ROM)	2.1	2.1
	VLAN support	■	■
	Advanced power management (ACPI)	■	■
DRIVER SUPPORT	Windows 10 (32/64-bit)	■	■
	Windows 7	■	■
	Windows 7 (64-bit)	■	■
	Windows Vista	■	■
	Windows Vista (64-bit)	■	■
	Windows XP	■	■
	Windows 8	■	■
	Windows 8 (64-bit)	■	■
	Linux 2.6	■	■
IPv6 SUPPORT		■	■
DIAGNOSTICS	LEDs	■	■
IDEAL ENVIRONMENT		Laptop computers with fiber connectivity	Laptop computers with fiber connectivity
CUSTOMER'S NEEDS		100Mbps fiber connectivity / laptop connectivity	1000Mbps fiber connectivity / laptop connectivity

Preboot Execution Environment (PXE) Support

PXE allows network administrators to perform preboot procedures on a system, such as installing an operating system, running a virus checker, or downloading a predefined system configuration. PXE support included in Allied Telesis adapter cards allows a workstation or computer to boot from a remote server connected to the network prior to booting from the local hard drive.

Desktop/Workstation




		GIGABIT COPPER		COPPER AND FIBER				
FEATURES		**2912T**	**2911T/2**	**2701FTXa**	**2716POE/FX**	**2911GP/SX**	**2911GP/LX**	**2911GP/SFP**
BUS TYPE		PCIe (x1)	PCIe (x1)	PCI (32-bit)	PCIe (x1)	PCIe (x1)	PCIe (x1)	PCIe (x1)
PORTS AND MEDIA SUPPORT	100TX			■				
	10/100/1000T PoE				IEEE 802.3af (15W)	IEEE 802.3at (30W)	IEEE 802.3at (30W)	IEEE 802.3at (30W)
	10/100/1000T	■	■ (2 ports)					
	100FX			SC, ST	SC, ST			
	1000X					SC, LC	SC, LC	1000Mbps SFP
FIBER TYPE				MMF	MMF	MMF	SMF	Depends on SFP
MAX FIBER DISTANCE				2 km	2 km	220 m / 500 m	10 km	Depends on SFP
QoS	IEEE 802.1p priority queues	■	■		■	■	■	■
PERFORMANCE	TCP/IP checksum CPU offload	■	■		■	■	■	■
	Jumbo frames		■		■	■	■	■
	Link aggregation support		■		■	■	■	■
	Link aggregation failover		■		■	■	■	■
MANAGEMENT	Wake-on-LAN	■	Copper port	■	■	Copper port	Copper port	Copper port
	Managed boot agent (PXE remote boot ROM)	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	DASH (TruManage)	■						
	VLAN support	■	■	■	■	■	■	■
	Advanced power management (ACPI)	■	■	■	■	■	■	■
	SNMP	■	■		■	■	■	■
SECURITY	IPSec offload	■						
DRIVER SUPPORT	Windows 10 (32 and 64-bit)		■		■	■	■	■
	Windows 7 (32 and 64-bit)	■	■	■	■	■	■	■
	Windows 2008	■	■		■	■	■	■
	Windows Vista (32 and 64-bit)	■	■	■	■	■	■	■
	Windows XP (64-bit)		■	■	■	■	■	■
	Windows 8	■	■	■	■	■	■	■
	Windows 8 (64-bit)	■	■	■	■	■	■	■
	Windows Server 2008 R2	■	■		■	■	■	■
	Windows Server 2012	■	■		■	■	■	■
	Windows Server 2016	■	■			■	■	■
	NDIS2	■	■	■	■	■	■	■
	Linux 2.6	■	■	■	■	■	■	■
IPv6 SUPPORT		■	■	■	■	■	■	■
DIAGNOSTICS	LEDs	■	■	■	■	■	■	■
	Virtual cable tester	■	■					
PHYSICAL	Low profile bracket and full height provided	■	■	■	■	■	■	■
IDEAL ENVIRONMENT		Desktop computers in ultra secure areas	Desktop computers in secure areas, virtualization servers	Desktop computers in secure areas	Desktop computers with fiber interfaces that want to power a PoE phone (or other device) from the secondary port	Desktop computers with fiber interfaces that want to power a PoE phone (or other device) from the secondary port	Desktop computers with fiber interfaces that want to power a PoE phone (or other device) from the secondary port	Desktop computers with fiber interfaces that want to power a PoE phone (or other device) from the secondary port
CUSTOMER'S NEEDS		Data encryption	High performance / load balancing / virtualization	100Mbps fiber connectivity / choice of fiber or copper interfaces	PoE / VoIP connectivity	PoE+	PoE+	PoE+ / choice of SFP

Desktop/Workstation

Jumbo Frames Support

Normal Ethernet packets are limited to a maximum size of 1548 bytes. Received packets larger than this are normally rejected by the interface card as errors. Jumbo frames support is beneficial for sending large packets, especially when the data contained in these packets either has a time-critical element, or is so large that the time taken to send multiple smaller packets is too great. Jumbo frame packets are normally up to 9000 bytes long.

Long-Distance Fiber

With the introduction of single-mode fiber adapters, Allied Telesis has extended the size of a fiber network from up to two kilometers over multi-mode fiber, to up to 20 km for Fast Ethernet, and 10 km for Gigabit Ethernet.

Advanced Power Management (ACPI)

ACPI is part of the environmental control initiative for computers. Allied Telesis adapter cards support ACPI, which places the system in a low power state when it is not receiving or transmitting data.






NEW

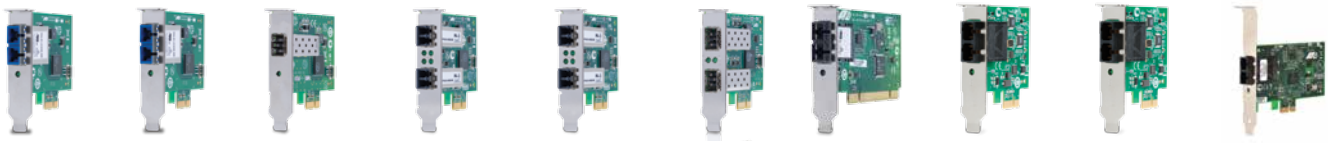
NEW

NEW

		GIGABIT COPPER AND FIBER		GIGABIT FIBER				
FEATURES		**2911STX**	**2911LTX**	**2916SX**	**2916LX10**	**2914SX/LC**	**2914SX/SC**	**2914SP**
BUS TYPE		PCIe (x1)	PCIe (x1)	PCI (32-bit)	PCI (32-bit)	PCIe (x1)	PCIe (x1)	PCIe (x1)
PORTS AND MEDIA SUPPORT	10/100/1000T	■	■					
	100FX							SFP
	1000X	SC, LC	SC, LC	SC, LC	LC	LC	SC	SFP
FIBER TYPE		MMF	SMF	MMF	SMF	MMF	MMF	10/100 SFP
MAX FIBER DISTANCE		220 m / 500 m	10 km	220 m / 500 m	10 km	220 m / 500 m	220 m / 500 m	Depends on SFP
QoS	IEEE 802.1p priority queues	■	■	■	■	■	■	■
PERFORMANCE	TCP/IP checksum CPU offload	■	■	■	■	■	■	■
	Jumbo frames	■	■	■	■	■	■	■
	Link aggregation support	■	■	■	■	■	■	■
	Link aggregation failover	■	■	■	■	■	■	■
	Teaming	■	■	■	■	■	■	■
MANAGEMENT	Wake-on-LAN	Copper port	Copper port			■	■	■
	Managed boot agent (PXE remote boot ROM)	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	DASH (TruManage)							
	VLAN support	■	■	■	■	■	■	■
	Advanced power management (ACPI)	■	■	■	■	■	■	■
	SNMP	■	■	■	■	■	■	■
SECURITY	IPSec offload							
DRIVER SUPPORT	Windows 10 (32 and 64-bit)	■	■			■	■	■
	Windows 7 (32 and 64-bit)	■	■	■	■	■	■	■
	Windows 2008 (32 and 64-bit)	■	■	■	■	■	■	■
	Windows Vista (32 and 64-bit)	■	■	■	■	■	■	■
	Windows XP (32 and 64-bit)	■	■	■	■	■	■	■
	Windows 8	■	■	■	■	■	■	■
	Windows 8 (64-bit)	■	■	■	■	■	■	■
	Windows Server 2008 R2	■	■	■	■			
	Windows Server 2012	■	■	■	■			
	Windows Server 2016	■	■					
	NDIS2	■	■	■	■	■	■	■
	Linux 2.6	■	■	■	■	■	■	■
IPv6 SUPPORT		■	■	■	■	■	■	■
DIAGNOSTICS	LEDs	■	■	■	■	■	■	■
PHYSICAL	Low profile bracket and full height provided	■	■	■	■	■	■	■
IDEAL ENVIRONMENT		Desktop computers in secure areas	Desktop computers in secure areas	Desktop computers in secure areas	Desktop computers in secure areas	Service requiring Gigabit connectivity	Service requiring Gigabit connectivity	Service requiring Gigabit connectivity
CUSTOMER'S NEEDS		1000Mbps fiber connectivity / choice of fiber or copper interfaces	1000Mbps fiber connectivity / choice of fiber or copper interfaces	Performance	Performance / long-distance networking	High performance / load balancing / virtualization	High performance / load balancing / virtualization	High performance / load balancing / long-distance networking / virtualization

Wake-on-LAN (WoL)

WoL is a feature of adapter cards that allows a computer fitted with a card to be remotely powered-on. The computer receives a special data packet via the network port that will cause the computer to boot. This, coupled with PXE support, allows network administrators to gain complete access to all computers on their networks.



	GIGABIT FIBER						FAST ETHERNET FIBER			
	2911SX	2911LX	2911SFP	2911SX/2LC	2911LX/2LC	2911SFP/2	2701FXa	2711FX	2711LX	2712FX
	PCIe (x1)	PCIe (x1)	PCIe (x1)	PCIe (x1)	PCIe (x1)	PCIe (x1)	PCI (32-bit)	PCIe (x1)	PCIe (x1)	PCIe (x1)
							SC, ST	MT, SC, ST, LC	SC, LC	SC
	SC, LC	SC, LC	1000Mbps SFP	LC (2 ports)	LC (2 ports)	1000Mbps SFP (2 ports)				
	MMF	SMF	Depends on SFP	MMF	SMF	Depends on SFP	MMF	MMF	SMF	MMF
	220 m / 500 m	10 km	Depends on SFP	220 m / 500 m	10 km	Depends on SFP	2 km	2 km	10 km	2 km
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■				
	■	■	■	■	■	■				
	■	■	■	■	■	■				
	■	■	■	■	■	■				
							■	■	■	■
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
										■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■		■	■	■
										■
	■	■	■	■	■	■		■	■	
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■		■	■	■
	■	■	■	■	■	■				
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■	■
	Service requiring Gigabit connectivity	Service requiring Gigabit connectivity	Service requiring Gigabit connectivity	Desktop computers in secure areas, virtualization servers	Desktop computers in secure areas, virtualization servers	Desktop computers in secure areas, virtualization servers	Desktop computers in secure areas	Desktop computers in secure areas	Desktop computers in secure areas	Desktop computers in secure areas
	High performance / load balancing / virtualization	High performance / load balancing / long-distance networking / virtualization	High performance / load balancing / long-distance networking	High performance / load balancing, virtualization	High performance / load balancing / virtualization	High performance / load balancing / virtualization	100Mbps fiber connectivity / modern PCIe computer	100Mbps fiber connectivity / choice of fiber or copper interfaces	100Mbps fiber connectivity / long-distance networking	Highly secure environment

Server Adapters

Network Virtualization

Allied Telesis server adapter cards are specifically designed for use in a virtualized environment. The cards interact directly with the virtualization hypervisor software, offloading many of the interface tasks from the main CPU, thus increasing the overall performance of the virtual machine.

The ANC10S Series 10 Gigabit adapter card improves performance with next-generation technology — VMware, Data Center Bridging, Direct Path, NetQueue — that includes features such as loopback (inter-VM communication), priority-weighted bandwidth management, and doubling the number of data queues per port from four to eight. Also supported are multicast and broadcast data on a virtualized server.

Superior Functionality

The ANC10S Series includes dedicated hardware and processors to process frames at the highest levels for both transmit and receive paths in the operating system — advantageous for virtualization applications.

The ANC10S Series enables convergence of all networked communications possible in a server, such as data (LAN), storage networks (iSCSI), and clustering.

		SFP+ 10 GIGABIT
FEATURES		**ANC10S/2**
BUS TYPE		PCIe (×8)
PORTS AND MEDIA SUPPORT	SFP+	■ (2 ports)
	Fiber type	MMF, SMF
	Max fiber distance	Depends on SFP+
QoS	IEEE 802.1p priority queues	■
PERFORMANCE	TCP/IP checksum CPU offload	■
	Jumbo frames	■
	Link aggregation support	■
	Link aggregation failover	■
	TOE	■
	iSCSI	■
MANAGEMENT	Managed boot agent (PXE remote boot ROM)	2.1
	VLAN support	■
	Advanced power management (ACPI)	■
	SNMP	■
DRIVER SUPPORT	Windows 2008 (32 and 64-bit)	■
	Windows Server 2008 R2	■
	Windows Server 2012	■
	Windows Server 2016	■
	Linux 2.6	■
IPv6 SUPPORT		■
DIAGNOSTICS	LEDs	■
PHYSICAL	Low profile bracket and full height provided	■
IDEAL ENVIRONMENT		Virtualization servers
CUSTOMER'S NEEDS		High performance with low CPU utilization

SFP/SFP+ Optics

Learn more about Allied Telesis pluggable optics on page 54.

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Allied Telesis continuously enhances its products. As a result, this catalog may not correctly represent all products currently available. Products may also vary by geographic region. Product specifications can change without notice, and while Allied Telesis makes every effort to ensure the accuracy of information presented in this catalog, the Company does not accept liability for errors or changes in the stated specifications.

For current product availability by region, full and complete product specifications and warranty information, please contact your regional sales manager or visit alliedtelesis.com.

Environmental Policy

As a major industry developer and manufacturer of networking equipment, Allied Telesis is committed to providing our customers with products designed and built to the highest quality, while minimizing the impact to the environment during both manufacturing and product operation.

Our Philosophy

Allied Telesis recognizes the importance of protecting the global environment and promoting conservation of biodiversity. We creatively utilize technology for sustainable social progress and for protecting the environment. Allied Telesis is committed to passing down a healthy global environment to the next generation.

Our Policy

Allied Telesis takes a proactive approach to:

- continual improvement of the local and global environment,
- prevention of pollution, and
- environmental management to fulfill corporate social responsibilities.

To achieve these objectives:

- Allied Telesis executive management has established and provides the resources for an Environmental Management System (EMS).
- We offer products designed to conserve energy; manufactured to save resources.
- We seek to reduce the risks to human health and the health of the environment from the use of hazardous chemical substances.
- We strive to reduce our impact on the environment through reduction, reuse, and recycling of waste materials (we practice 3R).
- We comply with all applicable environmental regulatory requirements, industry-specific self-regulation and stakeholder's requirements.

Reduced Operational Power Consumption

Using the latest technology and a range of power saving techniques, Allied Telesis has reduced power consumption by up to 50% over a wide range of its network devices. Reducing power consumption has a direct benefit for the environment. Additionally, further energy savings can also be made where products are installed in controlled temperature environments such as server rooms. Such environments allow the equipment to run cooler, requiring less effort and power from the device, resulting in a decrease in power utility costs and an increase in equipment reliability.

Eco-friendly is the brand name used by Allied Telesis to signify our low power range of networking products. Eco-friendly products will eventually encompass our entire product portfolio, as we continue to introduce new, lower power technology to meet customer demand.

Reducing Power on Network Ports: The latest switching silicon can detect the length of cables connected to a port. Using "measure and minimize" technology, Allied Telesis can ensure that maximum power is only injected into cables with the longest lengths, reducing the power injected into short cable lengths. Advanced products can ensure that selected ports are disabled overnight or on weekends, further reducing power.

Reducing Indicator Activity: All networking devices feature a varying array of power-consuming indicator devices (typically LEDs) to aid in installation and diagnostics. On the latest Allied Telesis products, these LEDs can be disabled when not required, saving up to a further 2% of operating power.

Power Supply Efficiency: The overall power consumption of a network device is ultimately dictated by the efficiency of the power supply. A power supply delivering only 50% efficiency draws twice the actual required power, with half the power wasted in the form of heat. Allied Telesis uses ultra-efficient power supplies, delivering conversion efficiencies of more than 80%, which produce less heat and reduce power consumption by up to 30%. Allied Telesis is now rating power supplies, informing the user of their efficiency.

Manufacturing

Allied Telesis prides itself on using state-of-the-art manufacturing equipment. While quality and efficiency are key parameters, Allied Telesis is also focused on reducing the potential damage to the environment caused during the manufacturing process.

ISO 9001 Standard: All Allied Telesis manufacturing facilities conform to ISO 9001 standards. Efficient production techniques, coupled with stringent design parameters ensure that Allied Telesis maintains its position as one of the highest quality networking producers in the industry.

ISO 14001 Standard: Allied Telesis has long been a responsible manufacturer, ensuring the minimum damage to the world's environment. All of our facilities adhere to the strict ISO 14001 standard for environment management of our production processes.

Allied Telesis manufacturing facilities also ensure minimal impact on the environment by use of the latest technology and processes. All water used in our manufacturing process is recycled.

Logistics

The majority of Allied Telesis network products are manufactured in Asia. Transporting these products across the world to the consumer markets can therefore have significant impact on the environment. Whenever possible, Allied Telesis attempts to use bulk sea transportation, as this has significantly less environmental impact when compared to air freight.

Restrictions on Hazardous Substances (RoHS) Compliance

Allied Telesis declares that the homogeneous content of the materials and components used in products bearing the CE Mark conform to the requirements established by the European Union RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) Directive, 2011/65/EU. Maximum Concentration Values of lead (Pb), mercury (Hg), hexavalent chromium (Cr+6), polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) shall be no more than 1000 ppm and cadmium (Cd) shall be no more than 100 ppm. Allied Telesis ensures RoHS conformance by requiring Declarations of Conformity and Full Materials Disclosure from all suppliers; by monitoring incoming materials and by maintaining strict manufacturing process controls.

REACH Policy

As a manufacturer of Articles that do not release chemical substances into the environment, Allied Telesis is committed to ensuring that there are no SVHCs (Substances of Very High Concern) above allowable threshold (1000 ppm) used in our products. We have procedures and processes in place to ensure continued conformity with REACH regulations.

WEEE Policy

Allied Telesis distributors and channel partners share a common commitment to recycle waste electronic equipment and safely dispose of what cannot be recycled, in accordance with the WEEE directive.

Conflict Minerals Policy

Allied Telesis is committed to social and environmental responsibility and we expect the same commitment from our supply chain. This includes compliance with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which requires U.S. publicly traded companies to trace the origins of tin, tantalum, tungsten, and gold (3TG) used in their products. The intended purpose of which is to prevent the use of (3TG) mined in the Democratic Republic of Congo (DRC) and adjoining countries in order to eliminate these "conflict minerals" as a source of funding for the ongoing conflict. We have a dedicated team of people working with our suppliers to reasonably assure that the 3TG in our products are "conflict free."

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