Products

Allied Telesis™

Our Commitment to Excellence

Known for **reliability**

Chosen for **quality**

Recognized for **innovation**

Allied Telesis is a world-class leader in delivering IP/Ethernet network solutions to the global marketplace. We create innovative, standards-based IP networks that seamlessly connect users with their voice, video and data services.

Publicly traded in Japan and with major corporate divisions in Europe, Asia and the Americas, Allied Telesis is a truly international company ready to service, support, and supply a globally connected customer base of diverse enterprises, organizations and governments. Our partners include the world's largest distributors, integrators, solution providers and resellers to assure you receive immediate local service and support.

Our solutions are used in a wide variety of complex networking applications, and optimized for very demanding and highly specialized markets such as healthcare, IP surveillance, hospitality, the military and public utilities, to name but a few. Because we provide world-class quality and performance at prices suited to budgets facing a challenging world economy, Allied Telesis has become the default standard for many of today's critical network operations.

Our worldwide research and development centers work to bring you innovative products that help your company succeed. We also operate state-of-the-art production facilities, compliant with the world's most-stringent environmental policies, manufacturing more than 600 different products every month, and shipping globally.

As a major industry manufacturer, Allied Telesis is committed to providing you with solutions comprised of products designed and built to the highest-possible standards and quality. Our manufacturing conforms to ISO 9000 standards, and all of our facilities adhere to the strict ISO 14001 standard to ensure a healthier world environment.

Allied Telesis has been designing, manufacturing and selling networking products for more than a quarter of a century. Our solution-based philosophy of producing products of the highest quality, at affordable prices, with extensive service and support, has resulted in Allied Telesis products being deployed in networks of all types and sizes around the world. Our proven track record of solid technology, excellent support and full-featured software and hardware has enabled Allied Telesis to become a worldwide de-facto standard in many areas of network technology. With a portfolio of products providing end-to-end networking for service provider, enterprise and SMB customers, Allied Telesis is the natural choice for many world-class organizations.

As a leading provider of networking infrastructure, Allied Telesis today enables efficient and reliable delivery of voice, video and data services. We are committed to innovating the way in which services and applications are delivered and managed, resulting in increased value and lower operating costs.

Allied Telesis Products

Allied Telesis engineers high-performance, high-quality, future-proof products to meet every cutting-edge voice, video and data networking need, without breaking the budget. From unmanaged and WebSmart switches to Layer 2 and Layer 3 switches, Allied Telesis produces efficient, streamlined, powerful products that will last for the life of the network and deliver the highest-possible return on investment.

Fast, Gigabit and 10 Gigabit

Allied Telesis advanced Fast, Gigabit and 10 Gigabit Ethernet Layer 2 and Layer 3 switches are an ideal solution in the aggregation tier of large networks, for server farms, data centers or small and medium businesses. A robust hardware design provides maximum uptime of critical services and reliability.

Stackable

Allied Telesis stackable switches offer chassis-like availability and resiliency, allowing management of the stack as a single, large virtual switch while providing fast inter-switch connectivity. Stackable switches offer a cost-effective and scalable switching solution for the network.

Power over Ethernet

Traditional switches deliver data to their connected devices. Allied Telesis PoE switches add an extra dimension, providing power to wireless access points, IP phones and IP security cameras and other connected devices. All Allied Telesis PoE switches meet the IEEE 802.3af or IEEE 802.3at industry standards, which helps to ensure seamless interoperability with other PoE devices.

IPv6 Management

Allied Telesis switches support IPv6, ensuring that infrastructure installed today will support the networks of the future. With the number of global IPv4 addresses now exhausted, investment today with IPv6-ready equipment is a necessity.

VLAN Double Tagging (Q-in-Q)

VLAN double-tagging can be useful for customers such as Internet Service Providers (ISP), allowing them to use VLANs internally while mixing traffic from clients that is already VLAN tagged. The first VLAN tag is used by the ISP to route traffic across their own network, while the second VLAN tag is that of the end-user customer. The use of this feature allows end-users to have physically distributed networks, which they can manage themselves, carried over an independent infrastructure.

IEEE 802.1x Authentication

This protocol uses an authentication server to store details of each user who has been granted access to the network. The authentication criteria can be a computer MAC address, but can also include IP address, username and password etc. Initially, the switch port will be blocked, but when a computer connects, it will only be connected to the authentication server. If the request to access the network is granted, then the switch will be programmed with the necessary details, such as VLAN membership. This type of security simplifies the task of the network administrator. They can keep all of their security data on a server and not have to program each switch. This scenario has the added benefit of allowing users to connect to any port on the network.

Voice VLAN

Voice VLAN segregates VoIP traffic from Ethernet traffic and applies it to a higher QoS. This ensures high voice quality for phone conversations, as voice and data traffic share the same switch and Ethernet ports. It protects time-sensitive voice traffic from being flooded by other data traffic, such as multicasts and broadcasts.

sFlow

sFlow is an industry-standard technology for monitoring high-speed switched networks. It gives complete visibility into the use of networks, enabling performance optimization, accounting and billing for usage and defense against security threats. Sampled packets sent to a collector ensure it always maintains a real-time view of network traffic.

eco-friendly

Allied Telesis switches featuring the eco-friendly logo have been designed to operate at significantly lower power than traditional switches.

This not only reduces environmental impact, but also reduces the operational running costs of the switch.

SwitchBlade x8112
CORE CHASSIS SWITCH

The SwitchBlade™ x8112 12-slot Core Chassis Switch is primarily targeted for medium to large enterprise networks — but equally at home in the enterprise data center.

The switch is designed to deliver high availability, maximum performance, future scalability and high port count.

Advanced Operating System

The SwitchBlade x8112 features the AlliedWare Plus™ operating system, providing users with advanced layer 3 functionality and an industry-standard Command Line Interface (CLI).

AlliedWare Plus™ OPERATING SYSTEM

High Availability Architecture

The SwitchBlade x8112 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 240 ports of copper or fiber Gigabit, or up to 60 ports of 10G Ethernet, into a single 7RU-high chassis.

Scalable Architecture

The design of the SwitchBlade x8112 allows for future enhancements. A family of Control/Fabric modules is planned, providing the chassis with a range of functionality and performance options. Users receive investment protection via the ability to grow their network, while re-using the existing blades, chassis and power supplies.

SwitchBlade x8112 Modules

- » **AT-SBx8112**
  Rack mount 12-slot chassis including Fan Tray
- » **AT-SBx81CFC400**
  Control/Fabric module with 400Gbps of switching performance
- » **AT-SBx81XS6**
  6-port 10GE SFP+ Ethernet line card
- » **AT-SBx81GT24**
  24-port 10/100/1000T Ethernet line card
- » **AT-SBx81GP24**
  24-port 10/100/1000T PoE+ Ethernet line card

- » **AT-SBx81GS24a**
  24-port SFP Ethernet line card
- » **AT-SBxPWRSYS1**
  1200W AC system power supply
- » **AT-SBxPWRPOE1**
  1200W AC PoE power supply
- » **AT-FL-SBx81-01**
  Premium feature license. Includes OSPF, PIMv4, Q-in-Q, RADIUS-Full

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.

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.

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.

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 Switching Rings

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.

Scalable

The SwitchBlade x908 supports up to eight XEM expansion modules, allowing the user to change the configuration of their network as needed. Each SwitchBlade x908 can support up to 96 Gigabit ports or up to 16 10GbE ports, while stacking two chassis to build a resilient core that doubles the number of ports.

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.

NSP Applications

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.

Extended Mode

SwitchBlade x908 chassis running selected XEM expansion modules can be configured to use larger hardware table sizes and more Link Aggregation Groups (LAGs). This makes the SwitchBlade x908 more suitable for applications in the core or in distribution layers of larger networks.

SwitchBlade x908 Modules

» **AT-SBx908**
Rack mount 8-slot chassis including fan module

» **AT-XEM-2XS**
2-port 10GE SFP+ expansion module

» **AT-XEM-2XP**
2-port 10GE XFP expansion module

» **AT-XEM-2XT**
2-port 10GE expansion module

» **AT-XEM-1XP**
1-port XFP expansion module

» **AT-XEM-12S** and **AT-XEM-12Sv2**
12-port SFP expansion module

» **AT-XEM-12T** and **AT-XEM-12Tv2**
12-port 10/100/1000T expansion module

» **AT-PWR05**
AC load sharing system power supply

» **AT-PWR05-80**
DC load sharing system power supply

» **AT-HS-STK-CBL**
650mm high speed stacking cable

» **AT-FAN03**
Spare fan module

SwitchBlade x3112

ACCESS EDGE CHASSIS SWITCH

The SwitchBlade x3112 is a 12-slot access edge chassis switch primarily targeted for service provider fiber access networks, and equally at home at the enterprise network edge and the data center. The switch is designed to deliver high availability, maximum performance with wirespeed non-blocking backplane performance, and high port count.

FTTx Service Provider Applications

The SwitchBlade x3112 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 AT-SBx3112 is available with either AC or DC power options.

As a FTTx platform, the SwitchBlade x3112 can support a maximum of 400 ports per chassis using 40-port 1000Mbps CSFP-based line cards (AT-SBx31GC40). It can also support redundant 10G uplinks using 4-port XFP-based line cards with EPSR (AT-SBx31XZ4) and 6-port SFP+-based

line cards (AT-SBx31XS6). The SwitchBlade x3112 can act as an aggregation hub for last mile FTTx applications using 10G line cards. It features 40 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 200G switch controllers, FTTx services can operate at wirespeed connectivity.

An evolution of the Allied Telesis tried and tested iMAP carrier-grade platform, the SwitchBlade x3112 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 x3112 is designed to deliver 99.999% reliability, while offering high availability with sub-millisecond hitless failover for mission-critical applications where uptime

SUBCATEGORY	FEATURE	AT-SBx3112	AT-SBx3112-96POE+	AT-SBx3112-8XR	AT-SBx3112-12XS
PRODUCT		Chassis with fan tray	Chassis bundle	Chassis bundle	Chassis bundle
SWITCH FUNCTIONALITY		Layer 2+	Layer 2+	Layer 2+	Layer 2+
ACCESSORIES	Controller Fabric Card (CFC)		1 x AT-SBx31CFC	2 x AT-SBx31CFC	2 x AT-SBx31CFC
	24 x 10/100/1000T PoE+		4 x AT-SBx31GP24		
	4 x XFP (10GbE)			2 x AT-SBx31XZ4	
	6 x SFP+ (10GbE)				2 x AT-SBx31XS6
	System power supply		1 x AT-SBxPWRSYS1	2 x SBxPWRSYS1	2 x SBxPWRSYS1-80 (DC)
	PoE power supply		1 x AT-SBxPWRPOE1		
	Fan tray		1 x AT-SBx31FAN	1 x AT-SBx31FAN	1 x AT-SBx31FAN
POWER SUPPLY	PSU type	Hot-swap internal	Hot-swap internal	Hot-swap internal	Hot-swap internal
	-48vDC PSU option	■	■	■	■
POWER OVER ETHERNET	IEEE 802.3at Class 4 and 802.3af Class 3	■	■	■	■
	Max number of PoE-enabled ports		96		
	Max number of IEEE 802.3at ports		80		
	Max number of IEEE 802.3af ports		200		
	Mode		A		
ENVIRONMENTAL	Cooling	Fan tray	Fan tray	Fan tray	Fan tray
	Temperature range	0°C to 40°C	0°C to 40°C	0°C to 40°C	0°C to 40°C
MANAGEMENT	CLI / Telnet / SNMP	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■
	Link aggregation (LACP)	■	■	■	■
	EPSR	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4K	4K	4K	4K
	VLAN double tagging (Q-in-Q)	■	■	■	■
	RADIUS / TACACS+ / SSH	■	■	■	■
DIMENSIONS	(W x D x H)	48.03 x 38.79 x 31.01 cm 18.9 x 12.2 x 4.8 in	48.03 x 38.79 x 31.01 cm 18.9 x 12.2 x 4.8 in	48.03 x 38.79 x 31.01 cm 18.9 x 12.2 x 4.8 in	48.03 x 38.79 x 31.01 cm 18.9 x 12.2 x 4.8 in
	Weight	17.77 kg / 39.1 lb	30.4 kg / 67.02 lb	28.91 kg / 63.6 lb	28.91 kg / 63.6 lb

is essential such as data centers, hospitality, government, and financial institutions.

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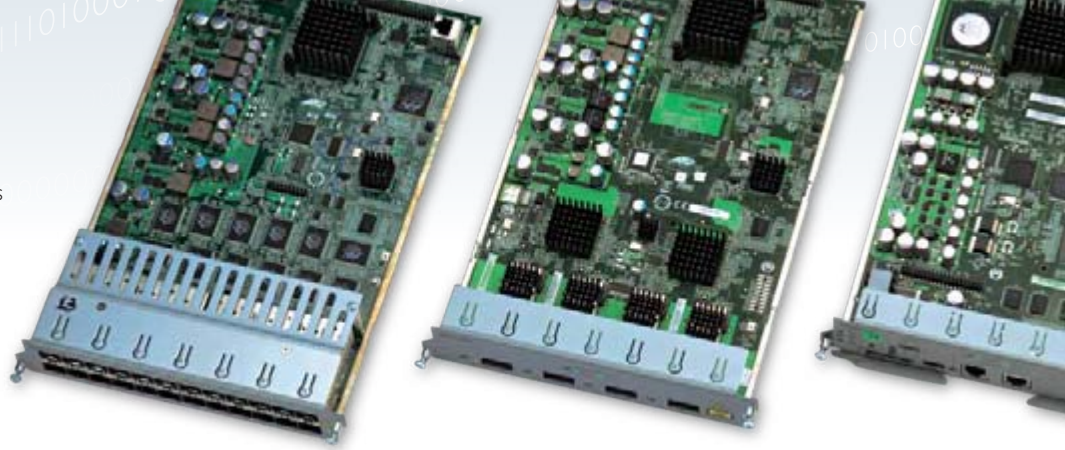
Power over Ethernet Plus (PoE+)

The SwitchBlade x3112 supports IEEE 802.3at PoE+ (30W) to enable customers to future-proof their network. 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 x3112. 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 x3112 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 x3112 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.

SwitchBlade x3112 Modules

» **AT-SBx31CFC**
Controller Fabric Card (CFC)

» **AT-SBx31GP24**
24-port 10/100/1000T PoE Ethernet line card

» **AT-SBx31XZ4**
4-port 10GE XFP Ethernet line card

» **AT-SBx31XS6**
6-port 10GE SFP+ Ethernet line card

» **AT-SBx31GS24**
24-port SFP Ethernet line card

» **AT-SBx31GC40** NEW
40-port CSFP Ethernet line card

SFP Optical Modules

Learn more about Allied Telesis pluggable optical modules on page 39.

Accessories

Small Form Pluggable Optics		Supported Platforms
AT-SP10SR	SFP+, MMF, 10Gbps, 300 m, 850 nm, LC	AT-SBx31XS6
AT-SP10LR/I	SFP+, SMF, 10Gbps, 10 km, 1310 nm, LC	AT-SBx31XS6
AT-SP10LR20/I	SFP+, SMF, 10Gbps, 20 km, 1310 nm, LC	AT-SBx31XS6
AT-SP10ER40/I	SFP+, SMF, 10Gbps, 40 km, 1550 nm, LC	AT-SBx31XS6
AT-XPSR	XFP, MMF, 10Gbps, 300 m, 850 nm, LC	AT-SBx31XZ4
AT-XPLR	XFP, SMF, 10Gbps, 10 km, 1310 nm, LC	AT-SBx31XZ4
AT-XPER40	XFP, SMF, 10Gbps, 40 km, 1550 nm, LC	AT-SBx31XZ4
AT-XPER80	XFP, SMF, 10Gbps, 80 km, 1550 nm, LC	AT-SBx31XZ4
AT-SPSX	SFP, MMF, 1000Mbps, 220 / 500 m, 850 nm, LC	AT-SBx31GS24
AT-SPEX	SFP, MMF, 1000Mbps, 2 km, 1310 nm, LC	AT-SBx31GS24
AT-SPLX10	SFP, SMF, 1000Mbps, 10 km, 1310 nm, LC	AT-SBx31GS24
AT-SPLX40	SFP, SMF, 1000Mbps, 40 km, 1310 nm, LC	AT-SBx31GS24
AT-SPZX80	SFP, SMF, 1000Mbps, 80 km, 1550 nm, LC	AT-SBx31GS24
AT-SPBD10-13	SFP, SMF, 1000Mbps, 10 km, 1310/1490 nm, LC-BiDi	AT-SBx31GS24
AT-SPBD10-14	SFP, SMF, 1000Mbps, 10 km, 1490/1310 nm, LC-BiDi	AT-SBx31GS24
AT-SPFX/2	SFP, MMF, 100Mbps, 2 km, 1310 nm, LC	AT-SBx31GS24
AT-SPFXBD-LC-13	SFP, SMF, 100Mbps, 10 km, 1310/1550 nm, LC-BiDi	AT-SBx31GS24
AT-SPFXBD-LC-15	SFP, SMF, 100Mbps, 10 km, 1550/1310 nm, LC-BiDi	AT-SBx31GS24
AT-SPFX/15	SFP, SMF, 100Mbps, 15 km, 1310 nm, LC	AT-SBx31GS24
AT-SPBD20DUAL-14	CSFP, 2 x SMF, 1000Mbps, 20 km, 1490/1310 nm, LC-BiDi	AT-SBx31GC40
AT-SPBD40DUAL-14	CSFP, 2 x SMF, 1000Mbps, 40 km, 1490/1310 nm, LC-BiDi	AT-SBx31GC40

10 Gigabit Switches

Allied Telesis offers versatile, highly resilient 10 Gigabit connections for the most advanced and demanding enterprise, service provider and municipal networks. Allied Telesis 10 Gigabit capabilities include carrier-grade modular and chassis-based switching and access solutions that provide Ethernet Protection Switching Rings with sub-50ms failover for mission-critical services.

Ethernet Protection Switching Ring (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. EPSRing provides high-speed (<50ms) reconfigurations in the event of a failure, ensuring no noticeable loss of service.

Dual Core Networking

Traditional core switches provide resilience by having a second chassis standing by. Users pay for two chassis, but only achieve the throughput and performance of one. Allied Telesis switches, with VCStack virtual chassis stacking, allow both core switches to pass traffic actively, with one also serving as the backup in the event of a failure. Thus, for the majority of the time, users benefit from twice the performance of a traditional core network.

SUBCATEGORY	FEATURE	AT-x610-24Ts/X	AT-x610-24Ts/X-POE+	AT-x610-24SPs/X	AT-x610-48Ts/X	AT-x610-48Ts/X-POE+
FORM FACTOR		Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack
SWITCH FUNCTIONALITY		Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3
PORTS AND MEDIA SUPPORT	10/100/1000T	24	24	4 (Combo)	48	48
	SFP	4 (Combo) (1000Mbps)	4 (Combo) (1000Mbps)	24 (100/1000X SFP)	4 (Combo) (1000Mbps)	4 (Combo) (1000Mbps)
	Modular uplinks					
	Fixed SFP+ (10G) uplinks	2 (4 with AT-x6EM/XS2)	2 (4 with AT-x6EM/XS2)	2 (4 with AT-x6EM/XS2)	2 (4 with AT-x6EMXS2)	2 (4 with AT-x6EM/XS2)
MODULAR UPLINKS	10/100/1000T					
	10/100/1000T PoE					
	SFP (1000Mbps)					
	CSFP (1000Mbps)					
	XFP (10G)					
	SFP+ (10G)					
	10GT					
POWER SUPPLY	PSU type	Internal	Hot-swap Internal	Internal	Internal	Hot-swap Internal
	-48vDC PSU option					
	Redundant PSU support	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR250	AT-PWR800 & AT-PWR1200
	Redundant PSU chassis	AT-RPS3000	AT-RPS3000	AT-RPS3000	AT-RPS3000	AT-RPS3000
	Additional redundant PSU	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR250	AT-PWR800 & AT-PWR1200
	Additional redundant PoE PSU					
POWER OVER ETHERNET	IEEE 802.3af (PoE)		■			■
	IEEE 802.3at (PoE+)		■			■
	PoE-enabled ports		24			48
	PoE power		720W			1440W
SCALABILITY	MAC address table size	32K	32K	32K	32K	32K
	Stacking (VCStack)	■ AT-STACKXG (8) x6EM/XS2 (8)	■ AT-STACKXG (8) x6EM/XS2 (8)	■ AT-STACKXG (8) x6EM/XS2 (8)	■ AT-STACKXG (8) x6EM/XS2 (8)	■ AT-STACKXG (8) x6EM/XS2 (8)
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fan	Fan
	Operating temperature	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
MANAGEMENT	Web	■	■	■	■	■
	CLI	■	■	■	■	■
	Telnet	■	■	■	■	■
	SNMP	■	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	■
	Link aggregation (LACP)	■	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4096	4096	4096	4096	4096
	RADIUS	■	■	■	■	■
	TACACS	■	■	■	■	■
	SSH/SSL	■	■	■	■	■
	IEEE 802.1x	■	■	■	■	■
	DoS protection	■	■	■	■	■
ROUTING	IPv4 and IPv6 Static	■	■	■	■	■
	RIP, OSPF and BGP	■	■	■	■	■
	RIPng and OSPFv3	■	■	■	■	■
	VRF-Lite	■	■	■	■	■
DIMENSIONS	(W x D x H)	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in
	Weight	6.3 Kg / 13.89 lb	5.6 Kg / 12.35 lb (no PSU)	6.6 Kg / 14.55 lb	6.8 Kg / 14.99 lb	6.0 Kg / 13.23 lb (No PSU)

Implementing the Standard

The IEEE standard allows multiple implementations for use over different types of fiber-optic cables. In the 10GBASE-R media types, an 'S' stands for the 850 nanometer (nm) wavelength of fiber-optic operation, an 'L' stands for 1310 nm, and an 'E' stands for 1550 nm. Allied Telesis offers the following:

Module	Standard	Distance	Wavelength	Cable Type
AT-SP10SR	10G-SR	300 m	850 nm	Multi-mode fiber (MMF)
AT-SP10LR	10G-LR	10 km	1310 nm	Single-mode fiber (SMF)
AT-SP10LR20/I	10G-LR	20 km	1310 nm	Single-mode fiber (SMF)
AT-SP10ER40/I	10G-ER	40 km	1550 nm	Single-mode fiber (SMF)
AT-XPSR	10G-SR	300 m	850 nm	Multi-mode fiber (MMF)
AT-XPLR	10G-LR	10 km	1310 nm	Single-mode fiber (SMF)
AT-XPER40	10G-ER	40 km	1550 nm	Single-mode fiber (SMF)
AT-XPER80	10G-ER	80 km	1550 nm	Single-mode fiber (SMF)

	AT-x900-12XT/S	AT-x900-24XT	AT-x900-24XS	SwitchBlade x908	SwitchBlade x3112
	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Rack mount / Stack	Rack mount
	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Layer 2
	12	24			
	12 (Combo) (100 or 1000Mbps)		24 (100 or 1000Mbps)		
	1	2	2	8	10
	AT-XEM-12T & 12Tv2 (12 ports)	AT-XEM-12T & 12Tv2 (12 ports)	AT-XEM-12T & 12Tv2 (12 ports)	AT-XEM-12T & 12Tv2 (12 ports)	AT-SBx31GT24 (24 ports)
					AT-SBx31GP24 (24 ports)
	AT-XEM-12S & 12Sv2 (12 ports)	AT-XEM-12S & 12Sv2 (12 ports)	AT-XEM-12S & 12Sv2 (12 ports)	AT-XEM-12S & 12Sv2 (12 ports)	AT-SB31xGS24 (24 ports)
					AT-SBx31GC40 (40 ports)
	AT-XEM-1XP (1 port) AT-XEM-2XP (2 ports)	AT-XEM-1XP (1 port) AT-XEM-2XP (2 ports)	AT-XEM-1XP (1 port) AT-XEM-2XP (2 ports)	AT-XEM-1XP (1 port) AT-XEM-2XP (2 ports)	AT-SBx31XZ4 (4 ports)
	AT-XEM-2XS (2 ports)	AT-XEM-2XS (2 ports)	AT-XEM-2XS (2 ports)	AT-XEM-2XS (2 ports)	AT-SBx31XS6 (6 ports)
	AT-XEM-2XT (2 ports)	AT-XEM-2XT (2 ports)	AT-XEM-2XT (2 ports)	AT-XEM-2XT (2 ports)	
	Fixed Internal	Hot-swap Internal	Hot-swap Internal	Hot-swap Internal	Hot-swap Internal
					AT-SBxPWRSYS1-80
		■	■	■	
		■	■	■	■
		AT-PWR01	AT-PWR01	AT-PWR05	AT-SBxPWRSYS1
					AT-SBxPWRPOE1
					■
					Up to 192 (80 full power)
					2400W
	16K	16K	16K	16K / 64K	32K
	■ AT-XEM-STK (2)	■ AT-XEM-STK (2)	■ AT-XEM-STK (2)	■ Rear stacking (2)	
	Fan	Fan	Fan	Hot-swappable fan module	Hot-swappable fan module
	0–50°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	8	8	8	8	8
	4096	4096	4096	4096	4096
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	SSH
					■
	■	■	■	■	
	■	■	■	■	
	■	■	■	■	
	■	■	■	■	
	■	■	■	■	
		■			
	44 x 35 x 4.4 cm	44 x 44 x 4.4 cm	44 x 44 x 4.4 cm	44 x 45.6 x 13.2 cm	48.03 x 38.79 x 31.01 cm
	17.3 x 13.8 x 1.73 in	17.5 x 17.3 x 1.73 in	17.5 x 17.3 x 1.73 in	17.3 x 18 x 5.2 in	18.9 x 12.2 x 4.8 in
	5.3 kg / 11.6 lb	7.3 kg / 16.09 lb (with 1 PSU)	7.3 kg / 16.09 lb (with 1 PSU)	14.32 kg / 31.57 lb (no PSU)	17.77 Kg / 39.10 lb

Gigabit Aggregation/Core Switches

Allied Telesis aggregation and core switches provide the backbone to any large network — reliable and resilient, with the capacity and throughput to handle today's demands. Redundant power supplies ensure high availability, while VCStack™ and link aggregation provide resilience, ensuring access switches continue to achieve connectivity, even in the event of a major failure.

x610 Series

Allied Telesis x610 Series advanced Layer 3 switches offer an impressive range of features for the aggregation edge. They provide scalability, resiliency, security and high performance and are easy to manage using AlliedWare Plus CLI and Web interfaces. The x610 Series provides hardware stacking up to eight units using VCStack virtual chassis stacking with either local or long-distance stacking links of up to 48Gbps dedicated bandwidth. Features such as NAC, IEEE 802.1x port-based authentication, dynamic VLAN, guest VLAN, MAC authentication, RADIUS client, RADIUS server, BPDU guard, STP root guard, Denial of Service (DoS) protection and ACLs provide advanced security to protect the network from the edge to the core.

SUBCATEGORY	FEATURE	AT-x600-24Ts	AT-x600-24Ts-POE+	AT-x610-24Ts	AT-x610-24Ts-POE+	AT-x610-24Ts/X	AT-x610-24Ts/X-POE+
FORM FACTOR		Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack
SWITCH FUNCTIONALITY		Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3
PORTS AND MEDIA SUPPORT	10/100/1000T	24	24	24	24	24	24
	SFP	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps
	Modular uplinks						
	Fixed SFP+ (10G) uplinks			2 with AT-x6EM/XS2	2 with AT-x6EM/XS2	2 (4 with AT-x6EM/XS2)	2 (4 with AT-x6EM/XS2)
MODULAR UPLINKS	12 x 10/100/1000T						
	12 x SFP (1000Mbps)						
	1 x XFP						
	2 x XFP						
	2 x SFP+ (10G)						
	10GBaseT						
POWER SUPPLY	PSU type	Fixed internal	Fixed internal	Fixed internal	Hot-swappable internal	Fixed Internal	Hot-swappable internal
	-48vDC PSU option						
	Redundant PSU option	■	■	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR800 & AT-PWR1200
	Redundant PSU chassis			AT-RPS3000	AT-RPS3000	AT-RPS3000	AT-RPS3000
	Redundant PSU chassis (incl 1 PSU)	AT-RPS3204	AT-RPS3104				
	Additional redundant PSU	AT-PWR3202	AT-PWR3101	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR800 & AT-PWR1200
POWER OVER ETHERNET	IEEE 802.3af (PoE)		■		■		■
	IEEE 802.3at (PoE+)		■		■		■
	PoE-enabled ports		24		24		24
	Max no. of full power ports		24		24		24
	PoE power		370W		720W		720W
SCALABILITY	MAC address table size	16K	16K	32K	32K	32K	32K
	Stacking (VCStack)	■ AT-STACKXG (4)	■ AT-STACKXG (4)	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fan	Fan	Fan
	Operating temperature	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
MANAGEMENT	Web	■	■	■	■	■	■
	CLI	■	■	■	■	■	■
	Telnet	■	■	■	■	■	■
	SNMP	■	■	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	■	■
	Link aggregation (LACP)	■	■	■	■	■	■
QoS	IEEE 802.1p priority queues	8	8	8	8	8	8
SECURITY	IEEE 802.1Q VLANs	4096	4096	4096	4096	4096	4096
	RADIUS	■	■	■	■	■	■
	TACACS	■	■	■	■	■	■
	SSH/SSL	■	■	■	■	■	■
	IEEE 802.1x	■	■	■	■	■	■
	DoS protection	■	■	■	■	■	■
ROUTING	IPv4 and IPv6 Static	■	■	■	■	■	■
	RIP, OSPF and BGP	■	■	■	■	■	■
	RIPng and OSPFv3	■	■	■	■	■	■
	VRF-Lite						
DIMENSIONS	(W x D x H)	44 x 30.5 x 4.4 cm 17.3 x 12 x 1.73 in	44 x 40.8 x 4.4 cm 17.3 x 16.1 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in	44 x 42 x 4.4 cm 17.3 x 16.5 x 1.73 in
	Weight	4.5 Kg / 9.9 lb	6.9 Kg / 15.2 lb	6.3 Kg / 13.89 lb	5.6 Kg / 12.35 lb (no PSU)	6.3 Kg 13.89 lb	5.6 Kg / 12.35 lb (no PSU)

x900 Series

Allied Telesis x900 Series advanced Gigabit Layer 3 switches feature a highly modular design that allows growth in response to network demands. They provide a range of hot-swappable copper and fiber expansion modules (XEMs), from 10/100/1000Mbps to 10 Gigabit Ethernet. Dual redundant power supply units are hot-swappable. The AlliedWare Plus CLI and Web interfaces make management easy, and features such as policy-based QoS, extensive remarking capabilities, control plane traffic prioritization and bandwidth metering ensure wirespeed delivery of critical IPv4 and IPv6 traffic.

	AT-x610-48Ts	AT-x610-48Ts-POE+	AT-x610-48Ts/X	AT-x610-48Ts/X-POE+	AT-9924SP	AT-x900-12T/S	AT-x900-24XT	AT-x900-24XS
	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack
	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3
	48	48	48	48		12	24	
	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps	4 (combo) 1000Mbps	24 100 or 1000Mbps	12 (combo) 100 or 1000Mbps		24 100 or 1000Mbps
						1	2	2
	2 with AT-x6EM/XS2	2 with AT-x6EM/XS2	2 (4 with AT-x6EM/XS2)	2 (4 with AT-x6EM/XS2)				
						AT-XEM-12T & 12Tv2 (12 ports)	AT-XEM-12T & 12Tv2 (12 ports)	AT-XEM-12T & 12Tv2 (12 ports)
						AT-XEM-12S & 12Sv2 (12 ports)	AT-XEM-12S & 12Sv2 (12 ports)	AT-XEM-12S & 12Sv2 (12 ports)
						AT-XEM-1XP	AT-XEM-1XP	AT-XEM-1XP
						AT-XEM-2XP (2 ports)	AT-XEM-2XP (2 ports)	AT-XEM-2XP (2 ports)
						AT-XEM-2XS (2 ports)	AT-XEM-2XS (2 ports)	AT-XEM-2XS (2 ports)
						AT-XEM-2XT (2 ports)	AT-XEM-2XT (2 ports)	AT-XEM-2XT (2 ports)
	Fixed internal	Hot-swappable internal	Fixed internal	Hot-swappable internal	Hot-swappable internal	Fixed Internal	Hot-swappable internal	Hot-swappable internal
					■		■	■
	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR800 & AT-PWR1200	■		■	■
	AT-RPS3000	AT-RPS3000	AT-RPS3000	AT-RPS3000				
	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR250	AT-PWR800 & AT-PWR1200	AT-PWR01		AT-PWR01	AT-PWR01
		■		■				
		■		■				
		48		48				
		48		48				
		1440W		1440W				
	32K	32K	32K	32K	16K	16K	16K	16K
	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)		■ AT-XEM-STK (2)	■ AT-XEM-STK (2)	■ AT-XEM-STK (2)
	Fan	Fan	Fan	Fan		Fan	Fan	Fan
	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 50°C	0 to 40°C	0 to 40°C
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	8	8	8	8	8	8	8	8
	4096	4096	4096	4096	4096	4096	4096	4096
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	44.5 x 44 x 4.4 cm	44 x 35 x 4.4 cm	44 x 44 x 4.4 cm	44 x 44 x 4.4 cm
	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	17.5 x 17.3 x 1.73 in	17.3 x 13.8 x 1.73 in	17.3 x 17.3 x 1.73 in	17.3 x 17.3 x 1.73 in
	6.8 Kg / 14.99 lb	6.0 Kg / 13.23 lb (No PSU)	6.8 Kg / 14.99 lb	6.0 Kg / 13.23 lb (No PSU)	6.8 Kg / 15 lb	5.3 Kg / 11.6 lb	7.3 Kg / 16.09 lb (w/ 1 PSU)	7.3 Kg / 16.09 lb (w/ 1 PSU)

Gigabit Edge Switches

Allied Telesis Gigabit Ethernet switches provide advanced enterprise features to improve delivery of converged data.
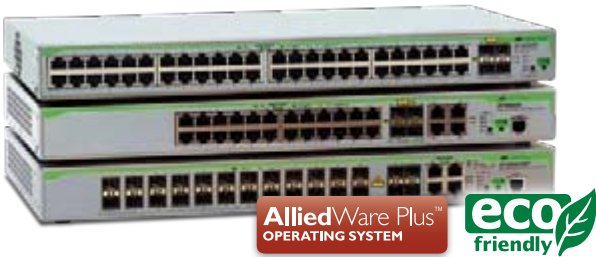
9000 Series

The Allied Telesis 9000 Series of high-performance Layer 2 28-port and 52-port Gigabit Ethernet switches offers advanced enterprise features at an affordable price. With an industry-standard AlliedWare Plus CLI and Web interface, the eco-friendly switch helps reduce power consumption and minimizes noise. The 9000 Series provides enhanced stacking of up to 24 units that can be remotely managed as a single IP across multiple sites. Features such as IEEE 802.1x port-based authentication, Microsoft Network Access and Symantec Network Access Control provide security at the network edge.

8000GS Series

The Allied Telesis 8000GS Series of Gigabit Ethernet stackable switches provides high-performance Layer 2 switching in an affordable, fixed-configuration platform. The 8000GS offers 24-port 10/100/1000T PoE and non-PoE versions, as well as a 48-port 10/100/1000T model. All models support four 1Gbps SFP combo slots and two integrated stacking connectors that deliver a total of 20Gbps stacking bandwidth. The stacking capability integrated into this platform is configured as a resilient ring topology designed to provide high reliability and simplified management for higher port-density applications. Support for jumbo Ethernet frames enables higher throughput of time-sensitive data.

SUBCATEGORY	FEATURE	AT-9000/28	AT-9000/28SP	AT-9000/28SP-E	
FORM FACTOR		Desktop / Rack mount	Desktop / Rack mount	Desktop / Rack mount	
SWITCH FUNCTIONALITY		Layer 2	Layer 2	Layer 2	
PORTS AND MEDIA SUPPORT	10/100/1000T	28	4 (combo)	4 (combo)	
	SFP	4 (combo) (100 or 1000Mbps)	28 (100 or 1000Mbps)	28 (100 or 1000Mbps)	
POWER OVER ETHERNET	IEEE 802.3af Class 3				
	PoE-enabled ports				
	Max no. of full power ports				
	PoE power				
SCALABILITY	MAC address table size	8K	8K	8K	
	Stacking	■ *	■ *	■ *	
ENVIRONMENTAL	Cooling	Low noise fan	Fan	Fan	
	Eco-friendly	■	■	■	
	Temperature range	0 to 40ºC	0 to 40ºC	0 to 50ºC	
MANAGEMENT	Web	■	■	■	
	CLI / Telnet / SNMP	■	■	■	
	IPv6	■	■	■	
NETWORK RESILIENCE	Spanning Tree	■	■	■	
	Link aggregation (LACP)	■	■	■	
QoS	IEEE 802.1p priority queues	8	8	8	
SECURITY	IEEE 802.1Q VLANs	4094	4094	4094	
	RADIUS / IEEE 802.1x	■	■	■	
	TACACS	■	■	■	
	SSH/SSL	■	■	■	
DIMENSIONS	(W x D x H)	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	
	Weight	3.61 kg / 7.95 lb	4.01 kg / 8.85 lb	4.01 kg / 8.85 lb	

Securing the Network Edge

Protocols such as IEEE 802.1x port-based authentication guarantee that only known users are connected to the network, ensuring data protection. Unknown users who physically connect can be isolated to a predetermined part of the network, offering guest benefits such as Internet access, while ensuring the integrity of private network data.

Secure Management

Only authorized administrators can access the management interface of the 9000 and 8000GS Series. Security protocols such as SSL, SSH and SNMPv3 facilitate this protection of the network for both local or remote connections.

Access Control Lists (ACLs)

Access Control Lists enable inspection of incoming frames and classify them based on various criteria. Specific actions can then be applied to these frames to more effectively manage the network traffic. Typically, ACLs are used as a security mechanism, either permitting or denying entry for frames in a group; but they can also be applied to QoS.

Ideal Branch Office and Wiring Closet Connectivity

Powerful line rate performance makes this switch ideal for branch offices or the wiring closet of larger offices. The state-of-the-art QoS capability of these products ensures reliable delivery of advanced network services such as voice and video, while effectively controlling the continually increasing traffic needs of today's networks.

	AT-9000/52	AT-8000GS/24	AT-8000GS/24POE	AT-8000GS/48
	Desktop / Rack mount	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack
	Layer 2	Layer 2	Layer 2	Layer 2
	48	24	24	48
	4 (100 or 1000Mbps)	4 (combo) (100 or 1000Mbps)	4 (combo) (100 or 1000Mbps)	4 (combo) (100 or 1000Mbps)
			24	
			9	
			140W	
	8K	8K	8K	8K
	■ *	■ (6)	■ (6)	■ (6)
	Fan	Fan	Fan	Fan
	■			
	0 to 40ºC	0 to 40ºC	0 to 40ºC	0 to 40ºC
	■	■	■	■
	■	■	■	■
	■	■	■	■
	■	■	■	■
	■	■	■	■
	8	4	4	4
	4094	256	256	256
	■	■	■	■
	■	■	■	■
	■	■	■	■
	44 x 25.6 x 4.3 cm 17.3 x 10 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in
	4.06 kg / 8.95 lb	3.15 kg / 6.94 lb	3.50 kg / 7.71 lb	3.38 kg / 7.45 lb

* Enhanced Stacking up to 24 units

Fast Ethernet Copper Switches

Allied Telesis Fast Ethernet Copper switches provide performance and flexibility at an affordable price. The switches offer standalone and stackable solutions targeted for the enterprise edge market. Power over Ethernet models provide connectivity for IP cameras, IP phones and wireless access points.

8100S Series

The Allied Telesis 8100S Series of stackable switches provides high performance Layer 2–4 switching in conjunction with high availability, in a fixed-configuration platform. Most models support dual fixed internal power supplies, enabling the switches to be powered from different power sources, increasing overall system reliability.

| SUBCATEGORY	FEATURE	AT-8000/8POE	AT-8100L/8POE	AT-8100L/8POE-E	AT-8000S/16	AT-8000S/24	AT-8000S/24POE
FORM FACTOR		Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack
SWITCH FUNCTIONALITY		Layer 2	Layer 2–4	Layer 2–4	Layer 2	Layer 2	Layer 2
PORTS AND MEDIA SUPPORT	10/100TX	8	8	8	16	24	24
	10/100/1000T	1	2	2	1	2	2
	SFP	1 (combo) 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	1 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps
	Modular uplinks						
MODULAR UPLINKS	1 x 100FX						
POWER SUPPLY	PSU type	Fixed Internal	Fixed Internal	Fixed Internal	Fixed Internal	Fixed Internal	Fixed Internal
	-48vDC PSU option						
	Redundant PSU option						
	Redundant PSU chassis (incl 1 PSU)						
	Additional redundant PSU						
POWER OVER ETHERNET	IEEE 802.3af (PoE)	■	■	■			■
	IEEE 802.3at (PoE+)		■	■			
	PoE-enabled ports	8	8	8			24
	Max number of full power ports	6	6	6			12
	Mode	B	B	B			B
	PoE power	95W	185W	185W			185W
SCALABILITY	MAC address table size	8K	16K	16K	8K	8K	8K
	Stacking					■ (6)	■ (6)
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fanless	Fanless	Fan
	Variable-speed fan		Yes	Yes			
	Eco-friendly		■	■			
	Temperature range	0 to 40°C	0 to 40°C	0 to 50°C	0 to 40°C	0 to 40°C	0 to 40°C
MANAGEMENT	Web		■	■	■	■	■
	CLI	■	■	■	■	■	■
	Telnet	■	■	■	■	■	■
	SNMP	■	■	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■	■	■
	Link Aggregation (LACP)		■	■	■	■	■
QoS	IEEE 802.1p priority queues		8	8	4	4	4
SECURITY	IEEE 802.1Q VLANs	255	4096	4096	256	256	256
	RADIUS	■	■	■	■	■	■
	TACACS		■	■	■	■	■
	SSH/SSL		■	■	■	■	■
	IEEE 802.1x	■	■	■	■	■	■
	DoS protection						
ROUTING			Basic	Basic			
DIMENSIONS	(W x D x H)	33 x 22.8 x 4.3 cm 13 x 8 x 1.7 in	33 x 22.8 x 4.3 cm 13 x 8 x 1.72 in	33 x 22.8 x 4.3 cm 13 x 8 x 1.72 in	33 x 12 x 4.3 cm 13 x 9.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in
	Weight	2.2 Kg / 4.9 lb	2.29 Kg / 5.05 lb	2.29 Kg / 5.05 lb	1.95 Kg / 4.29 lb	3.15 Kg / 6.94 lb	3.7 Kg / 8.15 lb

8600 Series

The 8600 Series of cost-effective, feature-rich Fast Ethernet Layer 3 edge switches is designed to provide desktop connectivity for enterprise workgroups, mid-sized networks and high school and campus networks. The 8600 Series provides management stacking up to nine switches that can be remotely managed as a single IP across multiple sites. This solution uses open standard interfaces as stacking links so that switches can be stacked across different sites. It offers advanced switching features such as RIP, OSPF, VRRP, multicast routing, wirespeed Layer 2/3/4 traffic classifiers, bandwidth limiting, DiffServ and Access Control Lists for service providers, Telco, multi-tenant or multi-business unit applications.

	AT-8100S/24C	AT-8100S/24	AT-8100S/24POE	AT-8000S/48	AT-8000S/48POE	AT-8100S/48	AT-8100S/48POE	AT-8624T/2M-V2	AT-8624POE-V2
	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Desktop / Rack mount	Desktop / Rack mount
	Layer 2–4	Layer 2–4	Layer 2–4	Layer 2	Layer 2	Layer 2–4	Layer 2–4	Layer 3	Layer 3
	24	24	24	48	48	48	48	24	24
	2	2	2	2	2	2	2	2	2
	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 100 or 1000Mbps	2 (combo) 1000Mbps	2 (combo) 1000Mbps
	2							2	2
								AT-A45	AT-A45
	Fixed Internal	2 Fixed Internal	2 Fixed Internal	Fixed Internal	Fixed Internal	2 Fixed Internal	2 Fixed Internal	Fixed Internal	Fixed Internal
		■				■		■	■
		Internal	Internal			Internal	Internal		
								AT-RPS3004	AT-RPS3104
								AT-PWR3004	AT-PWR3101
			■		■		■		■
			■				■		
			24		48		48		24
			12		24		12		24
			B		B		B		A
			370W		375W		370W		400W
	16K	16K	16K	8K	8K	16K	16K	8K	8K
	■ (8)	■ (8)	■ (8)	■ (6)	■ (8)				
	Fanless	Fanless	Fan	Fan	Fan	Fanless	Fan	Fan	Fan
	Yes	Yes	Yes				Yes		
	■	■	■			■	■		
	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	8	8	8	4	4	8	8	4	4
	4096	4096	4096	256	256	4096	4096	256	256
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■	■
	Basic	Basic	Basic			Basic	Basic	■ (Full)	■ (Full)
	33 x 22.8 x 4.3 cm 13 x 8 x 1.72 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	44 x 25.7 x 4.3 cm 17.3 x 13.7 x 1.7 in	44 x 34.7 x 4.3 cm 17.3 x 13.7 x 1.7 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	43.8 x 22.2 x 4.4 cm 17.24 x 8.7 x 1.73 in	43.8 x 40.6 x 4.4 cm 17.24 x 15.98 x 1.73 in
	2.15 kg / 4.75 lb	3.62 kg / 8.1 lb	3.62 kg / 8.1 lb	3.38 Kg / 7.45 lb	5.6 Kg / 12.34 lb	4.03 kg / 8.9 lb	5.42 kg / 11.95 lb	3.3 Kg / 7.27 lb	6 Kg / 13.22 lb

Fast Ethernet Fiber Switches

Allied Telesis Fast Ethernet Fiber switches provide both additional security and network size compared with copper-based networks. The switches offer standalone and stackable solutions targeted for the enterprise edge market, and are traditionally used in defense, government, campus and security applications.
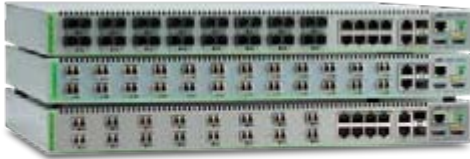
8100S Series

The Allied Telesis 8100S Series of stackable fiber switches provides high performance secure Layer 2–4 switching in conjunction with high availability, in a fixed-configuration platform. Supporting both SC and LC fiber connectors, these switches provide connectivity for current Fast Ethernet networks, while maintaining compatibility with future Gigabit networks.

SFP Optical Modules

Learn more about Allied Telesis pluggable optical modules on page 39.

SUBCATEGORY	FEATURE	AT-8516F	AT-8100S/16F8-SC	AT-8100S/16F8-LC	AT-8100S/24F-LC
FORM FACTOR		Desktop / Rack mount	Wall mount / Desktop / Rack mount /Stack	Wall mount / Desktop / Rack mount /Stack	Wall mount / Desktop / Rack mount /Stack
SWITCH FUNCTIONALITY		Layer 2	Layer 2–4	Layer 2–4	Layer 2–4
PORTS AND MEDIA SUPPORT	100FX	16 (SC) MMF	16 (SC) MMF	16 (LC) MMF	24 (LC) MMF
	10/100TX		8	8	
	10/100/1000T		2	2	2
	SFP		2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)
	Modular uplinks	2			
MODULAR UPLINKS	1 x 1000T	AT-A46			
	1 x GBIC	AT-A47			
	1 x 100FX	AT-A45			
POWER SUPPLY	PSU type	Fixed Internal	2 Fixed Internal	2 Fixed Internal	2 Fixed Internal
	-48vDC PSU option				
	Redundant PSU option	■	Internal	Internal	Internal
	Redundant PSU chassis (incl 1 PSU)	AT-RPS3004			
	Additional redundant PSU	AT-PWR3004			
SCALABILITY	MAC address table size	8K	16K	16K	16K
	Stacking		■ (8)	■ (8)	■ (8)
ENVIRONMENTAL	Cooling	Fan	Fan	Fan	Fan
	Variable speed fan		■	■	■
	Eco-friendly		■	■	■
	Temperature range	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
MANAGEMENT	Web	■	■	■	■
	CLI	■	■	■	■
	Telnet	■	■	■	■
	SNMP	■	■	■	■
NETWORK RESILIENCE	Spanning Tree	■	■	■	■
	Link Aggregation (LACP)	■	■	■	■
QoS	IEEE 802.1p priority queues	4	8	8	8
SECURITY	IEEE 802.1Q VLANs	256	4096	4096	4096
	RADIUS	■	■	■	■
	TACACS	■	■	■	■
	SSH/SSL	■	■	■	■
	IEEE 802.1x	■	■	■	■
	DoS protection	■			
ROUTING			Basic	Basic	Basic
DIMENSIONS	(W x D x H)	43.8 x 18.4 x 4.4 cm 17.24 x 7.24 x 1.73 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in	44 x 29.1 x 4.3 cm 17.34 x 14.46 x 1.72 in
	Weight	3.5 kg / 7.6 lb	4.1 kg / 9.1 lb	4.4 kg / 9.75 lb	4.4 kg / 9.75 lb

Industrial and Extended Temperature

Allied Telesis industrial and extended temperature products provide the capability to extend networks outside of an office environment. Extended temperature products enable cost-effective solutions to be built without the need to employ higher-cost industrial temperature devices.

EXTENDED TEMPERATURE PoE eco friendly

AT-8100L/8POE-E NEW

The AT-8100L/8POE-E is ideal for warehouse-type applications where cameras and access points must be installed to provide network and security coverage, but where the temperature range exceeds that of an office environment.

- » Operating Temperature 0° to 50°C
- » 8 x 10/100TX ports
- » 2 x 10/100/1000T / SFP Combo ports
- » PoE+ power on all 10/100Tx ports
- » PoE+ Budget of 185 W
- » L2–L4 Managed Switch
- » See Page 14
- » Basic L3 functionality

EXTENDED TEMPERATURE eco friendly

AT-9000/28SP-E NEW

The AT-9000/28SP-E provides 28 Gigabit SFP ports for use as a fiber concentrator in warehouse-type applications where the temperature range exceeds that of an office environment.

- » Operating Temperature 0° to 50°C
- » 28 SFP ports (100 and 1000Mbps)
- » 4 10/100/1000T Combo ports
- » Layer 2 Managed
- » See Page 12

EXTENDED TEMPERATURE

AT-IFS802SP NEW

The AT-IFS802SP switch provides managed Layer 2 connectivity for 8 x 10/100TX ports, with 2 10/100/1000T / SFP combo uplinks. The switch is designed for standalone or Dinrail mounting, and is powered by either one or two external DC power supplies.

- » Operating Temperature -10° to 60°C
- » 8 x 10/100TX ports
- » 2 x 10/100/1000T / SFP (100 / 1000Mbps) ports
- » 12-48VDC Redundant Power Supply
- » Dinrail mounted
- » IP30 Metal Case
- » Managed Layer 2 functionality

EXTENDED TEMPERATURE

AT-x900-12XT/S

AT-x900-12XT/S is a Gigabit switch supporting advanced Layer 3 functionality. With 12 combo ports operating as either 10/100/1000T or SFP (100 and 1000Mbps), the switch provides the ultimate in port flexibility. The switch also supports 1 XEM expansion slot that can be populated with a choice of modules, providing additional Gigabit ports and even 10G ports.

- » Operating Temperature 0° to 50°C
- » 12 x 10/100/1000T or SFP (100 or 1000Mbps) combo ports
- » Advanced Layer 3 functionality
- » See page 11

» 1 x XEM expansion port supporting:	
AT-XEM-12S	12 x 100 / 1000Mbps SFP
AT-XEM-12Sv2	12 x 1000Mbps SFP
AT-XEM-12Tv2	12 x 10/100/1000T ports
AT-XEM-1XP	1 x 10G XFP
AT-XEM-2XP	2 x 10G XFP
AT-XEM-2XS	2 x 10G SFP+
AT-XEM-2XT	2 x 10G RJ-45
AT-XEM-STK	Stacking module allowing 2 x AT-x900-12XT/S to be stacked

INDUSTRIAL TEMPERATURE PoE

AT-IFS802SP/POE (W) NEW

This industrial temperature switch is ideal for outside plant deployment for use in powering digital IP security cameras and wireless access points. The switch provides the option of fiber-optic backhaul, allowing it to be deployed great distances from a control room.

- » Operating Temperature -40° to 70°C
- » 8 x 10/100TX ports
- » 2 x 10/100/1000T / SFP (100 / 1000Mbps) ports
- » All 8 x 10/100TX ports support PoE 802.3af
- » 12-48 vDC Redundant Power Supply
- » Dinrail mounted
- » IP30 Metal Case
- » Managed Layer 2 functionality

PoE Gigabit Switches

Allied Telesis offers a range of Power over Ethernet (PoE) switches, delivering all the switching functionality required by the network, while providing power to PoE-capable connected devices.

PoE allows a copper Ethernet cable to provide power as well as data connectivity to remote devices, such as VoIP phones, security cameras or wireless access points. Using PoE devices eliminates the need to provide power at the remote end of the data link.

How Much Power?

The IEEE 802.3af PoE standard allows any Power Sourcing Equipment (PSE) to provide up to 15.4 Watts of power to Powered Devices (PD), or the end-point. The IEEE 802.3at PoE+ standard allows for any PSE to provide up to 30 Watts of power.

Class	Usage	Max. Power Levels Output at the PSE	Power Ranges Output at the PD
0	Default	15.4W	0.44W to 12.94W
1	Optional	4.0W	0.44W to 3.84W
2	Optional	7.0W	3.84W to 6.49W
3	Optional	15.4W	6.49W to 12.95W
4	Optional	30W	12.95W to 25.50W

SUBCATEGORY	FEATURE	AT-GS950/8POE	AT-8000GS/24POE	AT-x600-24Ts-POE+	
FORM FACTOR		Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	
SWITCH FUNCTIONALITY		WebSmart	Layer 2	Advanced Layer 3	
PORTS AND MEDIA SUPPORT	10/100/1000T	8	24	24	
	SFP	2 (combo) (100 or 1000Mbps)	4 (Combo) (100 or 1000Mbps)	4 (Combo) (1000Mbps)	
	SFP+				
	Modular uplinks				
MODULAR UPLINKS	10/100/1000T				
	10/100/1000T PoE				
	SFP (100 or 1000Mbps)				
	SFP+ (10G)				
	CSFP (1000Mbps)				
POWER SUPPLY	PSU type	Fixed Internal	Fixed Internal	Fixed Internal	
	Redundant PSU option				
	Redundant PoE PSU option				
	Redundant PSU chassis				
	Redundant PSU chassis (incl 1 PSU)			AT-RPS3104	
	Additional redundant PSU			AT-PWR3101	
	Additional redundant PoE PSU				
POWER OVER ETHERNET	IEEE 802.3af (PoE)	■	■	■	
	IEEE 802.3at (PoE+)			■	
	PoE-enabled ports	4	24	24	
	Max number of full power ports	4	9	24	
	PoE power	60W	140W	370W	
SCALABILITY	MAC address table size	8K	8K	16K	
	Stacking		■ (6)	■ AT-STACKXG (4)	
ENVIRONMENTAL	Cooling	Fanless	Fan	Fan	
	Temperature range	0 to 40°C	0 to 40°C	0 to 40°C	
MANAGEMENT	Web	■	■	■	
	CLI		■	■	
	Telnet		■	■	
	SNMP	■	■	■	
NETWORK RESILIENCE	Spanning Tree	■	■	■	
	Link aggregation (LACP)	■	■	■	
QoS	IEEE 802.1p priority queues	4	4	4	
SECURITY	IEEE 802.1Q VLANs	256	4096	4096	
	RADIUS	■	■	■	
	TACACS+		■	■	
	SSH/SSL		■	■	
	IEEE 802.1x	■	■	■	
	DoS protection		■	■	
DIMENSIONS	(W x D x H)	32 x 23 x 4.3 cm 13 x 9.1 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44 x 40.8 x 4.4 cm 17.3 x 16.1 x 1.73 in	
	Weight	2.54 Kg / 5.6 lb	3.5 Kg / 7.71 lb	6.9 Kg / 15.2 lb	

A port connected to a network node that is not a Powered Device — that is, a device that receives its power from another source — functions as a regular Ethernet port, without PoE. The PoE feature remains enabled on the port, but no power is delivered to the device.

Power Budget

Users should ensure that the maximum power drawn by all the PDs does not exceed the maximum power that can be delivered by the PSE. If this occurs, the switch will use a predetermined algorithm to decide which ports will receive power. See user manuals for details on each switch.

Power Injectors

Allied Telesis also offers power injectors and splitters (page 54), which can be used to inject or extract power over a single Unshielded Twisted Pair (UTP) connection:

» AT-6101G 802.3af Power Injector
» AT-6101GP 802.3at Power Injector
» AT-6102G power splitter

	AT-x610-24Ts-POE+	AT-x610-24Ts/X-POE+	AT-x610-48Ts-POE+	AT-x610-48Ts/X-POE+	AT-SBx3112
	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Desktop / Rack mount / Stack	Rack mount
	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Advanced Layer 3	Layer 2
	24	24	48	48	
	4 (Combo) (1000Mbps)	4 (Combo) (1000Mbps)	4 (Combo) (1000Mbps)	4 (Combo) (1000Mbps)	
	2 with AT-x6EM/XS2	2 (4 with AT-x6EM/XS2)	2 with AT-x6EM/XS2	2 (4 with AT-x6EM/XS2)	
					10
					At-SBx31GT24 (24 ports)
					AT-SBx31GP24 (24 ports)
					AT-SB31xGS24 (24 ports)
					AT-SBx31XS6 (6 ports)
					AT-SBx31GC40 (40 ports)
	Modular	Modular	Modular	Modular	Hot Swap Internal
	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-SBxPWRSYS1
					AT-SBxPWRPoE1
	AT-RPS3000	AT-RPS3000	AT-RPS3000	AT-RPS3000	
					AT-SBxPWRSYS1
	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-PWR800 & AT-PWR1200	AT-SBxPWRPoE1
	■	■	■	■	■
	■	■	■	■	■
	24	24	48	48	Up to 192
	24	24	48	48	80
	720W	720W	1440W	1440W	2400W
	32K	32K	32K	32K	32K
	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)	■ AT-STACKXG (8)	
	Fan	Fan	Fan	Fan	Hot-swappable fan module
	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	
	4	4	4	4	8
	4096	4096	4096	4096	4096
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	SSH
	■	■	■	■	■
	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	44 x 42 x 4.4 cm	48.03 x 38.79 x 31.01 cm
	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	17.3 x 16.5 x 1.73 in	18.9 x 12.2 x 4.8 in
	5.6 Kg 12.35 lb	5.6 Kg 12.35 lb	6.0 Kg / 13.23 lb	6.0 Kg / 13.23 lb	17.77 Kg / 39.10 lb

PoE Fast Ethernet Switches

Allied Telesis offers a complete range of Fast Ethernet Power over Ethernet (PoE) switches, delivering all the switching functionality required by the network while providing power to PoE-capable connected devices.

Selecting the correct switch

Selecting the correct type of switch is key to trouble-free network operation. The following requirements help to make the correct choice:

» **Maximum Power per Port**
Do any of the end devices (Powered Devices) require more than 15.4W of power? If they do, then a switch capable of delivering up to 30W of power, using the IEEE 802.3at (PoE+) standard, is needed. Typical applications requiring up to 30W are PZT IP digital video cameras and multiple radio access points.

» **Maximum Power Budget**
The power budget is the sum total amount of power needed by all the end devices. Ensure that the switch can deliver at least the power required.

» **Application**
Many applications require prioritization of traffic, such as VoIP telephony or IP-based video services. Switches without the necessary prioritization and Quality of Service functionality may be able to power the end device, but may not be capable of delivering consistent data.

SUBCATEGORY	FEATURE	AT-FS708/POE	AT-FS750/24POE	AT-8000/8POE	AT-8100L/8POE	
FORM FACTOR		Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	
SWITCH FUNCTIONALITY		Unmanaged	WebSmart	Layer 2	Layer 2–4	
PORTS AND MEDIA SUPPORT	10/100TX	8	24	8	8	
	10/100/1000T		2	1	2	
	SFP	1 (1000Mbps)	2 (combo) (100 or 1000Mbps)	1 (combo) (1000Mbps)	2 (combo) (100 or 1000Mbps)	
	Modular uplinks					
MODULAR UPLINKS	1 x 100FX					
POWER SUPPLY	PSU type	Fixed Internal	Fixed Internal	Fixed Internal	Fixed Internal	
	Redundant PSU option					
	Redundant PSU chassis (inc 1 PSU)					
	Additional redundant PSU					
POWER OVER ETHERNET	IEEE 802.3af (PoE)	■	■	■	■	
	IEEE 802.3at (PoE+)				■	
	PoE-enabled ports	8	12	8	8	
	Max number of full power ports	4	6	6	6	
	Mode	A	A	B	B	
	PoE power	65W	100W	95W	185W	
SCALABILITY	MAC address table size	8K	8K	8K	16K	
	Stacking					
ENVIRONMENTAL	Cooling	Fanless	Fan	Fan	Fan	
	Variable speed fan				■	
	Eco-friendly	■	■		■	
	Temperature range	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	
MANAGEMENT	Web		■		■	
	CLI			■	■	
	Telnet			■	■	
	SNMP		■	■	■	
NETWORK RESILIENCE	Spanning Tree		■	■	■	
	Link aggregation (LACP)		■		■	
QoS	IEEE 802.1p priority queues		4		8	
SECURITY	IEEE 802.1Q VLANs		256	255	4096	
	RADIUS		■	■	■	
	TACACS				■	
	SSH/SSL				■	
	IEEE 802.1x		■	■	■	
	DoS protection					
ROUTING					Basic	
DIMENSIONS	(W x D x H)	26.5 x 16.2 x 4.3 cm 10.4 x 6.4 x 1.7 in	44 x 32.2 x 4.35 cm 17.3 x 12.7 x 1.7 in	33 x 22.8 x 4.3 cm 13 x 8 x 1.7 in	33 x 22.8 x 4.3 cm 13 x 8 x 1.72 in	
	Weight	1.9 Kg / 4.2 lb	4.133 Kg / 9.11 lb	2.2 Kg / 4.9 lb	2.29 Kg / 5.05 lb	

» Redundant Power

Does a service such as emergency VoIP telephony or video intrusion protection need to be provided even in the event of a fault? A switch capable of providing dual power sources must be selected.

Cable Types

PoE is designed to run over existing standard Ethernet cables. However, for Fast Ethernet, there are two modes of operation:
» Mode A – Injects power onto the data wires
» Mode B – Uses "spade pairs" to transmit the power.
Gigabit copper connections use all four pairs to connect.

	AT-8100L/8POE-E	AT-8000S/24POE	AT-8100S/24POE	AT-8000S/48POE	AT-8100S/48POE	AT-8624POE-V2
	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount / Stack	Wall mount / Desktop / Rack mount	Desktop / Rack mount
	Layer 2–4	Layer 2	Layer 2–4	Layer 2	Layer 2–4	Layer 3
	8	24	24	48	48	24
	2	2	2	2	2	2
	2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)	2 (combo) (100 or 1000Mbps)	2 (combo) (1000Mbps)
						2
						AT-A45
	Fixed Internal	Fixed Internal	2 Fixed Internal	Fixed Internal	2 Fixed Internal	Fixed Internal
						■
			Internal		Internal	AT-RPS3104
						AT-PWR3101
	■	■	■	■	■	■
	■		■		■	
	8	24	24	48	48	24
	6	12	12	24	12	24
	B	B	B	B	B	A
	185W	185W	370W	375W	370W	400W
	16K	8K	16K		16K	8K
		■ (6)	■ (8)	■ (8)		
	Fan	Fan	Fan	Fan	Fan	Fan
	■		■		■	
	■		■		■	
	0 to 50°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	8	4	8	4	8	4
	4096	256	4096	256	4096	256
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	Basic		Basic		Basic	■ (Full)
	33 x 22.8 x 4.3 cm	44 x 25.7 x 4.3 cm	44 x 29.1 x 4.3 cm	44 x 34.7 x 4.3 cm	44 x 29.1 x 4.3 cm	43.8 x 40.6 x 4.4 cm
	13 x 8 x 1.72 in	17.3 x 10.1 x 1.7 in	17.34 x 14.46 x 1.72 in	17.3 x 13.7 x 1.7 in	17.34 x 14.46 x 1.72 in	17.24 x 15.98 x 1.73 in
	2.29 Kg / 5.05 lb	3.7 Kg / 8.15 lb	3.62 kg / 8.1 lb	5.6 Kg / 12.34 lb	5.42 Kg / 11.95 lb	6 Kg / 13.22 lb

WebSmart Switches

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 high levels of 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. In this scenario, the backbone network will provide all the client authentication.

SUBCATEGORY	FEATURE	FAST ETHERNET			
		AT-FS750/16	AT-FS750/24	AT-FS750/24POE	AT-FS750/48
FORM FACTOR		Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount
PORTS AND MEDIA SUPPORT	10/100TX	16	24	24	48
	10/100/1000T	2 (combo)	2 (combo)	2 (combo)	2 (combo)
	SFP	2 (combo)	2 (combo)	2 (combo)	2 (combo)
	100FX SFP support	■	■	■	■
POWER SUPPLY		Internal	Internal	Internal	Internal
POWER OVER ETHERNET	IEEE 802.3af Class 3			■	
	PoE-enabled ports			12	
	Max number of full power ports			6	
	Mode			A	
	PoE power			100W	
SCALABILITY	MAC address table size	8K	8K	8K	8K
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fan	Fan
	Eco-friendly			■	■
MANAGEMENT	Web	■	■	■	■
	CLI				
	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	■	■	■	■
DIMENSIONS	(W x D x H)	35.2 x 25.6 x 4.3 cm 13.85 x 10 x 1.7 in	44 x 25.7 x 4.3 cm 17.3 x 10.1 x 1.7 in	44.4 x 32.2 x 4.3 cm 17.5 x 12.7 x 1.7 in	44.4 x 32.2 x 4.3 cm 17.5 x 12.7 x 1.7 in
	Weight	2.38 kg / 5.24 lb	3.24 kg / 7.14 lb	4.13 kg / 9.11 lb	3.79 kg / 8.35 lb
IDEAL ENVIRONMENT		» Classroom » Home office » SMB » Security at the edge	» Classroom » Home office » SMB » Security at the edge	» Classroom » Home office » SMB » Security at the edge	» Classroom » 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	» Low-cost Power over Ethernet » 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

SFP Optical Modules
Learn more about Allied Telesis pluggable optical modules on page 39.

	GIGABIT ETHERNET				
	AT-GS950/8	**AT-GS950/8POE**	**AT-GS950/16**	**AT-GS950/24**	**AT-GS950/48**
	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount
	8	8	16	24	48
	2 (combo)	2 (combo)	2 (combo)	4 (combo)	4 (combo)
	■	■	■	■	■
	Internal	Internal	Internal	Internal	Internal
		■			
		4			
		4			
		B			
		60W			
	8K	8K	8K	8K	8K
	Fanless	Fanless	Fanless	Fanless	Fan
	■	■	■	■	■
	■	■	■	■	■
	■ v3	■	■ v3	■ v3	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	4	4	4	4	4
	256	256	256	256	256
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	■	■	■	■	■
	28 x 17.9 x 4.3 cm / 11 x 7 x 1.7 in	32 x 23 x 4.3 cm / 13 x 9.1 x 1.7 in	33 x 20 x 4.4 cm / 13 x 7.9 x 1.73 in	33 x 20 x 4.4 cm / 13 x 7.9 x 1.73 in	44 x 25.7 x 4.3 cm / 17.3 x 10.1 x 1.7 in
	1.5 kg / 3.3 lb	2.54 kg / 5.6 lb	2.1 kg / 4.63 lb	2.3 kg / 5.07 lb	4.05 kg / 8.92 lb
	» Classroom » Home office » SMB » Security at the edge	» Classroom » Home office » SMB » Security at the edge	» Classroom » Home office » SMB » Security at the edge	» Classroom » Home office » SMB » Security at the edge	» Classroom » 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	» Low-cost Power over Ethernet » 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	» 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 Switches

Unmanaged switches are simple to deploy, as they require no user setup — making them the ideal solution for Small Office, Home Office (SOHO) applications. Their silent, eco-friendly low-power operation ensure 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.
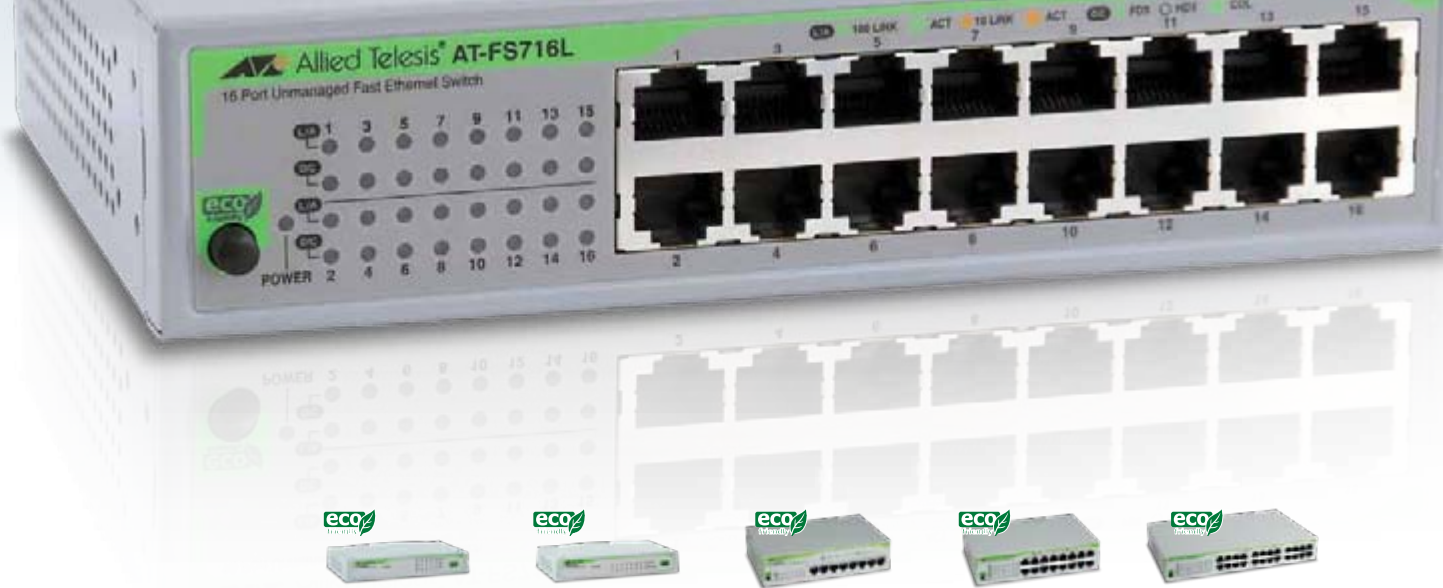
Fanless Design

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

Allied Telesis eco-friendly products use a variety of methods to reduce power consumption, helping protect the environment and reducing energy costs. All eco-friendly models use highly efficient power supplies, which reduce generated heat. Inactive Ethernet ports are placed into power-saving mode, and active ports measure the distance of the attached cables to drive the correct amount of power. These improvements result in 50% less power consumption than previous models.

SUBCATEGORY	FEATURE	AT-FS705LE	AT-FS705L	AT-FS705EFC	AT-FS708LE	AT-FS708	
				FAST ETHERNET			
FORM FACTOR		Wall mount / Desktop	Wall mount / Desktop	Wall mount / Desktop	Wall mount / Desktop	Wall mount / Desktop / Rack mount	
PORTS AND MEDIA SUPPORT	10/100TX	5	5	4	8	8	
	100FX			1 x SC, MMF			
	SFP (1000Mbps)						
POWER SUPPLY		External (high efficiency)	Internal	External (high efficiency)	External (high efficiency)	Internal	
POWER OVER ETHERNET	IEEE 802.3af Class 3						
	PoE-enabled ports						
	Max full power ports						
	Mode						
	PoE power						
SCALABILITY	MAC address table size	2K	2K	4K	4K	1K	
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless	Fanless	Fanless	
	Eco-friendly	■	■	■	■	■	
DIMENSIONS	(W x D x H)	11.6 x 7 x 2.5 cm 4.56 x 2.77 x 1 in	16 x 11.6 x 3.5 cm 6.3 x 4.6 x 1.4 in	17.9 x 9.8 x 1.7 cm 7.04 x 3.85 x .67 in	13 x 7 x 2.5 cm 5.12 x 2.77 x 1 in	24.9 x 11.6 x 3.6 cm 9.8 x 4.56 x 1.4 in	
	Weight	.224 kg / .49 lb	.5 kg / 1.10 lb	.36 kg / .79 lb	.266 kg / .6 lb	.9 kg / 1.98 lb	
IDEAL ENVIRONMENT		» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network	» Edge switch on fiber-based network	» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network	
CUSTOMER'S NEEDS		» Small or no IT » Cost effective » Simple to install	» Small or no IT » Cost effective » Simple to install	» Interface to fiber backbone network » Longer than 100 m cable runs » Cost effective » Simple to install	» Small or no IT » Cost effective » Simple to install	» Small or no IT » Cost effective » Simple to install	

SUBCATEGORY	FEATURE	GIGABIT ETHERNET				
		AT-GS900/5E	AT-GS900/8E	AT-GS900/8	AT-GS900/16	AT-GS900/24
FORM FACTOR		Wall mount / Desktop	Wall mount / Desktop	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount
PORTS AND MEDIA	10/100/1000T	5	8	8	16	24
POWER SUPPLY		External (high efficiency)	External (high efficiency)	Internal	Internal	Internal
SCALABILITY	MAC address table size	4K	4K	8K	8K	16K
ENVIRONMENTAL	Cooling	Fanless	Fanless	Fanless	Fanless	Fanless
	Eco-friendly	▪	▪	▪	▪	▪
DIMENSIONS	(W x D x H)	17.1 x 9.8 x 2.8 cm 6.73 x 3.86 x 1.1 in	17.1 x 9.8 x 2.8 cm 6.73 x 3.86 x 1.1 in	18.4 x 12.1 x 4.4 cm 7.24 x 4.76 x 1.6 in	18.4 x 12.1 x 4.4 cm 7.2 x 4.76 x 1.73 in	28 x 18 x 4.4 cm 11.02 x 7.08 x 1.73 in
	Weight	.37 kg / .81 lb	.389 kg / .857 lb	.75 kg / 1.65 lb	.95 kg / 2.09 lb	1.79 kg / 3.9 lb
IDEAL ENVIRONMENT		» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network	» Small home / office networks » Extend edge of larger network
CUSTOMER'S NEEDS		» High performance » Small or no IT » Cost effective » Simple to install	» High performance » Small or no IT » Cost effective » Simple to install	» High performance » Small or no IT » Cost effective » Simple to install	» High performance » Small or no IT » Cost effective » Simple to install	» High performance » Small or no IT » Cost effective » Simple to install

FAST ETHERNET				
AT-FS708/POE	AT-FS709FC	AT-FS716L	AT-FS717FC/SC	AT-FS724L
Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Wall mount / Desktop / Rack mount	Desktop / Rack mount	Wall mount / Desktop / Rack mount
8	8	16	16	24
	1 x SC, MMF		1 x SC, MMF	
1				
Internal	Internal	Internal	Internal	Internal
▪				
8				
4				
A				
65W				
8K	4K	8K	4K	8K
Fanless	Fanless	Fanless	Fanless	Fanless
		▪		▪
26.5 x 16.2 x 4.3 cm 10.4 x 6.4 x 1.7 in	22 x 12 x 3.6 cm 8.66 x 4.72 x 1.4 in	18.4 x 12.4 x 4.4 cm 7.24 x 4.88 x 1.73 in	29.5 x 11.5 x 4 cm 11.61 x 4.52 x 1.57 in	28 x 18 x 4.4 cm 11.02 x 7.08 x 1.73 in
1.9 kg / 4.20 lb	2 kg / 4.4 lb	.8 kg / 1.76 lb	.93 kg / 2.05 lb	1.592 kg / 3.51 lb
» Small office network with wireless, IP cameras	» Edge switch on fiber-based network	» Small office network	» Edge switch on fiber-based 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	» Interface to fiber backbone network » Longer than 100 m cable runs » Cost effective » Simple to install	» Small or no IT » Cost effective » Simple to install	» Interface to fiber backbone network » Longer than 100 m cable runs » Cost effective » Simple to install	» Small or no IT » Cost effective » Simple to install

iMAP™ and iMG

IP is driving new services and innovative new 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 as well as being able to respond competitively to new service needs.

The Allied Telesis iMAP integrated Multiservice Access Platform and iMG intelligent Multiservice Gateway families are the benchmark of true next-generation IP access solutions, fulfilling all of today's critical broadband service needs and designed to evolve as new service demands change.

			iMAP CHASSIS							
SUBCATEGORY	FEATURE	MiniMAP 9100	iMAP 9700				iMAP 9810			
MODEL NUMBER		AT-TN-9101 / 2 / 3	AT-TN-250G				AT-TN-253G			
PHYSICAL HEIGHT		1RU	9RU				3RU			
POWER SUPPLY	Single AC	AT-TN-9102	Requires additional AT-TN-R113				Requires additional AT-TN-R113			
	Dual AC (option)	AT-TN-9103	Requires additional AT-TN-R113 and AT-TN-R114				Requires additional AT-TN-R113 and AT-TN-R114			
	Dual DC	AT-TN-9101	Standard				Standard			
CONTROLLER CARDS	Primary fabric controller	CFC12 (AT-TN-408)	CFC24 (AT-TN-401)	CFC56 (AT-TN-407)	CFC56 (AT-TN-407)	CFC56 (AT-TN-407)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)
	Optional redundant controller		CFC24 (AT-TN-401)	CFC56 (AT-TN-407)	CFC56 (AT-TN-407)	CFC56 (AT-TN-407)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)	CFC100 (AT-TN-409)
NETWORK TRANSPORT	Slots	None - transport on CFC12 fabric	2	2	2	2	2	2	2	2
	Model	CFC12 fabric (AT-TN-408)	GE3 (AT-TN-301)	XE1 (AT-TN-308)	XE1S (AT-TN-310)	XE6 (AT-TN-309)	GE3 (AT-TN-301)	XE1 (AT-TN-308)	XE1S (AT-TN-310)	XE6 (AT-TN-309)
	Uplink ports	4 x SFP + 2 x 10/100/1000T	3 x SFP	1 x XFP	1 x SFP+	6 x SFP+	3 x SFP	1 x XFP	1 x SFP+	6 x SFP+
	Uplink speed	Gigabit	Gigabit	10GbE	10GbE	10GbE	Gigabit	10GbE	10GbE	10GbE
BLADE SLOTS		3	17 (16 with dual-fabric cards)			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	160			120
	BiDi fiber (1000Mbps)	72	408			360	192			144
	10/100TX (copper)	30	170			150	80			60
	Gigabit	24	136			120	64			48
	GEPON	192	1088			960	512			384
TEMPERATURE RANGE		-40ºC to 65ºC (AT-TN-9102/3 AC version: 0ºC to 55ºC)	-40ºC to 65ºC				-40ºC to 65ºC			
DIMENSIONS	(W x D x H)	(AT-TN-9101) DC power 48.3 x 30 x 4.45 cm 19 x 11.8 x 1.75 in (AT-TN-9102/3) AC power 48.3 x 51.3 x 4.45 cm 19 x 20.2 x 1.75 in	48.3 x 30 x 40 cm 19 x 11.8 x 15.75 in				48.3 x 30.5 x 13.3 cm 19 x 12 x 5.25 in			
	Weight	4 kg / 8.8 lb (DC chassis) 6.7 kg / 14.75 lb (AC chassis)	15 kg / 33 lb				7 kg / 15.4 lb			

One Access Platform, Any Service

The iMAP product family is designed to support IP Triple Play and video services using Ethernet technology. With redundant Gigabit Ethernet connections to each line card from the control modules, there is ample bandwidth and throughput for all current and future services and access technologies. A common control and fabric enables 10GbE backplane connectivity, 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.

		iMAP BLADES			
SUBCATEGORY	FEATURE	FE10	POTS24C	ADSL24AE	PAC24C
PART NUMBER		AT-TN-102	AT-TN-143	AT-TN-140	AT-TN-145
COPPER	10/100TX	10			
	POTS		24		24
	ADSL splitter				
	ADSL (Annex A)			24	24
	ADSL (Annex B)				
	G.SHDSL				
	VDSL2 (Annex A)				
	VDSL2 (Annex B)				
	T1/E1 (circuit emulation)				
	T1/E1 (data transport)				
FIBER	100Mbps (2 fiber), SMF				
	100Mbps BiDi, SMF				
	100/1000Mbps BiDi, SMF				
	SFP (1000Mbps)				
	GEPON				
PHYSICAL	Single/double width blade	Single	Single	Single	Double
SALES REGION					US only

iMAP

INTEGRATED MULTISERVICE ACCESS PLATFORM

As the world's communications systems move to an all IP and Ethernet access network with IP/MPLS core, the Allied Telesis iMAP (integrated Multiservice Access Platform) 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).

SUBCATEGORY	FEATURE	iMAP CONTROLLER CARDS			
		CFC12	CFC24	CFC56	CFC100
PART NUMBER		AT-TN-408	AT-TN-401	AT-TN-407	AT-TN-409
CHASSIS COMPATIBLE	MiniMAP 9100	■			
	iMAP 9400		■	■	
	iMAP 9700		■	■	
	iMAP 9810				■
PERFORMANCE	Switching fabric	12Gbps	24Gbps	56Gbps	100Gbps
	EPSR	■	■	■	■
	VLANs per port	4095	4095	4095	4095
	Per VLAN rate limiting	■	■	■	■
UPLINKS	SFP (1000Mbps)	4			
	10/100/1000T	2			
SECURITY	Upstream forwarding only	■	■	■	■
	ACL support	■	■	■	■
QoS	Priority queues	8	8	8	8
	Priority scheduling	■	■	■	■

iMAP BLADES													
ADSL24B	ADSL48B	SHDSL24	VDSL24A	VDSL24B	CES8	NTE8	FX10LX	FX10BX	FX20BX	FX20BX40	GE24BX	GE8	GEPON
AT-TN-124	AT-TN-132	AT-TN-127	AT-TN-130	AT-TN-128	AT-TN-119	AT-TN-125	AT-TN-107	AT-TN-109	AT-TN-139	AT-TN-142	AT-TN-144	AT-TN-117	AT-TN-118
24	48												
		24											
			24										
				24									
					8								
						8							
							10						
								10 (15 km)	20 (15 km)	20 (40 km)			
											24 (20 km)		
												8	
													2
Single	Double	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
EU only	EU only												

iMG

INTELLIGENT MULTISERVICE GATEWAYS

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 satisfy consumer needs, an intelligent home gateway approach becomes essential.

Moving from a "dumb pipe" to a service-oriented connection requires having both management and functionality at both the access side and 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, Ethernet and fiber applications are designed as extensions of the Allied Telesis access platform, with unified management, functionality and features.

SUBCATEGORY	FEATURE	AT-iMG624A	iMG634 Series	iMG634W Series	AT-iMG616W	AT-iMG646BD	AT-iMG1505	AT-iMG1525	AT-iMG1525RF
ENVIRONMENTAL	Indoor usage	■	■	■	■	■	■	■	■
	Outdoor usage								
UPLINK	ADSL2+ Annex A	AT-iMG624A-R2	AT-iMG634A-R2	AT-iMG634WA-R2					
	ADSL2+ Annex B		AT-iMG634B-R2	AT-iMG634WB-R2					
	Ethernet 100Mbps copper	■	■	■					
	Ethernet 100Mbps fiber (MMF)								
	Ethernet 100Mbps fiber (SMF)								
	Ethernet 100Mbps fiber (BiDi)				■	■	■	■	■
	Ethernet 100Mbps fiber (40 km BiDi)								
	Ethernet 100Mbps fiber SFP module								
	Ethernet 1000Mbps fiber (BiDi)						■ (20 km)	■ (20 km)	■ (20 km)
	GEPON								
LAN INTERFACE	10/100TX	4	4	4	6	6			
	10/100/1000T						5	5	5
	Wireless IEEE 802.11b/g			■	■				
	HPNA								
	HPNAv3.1								
	T1/E1 CES								
WAN PORT	Copper / fiber	Copper	Copper	Copper	Fiber	Fiber	Fiber	Fiber	Fiber
CATV RF OVERLAY	Low output power								
	High output power								■
PHONE INTERFACES	FXS		2	2	2	4		2	2
	PSTN lifeline		■	■	■	■		■	■
VoIP PROTOCOLS	SIP / MGCP		■	■	■	■		■	■
CONSOLE INTERFACE	RS232 RJ-45 connector	■	■	■					
	8 position mini DIN 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 AT-iMG001				■	■	■	■	■
	Battery backup AT-iMG008		■	■	■	■	■	■	■
	Outdoor case AT-EN646MOD								
	Outdoor case AT-EN-SFR-ONT								

Allied Telesis iMG CPE products provide a smarter, more feature-rich and flexible approach to delivering subscriber services, and are critical to a service provider wanting to deliver reliable and high-quality revenue services. 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 full-featured products for delivering multimedia services such as broadcast and streaming IP video, Internet data and VoIP from a single subscriber line to multiple devices in the home.

Feature and functionality between the iMAP access family and iMG home gateway family are intelligently integrated, along 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 during service life are reduced — leading to lower OPEX and greater customer satisfaction.

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 57.*

	IMGs							iBGs
	AT-iMG726MOD	AT-iMG726BD	AT-iMG746MOD	AT-iMG2504	AT-iMG2524	AT-iMG2524F	AT-iMG2524H	AT-iBG915FX
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	
								■
					■		■	
	PKG1		PKG1					
	Pluggable option		Pluggable option					
								■
	PKG7, PKG10	■ (20 km)	PKG7, PKG10	■ (20 km)	■ (20 km)	■ (20 km)	■ (20 km)	
	PKG3		PKG3					
	6	4	6					5
	1 on PKG10	2	1 on PKG10	4	4	4	4	
	Pluggable option		Pluggable option					
	Pluggable option		Pluggable option				■	
	Pluggable option		Pluggable option					
	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Copper/Fiber
						■		
	2	2	4		2	2	2	8
	■	■	■		■	■	■	
	■	■	■		■	■	■	■
	■	■	■					■
				■	■	■	■	
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
				■	■	■	■	
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	■
	■	■	■	■	■	■	■	
	■		■					
		■		■	■	■	■	

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 keeping pace with changing technology and integrating 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.

Allied Telesis offers three chassis-based systems:

» The AT-MCR12 is a 12-slot chassis, which houses up to 12 of the best-selling Allied Telesis media converters.

» The AT-CV5001 is a managed 18-slot chassis, fitting up to 18 blade-type media converters. This is the most configurable solution.

» The AT-MCF2x00 is a two- or four-port managed chassis system. The two-port system can be configured to have up to 24 conversions in a 1 Rack Unit (1RU) chassis. The four-port system can have up to 48 conversions in a 3RU-high system. Both models are stackable to add multiple units together as one IP address.

With so many products and configurations, Allied Telesis is clearly a worldwide leader in fiber to copper Ethernet media conversion.

Standalone Media Converters

SUBCATEGORY	FEATURE	ETHERNET AND FAST ETHERNET STANDALONE MEDIA CONVERTERS								
		AT-MC13	AT-MC101XL	AT-MC102XL	AT-MC103XL	AT-MC103LH	AT-MC104XL	AT-MC115XL	AT-MC116XL	AT-MC605
PORTS	Port 1	10T	100TX	100TX	100TX	100TX	100FX MMF (SC)	10T or 100TX	10T or 100TX	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)	RJ-11
	Type	MMF	MMF	MMF	SMF	SMF	SMF	MMF	MMF	VDSL
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	3 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	6
POWER OVER ETHERNET	IEEE 802.3af Class 3									
	PoE-enabled ports									
	Max full power ports									
	Mode									
	PoE power									
POWER SUPPLY	PSU type	External	External	External	External	External	External	External	External	External
	Multi-region	■				■	■	■	■	■
	Compatible with AT-MCR12 12-slot chassis	■	■	■	■	■	■	■	■	■
	Compatible with AT-MCR1 1-slot chassis	■	■	■	■	■	■	■	■	■
DIMENSIONS	(W x D x H)	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in
	Weight	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb

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.

EXTENDED TEMPERATURE

AT-MC115XL / MC116XL

These media converters provide connectivity at both 10 and 100Mbps, providing conversion from copper 10T to fiber 10FL and copper 100TX to fiber 100SX. Operating at 850 nm wavelength over multi-mode fiber, the media converters can operate at up to 2 km at 10Mbps and 300 m at 100Mbps. The AT-MC115XL supports a fiber ST connector, and the AT-MC116XL supports fiber SC.

- » Operating Temperature 0° to 50°C
- » 10T to 10FL
- » 100TX to 100SX
- » Multi-mode fiber with ST and SC connector
- » Standalone, Rack or DINRAIL mounted

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 the added functionality that the media converter will also flash the link LED of the port with the link failure. This aids with diagnostics, allowing network administrators to more quickly locate and rectify the fault.

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.

ETHERNET AND FAST ETHERNET STANDALONE MEDIA CONVERTERS / PCI-BASED MEDIA CONVERTERS

AT-MC606	AT-FS201	AT-FS202	AT-PC232/POE	AT-FS232	AT-FS232/1	AT-FS232/2	AT-FS238A/1	AT-FS238B/1	AT-MC102XL-PCI	AT-MC102XL-PCIe
100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	10/100TX	100TX	100TX
BNC	100FX (ST)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)	100FX (SC)
VDSL	MMF	MMF	MMF	MMF	SMF	SMF	BiDi - SMF	BiDi - SMF	MMF	MMF
	100FX	100FX	100FX	100FX	100FX	100FX	100FX	100FX	100FX	100FX
	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1550 nm	1310 nm	1310 nm
	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1310 nm	1550 nm	1310 nm	1310 nm	1310 nm
2 km	2 km	2 km	2 km	2 km	15 km	40 km	15 km	15 km	2 km	2 km
	■	■	■	■	■	■	■	■		
	■	■	■	■	■	■	■	■	■	■
			■	■	■	■	■	■		
	1532 bytes	1532 bytes	1916 bytes	1532 bytes	1532 bytes	1532 bytes	1532 bytes	1532 bytes	9KB	9KB
6	7	7	13	9	9	9	9	9	2	2
			■							
			1							
			1							
			A							
			15.4W							
External	External	External	Internal	External	External	External	External	External	PCI	PCIe
■	■	■		■	■	■	■	■		
■	■	■		■	■	■	■	■		
■	■	■	■	■	■	■	■	■		
10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	15.5 x 13.1 x 4 cm 6.1 x 5.16 x 1.58 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	12.5 x 6.4 cm 4.9 x 2.5 in	12.5 x 6.4 cm 4.9 x 2.5 in
.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.75 kg / 1.65 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.06 kg / .14 lb	.06 kg / .14 lb

GIGABIT STANDALONE MEDIA CONVERTERS

SUBCATEGORY	FEATURE	AT-MC1004	AT-MC1008/GB	AT-MC1008/SP	AT-GS2002/SP	AT-PC2002POE
PORTS	Port 1	1000T	1000T	1000T	10/100/1000T	10/100/1000T
	Port 2	1000SX (SC)	GBIC	SFP	SFP	SFP 100 or 1000Mbps
	Fiber type	MMF	SC*	LC*	LC*	LC*
IEEE STANDARD		1000SX	1000SX and LX	1000SX and LX	1000SX and LX	100FX and 1000X
Tx WAVELENGTH		850 nm	Depends on GBIC	Depends on SFP	Depends on SFP	Depends on SFP
Rx WAVELENGTH		850 nm	Depends on GBIC	Depends on SFP	Depends on SFP	Depends on SFP
MAX FIBER DISTANCE		550 m	Depends on GBIC	Depends on SFP	Depends on SFP	Depends on SFP
FUNCTIONALITY	Rate and speed		■	■	■	■
	MissingLink support	■	■	■	■	■
	Smart MissingLink support	■	■	■	■	■
	Max frame size	9KB	9KB	9KB	1536 bytes	1536 bytes
	Diagnostic LEDs	8	8	8	11	15
POWER OVER ETHERNET	IEEE 802.3af Class 3					■
	PoE-enabled ports					1
	Max no. of full power ports					1
	Mode					Mode-A
	PoE power					15.4W
POWER SUPPLY	PSU type	External	External	External	External	Internal
	Multi-region		■	■	■	
	Compatible with AT-MCR12 12-slot chassis	■	■	■	■	
	Compatible with AT-MCR1 1-slot chassis					
DIMENSIONS	(W x D x H)	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	10 x 9.5 x 2.5 cm 3.93 x 3.74 x 1 in	15.5 x 13.1 x 4 cm 6.1 x 5.16 x 1.58 in
	Weight	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.3 kg / .66 lb	.75 kg / 1.65 lb

* Dependent on GBIC or SFP

Mounting Hardware

Mounting Options

The majority of unmanaged Allied Telesis AT-MC, AT-GS and AT-FS Series media converters can be mounted in a number of ways to suit the installation.

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 the AT-WLMT.

» AT-WLMT
   Wall mount fixture
   (supplied in packages of 10)

DIN Rail

The AT-DINRAIL1 is a universal bracket that allows a wide range of Allied Telesis media converters and media/rate converters to be mounted onto an industry-standard 35mm DIN Rail.

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

Rack

All the larger multi-channel and modular media converters ship with 19" rack mount kits. Smaller media converters may also be rack mounted in a number of ways:

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

» AT-MCR12 chassis
   This chassis allows up to 12 standalone media converters or switches to be mounted in a chassis. The chassis supports optional redundant power supplies and can be AC or DC powered.

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

Universal Power Supply

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

» AT-MCPWR
   Universal, high-efficiency external power adapter

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.

AT-CV1000
1-slot

Features
» External power adapter
» Silent, fanless design
» Standalone or wall mount

AT-CV1203
2-slots

Features
» External power adapters (one as standard)
» Resilient power adapters (AT-CV1200PSU)
» Supports dying gasp
» Standalone or wall mount

AT-CV5001
18-slot rack mount chassis

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

SFP Optical Modules
Learn more about Allied Telesis pluggable optical modules on page 39.
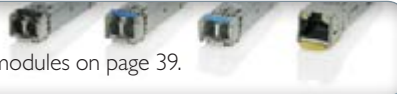
		CONVERTEON MODULES			
SUBCATEGORY	**FEATURE**	**AT-CM301**	**AT-CM302**	**AT-CM3K0S**	**AT-CM70S**	**AT-CV1KSS**
PORTS	Port 1	10/100TX	10/100TX	10/100/1000T	4 x T1/E1 1 x 10/100TX	SFP
	Port 2	100FX (ST)	100FX (SC)	100 or 1000Mbps SFP	100Mbps SFP	SFP
	Fiber type	MMF	MMF	Depends on SFP	Depends on SFP	Depends 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	Depends on SFP
FUNCTIONALITY	Media type	■	■	■	■	■
	Rate and speed	■	■	■	■	
	MissingLink support	■	■	■		■
	Smart MissingLink support	■	■	■		■
	Max frame size	10KB	10KB	10KB	1535 bytes	9KB
	Diagnostic LEDs	9	9	9	11	5
	Rate limiting	■	■	■	■	■
OAM	Dying gasp support	■	■	■	■	
	Management	■	■	■	■	
ECO-FRIENDLY		■	■	■		
DIMENSIONS	(W x D x H)	2.2 x 7.3 x 13 cm .85 x 2.89 x 5.1 in	2.2 x 7.3 x 13 cm .85 x 2.89 x 5.1 in	2.2 x 7.3 x 13 cm .85 x 2.89 x 5.1 in	4.4 x 7.3 x 13 cm 1.71 x 2.89 x 5.1 in	2.2 x 7.3 x 13 cm .85 x 2.89 x 5.1 in
	Weight	.27 kg / .06 lb	.27 kg / .06 lb	.27 kg / .06 lb	.54 kg / 1.2 lb	.27 kg / .06 lb

Chassis-Based Media Converters

AT-MCF2000

Multi-channel Manageable Media Converter

The AT-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, IRU chassis
» High-density conversion, with up to 24 Fast Ethernet channels
» Hot-swappable media blades (maximum of two)
» Hot-swappable management module (AT-MCF2000M)
» Stack multiple chassis using stacking modules (AT-MCF2000S)
» Hot-swappable power supply modules (AT-MCF2000AC)
» Resilient power supply modules
» Operates in unmanaged and managed modes

AT-MCF2300

4-slot Chassis

The AT-MCF2300 is an end-to-end managed media conversion system. The 3RU chassis can hold one to four multi-channel blades, providing 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 (AT-MCF2000M)
» Stack multiple chassis using stacking modules (AT-MCF2000S)
» Hot-swappable power supply modules (AT-MCF2300AC)
» Resilient power supply modules
» Operates in unmanaged and managed modes

AT-MCF2000 Chassis
with AT-MCF2000M management module

AT-MCF2000 Chassis
with AT-MCF2000S stacking module

AT-MCF2300 Chassis
with AT-MCF2000S stacking module
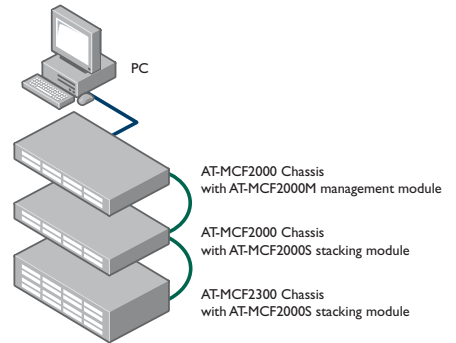
Stacking AT-MCF2xxx Chassis

The AT-MCF2000 and AT-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 all fitted with a stacking module.

SUBCATEGORY	FEATURE	MODULES FOR AT-MCF2x00 CHASSIS		
		AT-MCF2012LC	AT-MCF2012LC/1	AT-MCF2032SP
PORTS	Port 1	12 x 10/100TX	12 x 10/100TX	12 x 10/100/1000T
	Port 2	12 x 100FX (LC)	12 x 100FX (LC)	12 x SFP
	Fiber type	MMF	SMF	Depends on SFP
IEEE STANDARD		100FX	100FX	100 or 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	■	■	■
DIMENSIONS	(W x D x H) AT-MCF2000	46 x 44 x 4.4 cm 18 x 17.3 x 1.73 in	46 x 44 x 4.4 cm 18 x 17.3 x 1.73 in	46 x 44 x 4.4 cm 18 x 17.3 x 1.73 in
	Weight	8.5 kg / 18.74 lb	8.5 kg / 18.74 lb	8.5 kg / 18.74 lb

Optical Modules

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

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

Pluggable Optical Modules

SFP Series (SP)

The SP Series offers the latest industry standard in 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 varied distance and service requirements.

XFP Series (XP)

The XP Series offers the latest industry-standard 10 Gigabit Ethernet connectivity in a flexible, small form-factor. These hot-swappable optical interfaces simply plug into an XFP slot in any compatible Allied Telesis product for simple migration to 10 Gigabit data rates.

GBIC Series (G8)

The G8 Series offers the latest industry standard in flexible, full-duplex Gigabit Ethernet connectivity. These hot-swappable, fiber and copper interfaces simply plug into a GBIC slot on Allied Telesis GBIC-compatible products. Configurations can be optimized to meet varied distance and service requirements.

GIGABIT FIBER-OPTICS					
SUBCATEGORY	AT-SPSX	AT-SPSX/I	AT-G8SX	AT-SPEX	AT-SPLX10
FORM FACTOR	SFP	SFP	GBIC	SFP	SFP
FIBER TYPE	MMF	MMF	MMF	MMF	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	850 nm	1310 nm	1310 nm
Tx WAVELENGTH	850 nm	850 nm	850 nm	1310 nm	1310 nm
MAX FIBER DISTANCE	220 / 550 m	220 / 550 m	220 / 550 m	2 km	10 km
CONNECTOR TYPE	LC	LC	SC	LC	LC
TEMPERATURE	0°C to 70°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C	0°C to 70°C

FAST ETHERNET FIBER-OPTICS				
SUBCATEGORY	AT-SPFX/2	AT-SPFXBD-LC-13	AT-SPFXBD-LC-15	AT-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
DIGITAL DIAGNOSTICS MONITORING (DDM)				
Rx WAVELENGTH	1310 nm	1550 nm	1310 nm	1310 nm
Tx WAVELENGTH	1310 nm	1310 nm	1550 nm	1310 nm
MAX FIBER 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

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° to 85°C.

- » **AT-SPSX/I**
  1000SX SFP for multimode fiber

- » **AT-SPLX10/I**
  1000LX SFP for single mode fiber (10km)

- » **AT-SP10LR/I**
  10G SFP+ for single mode fiber (10km)

- » **AT-SP10LR20/I**
  10G SFP+ for single mode fiber (20km)

- » **AT-SP10ER40/I**
  10G SFP+ for single mode fiber (40km)

COPPER		
SUBCATEGORY	AT-SPTX	AT-G8T
FORM FACTOR	SFP	GBIC
SPEED	10/100/1000T	10/100/1000T
MAX COPPER DISTANCE	100 m	100 m
CONNECTOR TYPE	RJ-45	RJ-45
TEMPERATURE	0°C to 70°C	0°C to 70°C

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 varied distance and service requirements.

Fiber Distances

Customers moving to Gigabit (1000Mbps) may find that existing multi-mode fiber may not be suitable for their network, as the distance required is over 220 m. Allied Telesis recommends using the AT-SPEX optical transceiver, which uses non-standard optics, but supports the 2 km distance.

IEEE 802.3 Ethernet specification for networks over multi-mode fiber

Standard	Speed	Max Distance (MMF)
10FL	10Mbps	2 km
100FX	100Mbps	2 km
1000SX	1000Mbps	220 m

GIGABIT FIBER-OPTICS						COMPACT GIGABIT FIBER-OPTICS (CSFP)	
AT-SPLX10/I	AT-G8LX10	AT-SPBD10-13	AT-SPBD10-14	AT-SPLX40	AT-SPZX80	AT-SPBD20DUAL-14	AT-SPBD40DUAL-14
SFP	GBIC	SFP	SFP	SFP	SFP	CSFP	CSFP
SMF	SMF	SMF	SMF	SMF	SMF	SMF	SMF
2 (Rx, Tx)	2 (Rx, Tx)	1 (BiDi)	1 (BiDi)	2 (Rx, Tx)	2 (Rx, Tx)	2 (BiDi)	2 (BiDi)
1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps	1000Mbps
■				■	■	■	■
1310 nm	1310 nm	1490 nm	1310 nm	1310 nm	1550 nm	1310 nm	1310 nm
1310 nm	1310 nm	1310 nm	1490 nm	1310 nm	1550 nm	1490 nm	1490 nm
10 km	10 km	10 km	10 km	40 km	80 km	20 km	40 km
LC	SC	LC - BiDi	LC - BiDi	LC	LC	2 x LC	2 x LC
-40°C to 85°C	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C	-5°C to 70°C	-40°C to 85°C	-40°C to 85°C

	10 GIGABIT FIBER-OPTICS (XFP)			
SUBCATEGORY	AT-XPSR	AT-XPLR	AT-XPER40	AT-XPER80
FORM FACTOR	XFP	XFP	XFP	XFP
FIBER TYPE	MMF	SMF	SMF	SMF
NUMBER OF FIBERS	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)	2 (Rx, Tx)
SPEED	10G	10G	10G	10G
DIGITAL DIAGNOSTICS MONITORING (DDM)	■	■	■	■
Rx WAVELENGTH	850 nm	1310 nm	1550 nm	1550 nm
Tx WAVELENGTH	850 nm	1310 nm	1550 nm	1550 nm
MAX FIBER DISTANCE	300 m	10 km	40 km	80 km
CONNECTOR TYPE	LC	LC	LC	LC
TEMPERATURE	0°C to 70°C	-5°C to 70°C	-5°C to 70°C	-5°C to 70°C

	10 GIGABIT FIBER-OPTICS (SFP+)							
SUBCATEGORY	AT-SP10SR	AT-SP10LR	AT-SP10LR/I	AT-SP10LR20/I	AT-SP10ER40/I	AT-SP10TW1	AT-SP10TW3	AT-SP10TW7
FORM FACTOR	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+	SFP+
FIBER TYPE	MMF	SMF	SMF	SMF	SMF			
COPPER TYPE						Twinax	Twinax	Twinax
NUMBER OF FIBERS	2	2	2	2	2			
SPEED	10G	10G	10G	10G	10G	10G	10G	10G
DIGITAL DIAGNOSTICS MONITORING (DDM)	■	■	■	■	■			
Rx WAVELENGTH	850 nm	1310 nm	1310 nm	1310 nm	1550 nm			
Tx WAVELENGTH	850 nm	1310 nm	1310 nm	1310 nm	1550 nm			
MAX DISTANCE	300 m	10 km	10 km	20 km	40 km	1 m	3 m	7 m
CONNECTOR TYPE	LC	LC	LC	LC	LC			
TEMPERATURE	0°C to 70°C	0°C to 70°C	-40°C to 85°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 Interface Cards

alliedtelesis.com/nics

From 10Mbps to 10 Gigabit, Allied Telesis seamlessly connects desktops, laptops and servers with a continually expanding portfolio of high-quality, reliable and cost-effective Network Interface Cards.

With the addition of its latest line of multi-port Gigabit and 10 Gigabit server Network Interface Cards (2973 Series and AT-VNC10S), Allied Telesis has optimized NICs 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 NICs 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 profound tool to analyze the interface card to check specific data.

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

Laptop NICs

SUBCATEGORY	FEATURE	FAST ETHERNET FIBER AT-2814FX	GIGABIT FIBER AT-2872SX
BUS TYPE		ExpressCard/34 (54 compatible)	ExpressCard/34 (54 compatible)
PORTS AND MEDIA SUPPORT	100FX	SC	
	1000SX		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
	DASH (TruManage)	■	
	VLAN support	■	■
	Advanced power management (ACPI)	■	■
	SNMP	■	■
DRIVER SUPPORT	Windows 7	■	■
	Windows 7 (64-bit)	■	■
	Windows Vista	■	■
	Windows Vista (64-bit)	■	■
	Windows XP	■	■
	NDIS2	■	■
	Linux 2.4	■	■
	Linux 2.6	■	■
IPv6 SUPPORT		■	■
DIAGNOSTICS	LEDs	■	■
DIMENSIONS	(W x H)	12.9 x 3.4 cm 5.1 x 1.2 in	12.9 x 3.4 cm 5.1 x 1.2 in
	Weight	.036 kg / .08 lb	.036 kg / .08 lb
IDEAL ENVIRONMENT		» Laptop computers in secure areas	» Laptop computers with fiber connectivity
CUSTOMER'S NEEDS		» 100Mbps fiber connectivity » Laptop connectivity	» 100Mbps fiber connectivity » Laptop connectivity

Managed Boot Agent (MBA) Support

MBA support on Allied Telesis NICs allows network administrators to perform pre-boot procedures on a system, such as installing an operating system, running a virus checker or downloading a predefined system configuration. This feature, coupled with the Wake-on-LAN (WoL) function, allows computers to be remotely powered-on during non-work hours to perform configuration and maintenance tasks. Pre-boot Execution Environment (PXE) support is included in Allied Telesis NICs. It allows a workstation or computer to boot from a remote server connected to the network prior to booting from the local hard drive.

Network Security

Although fiber-optic networking provides a much higher level of network security than copper, security can be further enhanced by encrypting the data being transmitted. Allied Telesis security cards perform high levels of encryption/decryption, freeing the host CPU of this performance-intensive task.

Copper Desktop/Workstation NICs

SUBCATEGORY	FEATURE	COPPER	COPPER AND FIBER			
		AT-2912T	AT-2701FTXa	AT-2716POE/FX	AT-2911GP/SX	AT-2911GP/LX
BUS TYPE		PCIe (x1)	PCI (32-bit)	PCIe (x1)	PCIe (x1)	PCIe (x1)
PORTS AND MEDIA SUPPORT	10/100TX		■			
	10/100/1000TX Class 3 PoE			■	■	■
	10/100/1000T	■				
	10FL					
	100FX		SC, ST	SC, ST		
	1000X				SC, LC	SC, LC
FIBER TYPE			MMF	MMF	MMF	SMF
MAX FIBER DISTANCE			2 km	2 km	220 m	10 km
QoS	IEEE 802.1p priority queues	■	■	■	■	■
PERFORMANCE	TCP/IP checksum CPU offload	■		■	■	■
	Jumbo frames	■		■	■	■
	Link aggregation support		■	■	■	■
	Link aggregation failover		■	■	■	■
MANAGEMENT	Wake-on-LAN	■	■	■		
	Managed boot agent (PXE remote boot ROM)	2.1	2.1	2.1	2.1	2.1
	DASH (TruManage)	■				
	VLAN support	■	■	■	■	■
	Advanced power management (ACPI)	■	■	■	■	■
	SNMP	■		■	■	■
SECURITY	DES encryption	■				
	3DES encryption	■				
	AES encryption	■				
DRIVER SUPPORT	Windows 7 (32 and 64-bit)	■	■	■	■	■
	Windows 2008	■	■	■	■	■
	Windows Vista (32 and 64-bit)	■	■	■	■	■
	Windows XP	■	■	■	■	■
	Windows XP (64-bit)		■	■	■	■
	Windows 2003	■	■			
	Windows 2003 (64-bit)	■	■			
	NDIS2	■	■	■	■	■
	NetWare 6.x	■	■			
	Linux 2.4	■	■	■	■	■
	Linux 2.6	■	■	■	■	■
IPv6 SUPPORT		■	■	■	■	■
DIAGNOSTICS	LEDs	■	■	■	■	■
	Virtual cable tester	■				
PHYSICAL	Low profile bracket and full height provided	■	■	■	■	■
DIMENSIONS	(W x H)	10.7 x 5.7 cm 4.2 x 2.2 in	16.8 x 6.5 cm 6.6 x 2.56 in	14.1 x 5.6 cm 5.6 x 2.2 in	14.1 x 5.6 cm 5.6 x 2.2 in	14.1 x 5.6 cm 5.6 x 2.2 in
	Weight	.04 kg / .05 lb	.07 kg / .15 lb	.068 kg / .15 lb	.068 kg / .15 lb	.068 kg / .15 lb
IDEAL ENVIRONMENT		» Desktop computers in ultra secure areas	» 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
CUSTOMER'S NEEDS		» Data encryption	» 100Mbps fiber connectivity » Choice of fiber or copper interfaces	» PoE	» PoE	» PoE

Fiber Desktop/Workstation NICs

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 to sending large packets, especially where 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 Network Interface Cards, Allied Telesis has now extended the size of a fiber network from up to two kilometers over multi-mode fiber, to up to 20 kilometers 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 NICs support ACPI, which places the system in a low power state when it is not receiving or transmitting data.

SUBCATEGORY	FEATURE	GIGABIT FIBER				
		AT-2916SX	AT-2916LX10	AT-2931SX	AT-2911SX	AT-2911LX
BUS TYPE		PCI (32-bit)	PCI (32-bit)	PCI-x (32/64-bit)	PCIe (x1)	PCIe (x1)
PORTS AND MEDIA SUPPORT	10FL					
	100FX					
	1000SX	LC, SC	LC	LC, SC	LC, SC	LC, SC
FIBER TYPE		MMF	SMF	MMF	MMF	SMF
MAX FIBER DISTANCE		220 m	10 km	220 m	220 m	10 km
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					
	Managed boot agent (PXE remote boot ROM)	2.1	2.1	2.1	2.1	2.1
	DASH (TruManage)					
	VLAN support	■	■	■	■	■
	Advanced power management (ACPI)	■	■	■	■	■
	SNMP	■	■	■	■	■
SECURITY	DES encryption					
	3DES encryption					
	AES encryption					
DRIVER SUPPORT	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 2003 (32 and 64-bit)	■	■	■	■	■
	Windows 2000	■	■	■	■	■
	NDIS2	■	■	■	■	■
	NetWare 6.x	■	■	■	■	■
	Linux 2.4	■	■	■	■	■
	Linux 2.6	■	■	■	■	■
IPv6 SUPPORT		■	■	■	■	■
DIAGNOSTICS	LEDs	■	■	■	■	■
PHYSICAL	Low profile bracket and full height provided	■	■	■	■	■
DIMENSIONS	(W x H)	11.9 x 6.4 cm 4.68 x 2.5 in	11.9 x 6.4 cm 4.68 x 2.5 in	16.8 x 6.4 cm 6.6 x 2.5 in	8.8 x 6.9 cm 3.5 x 2.7 in	8.9 x 6.9 cm 3.5 x 2.7 in
	Weight	.06 kg / .13 lb	.06 kg / .13 lb	.07 kg / .15 lb	.06 kg / .13 lb	.06 kg / .13 lb
IDEAL ENVIRONMENT		» 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		» Performance	» Performance » Long distance networking	» High performance » Load balancing » Redundant links	» High performance » Load balancing	» High performance » Load balancing » Long distance networking

Wake-on-LAN (WoL)

Wake-on-LAN is a feature of interface 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				
	AT-2911SFP	AT-2701FXa	AT-2701LX20	AT-2711FX	AT-2712FX	AT-2712LX20
Bus	PCIe (x1)	PCI (32-bit)	PCI (32-bit)	PCIe (x1)	PCIe (x1)	PCIe (x1)
Connector	SFP	MT, SC, ST	SC	MT, SC, ST	SC	SC
Fiber		MMF	SMF	MMF	MMF	SMF
Distance		2 km	20 km	2 km	2 km	20 km
	■	■	■	■	■	■
	■			■	■	■
	■					
	■	■	■			
	■	■	■			
	■					
		■	■	■	■	■
PCIe version	2.1	2.1	2.1	2.1	2.1	2.1
					■	
	■	■	■	■	■	■
	■	■	■	■	■	■
	■			■	■	■
					■	■
					■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
	■	■	■	■	■	■
Dimensions	8.9 x 6.9 cm 3.5 x 2.7 in	16.8 x 6.5 cm 6.6 x 2.56 in	16.8 x 6.5 cm 6.6 x 2.56 in	12.1 x 6.9 cm 4.76 x 2.71 in	10.7 x 4.2 cm 5.6 x 2.2 in	10.7 x 4.2 cm 5.6 x 2.2 in
Weight	.06 kg / .13 lb	.07 kg / .15 lb	.07 kg / .15 lb	.04 kg / .11 lb	.05 kg / .09 lb	.05 kg / .09 lb
	» Service requiring Gigabit connectivity	» Desktop computers in secure areas	» Desktop computers in secure areas	» Desktop computers in secure areas	» Desktop computers in secure areas	» Desktop computers in secure areas
	» High performance » Load balancing » Long distance networking	» 100Mbps fiber connectivity » Modern PCIe computer	» 100Mbps fiber connectivity » Modern PCIe computer » Long distance networking	» 100Mbps fiber connectivity » Choice of fiber or copper interfaces	» Highly secure environment	» Highly secure environment » Long distance networking

Server NICs

Network Virtualization

The Allied Telesis AT-2973 Series of Network Interface Cards has been 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 AT-VNC10S 10 Gigabit interface card provides improved performance with next-generation technology — VMware Direct Path, NetQueue, SR-IOV — 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 is multicast and broadcast data on a virtualized server.

Superior Functionality

The AT-VNC10S includes dedicated hardware and processors to process frames at the highest levels in the operating system for both transmit and receive paths — advantageous for virtualization applications.

The AT-VNC10S enables convergence of all the networked communications possible in a server, such as data (LAN), storage networks (iSCSI) and clustering.

SFP Optical Modules
Learn more about Allied Telesis pluggable optical modules on page 39.

SUBCATEGORY	FEATURE	GIGABIT COPPER					SFP+ 10 GIGABIT
		AT-2972SX	AT-2972LX10	AT-2973SX	AT-2973T	AT-2973T/4	AT-VNC10S
BUS TYPE		PCIe (x4)	PCIe (x4)	PCIe (x4)	PCIe (x4)	PCIe (x4)	PCIe (x8)
PORTS AND MEDIA SUPPORT	10/100/1000T				■ (2 ports)	■ (4 ports)	
	1000X	LC	LC	LC (2 ports)			
	SFP+						■ (2 ports)
	Fiber type	MMF	SMF	MMF			MMF, SMF
	Max fiber distance	220 m	10 km	220 m			Dep. 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	Wake-on-LAN				■	■	
	Managed boot agent (PXE remote boot ROM)	2.1	2.1	2.1	2.1	2.1	2.1
	VLAN support	■	■	■	■	■	■
	Advanced power management (ACPI)	■	■	■	■	■	■
	SNMP	■	■	■	■	■	■
DRIVER SUPPORT	Windows 7 (32 and 64-bit)	■	■	■	■	■	■
	Windows 2008 (32 and 64-bit)	■	■	■	■	■	■
	Windows Vista (32 and 64-bit)	■	■	■	■	■	
	Windows 2003 (32 and 64-bit)	■	■	■	■	■	
	Linux 2.4	■	■	■	■	■	
	Linux 2.6	■	■	■	■	■	■
IPv6 SUPPORT				■	■	■	■
DIAGNOSTICS	LEDs	■	■	■	■	■	■
	Virtual cable tester				■	■	
PHYSICAL	Low profile bracket and full height provided	■	■	■	■		■
DIMENSIONS	(W x H)	16.8 x 6.8 cm 6.6 x 2.7 in	16.8 x 6.8 cm 6.6 x 2.7 in	14.5 x 5.7 cm 5.7 x 2.2 in	14.5 x 5.7 cm 5.7 x 2.2 in	15.3 x 11.1 cm 6.03 x 4.38 in	16 x 6.89 cm 6.3 x 2.71 in
	Weight	.06 kg / .13 lb	.06 kg / .13 lb	.05 kg / .09 lb	.05 kg / .09 lb	.10 kg / .23 lb	.09 kg / .21 lb
IDEAL ENVIRONMENT		» Virtualization servers	» Virtualization servers	» Virtualization servers	» Virtualization servers	» Virtualization servers	» Virtualization servers
CUSTOMER'S NEEDS		» High performance with low CPU utilization	» High performance with low CPU utilization	» High performance with low CPU utilization	» High performance with low CPU utilization	» High performance with low CPU utilization	» High performance with low CPU utilization

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

The comprehensive, high-performance Allied Telesis AR Series features hardware and software functions such as advanced routing, QoS, IPv6 and advanced security, including Stateful Inspection Firewall and VPN services. AR Series routers 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 confirmed reliability that makes Allied Telesis a trusted networking partner.

Routers
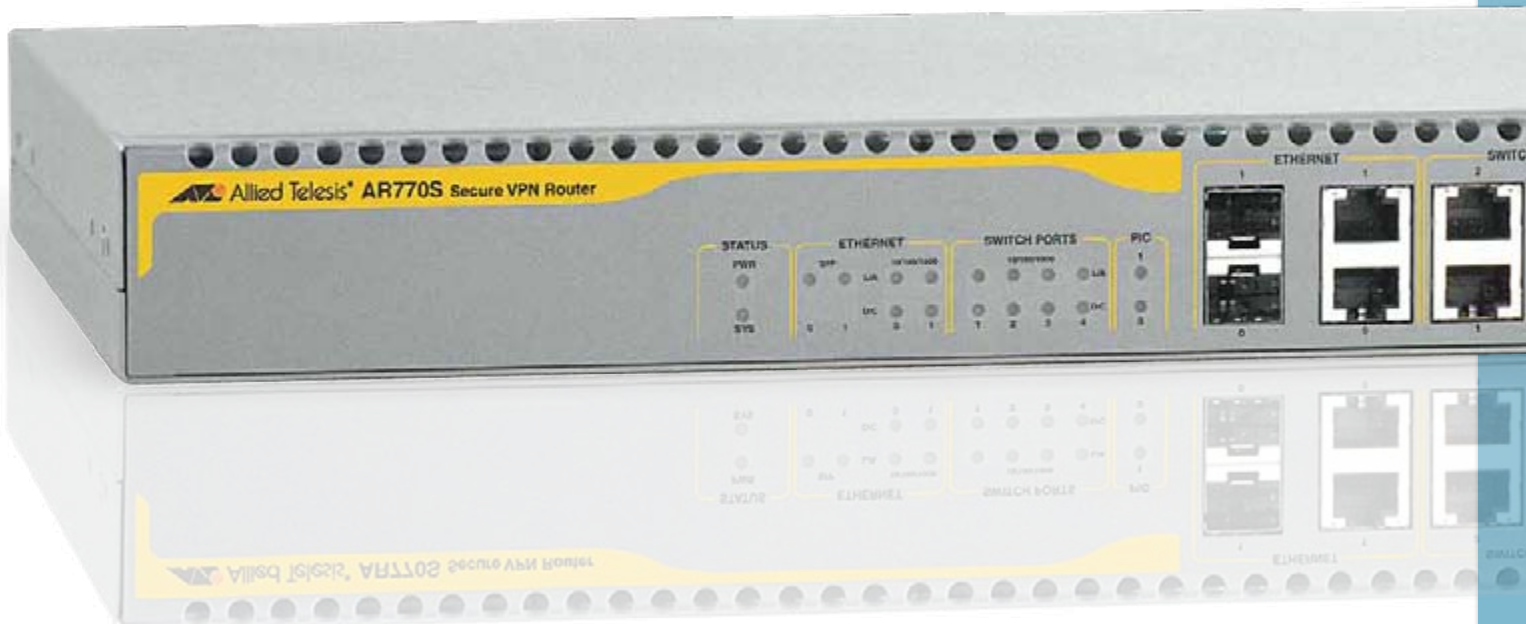
SUBCATEGORY	FEATURE	SECURE MODULAR VPN ROUTERS		SECURE GIGABIT MODULAR VPN ROUTER	SECURE xDSL ROUTER
		AT-AR415S	AT-AR750S	AT-AR770S	AT-AR440S
FORM FACTOR		Desktop / Rack mount	Desktop / Rack mount	Desktop / Rack mount	Desktop / Wall mount / Rack mount
PORTS AND MEDIA SUPPORT	10/100TX	1 (WAN) + 4 (LAN)	2 (WAN) + 5 (LAN)		5 (LAN)
	10/100/1000T			2 (WAN) + 4 (LAN)	
	SFP			2 (combo) 100 or 1000Mbps	
	xDSL (WAN)				ADSL2/2+ (Annex A)
	Async port	1	1	1	1
	PIC bays (unpopulated)	1	2	2	1
OPTIONAL PIC CARDS	T1/E1 WAN	AT-AR020	AT-AR020	AT-AR020	AT-AR020
	BRI - ISDN (S/T)	AT-AR021S	AT-AR021S	AT-AR021S	AT-AR021S
	2Mbps sync port	AT-AR023	AT-AR023	AT-AR023	AT-AR023
	4 x async	AT-AR024	AT-AR024	AT-AR024	AT-AR024
	2 x FXS VoIP	AT-AR027			AT-AR027
POWER SUPPLY		Fixed internal	Fixed internal	Fixed internal	Fixed internal
ENVIRONMENTAL	In/outdoor usage	Indoor	Indoor	Indoor	Indoor
	Temperature range	0 to 40ºC	0 to 40ºC	0 to 40ºC	0ºC to 50ºC
MANAGEMENT	Web	■	■		■
	CLI access	Async, Telnet	Async, Telnet	Async, Telnet	Async, Telnet
	SNMP	v2 and v3	v2 and v3	v2 and v3	v2 and v3
	UPnP	■			
NETWORK RESILIENCE	VRRP	■	■	■	■
QoS	IEEE 802.1p priority queues	■	■	■	■
	Queueing mechanisms	■	■	■	■
	Priority mechanisms	■	■	■	■
SECURITY	IEEE 802.1Q VLANs	64	64	64	64
	RADIUS	■	■	■	■
	SSL	■	■	■	■
	IEEE 802.1x	■	■	■	■
	DoS protection	■	■	■	■
	Firewall	4000 sessions (AT-FL18B) 8000 sessions (AT-FL18C)	■	■	■
OTHER	DMZ	■	■	■	■
	MAC filter	■	■	■	■
	IP / TCP / UDP filter	■	■	■	■
	URL filter	■	■	■	■
	Peer-to-peer protocols detection	■	■	■	■
	Encryption (DES, 3DES, AES)	■	■	■	■
	VPN concurrent tunnels	1 - standard 5 - AT-FL19B, 10 - AT-FL19C 25 - AT-FL19D, 50 - AT-FL19E	250	1000	100
ROUTING	RIPv1 and v2	■	■	■	■
	IPv4	■	■	■	■
	IPv6	AT-AR400-ADVL3UPGRD	AT-AR700-ADVL3UPGRD	AT-AR700-ADVL3UPGRD	AT-AR400-A3VLDUPGRD
	OSPF	■	■	■	■
	NAT / NAPT	■	■	■	■
	NAT VPN pass-through (sessions)	■	■	■	■
	PPPoE / PPTP / L2TP	■	■	■	■
	DHCP client / server / relay	■	■	■	■
	WAN load balancing	AT-FL15 (option)	Included	Included	AT-FL15 (option)
	Server load balancing	AT-AR400-ADVLDUPGRD	AT-AR700-ADVL3UPGRD	AT-AR700-ADVL3UPGRD	AT-AR400-ADVLDUPGRD
	BGP-4	AT-AR400-ADVLDUPGRD	AT-AR700-ADVL3UPGRD	AT-AR700-ADVL3UPGRD	AT-AR400-ADVLDUPGRD
DIMENSIONS	(W x D x H)	30.5 x 19 x 4.5 cm 12 x 7.48 x 1.77 in	30.5 x 19 x 4.4 cm 12 x 7.48 x 1.73 in	44 x 23.9 x 4.4 cm 17.3 x 9.4 x 1.73 in	33.5 x 18 x 4.5 cm 13.18 x 7 x 1.77 in
	Weight	1.75 kg / 3.85 lb	1.92 kg / 4.23 lb	2.95 kg / 6.5 lb	1.96 kg / 4.32 lb
IDEAL ENVIRONMENT		» Medium business	» Medium business	» Large business	» Branch office
CUSTOMER'S NEEDS		» Remote access	» Remote access	» Remote access	» Head office connectivity

Wireless

Allied Telesis wireless products provide customers with the highest performance and compliance to today's standards, for unmatched investment protection in the wireless marketplace. All Allied Telesis wireless solutions offer "best-of-breed" performance, especially when security features and authentication protocols are required for network robustness. Advanced software features and a broad range of accessories provide high-end functionality from SOHO to enterprise-class networks.

MEMBER
Wi Fi ™
ALLIANCE

Enterprise

Allied Telesis wireless access points and switches for Enterprise networks feature enhanced security and Quality of Service as well as multiple and extended operating modes.

Small and Medium Business

Allied Telesis designs wireless products for Small Office / Home Office (SOHO) to Small-Medium Business (SMB) network needs.

Wireless Clients

Allied Telesis wireless clients provide laptop and desktop PC users a flexible and nomadic access to high-speed wireless networks.

Accessories

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

Allied Telesis
AT-WR4600 SERIES

Wireless

SUBCATEGORY	FEATURE	ACCESS POINTS AND ROUTERS		BASE STATION
		AT-WR2304N	AT-TQ2403	AT-WR4562*
FORM FACTOR		Desktop / Wall mount	Desktop / Wall mount	Pole mount / Wall mount
PORTS AND MEDIA SUPPORT	Ethernet	1 x 10/100TX (WAN); 4 x 10/100TX (LAN)	1 x 10/100TX	1 x 10/100TX
	Serial		1	
	USB			
	Wireless radio	1 x IEEE 802.11b/g/n (2x2 MIMO : 300Mbps)	2 x IEEE 802.11a/b/g	1 x IEEE 802.11a/b/g
POWER SUPPLY		External	External or IEEE 802.3af PoE (PD)	IEEE 802.3af PoE (PD)
ENVIRONMENTAL	Indoor / outdoor usage	Indoor	Indoor	Outdoor (IP67)
	Temperature range	0ºC to 45ºC	0 to 40ºC	-30ºC to 65ºC
SCALABILITY	Clustering		15 (without wireless VLAN) 8 (with 4 wireless VLANs)	
MANAGEMENT	Web GUI	HTTP, HTTPS	HTTP, HTTPS	HTTP, HTTPS
	CLI access		Telnet, SSH	MAC Telnet, Telnet, SSH
	SNMP	v1, v2c	v1, v2c	v1, v2c, v3
	UPnP	■		■
NETWORK RESILIENCE				STP, RSTP, LACP, VRRP
QoS			■	■
SECURITY	RADIUS / IEEE 802.1x / SSL	■	■	
	Encryption	AES	AES	DES, 3DES, AES
	DoS protection	■		■
	Firewall	■		■
	DMZ	■		■
	NAT / NAPT	■		■
	ALG	■		■
	VPN pass-through	Multiple sessions		■
	Filtering	■	■	■
	MAC address	■	■	■
	IP	■		■
	TCP / UDP port	■		■
	URL	■		■
	Peer-to-peer protocol			■
BRIDGING	MAC cloning	■		
	PPPoE / PPTP / L2TP	■		■
	VLAN		■	■
	VLAN bridging			■
ROUTING	IPv4	■		■
	IPv6			■
	Supported protocols	Static routing		Static routing, OSPFv2, RIPv1, RIPv2
	Multicast support			PIM, IGMP
WIRELESS	IEEE 802.11e (QoS)	WMM	WMM	WMM
	IEEE 802.11i (security)	■	■	
	Mode: ad-hoc			
	Mode: infrastructure	Access point	Access point	Access point, station
	Wireless Distribution System (WDS)	■	■	■
	Wireless Protected Setup (WPS)	■		
	Wireless Virtual LAN		■	■
	Captive portal		■	■
	Dynamic channel planning	■	■	
	Multiple SSID	4	32	128
	Regulatory domain compliance		■	■
	Rogue AP detection		■	■
	Antenna	2 x 2.4GHz (2dBi) omni, detachable	2 x 2.4GHz (1.8dBi) / 5GHz (2.8dBi) omni, detachable	
	Antenna diversity mode		■	
	Wi-Fi certified	■		
DIMENSIONS	(W x D x H)	12.5 x 9.8 x 2.5 cm / 4.9 x 3.8 x 1 in	17.85 x 10.8 x 3 cm / 7 x 4.3 x 1.2 in	21.2 x 5.7 x 18.3 cm / 8.4 x 2.2 x 7.2 in
	Weight	.15 kg / .3 lb	.25 kg / .55 lb	1.2 kg / 2.7 lb
IDEAL ENVIRONMENT		» Small business (SMB)	» Enterprise	» WISP, enterprise
CUSTOMER'S NEEDS		» Intranet / Internet access » Indoor wireless bridge	» Intranet access » Indoor wireless bridge » Hotspot access	» WLL » Hotspot » Outdoor wireless bridge

	CPE AND BRIDGES		BASE STATION AND HIGH-SPEED MOBILITY
	AT-WR4541a*	**AT-WR4541g***	**AT-WR4662n***
	Pole mount / Wall mount	Pole mount / Wall mount	Pole mount / Wall mount
	1 x 10/100TX	1 x 10/100TX	1 x 10/100TX
	1 x IEEE 802.11a/b/g	1 x IEEE 802.11a/b/g	2 x IEEE 802.11a/b/g/n (2x2 MIMO : 300Mbps)
	18vDC passive PoE	18vDC passive PoE	IEEE 802.3af PoE (PD)
	Outdoor (IP67)	Outdoor (IP67)	Outdoor (IP67)
	-30ºC to 65ºC	-30ºC to 65ºC	-30ºC to 65ºC
	HTTP, HTTPS	HTTP, HTTPS	
	MAC Telnet, Telnet, SSH	MAC Telnet, Telnet, SSH	SSH
	v1, v2c, v3	v1, v2c, v3	
	■	■	
	STP, RSTP, LACP, VRRP	STP, RSTP, LACP, VRRP	STP, RSTP, VRRP
	■	■	■
	DES, 3DES, AES	DES, 3DES, AES	DES, 3DES, AES
	■	■	■
	■	■	
	■	■	
	■	■	
	■	■	■
	■	■	■
	■	■	■
	■	■	
	■	■	■
	■	■	■
	■	■	■
	Static routing, OSPFv2, RIPv1, RIPv2	Static routing, OSPFv2, RIPv1, RIPv2	Static routing, OSPFv2, RIPv1, RIPv2, HSMIP
	PIM, IGMP	PIM, IGMP	IGMP snooping
	■	■	WMM
	■	■	
	■	■	
	Access point, station	Access point, station	Access point, station
	■	■	Bridge, Repeater
	■	■	■
	■	■	■
			■
	128	128	16
	■	■	■
	■	■	
	1 x 5GHz (15dBi) sector, embedded	1 x 2.4GHz (11dBi) sector, embedded	
	■	■	
	13.3 x 8.6 x 16 cm / 5.2 x 3.4 x 6.3 in	13.3 x 8.6 x 16 cm / 5.2 x 3.4 x 6.3 in	21.2 x 5.7 x 18.3 cm / 8.4 x 2.2 x 7.2 in
	.5 kg / 1 lb	.5 kg / 1 lb	1.2 kg / 2.7 lb
	» WISP, enterprise	» WISP, enterprise	» WISP, ITS
	» WLL » Outdoor wireless bridge	» WLL » Outdoor wireless bridge	» WLL » Outdoor wireless bridge » Vehicle-to-infrastructure communication

* NOT AVAILABLE IN NORTH AMERICA

Wireless PoE Accessories

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. Receiving 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.

		PSE PoE		PD PoE
SUBCATEGORY	**FEATURE**	**AT-6101G**	**AT-6101GP**	**AT-6102G**
FORM FACTOR		Desktop	Desktop	Desktop / Wall Mount
PORTS AND MEDIA	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
DIMENSIONS	(W x D x H)	11.7 x 6 x 3.6 cm 4.6 x 2.4 x 1.4 in	11.7 x 6 x 3.6 cm 4.6 x 2.4 x 1.4 in	8 x 5.6 x 2.6 cm 3.1 x 2.2 x 1.02 in
	Weight	.18 kg / .4 lb	.18 kg / .4 lb	.08 kg / .18 lb
CUSTOMER'S NEEDS		» Feeding protected Power over Ethernet to any Fast and Gigabit Ethernet equipment without having to replace non PoE switches	» Feeding protected Power over Ethernet to any Fast and Gigabit Ethernet equipment without having to replace non PoE switches	» Makes any non PoE equipment up to Gigabit Ethernet speed PoE capable » Extract power from a PoE line and supply 5 / 7.5 / 9 or 12vDC to any equipment

Wireless Accessories

		WALLMOUNT	COAX CABLES			
SUBCATEGORY	**FEATURE**	**AT-WR4501**	**AT-TQ0001**	**AT-TQ0003**	**AT-TQ0041**	**AT-TQ0045**
ENVIRONMENTAL	Indoor / outdoor usage	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
ANTENNA / CABLE TYPE			HDF200	HDF200	HDF400	HDF400
ANTENNA GAIN (dBi)	@ 2.4GHz					
	@ 5GHz					
INSERTION LOSS (dB)	@ 2.4GHz		-0.5	-1.7	-0.3	-1.2
	@ 5GHz		-0.7	-2.7	-0.5	-2.1
CONNECTOR			1 x N plug 1 x RP-SMA plug	1 x N plug 1 x RP-SMA plug	2 x N plug	2 x N plug
COMPATIBLE EQUIPMENT	AT-WR4541a / AT-WR4541g				■	■
	AT-WR4652		■	■		
	AT-WR4562 / AT-WR4662n	■			■	■
DIMENSIONS	(W x D x H) / Length	18.9 x 8.9 x 3.7 cm 7.4 x 3.5 x 1.5 in	.5 m 1ft 7.7 in	3 m 9 ft 10 in	.5 m 1 ft 7.7 in	5 m 16 ft 4.9 in
	Weight	.48 kg / 1.06 lb	.10 kg / .22 lb	.20 kg / .44 lb	.12 kg / .26 lb	.6 kg / 1.32 lb
IDEAL ENVIRONMENT		» WISP, enterprise	» WISP, enterprise	» WISP, enterprise	» WISP, enterprise	» WISP, enterprise
CUSTOMER'S NEEDS		» Wall-mount	» Higher gain or directional antenna	» Higher gain or directional antenna	» External antenna	» External antenna

Wireless NICs

WINBOX
An application that can be run on Microsoft Windows, Mac OS X and Linux and provides a GUI for configuring and monitoring every aspect of the WR4500 Series wireless router.

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. A protocol for simplifying and speeding up roaming between two access points.

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

TDMA
Time Division Multiple Access. Is a QoS mechanism at the physical layer that allows the static assignment of predefined time slots to every station in a Wireless Access 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.

SUBCATEGORY	FEATURE	WIRELESS NICS	
		AT-WNP300N	AT-WNU300N
BUS TYPE		PCI 2.2 (full and low-profile bracket)	USB 2.0
PORTS AND MEDIA SUPPORT	Wireless radio	IEEE 802.11b/g/n (2x2 MIMO : 150Mbps)	IEEE 802.11b/g/n (1x2 MIMO : 300Mbps)
ENVIRONMENTAL	Temperature range	0°C to 45°C	0°C to 45°C
WIRELESS AND SECURITY	IEEE 802.11e (QoS)	WMM	WMM
	IEEE 802.11i (security)	■	■
	IEEE 802.1x supplicant	■	■
	WEP (bits)	64 / 128	64 / 128
	WPA-EAP, WPA-PSK	■	■
	WPA2-EAP, WPA2-PSK	■	■
	Wireless Protected Setup (WPS)	■	
	Dynamic data rate scaling	■	■
	Antenna	2 x 2.4GHz (2dBi) omni, detachable	Embedded
DIAGNOSTIC LEDS		■	■
DRIVER SUPPORT	Windows 2000	■	■
	Windows XP	■	■
	Windows Vista	■	■
	Windows 7	Via NDIS wrapper	Via NDIS wrapper
CERTIFICATIONS	WHQL	■	■
	Wi-Fi Alliance	■	■
DIMENSIONS	(W x D x H)	12 x 6.3 cm 4.72 x 2.48 in	7.75 x 2.15 x 1.08 cm 3.05 x .85 x .43 in
	Weight	52 g / .1 lb	12 g / .026 lb

CAT5 CABLES		ANTENNA	RF SPLITTERS		SURGE PROTECTOR
AT-TQ0051	AT-TQ0053	AT-TQ0500	AT-TQ0292	AT-TQ0592	AT-TQ0591
Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor
CAT5 UTP	CAT5 UTP	Omni			
		2			
		5			
			-0.6	-0.5	-1.5
				-0.5	-1.5
1 x RJ-45 plug 1 x waterproof RJ-45 plug	1 x RJ-45 plug 1 x waterproof RJ-45 plug	1 x N plug	3 x N socket	3 x N socket	1 x N plug 1 x N socket
■	■	■	■	■	■
		■	■	■	■
■	■	■	■	■	■
10 m 32 ft 9.6 in	30 m 98 ft 5.1 in	2.2 x 2.2 x 19 cm .9 x .9 x 7.5 in	7.7 x 5.5 x 4.2 cm 3 x 2.2 x 1.7 in	8 x 3 x 8 cm 3.1 x 1.2 x 3.1 in	6.5 x 3.4 x 2.5 cm 2.6 x 1.3 x 1 in
.5 kg / 1.10 lb	1.5 kg / 3.31 lb	.07 kg / .15 lb	.33 kg / .72 lb	.33 kg / .72 lb	.14 kg / .31 lb
» WISP, enterprise	» WISP, enterprise	» WISP, enterprise	» WISP, enterprise	» WISP, enterprise	» WISP, enterprise
» Achieve IP67 protection level for outdoor equipment		» Hotspot » AP	» Two antennas on one radio I/F	» Two antennas on one radio I/F	» Equipment lightning protection

Wireless Antennas

ANTENNA TYPE	GAIN (dBi)	ALLIED TELESIS TenQ ANTENNA MODEL		LOBE WIDTH (°)		POLARIZATION
		2.4GHz	5GHz	Horizontal	Vertical	
OMNI	2	AT-TQ0500		360	45	vertical
	5		AT-TQ0500	360	30	vertical
	8	AT-TQ0201E	AT-TQ0501E	360	17	vertical
	12	AT-TQ0202E	AT-TQ0502E	360	5	vertical
PANEL	8	AT-TQ0221E	AT-TQ0521E	75	50	vertical / horizontal
	15	AT-TQ0222E	AT-TQ0522E	30	30	vertical / horizontal
	20	AT-TQ0223E	AT-TQ0523E	15	15	vertical / horizontal
SECTOR	12	AT-TQ0241E	AT-TQ0541E	120	15	vertical
	14	AT-TQ0242E	AT-TQ0542E	60	15	vertical
	18	AT-TQ0243E		30	15	vertical
PARABOLIC	19	AT-TQ0261E		15	15	vertical
	23		AT-TQ0561E	7.5	7.5	vertical
	24	AT-TQ0262E		8	8	vertical
	27.5		AT-TQ0562E	5.2	5.2	vertical

Antenna Types

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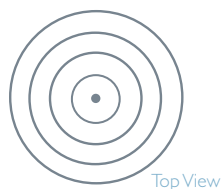
Omni
Omnidirectional antennas radiate power uniformly in every direction on the horizontal plane. Most access points and client devices have omnidirectional antennas.

Top View

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.

Top View

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.

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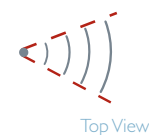
Parabolic
A dish-shaped, directional antenna with a radiation lobe similar to that of a panel antenna. It is usually larger than a panel and has a higher gain. Parabolic antennas are suitable for long distance point-to-point links.

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
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 in polarization 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

Side View

HIGH GAIN

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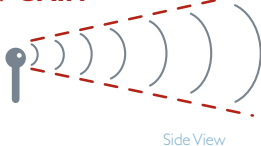
An omnidirectional antenna concentrates the signal in a 360° belt around it. The higher the gain, the thinner the belt, resulting in a better signal far from the antenna — but a narrower communication area.

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 as well as straight roads coverage. High-gain panel and parabolic antennas produce such a small spot that they should be deployed only 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.

Network Management Software

It's a complex job to administer a network. Rapid trouble resolution and the ability to monitor network performance is critical for every business. One size does not fit all when it comes to network management—everything depends on the network and user needs.

Allied Telesis network management software tools can help visualize and plan for network growth while maintaining the health and performance of the network.
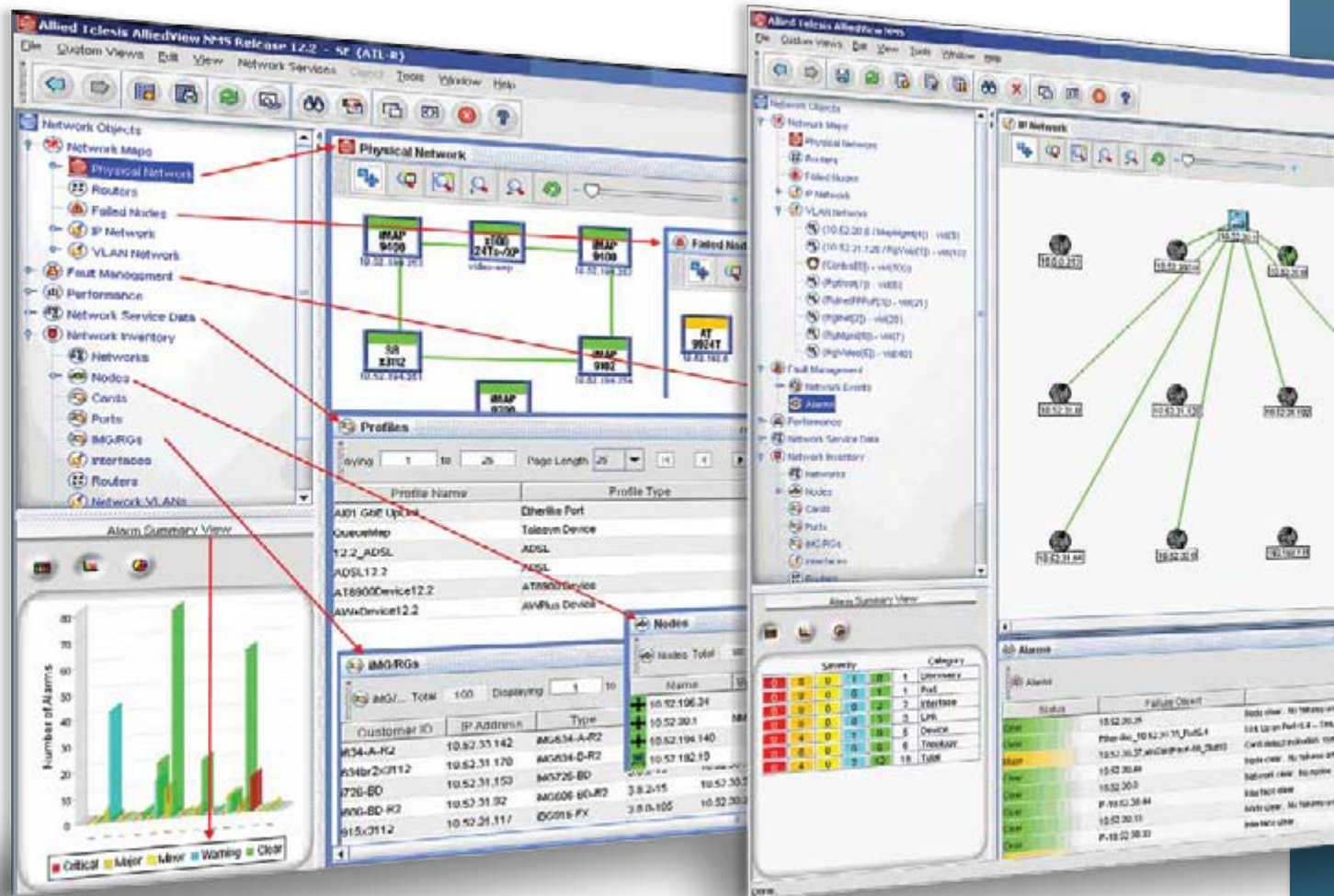
AlliedView™ NMS
Enterprise Edition
NETWORK DEVICE MANAGEMENT SOFTWARE

AlliedView NMS Enterprise Edition is a comprehensive management platform designed to offer enterprise customers powerful tools for the management of their Allied Telesis products as well as third-party switches. AlliedView NMS maximizes the operational efficiency by providing proactive management and diagnostics, reducing operational expense and shortening tasks involved with network administration.

Low-cost Deployment

AlliedView NMS Enterprise Edition is designed to operate on a Windows-based machine running XP, 7 or Server 2003/8/10. With a tiered approach to licensing, users can deploy AlliedView NMS on even the smallest size networks in a cost-effective manner and scale to thousands of network elements.

Network Inventory

AlliedView NMS Enterprise Edition provides automatic topology and device discovery of networks. AlliedView NMS allows for multiple network and device

Features

» Intuitive graphical interface
» Network-wide management
» Network backup/restore
» Network software management
» MIB browser
» GUI snapshot utility
» RMON 4 group support
» NMS alarms with e-mail notifications
» SNMP v1, v2c and v3
» Secure SSH management
» Network VLAN management
» QoS management
» Windows OS server support
» Remote Java and Web clients
» Manages Allied Telesis and third-party elements

views where the user can observe the entire network or focus in on an individual network device. In addition, AlliedView NMS contains an inventory of different device types and enables views of VLANs, network interfaces, ports and physical links.

Flexible Configuration

The extensive management capabilities of AlliedView NMS Enterprise Edition allow the user to manage thousands of Allied Telesis network elements, all configured from a central location.

Products can be easily configured for both Layer 2 and Layer 3 functionality, VLANs, and resilient EPSR and LACP trunks.

Network Upgrades

AlliedView NMS performs scheduled or on-demand network-wide firmware and software upgrades to Allied Telesis and third-party network elements. AlliedView NMS maintains control of software releases to ensure all elements in the network maintain the latest available software.

AlliedView™ NMS
Service Provider Edition
NETWORK DEVICE MANAGEMENT SOFTWARE

AlliedView NMS provides a unified management platform for network, element and service management for every type of service provider and enterprise network. AlliedView NMS supports more than 200 different Allied Telesis products, including switches, routers, multiservice access and fiber- or copper-based gateways.

AlliedView NMS incorporates user interfaces that are efficient as well as operator friendly to take the complexity out of performing routine tasks. The Command Line Interface (CLI) used for provisioning and element management is based on a format widely used and recognized in the industry. It is combined with an intuitive GUI for diagnostics, network mapping and alarm reporting, among other features, which offer the operator an easy-to-understand means of displaying and reviewing information.

The scalability of AlliedView NMS offers a wide range of use from medium-sized networks all the way to large service provider networks with thousands of devices and multiple services in the network. This includes support and administrative security for centralized or distributed client-side operations based on its software architecture. The enhanced tools incorporated into AlliedView NMS address the critical need to reduce time and labor to manage the network, and at the same time offer higher levels of customer service through rapid responsiveness.

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 Sun or 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, status polling and northbound interfaces. All

updates relative to the database are processed through the server.

The server software also supports distributed user clients, and provides scalability in terms of the number of clients that can be concurrently supported. The distributed clients act as the user interfaces between the end-users or administrators and the

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

AlliedView NMS server. Client support comprises the following functions:

» Interfaces with the clients and channels all of their transactions to the server applications

» Generates the user view of the network through database operations

» Generates alarms and autonomous messaging from the server database to the clients

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.

If a new network element, iMG or port is added to the network, auto-discovery provides the operator automated information and updates for inventory and configuration management. This allows the network to be maintained at a "current state," also eliminating any need to manually enter information when changes occur.

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.

Network Topology

Auto-discovery allows the operator to create and view the actual topology of the network, including Layer 2 and 3 networks, VLANs, EPSR rings (domains), physical nodes, physical cards (network interfaces and ports), terminal devices (iMGs) and physical links.

Zero Touch Service Provisioning

Allied Telesis has streamlined the provisioning process through its "one-touch provisioning" feature in AlliedView NMS. Each type of service, as well as port or link, can be assigned its own profile using configuration data that matches the requirement. Once done, the profile can be applied to each subscriber line, port or link in a single keystroke rather than having to re-enter the same data over and over again. In a large service network with large numbers of subscribers, the time savings are tremendous, as is the reduction in configuration errors that sometimes occur.

An additional key benefit in a service network, where revenue generation is critical, is in rapid service deployment and turn up. New subscribers can be added quickly and activated, thereby increasing revenues as well as providing a higher level of customer service.

In addition to auto- or bulk-provisioning the service VLANs using a defined service profile, the same procedure could be applied to the uplink or port for applying configuration and QoS parameters. Auto-configuring enables new nodes to be added and turned up quickly, and likewise new line cards or modules added to existing nodes. At the same time, it ensures conformity in the provisioning of the network configuration — eliminating the problems that sometimes occur when a new piece of equipment is added to the network and configured incorrectly.

Network Upgrades

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

Northbound Interface

AlliedView NMS can be integrated with existing Operation Support Systems (OSS) and Business Support Systems (BSS) through a Web services-based northbound interface. This enables the automation of service activations, changes and deactivations to be done on the higher level OSS/BSS systems and flow through to the Allied Telesis network elements.

Product Index

alliedtelesis.com

Company Details

Allied Telesis™

the **solution** : the **network**

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