

AT-AR725 & AT-AR745, Modular Enterprise Routers

AT-AR725, Modular Enterprise Router

AT-AR745, Modular Enterprise Router with NSM bay

KEY FEATURES

High speed DES & 3DES VPN

**Stateful Inspection
Firewall available**

Flexible LAN/WAN interfaces

QoS & Traffic Shaping

**Upgradeable RAM up to
512MB and Flash memory
up to 208MB**

High speed RISC processor

Multi-protocol routing

RRRP

OSPF protocol support

**Optional BGP4
protocol support**

IPv6

Up to 1023 VPN Tunnels

**Optional Redundant Power
Supply (RPS) available**

AT-AR700 Series routers provide a cost-effective, multi-service router platform specifically designed for medium and large business and branch offices that demand high performance, flexibility, manageability and upgradeability in their access edge routers. With a high performance 80MHz RISC processor, upgradeable SDRAM up to 512MB, Flash up to 208MB, and support for multiple WAN interfaces, the AT-AR700 series delivers a robust and integrated portfolio of routing, virtual private network (VPN), and firewall services.

HIGH SPEED VPN

Virtual Private Networks (VPN) across public data networks allow low-cost, secure connections to be used in place of costly dedicated links for branch offices, extranets, mobile users and teleworkers. The AT-AR700 series meets the IETF IPsec and ISAKMP standards, and it has obtained ICSA certification. When used with the VPN Module, Allied Telesyn's AT-AR700 series routers provide hardware-based encryption offering line-speed DES or 3DES VPN performance up to full-duplex T1/E1 speeds and can terminate up to 1,023 VPN tunnels without affecting routing performance.

FIREWALL

Allied Telesyn's state-of-the-art ICSA certified Stateful Inspection Firewall is available for AT-AR700 series routers, providing an effective method of protecting private networks by monitoring both packet content and session status. It protects against a wide range of Denial of Service (DoS) attacks including Ping of Death, SYN/FIN flooding, Smurf attacks, port scans, fragment attacks and IP spoofing. Email alerts are automatically triggered when such attacks are detected. AT-AR700 series routers also provide event triggers, firewall event logging, and accounting information to create a comprehensive security audit trail. The built-in dual 10/100Mbps Ethernet interfaces can be used to create separate LAN subnets for secure LAN operation, and additional 10Mbps Ethernet PICs may be used to create extra LAN subnets for DMZ applications or to connect to external xDSL modems for broadband applications.

VARIETY OF FLEXIBLE LAN/WAN INTERFACES

The AT-AR700 series offers investment protection with a future-proof router platform design that supports a wide variety of Port Interface Cards (PICs) for flexible configuration. LAN and WAN PICs can be simply and quickly field-upgraded as business needs change.

Several PICs can coexist in the AT-AR700 series routers supporting contemporary or legacy LAN/WAN interfaces and best of breed technology. This allows a smooth transition of technology, and since PIC cards can be used and are interchangeable with all Allied Telesyn modular routers and Layer 3 switches, your investment is secured without introducing incremental business risks.



EXTENDED LAN/WAN SUPPORT

The AT-AR745 is equipped with a powerful Network Service Module (NSM) bay designed to support a variety of high speed LAN/WAN technologies and utilizes a 32Mhz 32-bit PCI style bus for high speed data applications. NSMs are currently available in three forms:

- 4 PIC chassis
- 4 port Basic Rate ISDN
- 8 port Basic Rate ISDN

The NSM architecture is also supported by Allied Telesyn's range of Layer 3 switches, providing WAN connection for high speed LAN switching applications.

QOS & TRAFFIC SHAPING

Advanced traffic shaping features such as RSVP (Resource reSerVation Protocol) and BACP (Bandwidth Allocation Control Protocol) ensure support for multimedia applications. Policy routing allows data to be routed based on traffic type (e.g. WWW versus FTP), type of WAN link, and source and destination addresses. Priority routing is provided to support CoS applications (video, voice, email, web browsing).

ABOUT ALLIED TELESYN

Allied Telesyn leads the world in network technologies for the access edge. Since the company's inception in 1987, Allied Telesyn has been developing IP-based network products for use in video, voice and data networks at the metro edge, in education, government agencies and across the enterprise. Allied Telesyn's access, aggregation and core transport technologies range from simple Ethernet adapters, hubs and media converters to robust multi-layer Gigabit Ethernet switches and routers, wireless systems, DTM and WDM transport solutions for delivering real-time voice, video and data. Allied Telesyn's comprehensive support and professional service programs are suited to meet the growing demands of today's switched broadband infrastructures.

SERVICE & SUPPORT

Allied Telesyn provides value-added support services for its customers under its Net.CoverSM programs. For more information on Net.CoverSM support programs available in your area, contact your Allied Telesyn sales representative or visit our website.

www.alliedtelesyn.com

MINIMUM DOWNTIME

The AT-AR700 series routers offer a variety of redundancy features in order to minimize network downtime.

Virtual Router Redundancy Protocol (VRRP)

VRRP provides automatic router backup in mission-critical environments. Using this feature, multiple AT-AR700 series routers can share a virtual IP address used as the default LAN gateway, so should the master fail, the virtual IP address can be seamlessly assumed by the other routers. LAN devices can continue to be configured (e.g. using DHCP) with a single default gateway address, and since VRRP is a standard Internet protocol, full interoperability with other vendors supporting VRRP is assured.

ISDN, Frame Relay & Dial Back-up

Basic Rate ISDN, Frame Relay and dial back-up is provided on the AT-AR700 series routers, allowing redundancy to be obtained on your WAN connection by assigning a high priority and a low priority to each line. 1:1 protection means that both the line connections are used 100% during no fault condition and at 50% when the fault occurs.

Redundant Power Supply (RPS) Option

The AT-AR745 RPS protects against failure of the main power supply inside the AT-AR745. This external unit supports connection to one or two AT-AR745 units, ensuring non-stop network service in the event of PSU failure. RPS circuitry in the AT-AR745 monitors the state of the internal AC supply, and if it fails, will automatically switch over to the DC supply from the external AT-AR745 RPS unit. Local and RPS fan, and AC and RPS power status can be monitored via SNMP.

TRIGGERED EVENTS & SCRIPTS

A trigger sets off an ordered sequence of scripts and router commands to be executed when a certain event occurs, providing a powerful mechanism for automating the execution of router commands in response to specific events. Each trigger may reference multiple scripts and any script can be used by any trigger. Using this feature, AT-AR700 series routers can, for example, send an email alert to the network manager when trouble occurs, or it can automatically shut down an interface to protect against suspected attacks.

The scripting facility enables sequences of commands to be stored in a script and replayed at any time, allowing the router to be easily configured or quickly re-configured. This is useful when developing a complex router configuration, making the same configuration change to several different routers, or introducing a configuration change that must occur at a particular time. Scripts can be created on a PC and uploaded to the router, or they can be created using the router's own integrated text editor, and they can be activated either from the command line or from a trigger.

TERMINAL SERVER

Like Allied Telesyn's AT-AR300 and AT-AR400 series routers, the AT-AR700 series routers are also able to simultaneously provide terminal server functionality to manage devices like PBXs and print servers through asynchronous ports. This allows the system administrator to remotely and securely monitor and manage up to 26 servers and other devices.

IPv6

IPv6 is the "next generation" protocol designed by the IETF to solve the issues of the current version of Internet Protocol, IP version 4 (IPv4). Most of today's internet uses IPv4, which is now nearly twenty years old. IPv4 has been remarkably resilient in spite of its age, but it is beginning to have problems. The main issue is a growing shortage of IPv4 addresses.

IPv6 fixes a number of problems in IPv4, such as the limited number of available IPv4 addresses. It also adds many improvements to IPv4 in areas such as routing and network auto-configuration. IPv6 is expected to gradually replace IPv4, with the two coexisting for a number of years during a transition period.

Like almost all routers and switches in the Allied Telesyn portfolio, the AT-AR700 series routers support both IPv6 and IPv4 together and on the same ports, allowing a soft migration to IPv6 without any business risk or additional investment.

WORLD CLASS OS & MANAGEMENT SOFTWARE

AlliedWare™

A common OS ensures the AT-AR700 series routers will interoperate seamlessly with other Allied Telesyn fixed function, modular router and Layer 3 switch families allowing operational investment protection for training, management and monitoring.

A standards-based implementation assures full interoperability with all other major network equipment vendors. AT-AR700 series routers are shipped "ready to run" with AlliedWare™, a comprehensive software suite that includes all the features, management capabilities and performance today's networks demand.

AT-ViewPlus

AT-ViewPlus is a Java-based device management solution from Allied Telesyn that provides a user-friendly, window-based environment to manage the AT-AR700 series routers, as well as the complete lineup of Allied Telesyn managed devices. Whether managing a large network distributed across multiple sites or a small network with only a handful of nodes, AT-ViewPlus provides the tools needed to effectively monitor and proactively manage Allied Telesyn's intelligent networking products.

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GENERAL

- High performance 80MHz RISC processor
- 128-512MB upgradeable SDRAM
- 16MB Flash
- Up to 192MB Modular Flash. Compact Flash hardware and software capability to allow for future Flash expansion
- 2 x 10/100 Fast Ethernet, autosensing
- 32MHz 32-bit PCI-style bus NSM bay
- Up to 1023 VPN Tunnels

Port type	AT-AR725 Max. port densities	AT-AR745 Max. port densities using 4PIC NSM
ISDN BRI (S/T and U)	2	6
Synchronous (to 2Mbps)	2	6
Asynchronous serial	10	26
10/100Mbps Fast Ethernet	2	2
10Mbps Ethernet	-	2
(in addition to 2 x 10/100 on base)		
ISDN Primary Rate	2	4
E1/T1	2	4

POWER CHARACTERISTICS

Integral universal power supply:

Input Voltage	100-240vAC, 50-60Hz, 1A
Max Power Consumption	25W, 2A
RPS Input	5v/5.5A, 12v/1A, -12v/0.1A
DC Variant	38-59vDC/2.0A

PHYSICAL CHARACTERISTICS

Width	44cm (17.3")
Depth	33cm (13")
Height	4.4cm (1.73")
Weight	4kg (8.8lb), unpacked, no PICs/NSMs
19" rackmountable	1U high

ENVIRONMENTAL CHARACTERISTICS

Operating Temp.	0°C to 40°C (32°F to 104°F)
Storage Temp.	-25°C to 70°C (-13°F to 158°F)
Relative Humidity	5 to 95% noncondensing
Rear mounted cooling fan	

APPROVALS

Emissions	EN55022, Class A, FCC Class A, VCCI Class A, AS/NZS Cisp 22 Class A
Immunity	EN55024
Safety	
Listing	UL, cUL, and TUV
Standards	UL60950, CAN/CSA-C22.2NO.60950-00, EN60950, AS/NZS3260

FEATURE SUMMARY

Dial-up Networking

- Call Line ID
- Dial-on-Demand
- CLI Callback
- MPP/BACP/BAC/AODI
- DoV

Leased Line

- SYNC up to 2Mbps
- E1/T1/G.703 unchannelized
- E1/T1/G.703 channelized

Networking Protocols

- IP
- IPv6
- IPX/SPX (including Spoofing)
- AppleTalk
- DECNET

Routing Protocols

- Static routes
- RIP
- OSPF
- BGP4

WAN Protocols

- Frame Relay
- X.25
- PPP
- PPPoE client and server

Remote Access Dial-in Support

- Asynchronous serial ports with routing support

LAN Bridging

- Spanning Tree Protocol

Compression

- STAC Compression
- Predictor Compression

IP address management

- IP Multihoming
- Dynamic IP assignment on PPP
- DHCP client, server and Relay
- DNS Relay

Authentication

- PAP/CHAP authentication
- RADIUS/TACACS authentication

Tunneling & Security

- NAT Network Address Translation
- Packet filtering
- L2TP access concentrator
- L2TP network server
- Stateful Inspection Firewall
- HTTP Proxy
- SMTP Proxy
- DES Encryption hardware (optional)
- Triple DES Encryption hardware (optional)
- IPSec
- IKE
- PKI
- SSH Secure Shell for remote management

QoS

- Traffic Shaping
- Packet Priority
- RSVP

Configuration & Management

- Console port
- Command Line Interface (CLI)
- Telnet
- Web browser
- SNMP
- Trigger events
- Scripts
- Local and remote logging
- Configuration loading by TFTP, HTTP, Zmodem

IP Multicasting

- IGMP
- PIM-SM (on IP and IPv6)
- PIM-DM (on IP and IPv6)
- DVMRP (on IP and IPv6)

Minimum Downtime

- VRRP
- Redundant Power Supply (option)
- ISDN and Frame Relay back-up
- Hot swappable NMS
- Load balance (future)

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PCI ACCELERATOR CARD (PAC) OPTIONS

AT-AR061 ECPAC, Compression/Encryption PAC:

Encryption Type	Number of IPsec Tunnels
ESP (Static Encryption Key)	1023
ESP (Dynamic Key Exchange)	511
ESP+AH (Dynamic Key Exchange with Authentication Header)	255

FEATURE OPTIONS

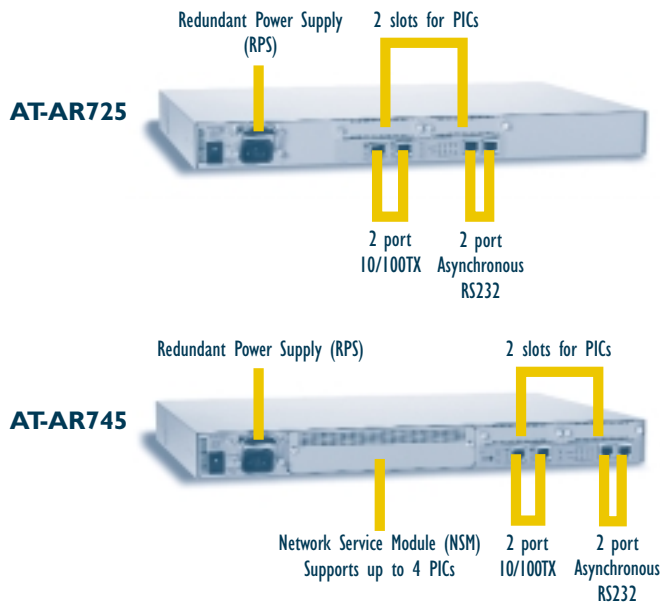
Feature	Description	Features included
AT-AR700-ADVL3UPGRD	Advanced L3 upgrade	IPv6, BGP4, MPLS (future), OSI (IS-IS)
AT-AR700sSecPk	Security pack upgrade	Firewall, SMTP Proxy, HTTP Proxy
AT-AR-3DES	3DES license	3DES*

* AT-AR061 ECPAC hardware encryption required

NETWORK MANAGEMENT SYSTEM OPTION

Feature	Description	Feature included
AT-VIEWPLUS-FULL	AT-VIEWPLUS	This license covers all Allied Telesyn managed devices
AT-SNMPC/WKGRP _{x,y} **	SNMPC WORKGROUP	Up to 1000 Nodes
AT-SNMPC/ENT _{x,y} /BASE**	SNMPC ENTERPRISE	Up to 25000 Nodes

** Version Number



ORDERING INFORMATION

AT-AR725-XX

Modular Enterprise Router

AT-AR745-XX

Modular Enterprise router with NSM bay

Where xx = 10 for U.S. power supply
20 for no power supply
30 for U.K. power supply
40 for Asia/Pacific power supply
50 for Europe power supply
80 for 48VDC power supply

Port Interface Card (PIC) Options

AT-AR020	Single E1/T1 Primary Rate ISDN (Max 2 in the NSM)
AT-AR021	(S) Single Basic Rate ISDN
AT-AR021	(U) Single Basic Rate ISDN
AT-AR022	Single 10Mbps Ethernet
AT-AR023	Single Synchronous to 2Mbps
AT-AR024	Four Asynchronous to 115Kbps
AT-AR026	Four 10/100 Fast Ethernet ports (Not recommended on NSM)
AT-AR027	2 ports VoIP FXS (future)
AT-AR028	2 ports VoIP FXO (future)

Network Service Module (NSM) (AT-AR745 only)

AT-AR040	4 PIC NSM
AT-AR041	8 port Basic Rate (S/T) ISDN NSM
AT-AR042	4 port Basic Rate (S/T) ISDN NSM

Encryption/Compression

AT-AR061	ECPAC, PCI-based DES-3DES Encryption/Compression card
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Memory Upgrade Options

AT-CF128A	Compact Flash card 128MB
AT-SD256A	SDRAM memory card 256MB

Redundant Power Supply Options

AT-AR740RPS	External Redundant Power Supply
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