

AT-AR740, Modular Enterprise Router

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KEY FEATURES

See Feature Summary Pg. 4

The AT-AR740 provides a cost-effective, multi-service router platform for larger branch office and corporate locations demanding high data throughput, upgradeable connectivity and support for multiple WAN services. The AT-AR740 router internetworks seamlessly with Allied Telesyn's comprehensive family of fixed function and modular routers and, by sharing the same operating system, will be instantly familiar. Fully standards-based implementation assures full interoperability with all major router vendors. The AT-AR740 router is shipped "ready to run" with AlliedWare™, a full set of operating system software with advanced features for security, management and performance.

CORPORATE OFFICE PERFORMANCE

Utilizing high-performance RISC-based technology, the AT-AR740 is an excellent choice where high throughput, quick response applications are deployed. Supporting high-speed routing between the two built-in 10/100Mbps Fast Ethernet ports, the AT-AR740 can handle the most data-intensive business applications. Hardware-based STAC/HiFn compression and DES encryption maximize data throughput without compromising routing performance.

SIMPLE PLUG-IN UPGRADES

The AT-AR740 supports up to six Port Interface Cards (PIC), for flexible configuration. LAN and WAN PICs can be simply and quickly field-upgraded as business needs change. PIC connectivity options include E1/T1, Frame Relay, Primary Rate and Basic Rate ISDN, leased circuits to 2Mbps, X.25, multiple Ethernet and asyn-chronous serial for external modem dial-up.

Businesses can migrate to E1/T1 services as traffic grows by adding an E1/T1 PIC, or a Basic Rate ISDN PIC can be added to provide backup services for vital WAN links. PIC cards can be used interchangeably between the AT-AR740 and the AT-AR720 router.



HARDWARE-BASED DATA COMPRESSION OPTION

• To maximize data throughput at higher line speeds, an optional hardware-based STAC LZS compression card (CMAC) is available, offering up to 8:1 data compression at higher line speeds where software based compression is less effective.

EXTENDED LAN/WAN SUPPORT

The AT-AR740 is equipped with a powerful Network Service Module (NSM) 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. The NSM is currently available in three forms:

- 4 PIC chassis
- 8 Synchronous ports to 2Mbps
- 8 Basic Rate ISDN ports

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

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.Cover™ programs. For more information on Net.Cover™ support programs available in your area, contact your Allied Telesyn sales representative or visit our website.

www.alliedtelesyn.com

ROUTERS

 **Allied Telesyn**
Simply connecting the IP world

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BUSINESS-GRADE PALADIN STATEFUL INSPECTION FIREWALL

Allied Telesyn's state of the art Stateful Inspection Firewall is available for the AT-AR740. Stateful Inspection provides 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 attacks including Ping of Death, SYN/FIN flooding, Smurf attacks, port scans, fragment attacks and IP spoofing. Nemesis will automatically transmit e-mail alerts when such attacks are detected.

The AT-AR740 also provides 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. 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.

VIRTUAL ROUTER REDUNDANCY PROTOCOL (VRRP)

VRRP, an Internet standard, provides automatic router backup in mission-critical environments. Multiple AT-AR740's can share a virtual IP address used as the default LAN gateway. Should the master fail, the virtual IP address is seamlessly assumed by the other router. LAN devices can continue to be configured (e.g. using DHCP) with a single default gateway address.

REDUNDANT POWER SUPPLY OPTION

The AT-AR740RPS protects against failure of the main power supply inside the AT-AR740. This external unit supports connection to one or two AT-AR740 units, ensuring non-stop network service in the event of PSU failure.

RPS circuitry in the AT-AR740 monitors the state of the internal AC supply, and if it fails, will automatically switch over to the DC supply from the external AT-AR740RPS unit. Local and RPS fan and A.C. and RPS power status can be monitored via SNMP.

48vDC OPERATION FOR TELCO APPLICATIONS

This factory fit version of the AT-AR740 is designed for installation at telecommunications carrier central offices, where DC operation is often preferred.

IPsec & ISAKMP SUPPORT FOR SECURE VPN OPERATION

IPsec uses hardware encryption to create secure Virtual Private Networks (VPN) across public data networks for remote users, permitting low-cost Internet connections to be used in place of costly dedicated links for branch offices, mobile users and teleworkers.

The AT-AR740 meets the IETF IPsec and ISAKMP standards. IPsec uses encryption technology to ensure confidentiality, integrity and authenticity of user data across public networks such as the Internet. Optional internal DES and Triple DES (3DES) encryption cards (EMAC) provide high-speed encryption of user data in hardware, so that routing performance is unaffected.

MULTIPROTOCOL ROUTING

- RIP, RIP2 and OSPF provide sophisticated network routing capabilities.
- IP, IPX, AppleTalk and DECnet routing and transparent bridging are supported as standard.
- IP Multihoming offers flexible LAN/WAN subnetting.
- L2TP enables tunnelling of non-IP traffic (e.g. IPX) across low-cost Internet links.
- PPPoE enables secure routing of multi-protocol traffic across public Ethernet links.

HIGH-SPEED FRAME RELAY NETWORKING

- Multiple IP addresses are supported per Frame Relay port with logical interfaces.
- Congestion control procedures limit output when the Frame Relay network is busy, avoiding data discard.
- 'Slow Start' mechanism controls initial data transmission into the network.
- Hardware-based DES encryption and STAC compression are also supported on Frame Relay links.

TRAFFIC SHAPING & QUALITY OF SERVICE (QOS)

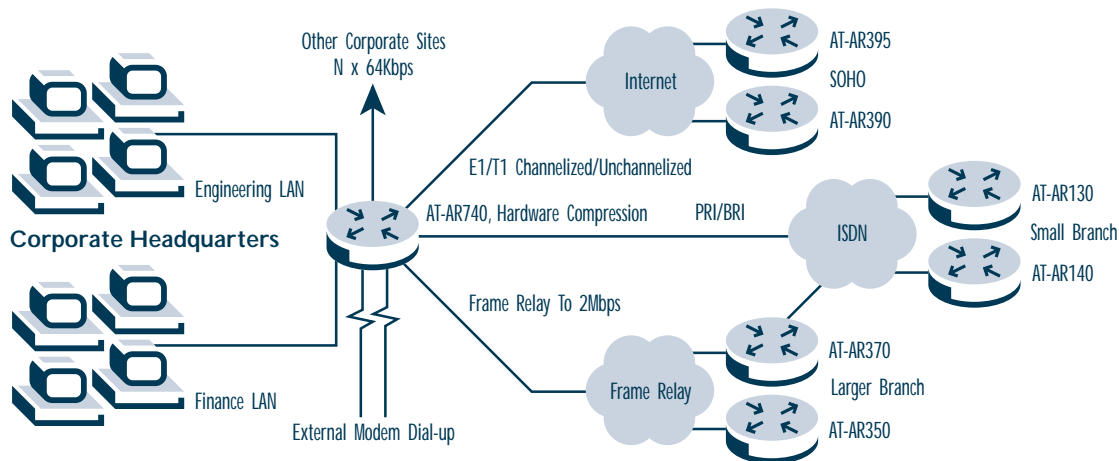
- Advanced traffic shaping features such as RSVP (Resource reSerVation Protocol) and BACP (Bandwidth Allocation Control Protocol) ensure support for multimedia applications.
- Policy routing allows data to be routed based on traffic type (e.g. WWW versus FTP), type of WAN link, and source and destination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

CONFIGURATION & MANAGEMENT

- Remote management is supported across the LAN/WAN.
- Secure Shell (SSH) provides authenticated and encrypted secure remote management. (SSH clients are available from third parties).
- SNMP, MIB II and Enterprise MIB are supported.
- Allied Telesyn's unique Trigger Facility enables the router to automatically respond to events by taking a range of actions from sending an email alert to the network manager to automatically shutting down an interface.

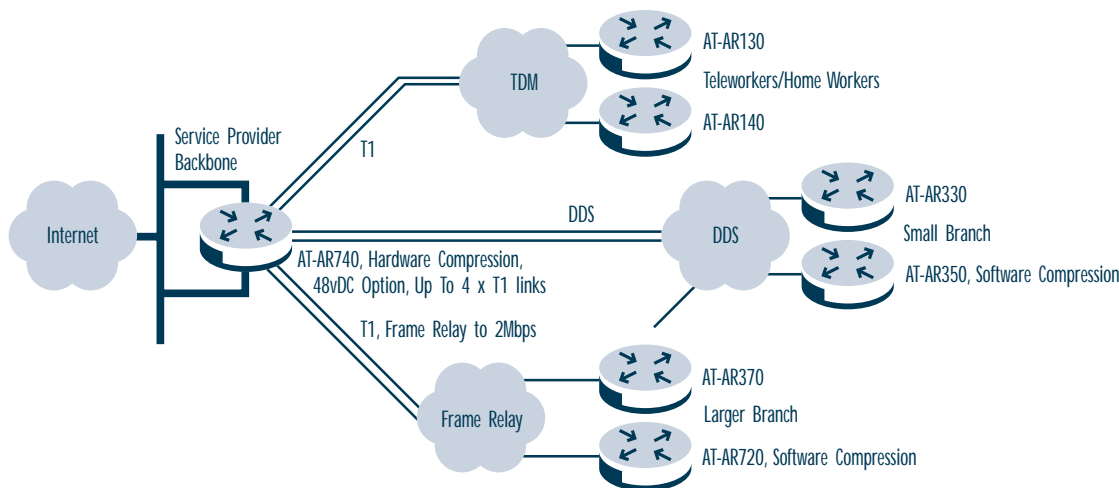
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CORPORATE ACCESS CONCENTRATION



- AT-AR740 is sited at a Corporate HQ and concentrates a wide range of Wide Area Networking (WAN) services including Basic and Primary Rate ISDN, Frame Relay, E1/T1 and Leased line, as well as providing async dial-up connections.
- Two 10/100Mbps departmental LANs have the security of physical separation while still enjoying all the benefits of WAN access.
- High-performance hardware compression in the AR740 interworks transparently with software compression on Allied Telesyn routers at the remote sites.
- New WAN technologies can be added or upgraded using NSM or PIC slide-in modules.

BUSINESS ISP T1 ACCESS CONCENTRATOR



- Concentration of multi-service business access links using DDS links, ISDN and Frame Relay across high-speed T1 links at the Service Provider access site.
- Choice of service on the basis of cost, availability and traffic volume.
- Hardware compression for high-performance data throughput.
- Dual 100Mbps connection to ISP backbone.
- 48vDC option.

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GENERAL

High performance RISC processor
16MB SDRAM
6MB Flash
2 x 10/100 Fast Ethernet, autosensing
32Mhz 32-bit PCI style bus NSM bay

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

POWER CHARACTERISTICS

Universal 110/240vAC power supply, 50/60Hz, 1A
IEC inlet and AC switch
PSU redundancy with external RPS unit AC models only
Optional 48vDC power supply (factory fit), 2A

PHYSICAL CHARACTERISTICS

Dimensions 44cm x 33cm x 4.4cm
17.3" x 13" x 1.73"
1U 19 inch rack mounting brackets available
Weight 8kg (17.6lbs), fully loaded

ENVIRONMENTAL CHARACTERISTICS

Operating Temp. 0°C to 40°C (32°F to 104°F)
Relative Humidity 5 to 95% noncondensing
Rear mounted cooling fan

ELECTRICAL/MECHANICAL APPROVALS

EMI to CISPR 22 class A and IEC801
EN60950 safety approval

FEATURE SUMMARY

SNMP Management
56-bit and 3DES Hardware Encryption Option
Secure VPN Option
IPsec
Stateful Inspection Firewall
ISAKMP Key Management
Hardware Data Compression Option
TPAD (Retail Applications)
Frame Relay
X.25
IP, IPX, AppleTalk and DECnet
Secure Shell Remote Management
RSVP
Virtual Router Redundancy Protocol (VRRP)
DNS Relay
IP Packet Prioritization
Generic Routing Encapsulation (GRE)
Predictor Data Compression
STAC Data Compression
Network Address Translation (NAT)
Dynamic IP Address Assignment
IP Dynamic Filtering Firewall
IP Multihoming
OSPF
RIP and RIP V2
Demand IP and IPX
IPX/SPX Spoofing
Spanning Tree Bridging
BACP
PPP Multilink
PPP over Ethernet (PPPoE)
Bandwidth on Demand
CLI, PAP and CHAP
IP/IPX and Bridge Filtering
HTTP File Download

PORT INTERFACE CARD (PIC) OPTIONS

AT-AR020 Single E1/T1 Primary Rate ISDN
AT-AR021 (S) Single Basic Rate ISDN
AT-AR021 (U) Single Basic Rate ISDN
AT-AR022 Single 10 Mbps Ethernet
AT-AR023 Single Synchronous to 2Mbps
AT-AR024 Four Asynchronous to 115Kbps
AT-AR026 Four 10/100 Fast Ethernet ports

ORDERING INFORMATION

AT-AR740-xx

Leased line and Frame Relay access router

Where xx = 10 for U.S. operation
30 for U.K. operation
40 for Australian operation
50 for European operation
80 for 48vDC power supply

Options

AT-AR010 EMAC
Provides hardware-based DES and 3DES encryption, required for IPsec operation

AT-AR011 ECMAC
Provides hardware-based DES and 3DES encryption, required for IPsec operation, plus hardware-based STAC compression

AT-AR012 CMAC
Provides hardware-based STAC compression

AT-AR013 3DES
Triple DES encryption (software option)

AT-AR014 Firewall
Stateful inspection firewall (software option)

AT-AR040 4 PIC NSM
4 PIC Network Service Module

AT-AR041 Octal BRI NSM
8 port Basic Rate (S/T) ISDN NSM

AT-AR042 Quad BRI NSM
4 port Basic Rate (S/T) ISDN NSM

AT-AR061 ECPAC (Future)
PCI-based DES encryption/compression card

AT-AR740RPS RPS
External redundant power supply

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