VPN Firewall

AT-AR2050V

Allied Telesis Virtual Private Network (VPN) Firewalls are the ideal secure gateway for modern businesses. Powerful VPN functionality is combined with comprehensive routing and switching, providing an innovative high performance solution that is easy to use and very secure.

AMF™ AlliedWare Plus™ OPERATING SYSTEM

As businesses adapt to faster paced operations, with increasing amounts of data, and the need to access company resources from outside the office, the demand for high performance VPN connectivity becomes more urgent.

The AT-AR2050V features comprehensive security and advanced networking capabilities, meeting the demands of distributed businesses that require multi-site VPNs.

High performance

Harnessing the power of multi-core processors and hardware acceleration engines guarantees high performance, by dramatically increasing throughput and enabling sustained low latency traffic inspection.

Powerful firewall

The firewall on the AT-AR2050V inspects every packet passing through it, so different traffic types can be managed in line with business security policies. Allied Telesis VPN Firewalls are the ideal solution for enterprise and branch offices requiring secure online connectivity.

Intrusion Detection and Prevention System (IDS/IPS)

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

Secure Remote VPNs

The Allied Telesis VPN Firewall supports IPSec site-to-site VPN connectivity to connect one or more branch offices to a central office, providing employees company-wide with consistent access to the corporate network.

Remote workers can utilize an SSL VPN connection to encrypt their business data over the Internet, allowing them to utilize all their business resources when working from home, travelling, or otherwise away from the company premises.

Comprehensive routing support

The security features of the VPN Firewall are complemented by advanced routing and switching capability. Full IPv6 routing and protocol implementation ensures today's networks are fully connectable, both internally and externally with other leading edge equipment. Powerful multicasting features support streaming video and voice traffic in modern converged networks.

High availability

When online connectivity is critical, the VPN Firewall has a bypass port to allow a link to another device as a passive backup. Automated failover immediately transmits Internet-bound traffic to the backup device, to maximize the availability of external connectivity, and ensure no loss of business productivity.

Easy to manage

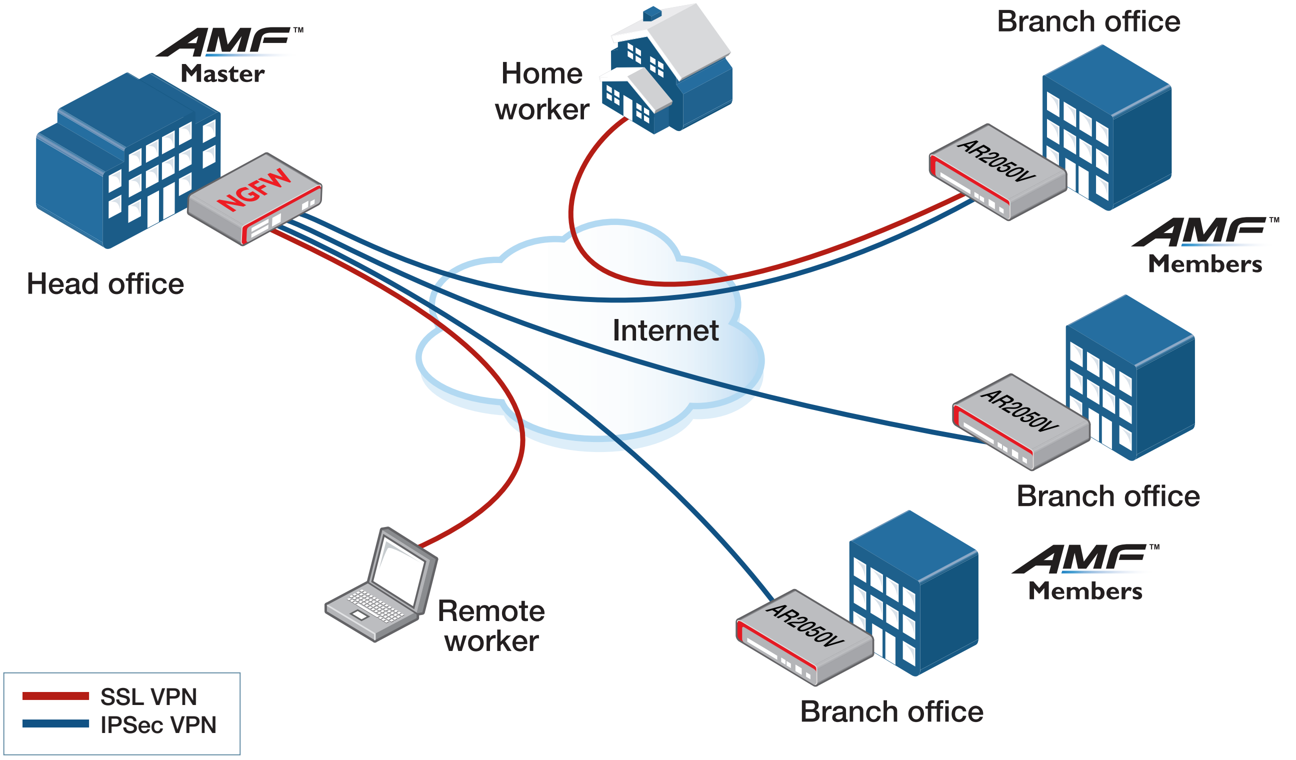
The AT-AR2050V runs the advanced AlliedWare Plus™ fully featured operating system, with an industry standard CLI.

Full support for Allied Telesis Management Framework™ (AMF) allows the Allied Telesis VPN Firewall to integrate with Allied Telesis switching products, forming a network that can be managed as a single virtual entity. A full suite of automated tools ensures that the firewall is fully backed up and recoverable without user intervention, maximizing the availability of online services.

Performance	
Firewall throughput	750 Mbps
Concurrent sessions	100,000
New sessions per second	3,600
IPS throughput	200 Mbps
VPN throughput	400 Mbps

DPI FIREWALL ENGINE	
Stateful packet inspection	All traffic passing through the firewall is inspected and categorized, so it can be managed in line with business policies.
DoS attack protection	Protection against Denial of Service (DoS) attacks, which are designed to consume resources and therefore deny users network and application access.
Intrusion Detection and Prevention System (IDS/IPS)	IDS/IPS provides monitoring, analysis and logging of suspicious events that occur on a network. It can also perform a variety of actions to prevent attacks.
URL filtering	Enables access to particular websites to be allowed (whitelist) or blocked (blacklist) with user-defined lists.
VIRTUAL PRIVATE NETWORKING (VPN)	
IPSec VPN for site-to-site connectivity	High-performance IPSec VPN allows the Allied Telesis VPN Firewall to connect branch offices and other large sites, for secure sharing of business information.
SSL/TLS VPN for secure remote access	Users simply utilize the OpenVPN client on their computer, tablet, or other mobile device for easy access to email, files, and other corporate digital resources when away from the office.
VPN pass-through	Pass-through enables VPN clients to make outbound connections using L2TP, PPTP or IPsec.
Redundant VPN gateway	Primary and secondary VPNs can be configured when using multiple WAN connections, for seamless failover of VPN connectivity to a remote site.
Dynamic routing through VPN tunnels	Dynamic routing over VPN links ensures no loss of connectivity, as traffic is routed through an alternate link in the event of a tunnel failure.
RESILIENCY	
High availability bypass port	The bypass port allows a backup link to be formed to another device, to act as a passive backup. In the event of a power failure, the WAN traffic is immediately transmitted to the backup device for automatic failover of the WAN connection.
VRRP triggers for bypass port failover	The Allied Telesis VPN Firewall supports event-based triggers to automatically change VRRP mastership if a bypass port is activated. This simplifies WAN failover and reduces disruption to other network devices.
QUALITY OF SERVICE (QOS)	
Traffic control	Traffic control allows the amount of bandwidth to be restricted for different traffic classes. RED curves can be defined to predictably drop traffic if congestion occurs.
Bandwidth management	Protect your business-critical traffic by limiting the bandwidth available to non-essential traffic. During peak times, non-essential traffic is limited, allowing critical traffic to flow freely.
NETWORKING	
3G/4G/LTE USB modem	A 3G/4G/LTE USB modem offers an additional secure data connection for critical services, which can automatically switch to a mobile network whenever a primary data connection becomes unavailable.
Layer 2 Tunnelling Protocol (L2TP)	L2TP provides site-to-site connectivity, which can also be protected by IPSec encryption.
IPv6 support	Full support for IPv6 routing, multicasting and security is provided.
Policy-based routing	Policy-based routing enables traffic forwarding decisions to be based on where the traffic is coming from, rather than where it is going to.
AMF management	AMF enables new devices to be pre-provisioned for zero-touch deployment. This simplifies installation, guarantees consistent configuration, and reduces setup time and cost.
AMF backup/recovery	As an AMF member, the VPN Firewall is automatically backed up, and can be recovered with plug-and-play simplicity.
Flexible deployment options	Allied Telesis VPN Firewalls can be deployed in traditional NAT, Layer 2 Bridge, Wire Mode and Network Tap modes.

Key solution



Multi-site VPN connectivity

Allied Telesis VPN Firewalls are the ideal integrated security platform for modern businesses. The powerful combination of VPN connectivity, secure remote access, and routing and switching, provides a single platform to connect and protect corporate data.

This example shows how the AT-AR2050V can provide multi-site connectivity back to a head office. IPSec VPNs to an Allied Telesis Next-Generation Firewall (NGFW) ensure that all staff have full access to digital resources. SSL VPN access provides secure access for workers when travelling, at home, or otherwise away from the office.

Automated network management

In addition to protecting and connecting modern networks, the VPN Firewalls are fully supported by AMF.

AMF is a sophisticated suite of management tools that automate and simplify many day-to-day network administration tasks. Powerful features like centralized management, auto-backup, auto-upgrade, auto-provisioning and auto-recovery ensure streamlined networking. Growing the network can be accomplished with plug-and-play simplicity, and network node recovery is fully zero-touch.

As part of an AMF network, along with all of the network switches, the VPN Firewalls are automatically backed up, ensuring seamless recovery if required.

Features

Firewall

- Multi zone firewall with stateful inspection
- Application Layer Gateway (ALG) for FTP, SIP and H.323
- Application layer proxies for SMTP and HTTP
- Bandwidth limiting control
- Firewall session limiting per user
- Bridging between LAN and WAN interfaces
- Intrusion Detection and Prevention System (IDS/IPS)
- User-defined URL filtering
- DoS and DDoS attack detection and protection
- Maximum and guaranteed bandwidth control
- Static NAT (port forwarding)
- Masquerading (outbound NAT)
- Enhanced NAT (static and dynamic)
- Security for IPv6 traffic

Networking

- Routing mode / bridging mode / mixed mode
- Static unicast and multicast routing for IPv4 and IPv6
- Dynamic routing (RIP, OSPF and BGP) for IPv4 and IPv6
- Flow-based Equal Cost Multi Path (ECMP) routing
- Dynamic multicasting support by IGMP and PIM
- Route maps and route redistribution (OSPF, BGP, RIP)
- Traffic control for bandwidth shaping and congestion avoidance
- Policy-based routing
- PPPoE client with PADT support
- DHCP client, relay and server for IPv4 and IPv6
- DNS client and relay for IPv4 and IPv6
- IPv4 and IPv6 dual stack
- Device management over IPv6 networks with SNMPv6, Telnetv6 and SSHv6
- Logging to IPv6 hosts with Syslog v6

Management

- Allied Telesis Management Framework (AMF) enables powerful centralized management and zero-touch device installation and recovery
- Web-based GUI for quick-start configuration and easy monitoring[1]
- Industry-standard CLI with context-sensitive help
- Role-based administration with multiple CLI security levels
- Built-in text editor and powerful CLI scripting engine
- Comprehensive SNMPv2c/v3 support for standards-based device management
- Event-based triggers allow user-defined scripts to be executed upon selected system events
- Comprehensive logging to local memory and syslog
- Console management port on the front panel for ease of access
- USB interface allows software release files, configurations and other files to be stored for backup and distribution to other devices

Resiliency

- Policy-based storm protection
- Link Aggregation Control Protocol (LACP) on LAN ports
- Spanning Tree Protocol (STP, RSTP) with root guard
- Virtual Router Redundancy Protocol (VRRPv2/v3)

Diagnostic Tools

- Automatic link flap detection and port shutdown
- Optical Digital Diagnostic Monitoring (DDM)
- Ping polling for IPv4 and IPv6
- Port mirroring
- TraceRoute for IPv4 and IPv6

Authentication

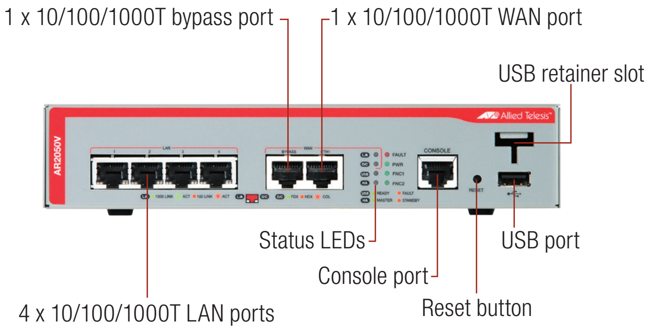
- Authentication, Authorization and Accounting (AAA)
- RADIUS and TACACS+ authentication and accounting
- Local or server-based RADIUS user database
- RADIUS group selection per VLAN or port
- Strong password security and encryption

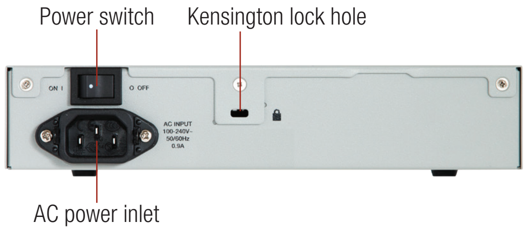
VPN Tunneling

- Diffie-Hellman key exchange
- Secure encryption algorithms: AES and 3DES
- Secure authentication: SHA-1 and SHA-256
- IKEv2 key management
- IPsec Dead Peer Detection (DPD)
- IPsec NAT traversal
- IPsec VPN for site-to-site connectivity
- VPN pass-through
- Dynamic routing through VPN tunnels (RIP, OSPF, BGP)
- Generic Routing Encapsulation (GRE) over IPv6
- Redundant VPN gateway
- SSL/TLS VPN for secure remote access

[1] GUI available Q4 2016

AT-AR2050V VPN FIREWALL





Specifications

	AT-AR2050V
Processor & memory	
Security processor	800MHz dual-core
Memory (RAM)	512MB
Memory (Flash)	4GB
Security features	
Firewall	Stateful multi-zone packet inspection firewall
Application proxies	FTP, TFTP, SIP
Threat protection	DoS attacks, fragmented & malformed packets, blended threats & more
Tunneling & encryption	
IPsec site-to-site VPN tunnels	50
SSL VPN users	100
Encrypted VPN	IPsec, SHA-1, SHA-256, IKEv2, SSL/TLS VPN
Encryption	3DES, AES-128, AES-192, AES-256
Key exchange	Diffie-Hellman groups 2, 5, 14, 15, 16, 18
Dynamic routed VPN	RIP, OSPF, BGP, RIPng, OSPFv3, BGP4+
Point to point	Static PPP, L2TPv2 virtual tunnels, L2TPv3 Ethernet pseudo-wires
Encapsulation	GRE for IPv4 and IPv6
Management & authentication	
Logging & notifications	Syslog & Syslog v6, SNMPv2 & v3
User interfaces	Scriptable industry-standard CLI
Secure management	SSHv1/v2, strong passwords
Management	Allied Telesis Management Framework™ (AMF)
User authentication	RADIUS, TACACS+, internal user database, Web authentication
Networking	
Routing (IPv4)	Static, Dynamic (BGP4, OSPF, RIPv1/v2), source-based routing, policy-based routing
Routing (IPv6)	Static, Dynamic (BGP4+, OSPFv3, RIPng), policy-based routing
Multicasting	IGMPv1/v2/v3, PIM-SM, PIM-DM, PIM-SSM, PIMv6
Resiliency	STP, RSTP
High availability	VRRP, VRRPv3, hardware controlled bypass port
Traffic control	8 priority queues, DiffServ, HTB scheduling, RED curves
IP address management	Static v4/v6, DHCP v4/v6 (server, relay, client), PPPoE
NAT	Static, IPsec traversal, Dynamic NAPT
Link aggregation	802.3ad static and dynamic (LACP)
VLANs	802.1Q tagging
Reliability features	
	Modular AlliedWare Plus operating system Full environmental monitoring of PSU, fan, temperature and internal voltages. SNMP traps alert network managers in case of any failure Variable fan speed control

	AT-AR2050V
Hardware characteristics	
Input power	90 to 260V AC (auto-ranging), 47 to 63Hz
Max power consumption	14W
LAN ports	4 x 10/100/1000T RJ-45
WAN ports	1 x 10/100/1000T RJ-45
High Availability bypass ports	1 x 10/100/1000T RJ-45
Other ports	1 x USB, 1 x RJ-45 console
Product dimensions (H x W x D)	42.5mm (1.67 in) x 210mm (8.26 in) x 220mm (8.66 in)
Product weight	1.8 kg (4.0 lb)
Environmental specifications	
Operating temperature range	0°C to 45°C (32°F to 113°F). Derated by 1°C per 305 meters (1,000 ft)
Storage temperature range	-25°C to 70°C (-13°F to 158°F)
Operating relative humidity range	5% to 80% non-condensing
Storage relative humidity range	5% to 95% non-condensing
Operating altitude	2,000 meters maximum (6,600 ft)
Regulations and compliances	
EMC	EN55022 class A, FCC class A, VCCI class A
Immunity	EN55024, EN61000-3-levels 2 (Harmonics), and 3 (Flicker)
Safety Standards	UL60950-1, CAN/CSA-C22.2 No. 60950-1-03, EN60950-1, EN60825-1, AS/NZS 60950.1
Safety Certifications	UL, cUL, TuV
RoHS Compliance	
	EU RoHS6 compliant, China RoHS compliant
Country of origin	
	China

Ordering information

AT-AR2050V-xx

1 x GE WAN and 4 x 10/100/1000 LAN

AT-RKMT-J15

Rack mount kit to install two devices side by side in a 19-inch equipment rack

AT-RKMT-J14

Rack mount kit to install one device in a 19-inch equipment rack

Where xx =	10 for US power cord
	20 for no power cord
	30 for UK power cord
	40 for Australian power cord
	50 for European power cord
	51 for encryption not enabled

3G/4G USB Modems

For a list of supported USB modems visit http://alliedtelesis.com/securityapps/AR2050V

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