Allied Telesis Autonomous Management Framework™ (AMF)

Automate and simplify network management.
Save time. Save money.

Allied Telesis Autonomous Management Framework (AMF) is a scalable network management platform. It supports Allied Telesis switching, firewall, and wireless products, as well as a wide range of third-party devices—including video surveillance cameras and IP phones—for truly inclusive network automation.

Allied Telesis Vista Manager EX enables graphical monitoring and management of AMF networks, and the full AlliedWare Plus operating system command set is available for all network devices.

Choose locally-based automated network management, or fully cloud-based deployment.

Business value through automation

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

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

Reduce operating costs by up to 60%—AMF saves time and money.

Simplify your network

Software Defined Networking (SDN) is moving networking towards the ideal combination of optimal network utilization and centralized management. An integral part of the Allied Telesis SDN solution, AMF delivers powerful management capabilities that are simple to use. An entire network can be managed from a single point, up-to-date network status is easily monitored using Vista Manager, and actionable reporting is available for timely issue resolution.

AMF reduces the time and skill required to maintain the network. Configuration and firmware files are regularly backed up. Failed devices are automatically regenerated, and configuration changes can be made on multiple devices simultaneously.

For peace of mind, AMF secure mode increases network security with management traffic encryption, authorization, and monitoring.

Fully scalable

AMF can manage networks that span different locations. Whether your network spans the campus, or the continent, AMF is simple to use. Support business growth locally, and in remote locations, with plug-and-play simplicity.

Automated management for up to thousands of devices, means AMF is ready for the inexorable move towards smarter cities and the Internet of Things (IoT).

Flexible deployment

AMF can be deployed with network management integrated right into the Allied Telesis switching or firewall hardware, with licensing options for any size network.

Alternately, AMF Cloud offers all of the functionality of integrated hardware-based management, with the advantages of private or public cloud access and flexibility. AMF Cloud multi-tenant provides a high value solution for large distributed businesses, as well as service providers offering network provisioning and/or management services.

Key Features

AMF automation

▶ Centralized management of all devices
▶ Peace of mind networking with auto-backup
▶ Update the network with auto-upgrade
▶ Plug-and-play expansion with auto-provisioning
▶ Zero-touch replacement with auto-recovery

AMF management and control

▶ Graphical monitoring with Vista Manager EX
▶ Multi-site business support with AMF WAN
▶ Large network support with AMF Controller
▶ Cloud-based management with AMF Cloud
▶ Multi-tenant support on AMF Cloud
▶ 3rd party device support for AMF Guests

Key Features - AMF Automation

AMF is a sophisticated suite of management tools that provide a simplified approach to network management. Powerful features like centralized management, auto-backup, auto-upgrade, auto-provisioning, and auto-recovery, enable plug-and-play networking and zero-touch management.

Centralized management

▶ Centralized management enables CLI commands to be run on multiple devices simultaneously. Commands are issued only once and AMF ensures that they are received and processed by each device. This saves time and reduces the chance of mistakes when configuration changes need to be made across several devices. Any configuration change, monitoring request or debugging of the network can be made to one, many, or all devices with a single command.

> "Configuration changes that were taking 2 hours previously, can now be done in just 10 minutes with AMF."
> — Southern Institute of Technology

Auto-backup

▶ AMF auto-backup reduces effort and the risk of errors by automatically managing the configurations for all devices in the network. Every day, AMF automatically backs up the configurations and firmware for the entire network into a central library, which can be located locally on the Master device, on a server, or fully online with AMF Cloud. Backups can also be created manually after configuration changes. Up-to-date firmware and configuration information is always available for all devices.

Auto-upgrade

▶ Firmware upgrades can be rolled out to groups of devices or the entire AMF network quickly and easily with auto-upgrade. The user simply selects the group of devices to be upgraded, then issues the CLI commands to load the new firmware release. Each device in the group will download the files in preparation for a reboot.

▶ Rather than having to reboot all devices in the group at the same time, AMF can use a rolling reboot. AMF ensures that only one device is rebooting at any one time, so maximum network connectivity is retained throughout the firmware upgrade process.

Auto-provisioning

▶ Auto-provisioning allows unconfigured devices to be added directly into the network because AMF can pre-provision the device even before it is present. This allows zero-touch expansion of the network, as devices can be easily added and AMF automatically selects the correct configuration. If a new device has not been pre-provisioned, then AMF isolates the device until it has been successfully configured, which can be managed automatically by AMF, or manually by the user.

Auto-recovery

▶ Replacing a failed device is truly zero touch with auto-recovery. The replacement device needs no configuration, other than a physical connection to the network. As soon as the device is powered up, AMF automatically reconfigures it using the latest back-up of its firmware and configuration.
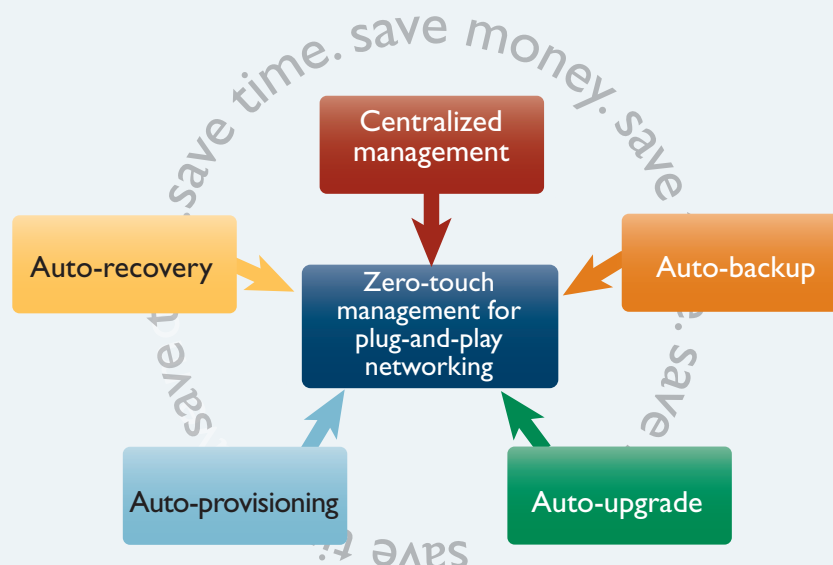
Key Features - AMF Management and Control

The power of AMF extends beyond simplifying and automating network administration. With features such as graphical monitoring and management through Vista Manager EX, large global network support, cloud-based network control, and the addition of 3rd party devices, AMF is a powerful and comprehensive network management solution. You can try AMF for free (managing up to 3 devices) with the AMF starter license.

Vista Manager EX

▶ The Allied Telesis graphical management tool, Vista Manager EX, provides visual management of an AMF network. Users can monitor and manage network switches and firewalls, as well as wireless Access Points (APs). Manage many or all devices at once, while actionable reporting highlights any problems requiring attention. Vista Manager EX provides intuitive usability with an overview dashboard, simple navigation, and further network information—all just a click away.

AMF WAN

▶ The benefits of AMF are not limited to the LAN. AMF networks can also tunnel across the internet so that devices in remote locations can be easily managed from a central location—perfect for multi-site businesses. The tunneled links can even reach across external (non AMF) routers for complete deployment flexibility.

▶ Remote offices can be connected to a head office with encrypted connections for secure company-wide automated network management. Any size AMF network can extend across different locations and different time zones.

AMF Controller

▶ An AMF network with a single Master can support up to 300 devices, which is ideal for small to medium-sized Enterprise networks. For larger networks, the AMF Controller extends the benefits of AMF to thousands of devices. It enables time and money to be saved on a

much larger scale, as the entire network (whether local, city-wide, or global) takes advantage of centralized management, and automated network back-up, upgrade, provisioning, and recovery.

AMF Cloud

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

▶ **Flexible deployment** with private or public cloud installation—use your own local server, or deploy fully online with Amazon web services.

▶ **Scalable** for any size network, with multiple licensing options.

▶ **Lower cost of entry** with no dedicated hardware requirements.

▶ **Reduce costs** with simple pay-as-you-go.

▶ **Web-based interface** for remote network monitoring and management—anywhere, anytime.

▶ **Peace of mind networking** with a full back-up stored in the cloud.

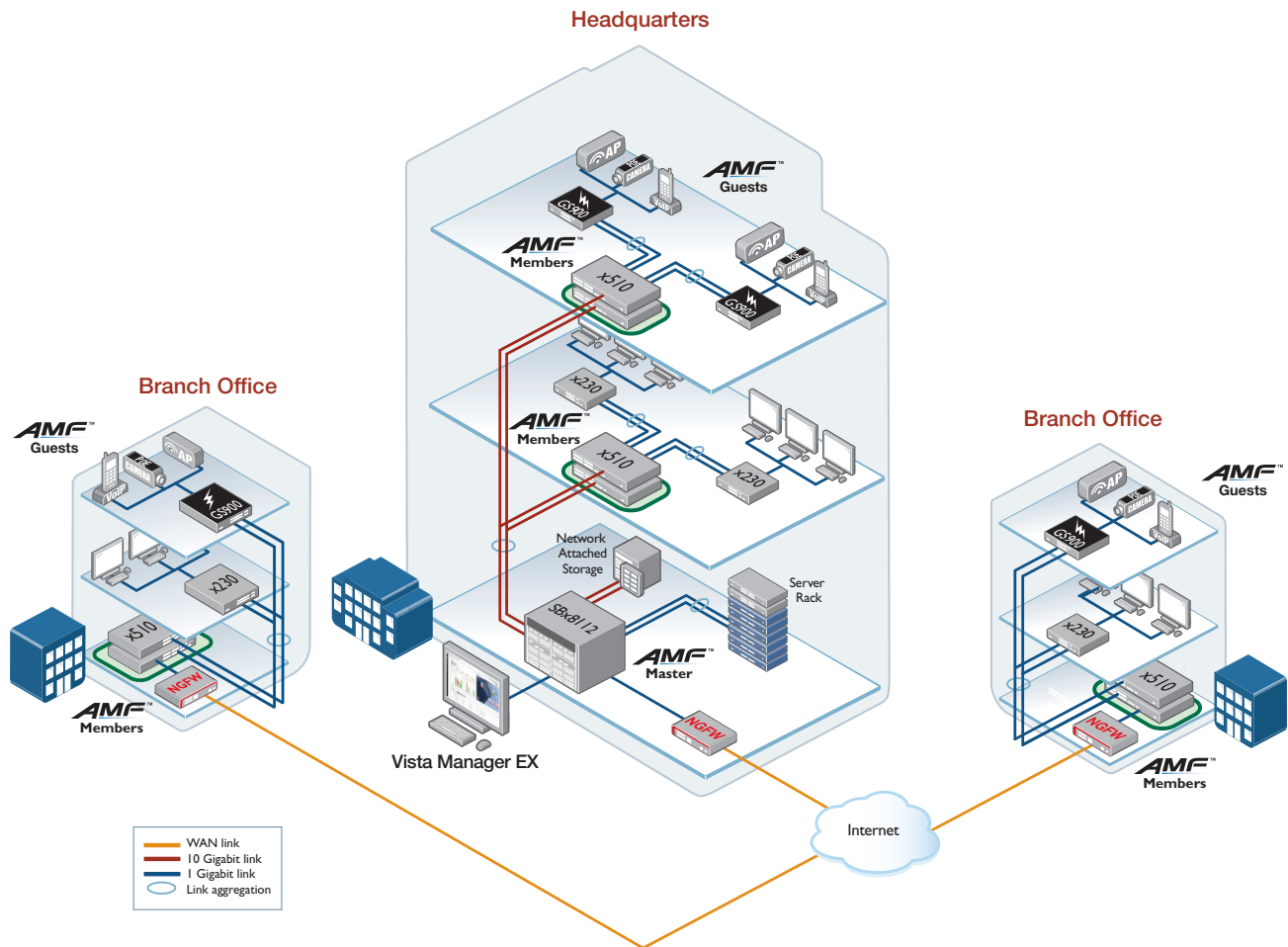▶ **Eco-friendly**—cloud deployment requires no rack space, cooling or power.

Multiple Tenants on AMF Cloud

▶ Support multiple tenants (up to 120) on AMF Cloud. Each tenant network is kept separate from other tenant networks for fully flexible deployment, with central or individual network management options. As an AMF Master capable device is not required in every location, AMF multi-tenant provides a high-value solution for large distributed companies, as well as service providers offering network provisioning and/or management services.

AMF Guests

▶ AMF guestnode allows Allied Telesis wireless APs and additional switching products, as well as third-party devices such as IP phones and security cameras, to be part of an AMF network. AMF guests are recognized by the network, providing a broader view of connected devices, and certain Allied Telesis wireless products utilize selected AMF automated features.

▶ Allied Telesis will continue to deliver further AMF functionality to third-party devices.

Key Solution

Headquarters

Branch Office

Branch Office

Vista Manager EX

Internet

WAN link
10 Gigabit link
1 Gigabit link
Link aggregation

Enterprise AMF network

Today's enterprise businesses demand always-on access to online resources and applications, and require a high performing network that can seamlessly carry multiple converged services.

Businesses of all sizes will benefit greatly from the power and simplicity of AMF, which unifies management of the entire network, and supports plug-and-play networking with zero-touch expansion and recovery.

The multi-site enterprise shown in the diagram has a powerful SwitchBlade x8100 series chassis in the core for high availability. This acts as the AMF Master, automatically backing up the rest of the Allied Telesis switching and firewall products, including devices loacted remotely across WAN links. Any device in any location can be easily upgraded or replaced simply by plugging it in. Centralized management allows configuration or monitoring to be carried out on many, or all, devices at once.

Wireless APs, IP phones and digital security cameras across all locations are AMF guests, and are recognized by the network.

Allied Telesis Vista Manager EX provides graphical monitoring and management of AMF networks. Plugins support the management of wireless and other devices. For more information visit alliedtelesis.com/products/software/vistamanager

> "We use AMF to perform centralized management, which is extremely efficient and effective. I can now successfully administer and manage a large, highly-available network with a very small IT team."
>
> —Kanaiwa Hospital

Key Solution

Smart city AMF surveillance network

All over the world, smart cities are looking to increase information availability, security, and transport efficiency to enhance the quality of urban services, while increasing the safety of citizens.

The city-wide surveillance network in the diagram shows digital cameras that can be deployed at bus stops, train stations, intersections and other public spaces. High-speed Allied Telesis resilient ring technology guarantees live access to all video feeds. This real-time video data helps increase the efficiency of public transport, as well as the safety of the commuting environment for passengers, visitors and city workers.

With AMF Cloud, the network controller is a virtual appliance, providing the advantages of cloud-based access and flexibility. A full up-to-date backup of the network is always stored in the cloud, enabling plug-and-play roll-out of new network devices, and zero-touch recovery.

As AMF guests, the surveillance cameras are part of the broad view of connected devices. The power of AMF provides the ability to configure many or all network devices city-wide with a single command.

AMF and Vista Manager EX support network managers in delivering advanced online services. This powerful single-pane-of-glass improves network visibility, while network maps and an overview dashboard simplify administration.

> "AMF provides integrators with a simpler and more efficient way of delivering a managed network service to their customers."
> —Spark Digital, Systems Integration
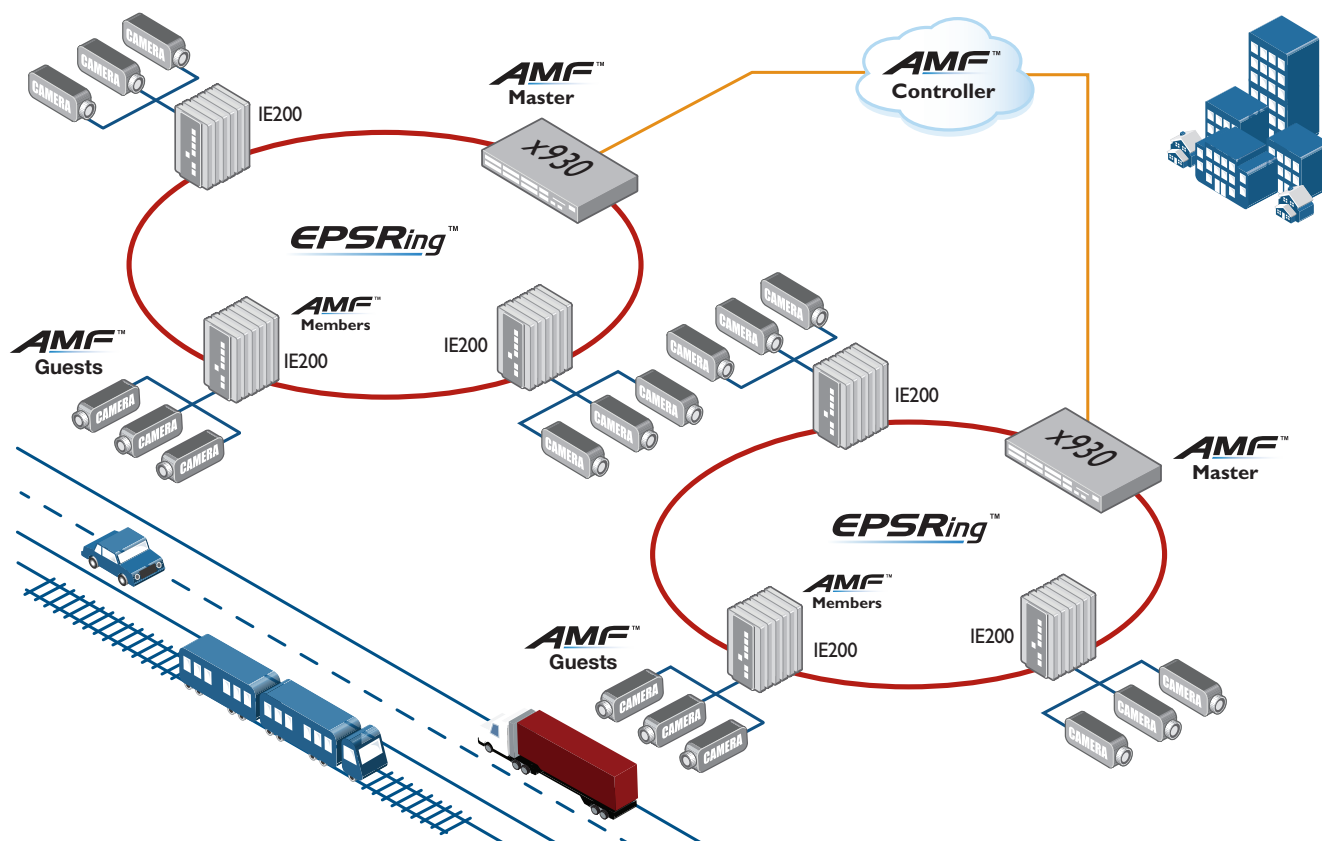
AMF product compatibility and licensing matrix

AMF is available for the following Allied Telesis products, running the advanced AlliedWare Plus™ operating system:

AlliedWare Plus™
OPERATING SYSTEM

NAME	AMF NODE	AMF MASTER	Free starter license	AMF CONTROLLER
Switches				
CentreCOM GS980EM/10H[1]	■	-		-
CentreCOM FS980M Series[1]	■	-		-
CentreCOM GS970M Series[1]	■	-		-
CentreCOM GS980M Series[1]	■	-		-
CentreCOM GS900MX Series[1]	■	-		-
CentreCOM XS900MX Series[1]	■	-		-
IE200 Series	■	-		-
IE210L Series	■	-		-
IE300 Series	■	-		-
IE340 Series	■	-		-
IE510 Series	■	-		-
x210 Series	■	-		-
x220 Series	■	-		-
x230 Series	■	-		-
x310 Series	■	-		-
x320-10GH	■	-		-
IX5-28GPX	■	-		-
x510 Series	■	20 node license: AT-FL-x510-AM20-1YR 20 node license: AT-FL-x510-AM20-5YR	■	-
x530L Series	■	20 node license: AT-FL-x530-AM20-1YR 20 node license: AT-FL-x530-AM20-5YR	■	-
x530 Series	■	20 node license: AT-FL-x530-AM20-1YR 20 node license: AT-FL-x530-AM20-5YR 40 node license: AT-FL-x530-AM40-1YR 40 node license: AT-FL-x530-AM40-5YR	■	-
x550 Series	■	20 node license: AT-FL-x550-AM20-1YR 20 node license: AT-FL-x550-AM20-5YR 40 node license: AT-FL-x550-AM40-1YR 40 node license: AT-FL-x550-AM40-5YR	■	-
x610 Series	■	20 node license: AT-FL-x610-AM20-1YR 20 node license: AT-FL-x610-AM20-5YR	■	-
x900 Series	■	-		-
x930 Series	■	40 node license: AT-FL-x930-AM40-1YR 40 node license: AT-FL-x930-AM40-5YR 80 node license: AT-FL-x930-AM80-1YR 80 node license: AT-FL-x930-AM80-5YR 120 node license: AT-FL-x930-AM120-1YR 120 node license: AT-FL-x930-AM120-5YR	■	-
DC2552XS/L3	■	40 node license: AT-FL-DC25-AM40-1YR 40 node license: AT-FL-DC25-AM40-5YR 80 node license: AT-FL-DC25-AM80-1YR 80 node license: AT-FL-DC25-AM80-5YR 120 node license: AT-FL-DC25-AM120-1YR 120 node license: AT-FL-DC25-AM120-5YR	■	-

[1] CentreCOM products support AMF edge. AMF edge is for products used at the edge of the network, and only support a single AMF link. They cannot use cross links or virtual links.

NAME	AMF NODE	AMF MASTER	Free starter license	AMF CONTROLLER
Switches				
x950 Series	■	40 node license: AT-FL-x950-AM40-1YR 40 node license: AT-FL-x950-AM40-5YR 80 node license: AT-FL-x950-AM80-1YR 80 node license: AT-FL-x950-AM80-5YR 120 node license: AT-FL-x950-AM120-1YR 120 node license: AT-FL-x950-AM120-5YR 180 node license: AT-FL-x950-AM180-1YR 180 node license: AT-FL-x950-AM180-5YR	■	
SwitchBlade x908	■	40 node license: AT-FL-SBX9-AM40-1YR 40 node license: AT-FL-SBX9-AM40-5YR	■	-
SwitchBlade x908 GEN2	■	40 node license: AT-FL-GEN2-AM40-1YR 40 node license: AT-FL-GEN2-AM40-5YR 80 node license: AT-FL-GEN2-AM80-1YR 80 node license: AT-FL-GEN2-AM80-5YR 120 node license: AT-FL-GEN2-AM120-1YR 120 node license: AT-FL-GEN2-AM120-5YR 180 node license: AT-FL-GEN2-AM180-1YR 180 node license: AT-FL-GEN2-AM180-5YR 300 node license: AT-FL-GEN2-AM300-1YR 300 node license: AT-FL-GEN2-AM300-5YR	■	10 area license: AT-FL-GEN2-AC10-1YR 10 area license: AT-FL-GEN2-AC10-5YR 30 area license: AT-FL-GEN2-AC30-1YR 30 area license: AT-FL-GEN2-AC30-5YR 60 area license: AT-FL-GEN2-AC60-1YR 60 area license: AT-FL-GEN2-AC60-5YR
SwitchBlade x8100 series with CFC400 controller card	■	40 node license: AT-FL-CF4-AM40-1YR 40 node license: AT-FL-CF4-AM40-5YR 80 node license: AT-FL-CF4-AM80-1YR 80 node license: AT-FL-CF4-AM80-5YR	■	-
SwitchBlade x8100 series with CFC960 controller card	■	80 node license: AT-FL-CF9-AM80-1YR 80 node license: AT-FL-CF9-AM80-5YR 120 node license: AT-FL-CF9-AM120-1YR 120 node license: AT-FL-CF9-AM120-5YR 300 node license: AT-FL-CF9-AM300-1YR 300 node license: AT-FL-CF9-AM300-5YR	■	10 area license: AT-FL-CF9-AC10-1YR 10 area license: AT-FL-CF9-AC10-5YR 30 area license: AT-FL-CF9-AC30-1YR 30 area license: AT-FL-CF9-AC30-5YR 60 area license: AT-FL-CF9-AC60-1YR 60 area license: AT-FL-CF9-AC60-5YR
Firewalls				
AT-AR2010V	■	-		-
AT-AR2050V	■	-		-
AT-AR3050S	■	-		-
AT-AR4050S	■	20 node license: AT-FL-AR4-AM20-1YR 20 node license: AT-FL-AR4-AM20-5YR	■	-

For AMF Cloud licensing informtion and server specifications, please see the AMF Cloud datasheet available from alliedtelesis.com/documents/datasheet-amf-cloud

To find out more about AMF and how it can improve your network, please contact your local Allied Telesis sales office or visit us online at alliedtelesis.com/amf

NETWORK SMARTER