# Vista Manager Network Appliance

## Network Automation, Monitoring and Management

The Vista Manager Network Appliance (VST-APL) delivers state-of-the-art network automation, with integrated monitoring and management. Combining powerful applications for automating network management and security, and providing visibility with actionable reporting, reduces administration effort, complexity and cost.

**VISTA MANAGER™**
NETWORK APPLIANCE

## Seamless network management

The Vista Manager Network Appliance (VST-APL) seamlessly integrates the tools for effortless management. Allied Telesis Autonomous Management Framework™ Plus (AMF Plus) and Autonomous Wave Control (AT-AWC™) centralize management and automatically optimize all wired and wireless network devices, while the SNMP plug-in supports third party devices. The AT-RADgate[1] RADIUS server manages user authentication, and AMF Security (AMF-Sec) ensures a self-defending network. Vista Manager is a single-pane-of-glass interface to the entire AMF Plus, AWC, SNMP, and AMF-Sec network. VST-APL brilliantly combines these tools in a powerful yet simple management solution.

## Flexible deployment

The VST-APL ships with Vista Manager enabled. Add capability and capacity with subscription-based licenses for AMF Plus Cloud, AWC plug-in, SNMP plug-in, AT-RADgate[1] plug-in, and AMF Security automation and management tools:

### Vista Manager

Vista Manager provides a single-pane-of-glass interface to the entire network. The dashboard includes network details and status, event information, and a topology map.
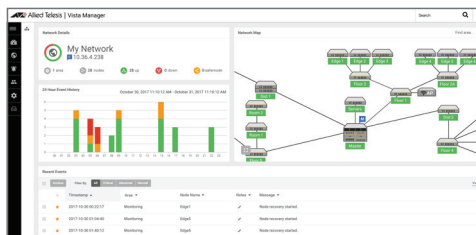


Critical issues, such as internal security threats, link tampering, network loops, environmental alarms, and failed nodes, are highlighted on the map and in the event log for easy resolution. An integrated Syslog server shows informative messages from network nodes and alarms on the network map, while asset management enables firmware and configuration backup and upgrade of one, many, or all devices.

The integrated SD-WAN orchestrator automatically optimizes inter-branch connections for secure application delivery.

The AMF Plus[2] orchestrator makes network management easy. The customizable health monitoring dashboard provides at-a-glance visual status and details of network devices, servers, and more. Easy graphical input let's you manage LAN traffic using QoS and ACLs, create new inter-branch

VPN connections, prioritize and shape application traffic, and manage security.

### AMF Plus Cloud

AMF Plus Cloud centralizes management of switches, firewalls, and routers across the network. Powerful features like auto-backup, auto-recovery, auto-provisioning, and auto-upgrade provide zero-touch administration for truly plug-and-play networking. An AMF Cloud Plus license also enables the AMF Plus orchestrator intent-based networking menu in Vista Manager, for performance driven and proactive management that helps prevent problems before they occur.

### AWC plug-in

AWC enables management and monitoring of Allied Telesis wireless APs, with floor maps, wireless coverage heat maps, and client counts. AWC models AP location and signal strength, and automatically optimizes wireless output and channel selection for a superior user experience. Use innovative Channel Blanket hybrid wireless for a no compromise network with high throughput and seamless roaming, while AWC Smart Connect provides simplified deployment, and a resilient Wi-Fi solution using wireless uplink connectivity.

### Multi-level wireless management

AWC Remote Monitor in Vista Manager EX centrally manages wireless networks that are controlled by Vista Manager mini deployments – including integrating floor and heat maps, and centrally storing all wireless logs for easy review.

AWC Sky Defender in Vista Manager EX detects the MAC addresses of BYOD devices connected to Vista Manager mini wireless deployments, which enables control of which user devices are able to access the network, as well as monitoring their connection status.

AWC Vista Appliance Storage (VAS) allows the history of wireless data, connection status, floor maps and more to be stored on a remote Vista Manager Network Appliance for a selectable time-frame that supports auditing and review as required.

### SNMP plug-in

The Simple Network Management Protocol (SNMP) plug-in enables auto-discovery and management of a wide range of third party devices, which are displayed on the Vista Manager network map alongside AMF plus and AWC devices. Extend network monitoring and enable pro-active management with automated SNMP trap notifications and alerts.

[1] The AT-RADgate RADIUS server is only available in the Asia Pacific region
[2] AMF Plus intent-based features are not supported on multi-tenant networks.

**VISTA MANAGER™**     **AWC**     **AMF-SEC**

# Vista Manager Network Appliance | Network Automation, Monitoring and Management

## AT-RADgate[1] RADIUS server plug-in

Allied Telesis RADIUS server application (AT-RADgate) enables user authentication and network access control. As a Vista Manager plug-in, user and endpoint information is seamlessly integrated for centralized management in line with business security policies.

## AMF-Security

The AMF-Sec controller partners with best-of-breed firewall and security appliances. When the security appliance detects an internal malware threat, the AMF–Sec controller responds immediately to isolate the affected part of the network and quarantine the suspect device. Remediation can be applied so the device can re-join the network with minimal disruption. Responses are configurable, and comprehensive logging forms a clear audit trail. AMF-Sec avoids lost time and unnecessary disruption by enabling a self-defending network.

## Vista Manager visual management

Multiple network map views enable easy visual management.

The color-coded traffic view shown below provides real-time visual status of network utilization and bandwidth across all links. The advanced view uses sFlow and DPI to show protocol and application use in the network.
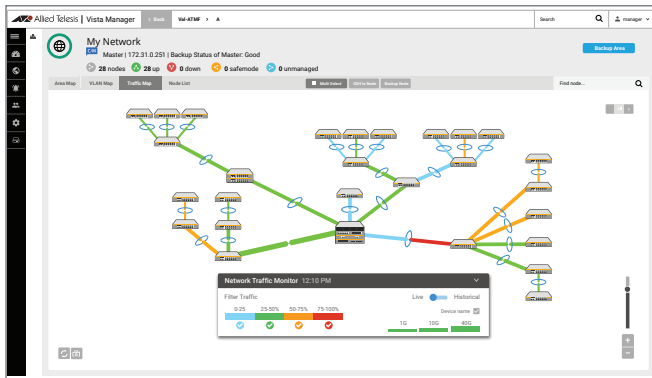


The VLAN view shown below enables simplified network management by creating VLANs across multiple switches with just a few mouse clicks.
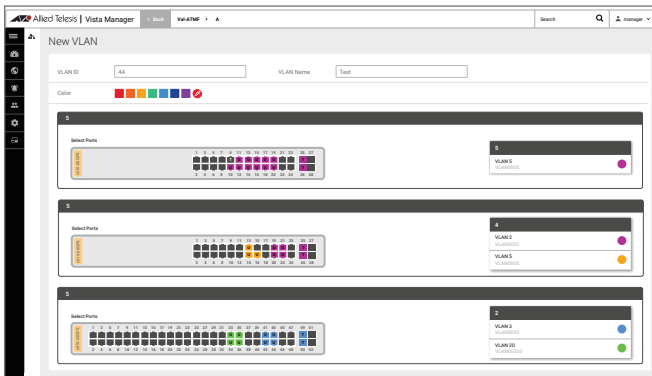


The Health Monitoring dashboard enables proactive management, with event actions that alert administrators of any issues via the network map or an email.

The configurable Network Health tab shown below provides overall status, and visibility of chosen network devices, servers, and more.

[1] The AT-RADgate RADIUS server is only available in the Asia Pacific region
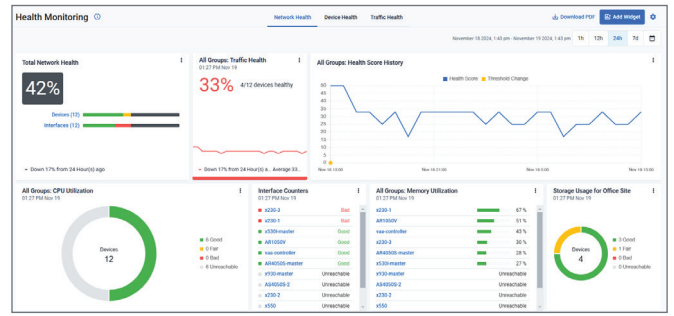


The Device Health tab shows at-a-glance status and trends for CPU, memory, storage, and temperature of Allied Telesis and third-party devices.

The Traffic Health tab shows device error counters and link health across the network.

## Wireless heat map

When using the AWC plug-in, the wireless concierge enables easy visualization with floor and heat maps, including client counts, with the 3D layered view allowing multi-dimensional signal management. AWC Smart Activation (AWC-SAC) intelligently monitors and manages signal transmission, and autonomously controls AP activation to provide the best possible wireless coverage and performance.
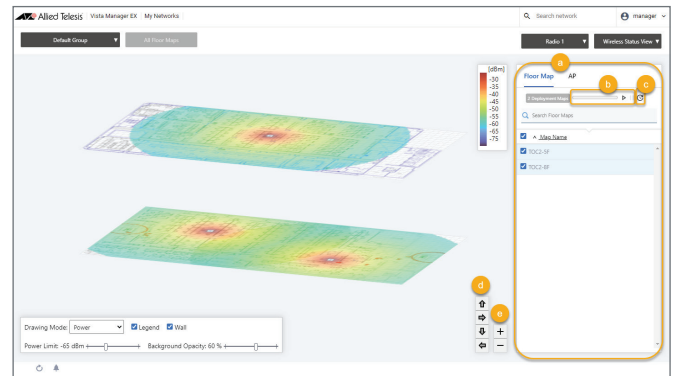


## SNMP graphs

The Simple Network Management Protocol (SNMP) plug-in can acquire detailed information and statistics from a broad range of networking devices. Different views enable users to manage devices the way they prefer, and statistical information such as interface traffic can be graphed.

SNMP automatically searches for SNMP agents and displays each device found in tree form, for an easy view of the overall network topology. The SNMP plug-in is a powerful way to add management flexibility by supporting non AMF Plus devices.

NETWORK SMARTER
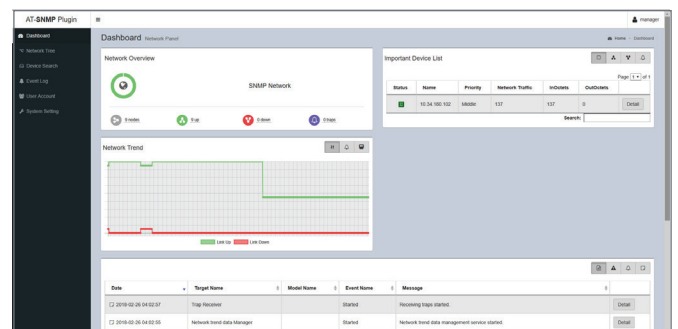
## Secure SD-WAN

AMF-WAN (SD-WAN) improves inter-branch network performance by automatically optimizing and securing application traffic over multiple WAN links between offices.

The SD-WAN orchestrator enables setting acceptable performance metrics for any application, and load-balancing traffic. By monitoring VPN link quality, time-sensitive or critical traffic is automatically switched to the optimal link as required.

Visual monitoring enables easy management of the WAN, with the ability to drill down to specific links or applications to assess live and historical operation.
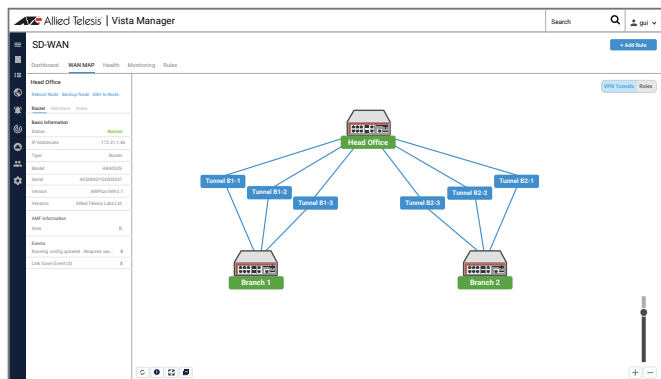


## Intelligent edge security

View agentless endpoints that do not have full authentication capability, but attempt network access, on Vista Manager's asset management page. Local RADIUS and the AT-RADgate[1] RADIUS server are both supported for control of endpoints in line with business security policies.

These endpoints can be allowed or blocked.
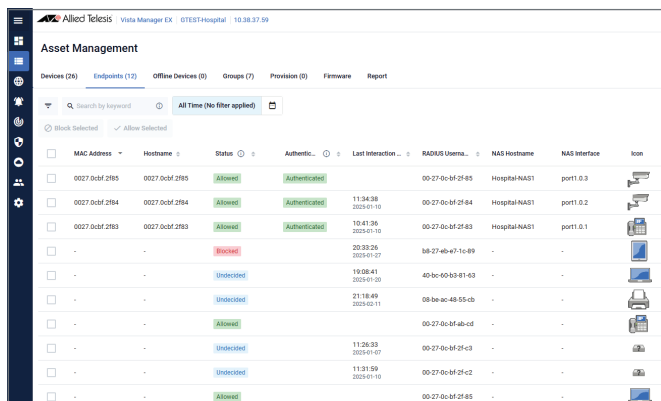


When using the third-party Nozomi Guardian or Microsoft InTune plugins, endpoint security alerts are displayed in Vista Manager on the network map and in asset management.

With Nozomi Guardian endpoint security alerts, endpoints can be automatically blocked by Vista Manager to protect the network based on the severity of the security alert.

[1] The AT-RADgate RADIUS server is only available in the Asia Pacific region

## Intent-based AMF Plus orchestrator

The AMF Plus orchestrator enables effortless translation of business intent into dynamic network change to make network management easy. The AMF Plus orchestrator graphical interface supports:

▶ Dynamic creation of VPNs between locations with graphical drag-and-drop simplicity

▶ Prioritizing business-critical applications between office locations

▶ Shaping inter-branch traffic for maximum performance

▶ Breaking out cloud-based applications directly from the branch. Application databases can be shared from the head-office enabling breakout from a wider range of Allied Telesis branch-office end-points

▶ Simple setting of security levels for multiple locations

▶ Using the configurable heath dashboard to monitor overall status, and key network devices and servers

▶ Health monitoring of CPU, memory, storage, and temperature of Allied Telesis and third-party devices, with automated alerts to simplify fault resolution

▶ Monitoring link health across the network, including latency, jitter, packet loss, and interface status

▶ Managing traffic, and controlling the priority and performance of key applications right through the network, using centralized visual Quality of Service (QoS) administration

▶ Easily visualizing Access Control Lists (ACLs) in a matrix format to quickly and simply check for coverage inconsistencies, and ensure user data and different traffic types are managed in line with business policies. Configure rules for any network or destination to manage traffic through the network
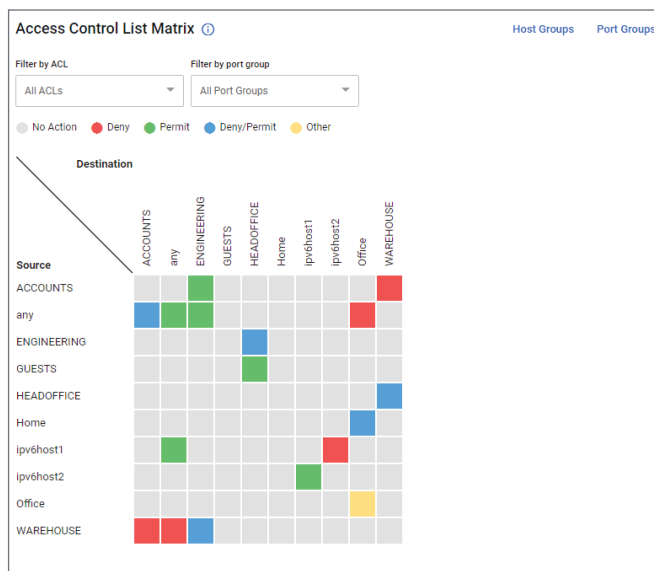


Easy visual ACL management with the AMF Plus orchestrator

# Key Solution - Integrated wired and wireless network management
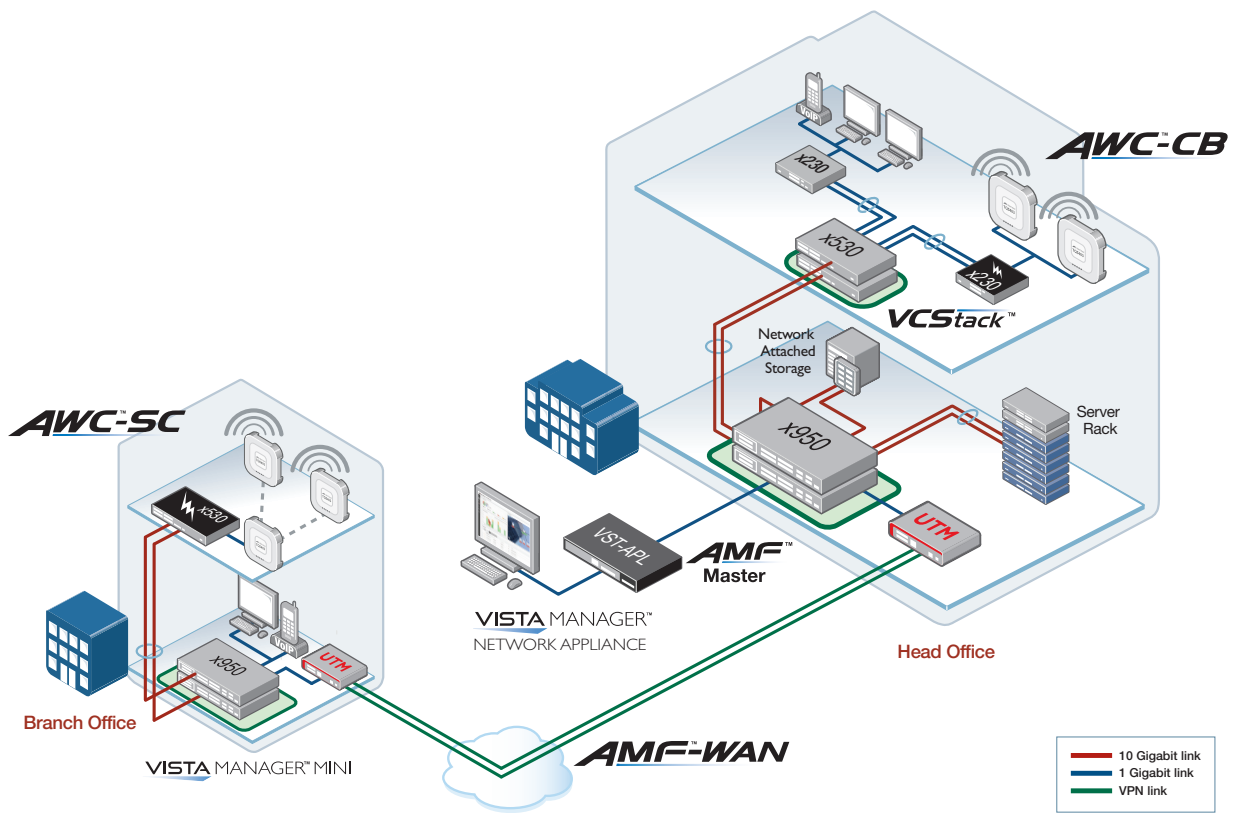


The Vista Manager Network Appliance (VST-APL) enables integrated management of the entire wired, wireless, and inter-branch infrastructure.

AMF Plus automates day to day administration of all switches and firewalls, with centralized management of one, many, or all devices, and features like auto-backup, auto-recovery, auto-provisioning, and auto-upgrade enabling zero-touch administration for plug-and-play networking. Complimenting AMF Plus, the SNMP plug-in supports third party devices for complete network management and monitoring.

AWC regularly analyzes the wireless network, and dynamically updates APs to deliver significant improvements in connectivity and performance, by automatically minimizing coverage gaps and reducing AP interference.  AWC Channel Blanket (AWC-CB) provides a single blanket of wireless coverage for seamless roaming and always-on connectivity, while AWC-Smart Connect (AWC-SC) enables plug-and-play wireless network growth, as new APs only need a

power connection, and will then automatically create resilient wireless uplink connections to other APs.

AWC will also display and integrate APs that are operated by AWC-Lite, where local management is provided by Vista Manager mini on the branch office x950 switch. Logs for these remote APs are collected by AWC, to provide access to the operation and status of all APs across the entire network.

AMF-WAN (our SD-WAN solution) optimizes the performance of business-critical traffic for the best possible performance, and automatically uses the best path to maximize the operation of real-time applications – all with no administrator intervention.

With Vista Manager providing visual monitoring and management of the entire network, the VST-APL is a cohesive and powerful solution to support modern organizations, by meeting their business needs and intent with reduced complexity and cost.

## Key Solution - Integrated security for a self-defending network

1. Targeted attack inside the network! Threat information is seen upline
2. Firewall sends threat notification
3. AMF-Sec instructs switch to shut down threat source
4. Infected device sent to quarantine
5. Security alerts shown on Vista Manager network map
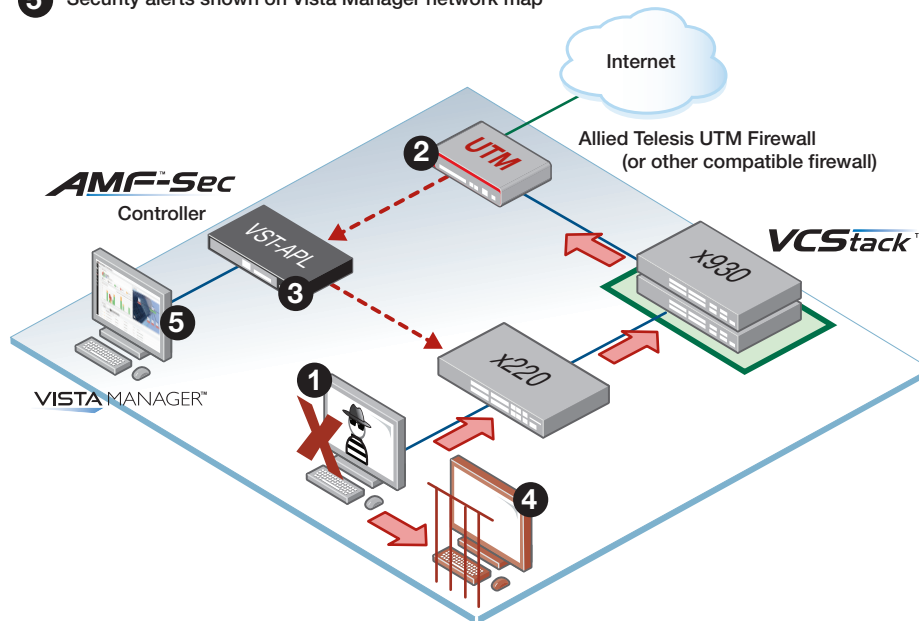


### Block threats at the source

Most threat protection solutions are only capable of blocking suspicious external traffic coming through the firewall from the Internet—this is the traditional "secure border" model.

However, the AMF-Sec controller partners with best-of-breed firewall and security appliances. When the security appliance detects an internal malware threat, the AMF–Sec controller responds immediately to isolate the affected part of the network and quarantine the suspect device. By using the AMF Application Proxy, the AMF-Sec controller can communicate securely with Allied Telesis wireless APs as well as switches, to ensure any malware threats are blocked at the source whether they are from wired or wireless devices.

AMF-Sec provides visual alerts on the Vista Manager network map, to make finding the suspect device simple so remediation can be applied.

### A self-defending network

AMF-Sec does not require administrator action to protect the network, as the controller automatically responds to any threats, whether malicious behavior, or even malware threats introduced inadvertently by staff with USB sticks, BYOD and so on. AMF-Sec can also block unauthenticated users from accessing the network to reduce risks to digital information, online resources, and business-critical applications.

AMF-Sec is an innovative security solution that can monitor traffic entering and traversing the local network, without introducing latency or bottlenecks. AMF-Sec helps organizations avoid lost time and unnecessary disruption, with automated security that enables a self-defending network.

# Vista Manager Network Appliance | Network Automation, Monitoring and Management

## Specifications

| PRODUCT | 10/100/1000T (RJ-45) COPPER PORTS[3] | 100/1000/10GB (RJ-45) COPPER PORTS[3] | USB |
|---|---|---|---|
| VST-APL-06 | 6 | - | 2 |
| VST-APL-10 | 6 | 4 | 2 |

## Physical Specifications

| PRODUCT | WIDTH X DEPTH X HEIGHT | WEIGHT | |
|---|---|---|---|
| | | UNPACKAGED | PACKAGED |
| VST-APL-06 | 438 x 292 x 44 mm (17.24 x 11.49 x 1.73 in) | 4.5 kg | 7.5 kg |
| VST-APL-10 | 438 x 292 x 44 mm (17.24 x 11.49 x 1.73 in) | 4.9 kg | 7.9 kg |

## Power, Heat and Noise

| PRODUCT | MAX POWER CONSUMPTION | MAX POWER DISSIPATION | NOISE |
|---|---|---|---|
| VST-APL-06 | 110W | 375.4 BTU/h | 29 dBA |
| VST-APL-10 | 150W | 511.9 BTU/h | 29 dBA |

## Operational Limits

| AMF PLUS CLOUD | |
|---|---|
| AMF Plus Controllers supported | 1 |
| AMF Plus Masters per AMF Plus Controller[4] | 60 |
| AMF Plus Members per AMF Plus Master | 300 |

| VISTA MANAGER | | |
|---|---|---|
| AMF Plus Areas[5] | | 1 |
| AMF Plus Devices | | 300 |
| SNMP Devices | | 1000 |
| AWC remote wireless AP management | Vista-mini instances able to be connected to the AWC plugin | 60 (AP logs retained for 366 days) |
| APs (whether directly managed or managed through Vista-mini instances) | System | 500 |
| | TQ Series APs | 500 |
| | TQm Series APs | 100 |
| Wireless Clients | | 3000 |
| Channel Blanket (AWC-CB) | Total Blankets | 20 |
| | Blankets per AP | TQ5403/TQ5403e: 6 TQ6602: 32 |
| | APs per Blanket | 100 |
| | Clients per Blanket | TQ5403/TQ5403e: 500 TQ6602: 320 |
| Smart Connect[6] (AWC-SC) | Maximum APs | 20 |
| | Maximum hops | 2 |
| | Maximum APs per hop | 4 |

| AMF-SEC | |
|---|---|
| Locations | 300 |
| AMF Plus network devices | 300 |
| End user devices | 5000 |
| User device MAC addresses | 5000 |
| Policies associated with end user devices | 5000 |

## Environmental Specifications

- ▶ Operating temperature range: 0°C to 40°C (32°F to 104°F)
- ▶ Storage temperature range: -25°C to 70°C (-13°F to 158°F)
- ▶ Operating relative humidity range: 5% to 90% non-condensing
- ▶ Storage relative humidity range: 5% to 95% non-condensing
- ▶ Operating altitude: 2,000 meters maximum (6,561 ft)

## Electrical Approvals and Compliances

- ▶ EMC: CISPR 32 class A, EN55032 class A, FCC class A, VCCI class A, ICES-003 Class A, RCM (AS/NZS CISPR 32), CE
- ▶ Immunity: EN55035, EN55024, EN 55035, IEC 61000-3-2, IEC 61000-3-3, ETSI EN300 386, ETIS EN300 132-2

## Safety

- ▶ Standards: UL62368, IEC60950-1, IEC62368, EN62368
- ▶ Certification: UL, TUV

## Restrictions on Hazardous Substances (RoHS) Compliance

- ▶ EU RoHS compliant
- ▶ China RoHS compliant

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[3] The copper ports are used for management connectivity, and do not support network switching capability.

[4] Multi-tenant mode is not supported.

[5] While AMF Plus Cloud supports an AMF Plus controller and multiple AMF Plus areas (with an AMF Plus Master each), Vista Manager only provides visual management for a single area comprising 1 AMF Plus Master and up to 300 members.

[6] There are 3 levels of APs in an AWC-SC network: APs directly connected to a switch or router are Root APs, while APs at the edge of the AWC-SC wireless network are Terminator APs. Connector APs are deployed between the Root and Terminator APs.

AWC-SC supports a maximum of 4 Connector APs (at hop 1), and 16 Terminator APs (at hop 2).

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### Feature Licenses

| LICENSE | DESCRIPTION |
|---|---|
| AT-AMFCLOUD-PLUS-CTRL-1YR | 1 year AMF Plus Controller 10 areas base/add-on license (maximum 300 areas) |
| AT-AMFCLOUD-PLUS-CTRL-5YR | 5 year AMF Plus Controller 10 areas base/add-on license (maximum 300 areas) |
| AT-AMFCLOUD-PLUS-BASE-1YR | 1 year AMF Plus Master license for up to 10 nodes |
| AT-AMFCLOUD-PLUS-BASE-5YR | 5 year AMF Plus Master license for up to 10 nodes |
| AT-AMFCLOUD-PLUS-EX1-1YR | 1 year AMF Plus Master 1 node add-on license (maximum 300 nodes) |
| AT-AMFCLOUD-PLUS-EX1-5YR | 5 year AMF Plus Master 1 node add-on license (maximum 300 nodes) |
| AT-AMFCLOUD-PLUS-EX10-1YR | 1 year  AMF Plus Master 10 node add-on license (maximum 300 nodes) |
| AT-AMFCLOUD-PLUS-EX10-5YR | 5 year  AMF Plus Master 10 node add-on license (maximum 300 nodes) |
| AT-FL-VISTA-SNMP-1YR[7] | 1 year license for SNMP plug-in |
| AT-FL-VISTA-SNMP-5YR[7] | 5 year license for SNMP plug-in |
| AT-FL-VISTA-AWC10-1YR | 1 year wireless controller (AWC) plug-in license for 10 APs |
| AT-FL-VISTA-AWC10-5YR | 5 year wireless controller (AWC) plug-in license for 10 APs |
| AT-FL-VISTA-CB10-1YR-2022[8] | 1 year Vista Manager AWC-Channel Blanket and AWC-Smart Connect license for managing up to 10 access points |
| AT-FL-VISTA-CB10-5YR-2022[8] | 5 year Vista Manager AWC-Channel Blanket and AWC-Smart Connect license for managing up to 10 access points |
| AT-FL-SESC-BASE-1YR[9, 10] | 1 year AMF-Sec base license for 10 nodes |
| AT-FL-SESC-BASE-5YR[9, 10] | 5 year AMF-Sec base license for 10 nodes |
| AT-FL-SESC-ADD10-1YR[9, 10] | 1 year AMF-Sec 10 node add-on license |
| AT-FL-SESC-ADD10-5YR[9, 10] | 5 year AMF-Sec 10 node add-on license |
| AT-FL-SESC-ADD50-1YR[9, 10] | 1 year AMF-Sec 50 node add-on license |
| AT-FL-SESC-ADD50-5YR[9, 10] | 5 year AMF-Sec 50 node add-on license |
| AT-FL-SESC-ADD100-1YR[9, 10] | 1 year AMF-Sec 100 node add-on license |
| AT-FL-SESC-ADD100-5YR[9, 10] | 5 year AMF-Sec 100 node add-on license |
| AT-FL-SESC-ADD200-1YR[9, 10] | 1 year AMF-Sec 200 node add-on license |
| AT-FL-SESC-ADD200-5YR[9, 10] | 5 year AMF-Sec 200 node add-on license |
| AT-FL-AMFSec-BASE10-1YR[11, 12] | 1 year Base software including 10 node license |
| AT-FL-AMFSec-BASE10-5YR[11, 12] | 5 year Base software including 10 node license |
| AT-FL-AMFSec-ADD10-1YR[11, 12] | 1 year license for an additional 10 nodes |
| AT-FL-AMFSec-ADD10-5YR[11, 12] | 5 year license for an additional 10 nodes |
| AT-RADIUS-BASE-1YR[13] | 1 year AT-RADgate RADIUS server license (1000 entries) |
| AT-RADIUS-BASE-5YR[13] | 5 year AT-RADgate RADIUS server license (1000 entries) |
| AT-RADIUS-ADD1000-1YR[13] | 1 year AT-RADgate RADIUS server add-on license (1000 entries) |
| AT-RADIUS-ADD1000-5YR[13] | 5 year AT-RADgate RADIUS server add-on license (1000 entries) |

[7] If your AlliedWare Plus network is running AMF Plus automation and management, then the SNMP plugin is automatically enabled in Vista Manager with no license required.  If the network is running the older AMF automation and management, then the Vista Manager SNMP license is required

[8] Channel Blanket and Smart Connect require an AWC-CB license, an AWC license, and a Vista Manager EX base licenses to operate. Channel Blanket is supported on TQ6702 GEN2, TQ6602 GEN2 and TQ6602 APs. Smart Connect is supported on TQ6702 GEN2 and TQ6602 GEN2 APs.

[9] This license is only available with the software version up to 2.2.x.

[10] AMF-Sec version 2.2.x runs on CentOS

[11] AMF-Sec version 2.3.x runs on the hardware-based Vista Manager Network Appliance (VST-APL), or the software-based Vista Manager virtual deployment option (VST-VRT).

[12] This license is available with AMF-Sec version 2.3.x or later

[13] The AT-RADgate RADIUS server is only available in the Asia Pacific region

## Ordering Information

**AT-VST-APL-06-60**
AT-Vista Manager Network Appliance with 6 x 10/100/1000T copper ports and a single fixed power supply (19 inch rack-mount brackets and four regional AC power cords included)

**AT-VST-APL-10-60**
AT-Vista Manager Network Appliance with 6 x 10/100/1000T, and 4 x 100/1000T/10G copper ports and a single fixed power supply (19 inch rack-mount brackets and four regional AC power cords included)