INFRASTRUCTURE REQUIREMENTS

Respond to each item below:

1) IITS telecommunications infrastructure must meet DOC Telecommunication Distribution Standards (TDIS) http://www.doc.wa.gov/about/business/capital-planning/resources.htm#links. Note that Leviton SCS may be installed as an approved substitute to SystiMax Solution in the TDIS. No other substitution will be allowed. Acknowledge Vendor’s acceptance of this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus acknowledges and accepts this requirement.

2) Incarcerant phone systems will not use the Administration Backbone or Horizontal Cabling Plant. Acknowledge Vendor’s acceptance of this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus acknowledges and accepts this requirement.

Securus’ phone system will not use the Administration Backbone or Horizontal Cabling Plant.

3) All wireless devices and access points must be 5GHz and the access points must be weather proof and also rated to be installed indoors. Describe how Vendor will meet this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Our currently installed WAPs support 2.4Ghz and 5ghz. The current JPay tablets at WA DOC operate on 2.4 Ghz. The new JP6 tablets operate on 2.4Ghz and 5GHz.

4) Vendor must conduct and provide a pre and post wireless site survey to validate coverage of the 5GHz band and must ensure complete wireless coverage of incarcerant living quarters except for those areas that are purposely restricted from coverage. Describe how Vendor will meet this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

The current wireless network at WA DOC, which Securus recently upgraded, contains Ruckus Zoneflex R600 Wireless Access Points (WAPs). They can be set to 2.4GHz or 5GHz coverage. Currently they are set to 2.4 GHZ because the current JPay tablets at WA DOC
operate on 2.4 Ghz. The new JP6 tablets operate on 5GHz. When we start providing JP6 tablets, we will conduct and provide a pre and post wireless site survey using AirMagnet Software to validate coverage of the 5GHz band and will ensure complete wireless coverage of incarcerant living quarters, except for those areas that are purposely restricted from coverage.

5) All wireless access points must be protected from tampering. Describe how Vendor will meet this requirement.

Vendor's response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

The Ruckus Zoneflex R600 WAPs are commercial grade and installed 25’ in the air, which makes them virtually inaccessible for tampering. Typically, portable cranes are need to install and access them. Even in the extremely unlikely event an incarcerant is able to reach a WAP, the worst that would happen is the WAP might be disabled, as opposed to being usable for some illicit purpose. In the event we detect an inoperable WAP, we will dispatch a technician to repair or replace it.

6) The system must be separate from the State Government Network (SGN). Acknowledge Vendor’s acceptance of this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus acknowledges and accepts this requirement.

7) The wireless placement plan must first receive the approval of the facility’s superintendent or designee and must honor the coverage boundaries required by the facilities. Acknowledge Vendor’s acceptance of this requirement.

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus acknowledges and accepts this requirement.

8) What speed of wireless service will Vendor provide and how will it be provided?

Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

The wireless speed will be 54 Mbps.
9) All construction/installation work to be carried out at a facility must first receive the approval of the Superintendent of the facility, must be properly permitted, and must be performed using industry standards. Acknowledge Vendor's acceptance of this requirement.

Vendor's response:

SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus acknowledges and accepts this requirement.

10) Vendor must provide redundancy for service critical hardware/infrastructure to reduce outages or downtime. Describe how Vendor will meet this requirement.

Vendor's response:

SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Redundancy is a key component of the NextGen Secure Communications Platform™ (NextGen SCP™). While operating on a single platform, Securus’ NextGen SCP runs on duplicate environments in separate data centers in Atlanta, Georgia, and Dallas, Texas. Each component has N+1 redundancy, meaning that a failure of any one component does not result in downtime because there is a backup available to resume its function. In addition to the inherent redundancy of NextGen SCP, Securus has also designed redundancy into all support systems, either through N+1 configuration, database clusters, virtual machines, load balancing, or other failover methods. All network transport has redundant network equipment and routing to allow traffic to reroute in the event of a failure.

The NextGen SCP platforms in Dallas and Atlanta were designed and built to the same specifications. This standardization allows re-homing of systems from their primary data center to an alternate data center in the event of a failure.

All circuits coming into Securus data centers use multiple diverse carriers, including the interconnections between data centers. In the event of a failure, traffic will reroute across a redundant circuit or path. In addition, Securus uses multiple carriers for incarcerant calls from the NextGen SCP platform. Calls to family and friends will immediately reroute upon failure of any carrier.

Securus uses multiple methods of storage to minimize the risk of data loss. All critical systems and data are backed up at regularly scheduled intervals and stored offsite for retrieval, if needed. In addition to offsite storage, Securus replicates voice clips, call recordings, and validation data between the data centers.

Securus uses industry-leading vendors for all platform and network hardware, including Dell, Cisco, Oracle, EMC, Big IP, and Intel. In addition to the redundancy designed into the platform and network, Securus also maintains a spare parts inventory onsite at each of our data centers to expedite repair of a failed component. Securus also maintains premium-
level support contracts with each vendor that define stringent service level agreements in case of a failure.

11) **What will be the specifications of the infrastructure (servers, etc.)?**

   **Vendor’s response:**

   **SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.**

   The onsite hardware that will be used for our infrastructure will include the following. Please see Exhibit A – Hardware Tech Specs for full technical specifications:

<table>
<thead>
<tr>
<th>Item</th>
<th>Make/Model</th>
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<tr>
<td>Routers</td>
<td>Adtran Netvanta 3140</td>
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<tr>
<td>Servers</td>
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<tr>
<td>Switches</td>
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<td>Adtran, Dual Mounting Tray</td>
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<td>Adtran, Netvanta 1534P</td>
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<td>Wireless Access Points</td>
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<td>V-Line, Shelf, #SB-745S1919 SFB</td>
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Depending on the space configuration at each WA DOC facility, Securus has multiple rack options to house the components of our system.
12) What is Vendor’s plan to keep infrastructure current?
Vendor’s response:
SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.

Securus provides highly reliable service from initial system design and installation through ongoing maintenance and support. Our plan to keep infrastructure current includes integrated remote programming, diagnostics, downloading, and troubleshooting capabilities combined with the service of our account management and field service teams.

Securus continuously monitors all data centers, infrastructure components, platform systems, and incarcerant telephone systems (ITS) using the SolarWinds® suite of network performance monitors. The SolarWinds performance monitors are highly configurable to provide real-time monitoring, event notification, alert history, and statistical information. An alarm condition creates immediate visual alerts and email notifications.

Remote Programming, Diagnostics, and Troubleshooting

The Securus Network Operations Center (NOC) monitors all Securus systems and our network. The Securus Network Operations Center (NOC) provides 24x7x365 monitoring for all Securus systems, network, back-office systems, and data centers. The NOC proactively monitors these systems to ensure performance is optimal and uninterrupted. In addition to system and network-level monitoring, the NOC also monitors real-time video surveillance and environmental alerts for our data centers. Securus maintains a fully redundant backup NOC at a separate physical location, should services be disrupted at the primary location.
Our NOC is located at our headquarters in the Dallas, Texas, metro area. The NOC is staffed by Securus employees who are network experts certified in the systems and software used to monitor all system functions and equipment, as well as the associated network. The NOC can contact the Technical Support Center (TSC) if it determines that another level of technical support is needed to address an issue. The NOC maintains failure reports, service history, and other diagnostic information, which are available to the DOC when requested.

**SolarWinds® Typical Monitored Application Elements**

**Premise Equipment and Polling**

The Securus Technical Support team provides 24x7x365 monitoring of all facility-based equipment and directly supports facility installations via telephone and email. Technical Support monitors connectivity for all installations and all installed equipment including Integrated Access Devices (IADs), Visitation Phone Monitoring (VPM) units, switches, and Uninterrupted Power Supply (UPS) systems. The systems are polled every two minutes to ensure proper operation, and their vital operating statistics sent every 10 minutes. Upon receiving an alert indicating network failure, Securus will open a trouble ticket with the appropriate circuit provider. In the case of a premise-based equipment failure, a Securus Field Technician is dispatched to the facility for on-site repair.
In addition to real-time monitoring and alerting, Securus Technical Support also leverages the SolarWinds® network performance monitor to gather and evaluate historical data for network alerts, bandwidth usage, packet loss, and hardware performance. The detailed level of monitoring available via our network performance monitor allows the Technical Support group to take proactive steps to prevent or mitigate facility outages and to ensure the correct resources are engaged if dispatch is necessary.

Infrastructure Inspections

System Administrators make scheduled inspections of all systems and routinely perform preventive maintenance and software enhancements as directed by a Production Change Control steering group. Additionally, change control practices have been reviewed and are compliant with Sarbanes-Oxley.
Premium Network Monitoring Capabilities

Securus proactively identifies potential system and network abnormalities through SolarWinds® suite of network performance monitors. This software allows Securus personnel to monitor all hardware, software and system metrics continuously.

Through network monitoring Securus can:

- **Proactively repair systems to prevent outages.** Many times corrections are made before a facility is aware of a problem. This means less downtime and increased system reliability for the facility.

- **Alert remote or on-site engineers of system threshold inconsistencies or alarms.** The NOC communicates with engineers through e-mail, short message service (SMS), or directly through a wireless phone to address the issue.

- **Receive real-time alerts when the system detects an error.** Monitoring identifies if network elements exceeded established thresholds and alerts Securus personnel of possible carrier network issues.

- **Ensure sufficient resources are in place.** The Securus capacity engineering team reviews call traffic volume reports and storage requirements throughout all systems to ensure sufficient network capacity.
- Centrally monitor calling traffic to determine increases or decreases in the number of telephones. With County agreement, the service and operations team will install additional telephones when required.

**Account Management**

The Securus Account Management group is a dedicated single point of contact service team that proactively manages the day-to-day needs of facilities to ensure the best possible experience from all our products, services, and support. In addition to Natasha Samuels, WA DOC's current Account Manager for JPay services, WA DOC will be assigned an account manager for Securus ITS, VVS, and associated services, who will be responsible for product training, monitoring system and product usage, proactive account support, account reviews, and reactive account support in order to ensure quality of service.

**Quarterly Performance Reviews**

Securus has assigned a dedicated account management team, which includes not only the sales and support staff, but also the DOC's assigned Account Manager who will monitor the ongoing service and maintenance request and will conduct regularly scheduled site visits to ensure that you are receiving the highest level of customer service. In addition to these site visits, Securus offers quarterly Operational Reviews in which your Account Manager will meet with the WA DOC staff and discuss operational performance, successes, and opportunities for improvement. Securus uses the information from these meetings to improve our service delivery platform. This approach allows Securus to consistently perform at Net Promoter Scores that are among the highest recorded by any business in any industry.

13) **Cabling currently installed in several facilities is CAT 3, but it's expected that service needs will require CAT 6 or higher cabling. Describe how Vendor will meet this requirement.**

**Vendor's response:**

**SECURUS HAS READ, UNDERSTANDS, AND WILL COMPLY WITH THIS REQUIREMENT.**

If required, we will install CAT6 or higher cabling.

The telephony interface between the housing area and our NextGen Secure Communications Platform calling services is a standard 48-volt DC tip and ring connection. The copper connectivity requirement preferred is CAT 5E, although this type of connection is also compatible to lower-signal integrity cabling, such as CAT 3.
EXHIBIT A – HARDWARE TECH SPECS
NetVanta 3140
Fixed Port Secure Access Ethernet Router

Benefits
- Provides secure access to internal networks
- Offers advanced security features
- Supports a wide range of protocols
- Easy management and configuration

Overview
The NetVanta 3140 is a fixed port, high-performance Ethernet router supporting converged access and high-quality voice services. It provides three modes for handling Gigabit Ethernet interfaces. This product is ideal for carrier-bundled service offerings and enterprises or Internet access for secure, high-speed corporate connectivity. The NetVanta 3140 is available in either a desktop or rackmounted platform.

Flexibility and Redundancy
The NetVanta 3140 is ideal for multiple applications, including Ethernet technology and other LAN/WAN connectivity. It can be configured with two Ethernet interfaces or two serial interfaces; it supports both 10/100 Mbps Ethernet and 100BASE-TX Ethernet. The NetVanta 3140 features a robust software platform that supports a wide range of protocols, including IPsec, SSL, and SSH. It also supports QoS features for voice and data traffic management, as well as a built-in firewall and antivirus protection.

Standards and Protocols
The NetVanta 3140 is compliant with numerous networking standards, including IPv4 and IPv6, and supports a variety of protocols, including TCP/IP, UDP, and ICMP. It also supports advanced security features, including SSL/TLS, SSH, and IPsec. The NetVanta 3140 also supports VoIP, allowing for voice over IP (VoIP) and other advanced communication services. It also supports advanced management features, including remote management and configuration.

SECURUS Technologies
NETVANTA 3140

Enterprise Session Border Control (eSBC)

The NetVanta 3140 can provide optional eSBC functionality delivering a truly converged application platform at the customer premises. This feature is becoming mandatory in today’s service deployment to prevent, secure and troubleshoot the SIP to SIP communication between a carrier network and the customers SIP compliant equipment.

Security

The AOS provides a powerful, high-performance stateful inspection firewall. The firewall can identify and protect against common Denial of Service (DoS) attacks like TCP syn flooding, IP spoofing, ICMP redirect, ping of death, and IP reasonably problems.

In addition, the AOS is capable of providing an inherent URL-filtering package without the use of an external server. URL filtering is another level of security that allows system administrators to restrict Internet access by permitting or denying specific URLs. This URL filtering feature also includes the ability to produce top website reports of the most frequently requested websites, allowing system administrators to modify the URL filter lists.

The NetVanta 3140 also adds the support for IPSec compliant VPN. The NetVanta 3140 supports encryption algorithms like DES, 3DES, and AES. With this upgrade, the NetVanta 3140 is fully compatible with other IPSec VPN equipped NetVanta products.

Management

The NetVanta 3140 Series can be remotely managed by ADTRAN’s n-Command® MSP platform. ADTRAN n-Command platforms offer the ability to discover devices, configure, make configuration changes, show firmware upgrades, backup/restore configuration, and generate inventory reports for asset management. The ADTRAN n-Command MSP also offers VoIP VCM and reporting, as well as an industry-leading, easy-to-use, Graphical User Interface (GUI). NetVanta 3140 is available in rack mountable, and desktop versions and are backed by an industry-leading warranty.

Administration

The AOS offers an intuitive Web-based GUI that provides step-by-step configuration wizards, management capability, and the ability to upload firmware updates. In addition, it has a standard CLI that mimics the widely adopted, industry de facto standard. The sequence of commands required to configure similar devices is almost identical, eliminating training costs typically associated with learning a new operating system or obtaining costly industry certifications. The CLI also allows for configuration scripts to be used, saved, and downloaded as a quick and easy recovery mechanism.

Product Specifications

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<td>PPP Dial Backup</td>
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<td>Console Port</td>
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<td>PAP and CHAP</td>
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<td>Three Gigabit Ethernet Interfaces (WAN/LAN Support)</td>
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<td>Multi-VRF CE + VRRP</td>
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<td>Supports 802.1q VLAN Trunking</td>
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<td>Policy-based Routing</td>
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<td>EIA-232 Providing Local Management and Configuration (via a DB-9 Female Connector)</td>
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<td>OSPPF</td>
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</table>

|                      | USB             |
|                      |                 |

SECURUS Technologies 12
Fixed Port Secure Access Ethernet Router

Quality of Service (QoS)
- Low Latency and Weighted Fair Queuing (WFQ)
- Class-Based WFQ
- DiffServ Packet Marking and Recognition
- Traffic Monitoring (NetFlow 9)

Voice Quality Monitoring (VQM)
- Mean Opinion Score (MOS) Prediction
- Jitter, Delay and Packet Loss
- Fast and Active Calls

Traffic and Network Quality Monitoring
- ICMP and TWAMP Probes and Tracks
- One-Way Delay
- Round-Trip Loss and Delay
- Inter-Packet Delay Variance
- Traffic Flow Collection and Analysis
- Packet Capture

Administration
- Familiar Command Line Interface (CLI)
- Web-Based GUI
- n-Command Support
- SNMP V2 and V3
- SYSLOG Logging
- Email Alerts (SMTP)
- Policy Statistics
- TCL Scripting
- Login Privilege Levels
- Telnet, Craft/Console Port, SSH, Ping, Trace Route and NTP

DHCP
- Client, Server and Relay

Firewall
- Stateful Inspection Firewall
- Denial of Service (DoS) Protection
- Access Control Lists
- Application Level Gateways
- Packet Filtering

Network Address Translation
- Basic NAT (1:1), NAPT (Many:1) and 1:1 Port Translation
- NAT-compatible SIP ALG

NAT Traversal and Remote Survivability
- B2BUA
- SIP Registrar for IP Phones
- SIP Proxy with Survivability
- Transparent/Stateful/Outbound

Content Filtering
- Inherent URL Filtering
- Top Website Reports
- Integration with WebSense

Secure Management
- Multi-level Access Control
- TACACS+
- RADIUS AAA
- SSH CLI and SSSL CLI
- Port Authentication (602.1x)

VPN (Optional)
- IPSec Tunnel Mode: 500 Tunnels
- Encryption: DES, 3DES and AES
- Authentication Mechanisms: XAUTH, Digital Certificates, Pre-shared Keys and Secure ID

Environment
- Operating Temperature: 32° to 122° F
  (0° to 50° C)
- Storage Temperature: -40° to 158° F
  (-20° to 70° C)
- Relative Humidity: Up to 95%, Non-condensing

Physical and Power
NetVanta 3140
- Floor Standing, Desktop Plastic Enclosure
- Dimensions: 1.63 in. x 9 in. x 6.36 in. (H x W x D),
  (4.14 cm x 22.66 cm x 16.21 cm)
- Weight: 1 lbs. (0.45 kg)
- Power: DC (12 VDC, 1.0 A)

NetVanta 3140 RM
- 1U Metal Rackmount
- Dimensions: 1.72 in. x 8.4 in. x 8 in. (H x W x D),
  (4.36 cm x 21.3 cm x 20.3 cm)
- Weight: 3 lbs. (1.4 kg)
- Power: AC (Auto-ranging, 100 to 250 VAC, 50/60 Hz,
  0.4 A Maximum)

Agency Approvals
- FCC Part 15 Class A
- CE Mark
- UL & Canadian UL
- RoHS
- C-Tick for Australia and New Zealand
## Ordering Options

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* Accessory applies to NetVanta 5140 (non-desktop version) only
NetVanta 1534
Layer 3 Lite Gigabit Ethernet Switch

Product Features
- 28-port multi-layer Gigabit Ethernet switch
- 24-Gigabit Ethernet ports and four SFP optical ports
- Two standard 1 Gbps SFP ports and two enhanced 2.5 Gbps SFP ports
- Non-blocking, up to 62 Gbps switching capacity
- Line rate Layer 2, and Layer 3 Lite capabilities
- 16 static routes
- 802.1Q VLANs, Private VLANs and VLAN assignment via 802.1x
- VoIP Setup Wizard
- Advanced QoS with support for 802.1p and DiffServ prioritization with four queues per egress port
- Automate actions with Port Scheduler and TCL scripting
- VoIP ready with LLDP, LLDP-MED and voice VLANs
- Business-class security with RADIUS, TACACS+, 802.1x and port security
- Optimized for iSCSI Storage Area Networks (SANs) solutions
- Wi-Fi® access controller for centralized management of NetVanta Wireless Access Points (WAPs)
- Cable and SFP diagnostics provides easy to use troubleshooting tools for copper and fiber cable
- Familiar CLI and Web GUI
- Limited lifetime warranty
- Next business day advance replacement

NetVanta 1534 is a managed, 28-port, Layer 3 Lite, Gigabit Ethernet switch designed as an access layer or network backbone switch for Small to Medium-sized Enterprises (SMEs). With the combination of the advanced multi-layer switching fabric, high-bandwidth capabilities, and enhanced Quality of Service (QoS) features, the NetVanta 1534 is ideal for Gigabit-to-the-desk deployments, and converged voice and data networks.

Hardware
The NetVanta 1534 rackmountable switch provides 28 Gigabit Ethernet ports, consisting of 24 fixed 10/100/1000Base-T Ethernet ports, two 1.0 Gbps Small Form-factor Pluggable (SFP) ports, and two 2.5 Gbps enhanced SFP ports located on the back. Together the four SFP ports can provide up to 14 Gbps of bandwidth between interconnected NetVanta 1534 switches. "Halfrack" in size, you can scale to 48 Gigabit Ethernet ports and eight SFP optical ports utilizing two NetVanta 1543 switches side-by-side in a single 19-inch rack space.

Multi-layer Switching
The NetVanta 1534 supports advanced multi-layer (Layer 2 and Layer 3 Lite) switching with up to 16 static routes allowing it to easily scale from SMBs to enterprise-size networks.

VoIP Ready
The NetVanta 1534 is VoIP ready with the ability to automatically configure IP phones using LLDP-MED, and the ability to separate voice traffic onto voice VLANs, to simplify the deployment of VoIP. In addition, the switch includes a VoIP Setup Wizard (available via a Web-based Graphical User Interface (GUI) or Command Line Interface (CLI)), which automates the complete VoIP setup process reducing deployment time and eliminating errors. An on-demand VoIP report provides a printable summary of the switch VoIP configuration, as well as providing alerts and recommendations to improve performance. All NetVanta switches support QoS to prioritize VoIP traffic, 802.1p and DiffServ Class of Service (CoS).

Security
The NetVanta 1534 offers a variety of data security features including DoS protection, MAC-based port security, multilevel user passwords, Secure Shell (SSH) and Secure Socket Layer (SSL) for encrypted user login, and Access Authentication and Authorization (AAA) for authentication with RADIUS and TACACS+. With features such as 802.1x and port security, administrators can assure that only authorized users are allowed access to the network.

The ADTRAN® Operating System (AOS) also features desktop auditing using DHCP in conjunction with Microsoft Network Access Protection (NAP) protocol to monitor the health of client computers. The two protocols work together to ensure that systems connected to the network are using appropriate corporate policies, such as firewall settings, antivirus settings and other client health information.

Port Scheduler
NetVanta 1534 allows ports to be enabled or disabled based on time or day. This ability to schedule available ports allows for added security and can provide less power consumption during off hours saving on utility cost.

iSCSI Optimized
All ADTRAN NetVanta Gigabit Ethernet switches are optimized for iSCSI SANs deployments. Network administrators can take advantage of features such as Jumbo frame support (up to 13K), separation of iSCSI network traffic utilizing VLANs, and 802.1x flow control to seamlessly integrate ADTRAN switches with iSCSI SANs devices.

Administration
AOS offers both a CLI and an intuitive Web-based GUI with step-by-step configuration wizards. For automating setup and configuration, NetVanta 1534 supports Auto-Config which provides the ability to automatically obtain the switch configuration via DHCP.

AOS also offers network forensics to aid in troubleshooting network problems by allowing network administrators to easily locate devices on the network by MAC or IP address.
NetVanta 1534
Layer 3 Lite Gigabit Ethernet Switch

Product Specifications

Physical Interface
Ethernet Ports
- 24 -10/100/1000Base-T
- 2-Standard 1 Gbps SFP ports
- 2-Enhanced 1 Gbps SFP Ports
- Auto Rate/Default MDI/MDI-X
Console Port
- DB-9, RS-232

Switching Performance
- Non-blocking Layer 2/3 Switching

Maximum Forwarding Bandwidth
- 62 Gbps

Layer 2 Support
- 802.1D Spanning Tree
- 802.3ad Link Aggregation
- Jumbo Frames (9K)
- 802.3x Flow Control

Layer 3 Support
- 16 Static Routes
- UDP Relay
- IPv6 Management

Diagnostics
- Port Mirroring
- LLDP-MED
- SFP Diagnostics

Front Panel Status LEDs
- Power Status
- LAN: link/activity

Port Statistics
- Number of TX/RX Frames, Collisions, Errors

Quality of Service
- 802.1p and DiffServ
- Four output queues per egress port
- Weighted Round Robin (WRR)
- Strict Priority Scheduling

VLAN
- Port-based VLANs
- 802.1Q tagged trunked VLANs
- Voice VLANs
- Private VLAN Edge
- Dynamic 802.1x assigned VLANs
- Support for up to 245 active VLANs

Storm Control
- Broadcast, Unicast, and Multicast

Administration
- CLI (Console/Telnet/SSH)
- SNMP v3
- Web-based GUI (HTTP/S)
- Syslog

Security
- Port authentication (802.1x)
- Port Security
- DoS Protection
- Hardware ACLs
- Microsoft Desktop Auditing

Wi-Fi Controller
- Controls up to 24 NetVanta WAPs

Environment
- Operating Temperature: 32° to 122° F (0° to 50° C)
- Storage Temperature: 4° to 158° F (-20° to 70° C)
- Relative Humidity: Up to 95%, non-condensing

Physical
- Chassis: 1U, 19 in. Rackmountable Metal Enclosure
- Dimensions: 1.72 in. x 8 in. x 11 in.
- Weight: 4 lbs. (2.7 kg)
- AC Power: 100–250 VAC, 50/60 Hz
- Power: 30 Watts, 1 A Max

Agency Approvals
- FCC Part 15 Class A, UL 1950/CeA, CE Mark, C-tick, RoHS

Ordering Information

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Part No.</th>
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</thead>
<tbody>
<tr>
<td>NetVanta 1534</td>
<td>1702590G1</td>
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<tr>
<td>NetVanta 1000BaseSX</td>
<td>1200480E1</td>
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<tr>
<td>NetVanta 1000BaseLX</td>
<td>1200481E1</td>
</tr>
<tr>
<td>NetVanta 2.5 Gbps Multimode</td>
<td>1200482G1</td>
</tr>
<tr>
<td>NetVanta 2.5 Gbps Singlemode</td>
<td>1200483G1</td>
</tr>
<tr>
<td>NetVanta 1 Meter SFP Interconnect Cable</td>
<td>1200484G1</td>
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<tr>
<td>NetVanta 3 Meter SFP Interconnect Cable</td>
<td>1200484G3</td>
</tr>
<tr>
<td>Dual Mounting Tray</td>
<td>1700508F1</td>
</tr>
<tr>
<td>Wall Mount Brackets</td>
<td>1700507F1</td>
</tr>
</tbody>
</table>
NetVanta 1534P
Layer 3 Lite Gigabit Ethernet Switch

Product Features

- 28-port multi-layer Gigabit Ethernet switch
- 24-Gigabit Ethernet ports and four SFP optical ports
- Two standard 1 Gbps SFP ports and two enhanced 2.5 Gbps SFP ports
- 802.3af (PoE), 802.3at (PoE+), and Legacy PoE
- Non-blocking, up to 62 Gbps switching capacity
- Line rate Layer 2 and Layer 3 Lite capabilities
- DHCP network forensics
- 802.1Q VLANs, Private VLANs and VLAN assignment via 802.1x
- VoIP Setup Wizard
- Advanced QoS with support for 802.1p and DiffServ prioritization with four queues per egress port
- Automate actions with Port Scheduler and TQL scripting
- VoIP ready with LLDP, LLDP-MED and voice VLANs
- Business-class security with RADIUS, TACACS+, 802.1x and port security
- Optimized for iSCSI Storage Area Networks (SANs) solutions
- Wi-Fi access controller for centralized management of NetVanta Wireless Access Points (WAPs)
- Cable and SFP diagnostics provide easy to use trouble-shooting tools for copper and fiber cable
- Familiar CLI and Web GUI
- Limited lifetime warranty
- Next business day advance replacement

The NetVanta 1534P is a managed, 28-port PoE, Layer 3 Lite Gigabit Ethernet switch designed for fast, secure, cost-effective Local Area Network (LAN) switching. This scalable, full-featured business-class switch is perfect for higher-bandwidth Voice over IP (VoIP) applications needing PoE to power IP Phones, as well as Gigabit-to-the-desktop deployments. Experience the ease of management with an easy-to-use Web-based Graphical User Interface (GUI) and familiar Command Line Interface (CLI).

Hardware

The NetVanta 1534P rackmount switch provides 28 Gigabit Ethernet ports, consisting of 24 fixed 10/100/1000Base-T Ethernet ports, two 1.0 Gbps Small Form-factor Pluggable (SFP) ports, and two 2.5 Gbps enhanced SFP ports. Together the four SFP ports can provide up to 14 Gbps of bandwidth between interconnected NetVanta 1534P switches.

Multi-layer Switching

The NetVanta 1534P supports advanced multi-layer (Layer 2 and Layer 3 Lite) switching with up to 16 static routes allowing it to easily scale from SMBs to enterprise-size networks.

VoIP Ready

The NetVanta 1534P is VoIP ready with the ability to automatically configure IP phones using LLDP-MED, and the ability to separate voice traffic onto voice VLANs, to simplify the deployment of VoIP. In addition, the switch includes a VoIP Setup Wizard (available via a Web-based Graphical User Interface (GUI) or Command Line Interface (CLI)), which automates the complete VoIP setup process reducing deployment time and eliminating errors. An on-demand VoIP report provides a printable summary of the switch VoIP configuration, as well as providing alerts and recommendations to improve performance. All NetVanta switches support QoS to prioritize VoIP traffic, 802.1p and DiffServ Class of Service (CoS).

PoE

The NetVanta 1534P provides up to 370 watts of 802.3af (PoE), 802.3at (PoE+) and Legacy PoE for powering IP phones, wireless access points (WAPs), and other devices requiring LAN power.

Supplemental PoE Power

When deployed with the NetVanta 1131 RPS/EPS unit, the NetVanta 1534P supports power redundancy as well as enhanced PoE. The NetVanta 1131 EPS output provides up to 370 watts of backup PoE for redundancy, and can also provide up to 370 watts of additional PoE, effectively doubling the available PoE budget (up to 740 watts).

Security

The NetVanta 1534P offers a variety of data security features including DoS protection, MAC-based port security, multilevel user passwords, Secure Shell (SSH) and Secure Socket Layer (SSL) for encrypted user login, and Access Authentication and Authorization (AAA) for authentication with RADIUS and TACACS+. With features such as 802.1x and port security, administrators can assure that only authorized users are allowed access to the network.

The ADTRAN® Operating System (AOS) also features desktop auditing using DHCP protocol to monitor the health of client computers. The two protocols work together to ensure that systems connected to the network are using appropriate corporate policies, such as firewall settings, antivirus settings and other client health information.

Port Scheduler

NetVanta 1534P allows ports to be enabled or disabled based on time of day. This ability to schedule available ports allows for added security and can provide less power consumption during off hours saving on utility costs.

iSCSI Optimized

All ADTRAN NetVanta Gigabit Ethernet switches are optimized for iSCSI SAN deployments. Network administrators can take advantage of features such as Juniper frame support (up to 13K), separation of iSCSI network traffic utilizing VLANs, and 802.3x flow control to seamlessly integrate ADTRAN switches with iSCSI SAN devices.

Administration

AOS offers both a CLI and an intuitive Web-based GUI with step-by-step configuration wizards. For automating setup and configuration, NetVanta 1534P supports Auto-Config which provides the ability to automatically obtain the switch configuration via DHCP.

AOS also offers network forensics to aid in troubleshooting network problems by allowing network administrators to easily locate devices on the network by MAC or IP address.
NetVanta 1534P
Layer 3 Lite Gigabit Ethernet Switch

Product Specifications

Physical Interface
- Ethernet Ports
  - 24 10-100/1000Base-T
  - 2-Standard 1 Gbps SFP ports
  - 2-Enhanced 1 Gbps SFP Ports
  - Auto rate/duplex
- Console Port
  - DB-9, RS-232

Switching Performance
- Non-blocking Layer 2/3 Switching

Maximum Forwarding Bandwidth
- 62 Gbps

Layer 2 Support
- 802.1Q Tagging
- 802.3ad Link Aggregation
- Jumbo Frames (15K)
- 802.3x Flow Control

Layer 3 Support
- 16 Static Routes
- UDP Relay
- IPv6 Management
- Layer 3 Interfaces
- 232 ARP Entries

Diagnostics
- Port Mirroring
- LLDP-MED
- SFP Diagnostics
- Cable Diagnostics
- Troubleshooting Page

Front Panel Status LEDs
- Power Status
- LAN: link, activity

Port Statistics
- Number of TX/RX Frames, Collisions, Errors

Quality of Service
- 802.1p and DiffServ
- Four output queues per egress port
- Weighted Round Robin (WRR)
- Strict Priority Scheduling

VLAN
- Port-based VLANs
- 802.1Q tagged trunked VLANs
- Voice VLANs
- Private VLAN Edge
- Dynamic 802.1x assigned VLANs
- Support for up to 255 active VLANs

Storm Control
- Broadcast, Unicast, and Multicast

PoE
- 802.3af (PoE) and 802.3at (PoE+) and Legacy PoE
- 370 Watts (Total)
- Extended PoE Budget up to 740W (when connected to the NetVanta 1131)

Administration
- CLI/Console/Telnet/SSH
- Web-based GUI (HTTP/SSL)
- n-Command support
- RADIUS
- TCL Scripting
- Port Scheduler
- DHCP Network Forensics

Security
- Port authentication (802.1x)
- Port Security
- DoS Protection
- Hardware ACLs
- Microsoft Desktop Auditing

Wi-Fi Controller
- Controls up to 24 NetVanta WAPs

Environment
- Operating Temperature: 32° to 122° F (0° to 45° C)
- Storage Temperature: -4° to 158° F (-20° to 70° C)
- Relative Humidity: Up to 55%, non-condensing

Physical
- Chassis: 1U, 19 in. Rackmountable Metal Enclosure
  (Rackmount Brackets Included)
- Dimensions: 1.72 in. x 17.2 in. x 10 in.
- Weight: 9.5 lbs (4.3 kg)
- AC Power: 110-230 VAC, 50/60 Hz
- Power: 500 Watts, 4.9 A Max

Agency Approvals
- FCC Part 15 Class A, UL 1950/C 84, RoHS

Ordering Information

<table>
<thead>
<tr>
<th>Equipment</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NetVanta 1534P</td>
<td>1702591G2</td>
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<tr>
<td>NetVanta 1000BaseX</td>
<td>1200480E1</td>
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<tr>
<td>SFP Transceiver</td>
<td>1200481E1</td>
</tr>
<tr>
<td>NetVanta 1000BaseX</td>
<td>1200482G1</td>
</tr>
<tr>
<td>SFP Transceiver</td>
<td>1200483G1</td>
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<td>NetVanta 2.5 Gbps</td>
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<tr>
<td>Multismode Transceiver</td>
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<td>NetVanta 2.5 Gbps</td>
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<td>NetVanta 1 Meter</td>
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<td>SFP Interconnect Cable</td>
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<td>NetVanta 3 Meter</td>
<td>1200484G3</td>
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<td>SFP Interconnect Cable</td>
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<tr>
<td>NetVanta 1131 (RPS/EPS)</td>
<td>1700530F1</td>
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<td>NetVanta 1131 RPS Cable</td>
<td>1700532F1</td>
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<tr>
<td>NetVanta 1131 EPS Cable</td>
<td>1700533F1</td>
</tr>
</tbody>
</table>
ZoneFlex R600
Dual-Band 802.11ac 3X3:3 Smart Wi-Fi Access Points

DATA SHEET

802.11AC HIGH PERFORMANCE MID-RANGE 3X3:3 SMART WI-FI ACCESS POINTS WITH ADAPTIVE ANTENNA TECHNOLOGY
The Ruckus ZoneFlex R600 delivers high-performance and reliable 802.11ac wireless networking at a competitive price point for medium density venues such as in K-12 or Higher ED.

The ZoneFlex R600 combines patented adaptive antenna technology and automatic interference mitigation to deliver consistent, predictable performance at extended ranges with up to an additional 6dB of BeamFlex gain on top of the physical antenna gain and up to 15dB of interference mitigation.

The R600 is ideal for wireless networks servicing mobile devices with dual-polarized antennas that adapt in real time to maximize performance for the mobile enterprise.

Performance is further enhanced as the ZoneFlex R600 integrates Ruckus’ patented BeamFlex, a software-controlled, high gain adaptive antenna technology. The ZoneFlex R600 automatically selects channels for highest throughput potential using Ruckus ChannelFly dynamic channel management, adapting to environmental changes.

A sleek and low-profile design, the ZoneFlex R600 was purpose-built for small-medium enterprises requiring reliable high speed client connectivity. It is ideal for a variety of medium density enterprise and hotspot environments including SMBs such as independent hotels, local retailers and non-franchise restaurants.

BENEFITS
EXTENDED RANGE REQUIRES FEWER APS
Adaptive antenna technology delivers up to 2x increase in Wi-Fi signal coverage minimizing the number of APs required to service any area

SLEEK, LOW PROFILE ENCLOSURE FOR EASE-OF-DEPLOYMENT
Aesthetically-pleasing design and a range of mounting options

CHANNEL SELECTION OPTIMIZES THROUGHPUT
ChannelFly dynamic channel management, based on throughput measurements, not just interference, chooses the best channel to give users the highest possible throughput

SUPER SIMPLE CONFIGURATION AND MANAGEMENT
The industry’s simplest configuration and management through a Web-based wizard

FLEXIBLE DEPLOYMENT OPTIONS
Standalone or controller-based migration

ADAPTIVE POLARIZATION DIVERSITY (PD-MRC)
Dual-polarized antennas that are dynamically selected provide better reception for hard to hear clients and more consistent performance as clients constantly change orientation

HASSLE FREE MIGRATION TO HIGHER SPEED WI-FI
Support for standard 802.3af power over Ethernet allows enterprises to use existing PoE switches without costly upgrades

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ZoneFlex R600
Dual-Band 802.11ac 3X3:3 Smart Wi-Fi Access Points

PATENTED BEAMFLEX™ TECHNOLOGY EXTENDS SIGNAL RANGE, IMPROVES STABILITY OF CLIENT CONNECTIONS

All ZoneFlex R600 Wi-Fi access points integrate a software-controlled smart antenna with PD-MRC (polarization diversity) that delivers up to an additional 6dB of BeamFlex gain and 15dB of interference mitigation. This is especially beneficial to enhance the performance of mobile devices which are constantly in motion and changing orientation.

ADVANCED WLAN APPLICATIONS

Each ZoneFlex R600 supports a wide range of value-added applications such as guest networking, Dynamic PSK, hotspot authentication, wireless intrusion detection and many more. In a controller-less configuration, the ZoneFlex R600 works with a wide range of authentication servers including Microsoft’s Active Directory, and AAA/RADIUS.

FLEXIBLE DEPLOYMENT OPTIONS

Ruckus is custom-designed to help small business owners grow their business, deliver an excellent customer experience and manage costs while supporting Wi-Fi and a variety of mobile devices with minimal IT staff.

COMPLETE LOCAL AND REMOTE MANAGEMENT

Each ZoneFlex R600 can be managed as a standalone AP through a Web-based GUI using SNMP or through the Ruckus SCI or FlexMaster. Local management can also be performed using Ruckus Smart WLAN controllers. FlexMaster is a Linux-based software platform that uses industry standard protocols to perform bulk configuration, fault detection, monitoring and a wide range of trouble-shooting capabilities over a wired area connection. The controllers enable local management and control of APs, adding value-added services such as transmit power control and guest networking.

FEATURES

- Dual-band concurrent (2.4GHz/5GHz)
- Adaptive antenna technology and advanced RF management
- Up to an additional 6dB BeamFlex gain / 15dB interference mitigation / 3dB physical antenna gain
- Automatic interference mitigation, optimized for high-density environments
- Integrated smart antenna technology
- Standard 802.3af Power over Ethernet (PoE)
- DHCP services
- IP multicast video streaming support
- Advanced QoS packet classification and automatic priority for latency-sensitive traffic
- Dynamic, per user rate-limiting for hotspot WLANs
- WPA-PSK (AES), 802.1X support for RADIUS and Active Directory
- BYOD, Zero-T and Dynamic PSK
- Admission control/load balancing
- Band steering and airtime fairness support
- Rich and customizable guest access services
- Application recognition and control
- Bonjour gateway
- SecureHotspot
- Band balancing
- SmartMesh
- SPoT location services

Many potential antenna combinations can be chosen for high availability of Wi-Fi

Two 10/100/1000 Mbps ports: one with PoE

High-gain directional antenna elements not only deliver signal gain but also interference mitigation for range extension, reliability and high data rates.
ZoneFlex R600
Dual-Band 802.11ac 3X3:3 Smart Wi-Fi Access Points

The ZoneFlex R600 integrates with your existing network infrastructure, delivering best-in-class 802.11ac performance and reliability at a competitive price -- making it the ideal wireless solution for mid-range enterprise and branch office applications.

DEPLOYMENTS FOR CLASSROOMS AND LIBRARIES
The ZoneFlex R600 is ideal for deployment in education common areas providing high quality wireless access in high density locations.

DEPLOYMENT FOR RETAIL/BRANCH OFFICES
The ZoneFlex R600 is ideal for deployment in retail stores to provide inconspicuous wireless connection to high quality video, wireless IP phones and data access for handheld PoS barcode scanners.

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## ZoneFlex R600
Dual-Band 802.11ac 3X3:3 Smart Wi-Fi Access Points

### Physical Characteristics

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Power</td>
<td>DC input: 12V/DC 10A</td>
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<tr>
<td></td>
<td>Power over Ethernet: 56.22 W</td>
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<tr>
<td>Physical Size</td>
<td>19.2 cm x 19.2 cm x 4 cm (7.57 x 7.57 x 1.6 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>2320 g (51 lbs)</td>
</tr>
<tr>
<td>Data Ports</td>
<td>2 x MIMO, auto-sensing 10/100/1000 Mbps, RJ-45, POE port (fan pair)</td>
</tr>
<tr>
<td>Lock Options</td>
<td>Hidden, fail-safe</td>
</tr>
<tr>
<td></td>
<td>Kensington Lock Holder</td>
</tr>
<tr>
<td></td>
<td>4 x 4 mm3, 1.6 mm3, 2.3 mm3, 3.0 mm3, 4.0 mm3, 5.0 mm3, 6.0 mm3, 7.0 mm3, 8.0 mm3, 9.0 mm3, 10.0 mm3</td>
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<tr>
<td>Environmental Conditions</td>
<td>- Operating Temperature: 0°C - 40°C</td>
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<td>- Operating Humidity: 30% - 95% non-condensing</td>
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### Performance and Capacity

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<tr>
<th>Category</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Concurrent Stations</td>
<td>Up to 150 clients per AP</td>
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<tr>
<td>Simultaneous VoIP Clients</td>
<td>Up to 30 clients per AP</td>
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### RF

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<tr>
<th>Feature</th>
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<tr>
<td>ANTENNA</td>
<td>Adaptive antenna that provides up to 112 unique antenna patterns per radio</td>
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<tr>
<td>Physical Antenna Gain</td>
<td>Up to 36dBi</td>
</tr>
<tr>
<td>BeamFlex® SINR TX Gain</td>
<td>Up to 64dB</td>
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<tr>
<td>BeamFlex® SINR RX Gain</td>
<td>3-5dBi (40-60dBi)</td>
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<tr>
<td>Interference Mitigation</td>
<td>Up to 158MHz</td>
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<tr>
<td>Minimum RX Sensitivity</td>
<td>Up to 10dBM</td>
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### Management

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<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Deployment Options</td>
<td>Individual public managed, managed by ZoneDirector (801-8 Above)</td>
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<tr>
<td></td>
<td>Managed by BeamFlex (801) above)</td>
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<tr>
<td>Configuration</td>
<td>Web User Interface (HTTPS)</td>
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<td>GL1 (RMS5/95), SNMPv3, 32, 32</td>
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<td>TFTP, TFTP, Telnet, poll available</td>
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### Wi-Fi

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<tr>
<th>Feature</th>
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<tr>
<td>Standards</td>
<td>802.11ac, 802.11n, 802.11a, 802.11g, 802.11b</td>
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<td>Supported Data Rates</td>
<td>300/867 Mbps, 450 Mbps, 600 Mbps, 1300 Mbps</td>
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<td>300 Mbps, 802.11ac, 802.11ax, 802.11ad, 802.11az</td>
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<td>867 Mbps, 1148 Mbps, 433 Mbps, 1300 Mbps</td>
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<tr>
<td>Radio Chains</td>
<td>Up to 33</td>
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<tr>
<td>Spatial Streams</td>
<td>Up to 20</td>
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<tr>
<td>RF Power Output (Aggregate)</td>
<td>Up to 20dBFm for 2.4 GHz, 27dBFm for 5 GHz</td>
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<td>25.9 dBm/1 MHz, 9.6 dBm/1 MHz</td>
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<td>Channelization</td>
<td>20 MHz/40 MHz, 80 MHz</td>
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<tr>
<td>Operating Channels</td>
<td>Up to 20</td>
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<tr>
<td>Frequency Band</td>
<td>Up to 20</td>
</tr>
<tr>
<td></td>
<td>20 MHz/40 MHz, 80 MHz, 160 MHz</td>
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<tr>
<td>Power Save</td>
<td>Supported</td>
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<tr>
<td>Wireless Security</td>
<td>WPA-Person, WPA2-EAP, WPA3-EAP</td>
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<tr>
<td></td>
<td>802.11ax, 802.11ac, 802.11b, 802.11g, 802.11n</td>
</tr>
<tr>
<td>Certifications**</td>
<td>Authentication (802.11x) with the ZoneDirector, local authentication database, support of RADIUS and Active Directory</td>
</tr>
<tr>
<td></td>
<td>* Up to 40 clients supported per country</td>
</tr>
<tr>
<td></td>
<td>** For current certification status please see ruckus.com</td>
</tr>
</tbody>
</table>

### Product Ordering Information

**MODEL**
- 901-R600-XX00: Concurrent dual-band 802.11ac Access Point, no power adapter

**Optional Accessories**
- 902-0108-0000: Bracket, Accessory Mounting Bracket
- 902-0173-0000: Power Adapter, AC/DC for 100-240V, 50/60Hz
- 902-0162-0000: Pole (adjustable height - 900 mm to 1200 mm)

*Maximum power varies by country

**PLEASE NOTE:** When ordering ZoneFlex indoor APs, you must specify the model number by indicating -US- or -CA- instead of -XX-. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US- or -CA- instead of -XX-.

For access points, -XX- applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam.

Warranty: 3 years with a limited lifetime warranty. For details see: ruckus.com/warranty

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*BeamFlex® antennas are statistical system level effects translated to enhanced SINR based on observations at low SNR in real-world conditions with multiple APs and many clients.*

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Ruckus Wireless, Inc. | 150 West Java Drive | Sunnyvale, CA 94089 USA | T: (855) 265-4200 | F: (408) 733-2065
ruckuswireless.com

SECURUS Technologies
The Eaton 3S — Sleek. Savvy. Sophisticated.

The sleek, new Eaton® 3S delivers high efficiency and energy-saving battery backup and surge protection for your premium home and office equipment — ready to go right out of the box.

Eaton 3S features and benefits:

- **Ease of use:** The plug-and-play functionality of the 3S allows you to start backing up your equipment the moment you take the unit out of the box. Gain automatic integration with Windows, Mac and Linux with a simple connection to a USB port.

- **EcoControl:** The 3S manages your energy efficiency for you with EcoControl Master/Control outlets. When the item using the Master outlet (e.g., your computer) is idle or shut down, then items using the Control outlets (e.g., printer, scanner) are automatically powered down — rewarding you with up to 30% in energy savings over a typical battery backup.

- **Modern design:** The sleek design of the 3S allows you to display it alongside your high-tech equipment for a sophisticated look. This unit can also be wall- or desk-mounted for additional space savings.

- **Premium protection:** The high-efficiency design of the Eaton 3S provides premium power protection for up to 10 devices, including those using data lines.

Intelligent Power Protector

By combining Eaton’s Intelligent Power® Protector software with the 3S, you can monitor and manage all of the power devices on your network. You can even enable graceful shutdown of computers during an extended power outage.

To learn more, please visit:

www.eaton.com/intelligentpower

Services and support

Eaton provides product support 24 hours a day, 7 days a week. From battery replacement to full service plans, Eaton is one of the top service models in the industry.

Three-year warranty

The 3S warranty covers both the UPS and the batteries for three years. No other manufacturer in the industry offers as comprehensive a warranty.

Battery runtime

The 3S provides up to 45 minutes of battery backup. For a detailed interactive battery runtime chart, please visit www.eaton.com/3S — then view the individual technical specifications pages for details of each unit.

Eaton

Powering Business Worldwide

The compact, versatile 3S fits under a desk or mounts on the wall.

Chalking 100 years

Ideas that endure

SECURUS Technologies
### 2S Model Selection Guide

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Power Rating (VA/ Watts)</th>
<th>Input Connection</th>
<th>Output receptacles***</th>
<th>Dimensions (W x D x H, in)</th>
<th>Net Weight, lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>35892</td>
<td>750 VA</td>
<td>5-15P</td>
<td>(3)5-15R</td>
<td>3.4 x 6.7 x 13.2</td>
<td>7.0</td>
</tr>
<tr>
<td>35789**</td>
<td>750 VA</td>
<td>5-15P</td>
<td>(3)5-15R</td>
<td>3.4 x 6.7 x 13.2</td>
<td>0.7</td>
</tr>
</tbody>
</table>

*Due to continuous product improvements, specifications are subject to change without notice. Please check Eaton.com for the most current product information.

**The model shown has control energy saving capability. To enable (for some) downloading control feature visit Eaton.com.

***Each unit of the 2S seires provide battery backup and surge protection, but do not provide surge protection only.

---

**Eaton 3S (750 VA)**

- **EcoControl Master receptacle** — when the device using this outlet is idle or off, items using the linked control outlets are powered down to save energy.
- **Power button**
- **Battery fault indicator**
- **6-foo1 line cord with 6-15P**
- **6-foo1 line cord with 6-15P**
- **RJ-45 connectors for protecting devices connected to data lines**
- **USB/SD port for plug-and-play**

To interact with the 3S, please visit: [eaton.com/3S](http://eaton.com/3S)

---

**Eaton Corporation**

- **Established 1915**
- **1969 Episcopal Ave.**
- **Raleigh, NC 27607**
- **United States**
- **440 9th Street**
- **Eaton.com/3S**

---

**The 3S is part of the UPSgrade program**

**UPSgrade**

www.eaton.com/upsgrade

- **Eaton and Intelligent Power are trademarks of Eaton Corporation.**
- **All other trademarks are property of their respective owners.**
DataShield In-Line Surge Protector for Network and Phone Lines, 1-Line RJ45

MODEL NUMBER: DNET1

Protects network datalines on workstations, printers, hubs and other devices from blown NIC cards, garbled transmissions, lock-ups and hard failures caused by surges, line noise, ESD, faulty wiring and lightning.

Description
Tripp Lite's DNET1 provides network Ethernet line surge suppression for 100Base-T, 10Base-T, Token Ring, AUI/802.3/3x and R5422 applications. Surge suppression is handled with balanced arrays of high-speed avalanche diodes that divert excess energies created by electrostatic discharges, faulty wiring or lightning away from network interface connections. Tripp Lite network surge suppressors reduce blown NIC cards, garbled network transmissions, system lock-ups and hard equipment failure by safely shunting data line surges to ground. Convenient RJ45 input and output connections with an included 5-inch Ethernet patch cable enables ideal protection for network workstations, printers and other internetworking devices with a network connection. For peace of mind, the DNET1 comes with a lifetime warranty and RoHS-compliant design.

Features
- DNET1 protects network workstations, printers and internetworking devices from surges present on 10/100Base-T, token ring, AUI/802.3/3x or RS422 network lines
- Convenient RJ45 input and output connections make for simple installation (RJ45 input/output connections, pins 1-8, 7.5V clamping)
- 5-inch Ethernet patch cable enables ideal protection placed as close as possible to the point of use
- Surge suppression utilizing high-speed avalanche diodes divert excess energies on the network to ground
- RoHS Compliance
- Lifetime Warranty

Highlights
- Network Ethernet line surge suppression for 100Base-T, 10Base-T, Token Ring, AUI/802.3/3x and RS422 applications
- Ideal protection for NICs, terminals, hubs, printers, LAN equipment, and other internetworking devices
- Protects against the effects of electrostatic discharge, faulty wiring and lightning
- Reduces blown NIC cards, garbled network transmissions, system lock-ups and hard equipment failure
- 750A circuit breaker; 7.5V nominal clamping voltage
- RJ45 input and output connections with included patch cable

Package Includes
- DNET1 data line protector
- 5-in. RJ45 patch cable
- Warranty information and instruction manual
## Specifications

<table>
<thead>
<tr>
<th><strong>OVERVIEW</strong></th>
<th></th>
</tr>
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<tbody>
<tr>
<td><strong>UPC Code</strong></td>
<td>037332011436</td>
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<table>
<thead>
<tr>
<th><strong>OUTPUT</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Receptacles</td>
<td>(1) Network</td>
</tr>
<tr>
<td>Circuit Breaker (amps)</td>
<td>750</td>
</tr>
<tr>
<td>Right-Angle Outlets</td>
<td>No</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>INPUT</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Input Voltage(s) Supported</td>
<td>120V AC, 230V AC</td>
</tr>
<tr>
<td>Recommended Electrical Service</td>
<td>120V, 230V</td>
</tr>
<tr>
<td>Input Plug Type</td>
<td>RJ45</td>
</tr>
<tr>
<td>Input Cord Length (ft.)</td>
<td>0</td>
</tr>
<tr>
<td>Right-Angle Plug</td>
<td>No</td>
</tr>
<tr>
<td>Input Cord Length (m)</td>
<td>0.00</td>
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<tr>
<td>Integrated Cord Clip</td>
<td>No</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>USER INTERFACE, ALERTS &amp; CONTROLS</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic LED(s)</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SURGE / NOISE SUPPRESSION</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Suppression Joule Rating</td>
<td>0</td>
</tr>
<tr>
<td>Clamping Voltage (RMS)</td>
<td>7.5</td>
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<tr>
<td>Auto Shut-Off</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>DATALINE SURGE SUPPRESSION</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone/DSL Protection</td>
<td>Yes</td>
</tr>
<tr>
<td>Telephone/DSL Protection Details</td>
<td>1 line</td>
</tr>
<tr>
<td>Cable (Coax) Protection</td>
<td>No</td>
</tr>
<tr>
<td>Network (Ethernet) Protection</td>
<td>Yes</td>
</tr>
<tr>
<td>Additional Dataline Protection</td>
<td>1-8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>PHYSICAL</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Anti-Microbial Protected</td>
<td>No</td>
</tr>
<tr>
<td>Color</td>
<td>Light Gray</td>
</tr>
<tr>
<td>Integrated Keyhole Mounting Slots</td>
<td>No</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Shipping Dimensions (hwd / cm)</td>
<td>15.24 x 7.62 x 5.08</td>
</tr>
<tr>
<td>Shipping Dimensions (hwd / in.)</td>
<td>6.00 x 3.00 x 2.00</td>
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<tr>
<td>Shipping Weight (kg)</td>
<td>0.11</td>
</tr>
<tr>
<td>Shipping Weight (lbs.)</td>
<td>0.23</td>
</tr>
</tbody>
</table>

**WARRANTY**

| Product Warranty Period (Warranty) | Lifetime limited warranty |

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https://www.tripplite.com/products/product-certification-agencies
CAT6-75-110 IN/RJ 45 OUT - SOLID-STATE BUILDING ENTRANCE PROTECTORS

Features:
- UL listed for Primary (497) and Isolated Loop (497B) applications
- Exceeds TIA/EIA Standards 568 and 758 for CAT6 performance
- Solid-state protection for fastest response
- Use between buildings in a campus environment as a building entrance protector or in hostile industrial applications as an isolated loop protector
- For use with CISCO POE systems
- Can be used in high power POE (POE+) applications
- Expandable System Protection - SurgeGate Modules can be attached to one another to expand system protection as your system grows
- 5 Year Product Warranty - This surge protector shall be free of any defects in design, materials, or workmanship, or ITW Linx will repair or replace the defective product
- $50,000 Connected Equipment

Questions on ordering? Call us at 1-800-278-5666
Visit us at: www.itwlinx.com

SECURUS Technologies
TECHNICAL SPECIFICATIONS

PRODUCT SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Approval</td>
<td>UL Primary (497) and Isolated Loop (497B)</td>
</tr>
<tr>
<td>Grounding Requirements</td>
<td>See Technical Reference at <a href="http://www.itwlinx.com">www.itwlinx.com</a></td>
</tr>
<tr>
<td>Recommended Grounding Impedance</td>
<td>&lt;0.5 Ohm</td>
</tr>
<tr>
<td>Width / Height / Depth / Weight</td>
<td>4.25&quot; / 4.25&quot; / 1.5&quot; / 0.42 lbs</td>
</tr>
<tr>
<td>Product Warranty</td>
<td>5 Years</td>
</tr>
<tr>
<td>Connected Equipment Warranty</td>
<td>Up to $50,000</td>
</tr>
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</table>

SIGNAL LINE SURGE PROTECTION: (TELCO)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Perfect Circuitry</td>
<td>Yes</td>
</tr>
<tr>
<td>Fused</td>
<td>Yes</td>
</tr>
<tr>
<td>Performance Rating</td>
<td>Cat6</td>
</tr>
<tr>
<td>Clamping Level</td>
<td>75V</td>
</tr>
<tr>
<td>Response Time</td>
<td>1-5 Nanoseconds</td>
</tr>
<tr>
<td>Capacitance</td>
<td>&lt;5pF</td>
</tr>
<tr>
<td>Wires Protected</td>
<td>4-pairs</td>
</tr>
<tr>
<td>Termination Type</td>
<td>110 Punchdown In/RJ, 45 Out</td>
</tr>
</tbody>
</table>

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT6-75-110 In/RJ, 45 Out</td>
<td>Protects high-performance 4-pair CAT6 outside plant cables as well as CAT6 UTP cables for voice or ISDN low-voltage (digital, 75V) applications. Uses 110 punchdown In/RJ, 45 Out.</td>
</tr>
</tbody>
</table>