

Aggregating Links For Maximum Performance

Optimal Network Connectivity | Reliable Network Access | Flexible Network Management

Enterprises are increasingly relying on the internet for delivery of critical components in everyday business operations. Any delays or interruptions in connectivity can easily result in reduced productivity, lost business opportunities and damaged reputation. Maintaining a reliable and efficient internet connection to ensure the operation of critical applications is therefore the key to success for any enterprise.



Xtera Communication's AscenLink is a device that intelligently balances the load of multiple WAN connections supported by user friendly UI and flexible policy based performance monitoring system. AscenLink provides unique solution that offers comprehensive multi-WAN management that keeps costs down as well as keeping customers and users connected.

Performance

The AscenLink intelligently aggregates multiple leased and broadband lines to significantly increase data transfer rate for faster application delivery.

Reliability

Provides fault tolerance for both inbound and outbound traffic to ensure stable and dependable bandwidth.

Quality

WAN link health check and fault tolerance detects errors across the entire link to provide consistent and firm WAN connectivity. It monitors the speed and health of each connection, while balancing traffic load and detecting outages.

Scalability

Allows for easy and instant deployment without having to alter or modify any existing infrastructure. The device is capable of aggregating smaller and older lines to improve data transmission.

Management

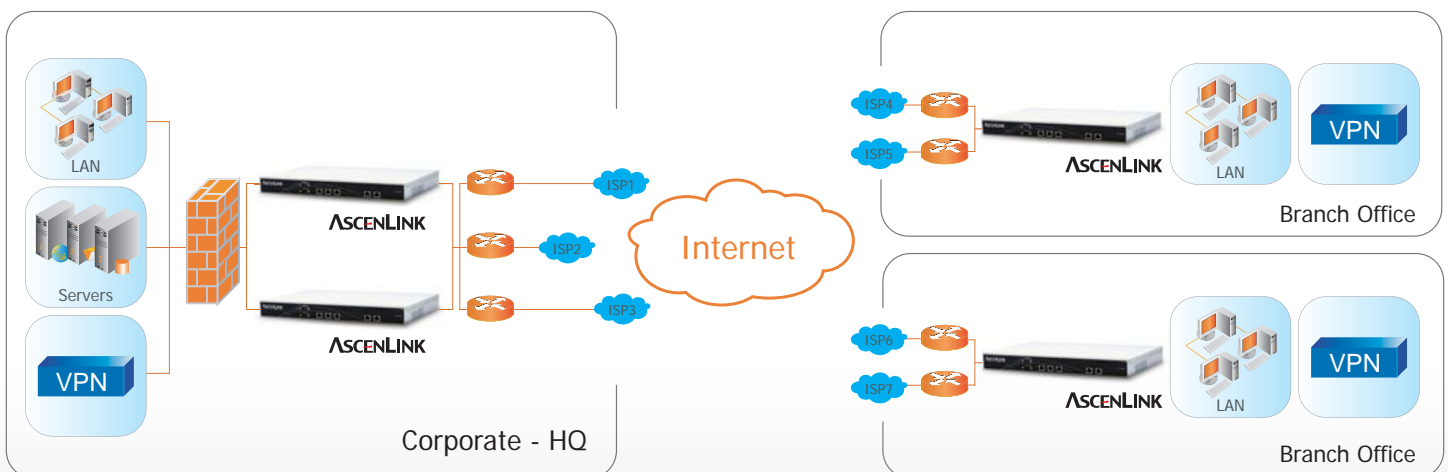
The UI provides a flexible management platform which offers in depth monitoring.

Cost

The multifunctional AscenLink delivers an excellent price versus performance ratio by integrating multiple network services into a single device. AscenLink can effectively reduce leased line expenses and management costs.

Productivity

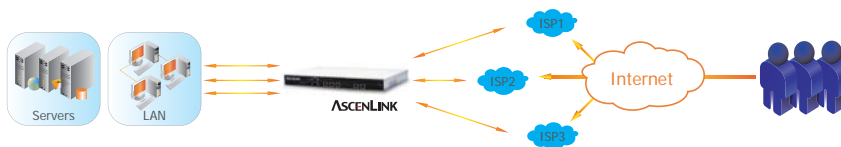
Reliable connection and guaranteed performance of multiple links will facilitate enterprises toward achieving maximum output and to ensure business continuity.



Maximizes Bandwidth Performance

AscenLink does not require highly expensive private lines to increase bandwidth. The device can effectively integrate multiple ISP lines and proven to increase network speed. The key component is the AscenLink's ability to balance WAN Link load which enables network administrators to use links more efficiently and to maximize performance of multiple links. The intelligent routing is capable of assigning dynamic connections based on the load of the links. Thus it automatically allocates connections from congested to idle lines. Enterprises can therefore significantly reduce the cost of operating a virtual private link by aggregating multiple low cost lines. The AscenLink is a product that ultimately improves network performance as well as saving costs.

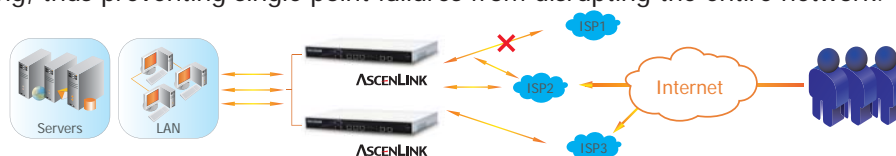
- **Outbound Load Balance** – The intelligent Auto Routing system can direct each session or connection to the best available link according to load balancing algorithms . It also supports policy-based routing, persistent routing, and traffic scheduling to effectively convert any business principle into network policy.
- **Inbound Load Balance** – When external users request any specific server IP address, AscenLink's Multihoming ability featuring the patented SwiftDNS technology promptly returns DNS response according to link quality. This provides enterprises with unmatched availability of bandwidth and load-balances incoming traffic across the multiple ISP lines.
- **Optimal Routing** – This distinctive function allows the AscenLink to locate the quickest and shortest path for data to reach its target destination when under multiple ISP lines. This is especially practical and valuable for multinational enterprises that constantly rely on long distance connections.



Reliable Network Connectivity

AscenLink delivers network reliability with its intelligent link detection and fault tolerance system. It detects faulty links from both internal network systems establishing connections to WAN and external connections accessing LAN network, and diverts traffic onto other links automatically. Therefore downlinks will not affect the entire network, and thus preventing network delays and disruptions.

- **Outbound Fault Tolerance** – The network health monitor supervises the network permanently with WAN Health Detection, providing 24/7 uninterrupted internet service. If an ISP line disconnects, AscenLink will automatically divert outbound traffic onto other lines without any disruptions. Similarly once the faulty link resumes its operations, the device will divert traffic back onto the link and redistributes traffic across all available connections to optimize the network performance.
- **Inbound Fault Tolerance** – WAN Health Detection together with SwiftDNS ensures AscenLink will automatically adjust DNS response during ISP line disruptions. This will allow users to permanently retain inbound connections via DNS enquiries. This ensures outbound services will never experience downtime.
- **High Availability** – AscenLink supports an active/passive deployment for a timely contingency backup in case of hardware failure. If hardware failure occurs in the active unit, the passive unit will takeover immediately to ensure the system remains functioning, thus preventing single point failures from disrupting the entire network.

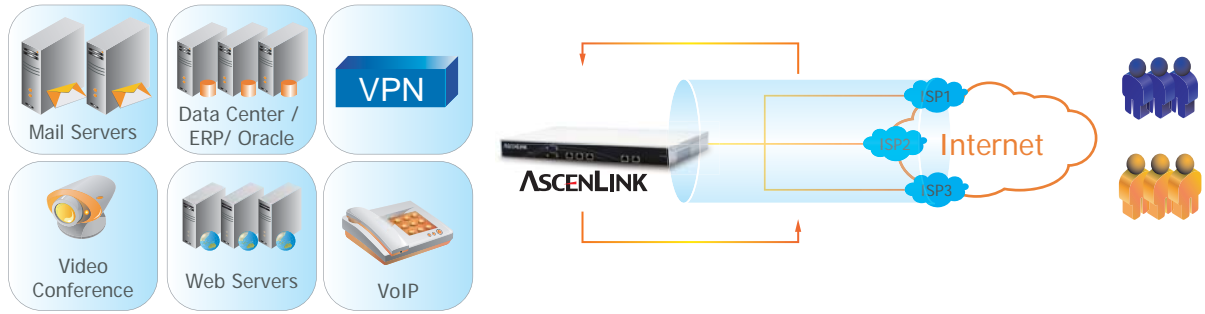


High Availability For Network Services

Enterprises have become dependant on network services to operate not regionally globally but globally to ensure targets are achieved. This cannot happen unless network performances are reliable. AscenLink not only constructs an efficient and stable network, but also delivers load balance, fault tolerance and bandwidth control to assure performance of network services and stability over multiple links.

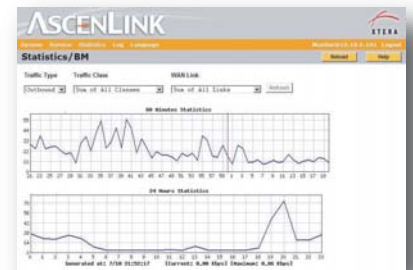
- **Tunnel Routing** – AscenLink's uniquely patented Tunnel Routing technology delivers link aggregation and fault tolerance over multiple links for a single connection. Traditional IP sec VPN establishes tunnels over a single link, whereas AscenLink Tunnel Routing is capable of establishing tunnels over multiple links. With the help of load balancing algorithms and WAN link health detection, Tunnel Routing delivers bandwidth aggregation over multiple links to ensure nonstop network service. AscenLink provides AES encryption algorithm which secures data transmission over tunnel routing in a public network. Tunnel Routing also supports dynamic IP networks, and this is especially crucial for critical services such as VPN and live video streaming where single connection applications can function under multiple lines to boost performance.
- **Server High Availability** – AscenLink allows servers to operate together for traffic load balancing without overloading any one specific server. Health Check provides continuous assessment of the server status, thus reducing the risk of server failures. Server High Availability ensures uninterrupted network services for enterprises to serve customers with stability and reliability.

- **Bandwidth Management** – AscenLink can be managed based on categorization of service, traffic source and destination. The settings can control maximum or minimum bandwidth for each category, thus bandwidth can be adjusted according to usage and avoid wastage. Critical applications are therefore guaranteed bandwidth for performance and quality.



Security and Management

AscenLink is a user friendly and flexible management device capable of handling multiple ISP links as well as ensuring network protection. The UI provides comprehensive log files of network statistics for each major function, ideal for inspections on bandwidth utilization and for system diagnoses. It is also a device by default that resists common attacks by having extra layers of security.



- **Firewall** – Conducts continuous stateful inspections to expose the source, IP address and layer 7 details of unknown connections, and is highly effective in repelling unwanted intrusions. The custom firewall settings can also be adjusted according to the needs of every enterprise.
- **Connection Limit** – Restricts the amount of connections each individual IP addresses can access. The limit imposes connection restrictions if a sudden surge is detected. Connection Limit will minimize the effect of network intrusions as well as assisting system administrators with adequate information to take the necessary actions.
- **User Friendly UI** – The UI effortlessly allows management the visibility to continuously monitor the network. The advanced and intuitive UI simplifies network management and provides the platform for uncomplicated and secure network administration.
- **Real-time Statistics and Report** – LinkReport provides live as well as historical reports for evaluating site traffic patterns, relative ISP performance, and estimated bandwidth billing cycles. It is the perfect solution for system administrators to monitor bandwidth resources and to make informed business decisions.

Model	200	702	703	706	710	5010	5050	5100
Application Environment	Branch Offices SOHO	Branch Offices SOHO	Branch Offices SOHO	Small - Medium Business	Medium - Large Business	Large Business	Headquarters Large Enterprise	Headquarters Large Enterprise
WAN Links	4	25	25	25	25	50	50	50
WAN Bandwidth	20 Mbps	20 Mbps	30 Mbps	60 Mbps	100 Mbps	100 Mbps	500 Mbps	1 Gbps
User Defined Port	Y	Y	Y	Y	Y	Y	Y	Y
Network Interface								
10/100 Base-TX	4	1	1	1	1	N	N	N
10/100/1000 Base-TX	N	4	4	4	4	6	6	6
1000 Base SX/LX	N	N	N	N	N	4(SX/LX) ³	4(SX/LX) ³	4(SX/LX) ³
Load Balancing Algorithm								
Fixed	Y	Y	Y	Y	Y	Y	Y	Y
Weighted Round-Robin	Y	Y	Y	Y	Y	Y	Y	Y
Application	Y	Y	Y	Y	Y	Y	Y	Y
Connection	Y	Y	Y	Y	Y	Y	Y	Y
Traffic	Y	Y	Y	Y	Y	Y	Y	Y
FQDN	Y	Y	Y	Y	Y	Y	Y	Y
Optimum Route	Y	Y	Y	Y	Y	Y	Y	Y
Multihoming								
WAN Load Balancing and Fault Tolerance	Outbound Only	Inbound Outbound	Inbound Outbound	Inbound Outbound	Inbound Outbound	Inbound Outbound	Inbound Outbound	Inbound Outbound
Multiple Domains	N	Y	Y	Y	Y	Y	Y	Y
DNS Relay	N	Y	Y	Y	Y	Y	Y	Y
Bandwidth Management								
Max. and Min. Bandwidth	Y	Y	Y	Y	Y	Y	Y	Y
Priority	Y	Y	Y	Y	Y	Y	Y	Y
Source / Destination IP and Application	Y	Y	Y	Y	Y	Y	Y	Y
Schedule	Y	Y	Y	Y	Y	Y	Y	Y
Firewall / Security								
Stateful Firewall	Y	Y	Y	Y	Y	Y	Y	Y
Access Control List	Y	Y	Y	Y	Y	Y	Y	Y
IP-MAC Mapping	Y	Y	Y	Y	Y	Y	Y	Y
Connection Limit	Y	Y	Y	Y	Y	Y	Y	Y
DoS Protection	Y	Y	Y	Y	Y	Y	Y	Y
Physical DMZ	Y	Y	Y	Y	Y	Y	Y	Y
Tunnel Routing	Standard ¹	Optional						
VPN Load Balancing	Y	Y	Y	Y	Y	Y	Y	Y
AES Encryption	Y	Y	Y	Y	Y	Y	Y	Y
Dynamic IP Support	Y	Y	Y	Y	Y	Y	Y	Y
NAT pass through	Y	Y	Y	Y	Y	Y	Y	Y
Peer Routing Exchange	Y	Y	Y	Y	Y	Y	Y	Y
Others								
Server High Availability	Y	Y	Y	Y	Y	Y	Y	Y
Built-in DNS	Y	Y	Y	Y	Y	Y	Y	Y
NAT Mode / Routing Mode	Y	Y	Y	Y	Y	Y	Y	Y
Web Cache Redirection	Y	Y	Y	Y	Y	Y	Y	Y
Persistent Routing	Y	Y	Y	Y	Y	Y	Y	Y
RIP V1/2 and OSPF	Y	Y	Y	Y	Y	Y	Y	Y
PPPoE / DHCP WAN Type Support	Y	Y	Y	Y	Y	Y	Y	Y
Multiple Public IP Pass-Through	Y	Y	Y	Y	Y	Y	Y	Y
IEEE 802.1q VLAN	N	Y	Y	Y	Y	Y	Y	Y
Redundant Power Supply	N	N	N	N	N	Y	Y	Y
On Demand Line Backup ²	Y	Y	Y	Y	Y	Y	Y	Y
HA (High Availability)	N	Y	Y	Y	Y	Y	Y	Y
Management								
Web Admin (SSL) / Console (RS323, SSH)	Y	Y	Y	Y	Y	Y	Y	Y
LinkReport support (Optional)	Y	Y	Y	Y	Y	Y	Y	Y
SNMP V1 / V2 / V3	Y	Y	Y	Y	Y	Y	Y	Y
Form Factor	Desk-top	1U	1U	1U	1U	2U	2U	2U

1. AscenLink 200 is required to pair with AscenLink 702 or higher models for Tunnel Routing applications.

2. Dial-on Demand Routing and Routing Backup.

3. The 5000 series ships without SFP modules installed in the SFP ports.

4. Xtera also makes the AscenLink 100 available for specialized deployments. Please contact Xtera for additional information on AL-100.

5. This specification is subject to change without notification.

6. Product names and logos belong to Xtera Communications.

7. For more information, you are cordially invited to visit our website at www.xtera.com

