SpeedStream®

SpeedStream® 5880 Broadband Security Router

The security solution for existing broadband connections

Built for Business

Many small and midsize businesses (SMB) and their teleworkers have broadband Internet access but no security—a situation that was acceptable a few years ago but is no longer. Increasingly, SMB customers recognize the urgency of protecting corporate and customer information as it travels over the Internet and resides in connected PCs. Furthermore, they are beginning to see the value in having an IP-application ready network which will allow them to take advantage of cost-reducing solutions such voice over IP (VoIP) and video over IP. However, until now, SMBs that wanted to secure their existing broadband connections and create an infrastructure for IP applications were forced to choose between high-end security appliances designed for the enterprise market or low-end solutions intended for consumers.

Now businesses have a new choice. A flexible, all-in-one application-ready security router solution, the SpeedStream 5880 Broadband Security Router delivers the most useful features of enterprise-class routers at a much lower price. And because the SpeedStream 5880 Broadband Security Router is compatible with all broadband connection methods—T1, DSL, cable, and fixed wireless—businesses can simplify deployment by using the same solution for all branch offices, regardless of their access method.

Enterprise-grade features for small and medium businesses

Sitting between the local area network and the broadband modem, the SpeedStream 5880 Broadband Security Router enables enterprise-class security and IP-applications such as firewall, virtual private networking (VPN), voice and video over IP, and high availability. SMBs need these capabilities but, unlike enterprise customers, typically don't have the resources to purchase and manage numerous devices. By incorporating multiple capabilities within one device, the SMBs can easily deploy and manage these services through a single interface.

With the SpeedStream 5880, businesses can easily deploy these capabilities at the time of initial installation or add these services over time, depending on their business needs. Capabilities include:

> **Firewall—**An integrated ICSA-certified stateful inspection firewall protects applications and data from hackers.

> **Secure VPN—**The SMB can deploy VPNs to ensure that data travels securely to and from offices. The easy-to-use interface allows these capabilities to be easily setup and managed with little to no training.

> **Demilitarized Zone (DMZ)—**Businesses can connect to a computer host or small network inserted as a "neutral" zone between the company's highly secure, private network and the outside public network. This enables the company to protect their main servers while providing services, such as an extranet for customers, suppliers or vendors, without compromising their internal network.

> **High availability—**The SpeedStream 5880 Broadband Security Router supports high availability with dial backup functionality and virtual router redundancy protocol (VRRP) support. The router can detect if the broadband connection is unavailable and automatically establishes a dial-up connection with the service provider. In addition, the router will automatically reroute traffic to an alternate router if the WAN link or IP datapath fails

Breakthrough price

Unlike enterprise-class security appliances, which deliver specialized features that SMBs just don't need, the SpeedStream 5880 Broadband Security Router provides the essentials for secure broadband access and the infrastructure for IP applications. By incorporating all these necessary functions of advanced routing, security, and IP-application support, the SpeedStream 5880 Broadband Security Router makes broadband security and applications affordable for SMBs.

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Value-Added Services

SpeedStream 5880 Broadband Security Routers

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The SpeedStream 5880 Broadband Security Router meets urgent business needs of SMBs: securely interconnecting small offices and teleworkers, adding security to existing broadband connections, and providing the infrastructure for IP applications.

Secure Connectivity for Small Offices

Many SMBs want to enable secure broadband communications among their headquarters, branch offices, and teleworkers. In addition, they want to take advantage of cost-reducing applications such as VoIP and video over IP. Using SpeedStream 5880 Broadband Security Routers, the customer can quickly establish secure VPNs between headquarters and every location. Using the DMZ port, the customer can establish an extranet for their suppliers and vendors—allowing access to technical documents, configuration notes, and software uploads—while protecting their highly sensitive corporate information. Furthermore, the customer can implement voice and video over IP between the offices, thereby eliminating inter-office toll and long distance charges. The router automatically provides priority to real-time applications, such as VoIP, using the built-in IP Quality of Service (IP QoS) feature. This ensures high-quality in delay-sensitive applications.

Retail Point-of-Sale (POS) Network Connectivity

Retail organizations need to link multiple outlets with corporate resources such as accounting and inventory databases. They also need a secure way to perform point-of-sales (POS) activities and Electronic Fund Transfers (EFTs). In many cases, these businesses rely on insecure broadband connections and dialup access.

By installing SpeedStream 5880 Broadband Security Routers behind existing broadband modems, the company can create a VPN that securely connects outlets to headquarters, as well as a firewall that protects customer and corporate data on the LAN from malicious attacks. Furthermore, a secure broadband infrastructure is created where IP applications can be utilized. Point-of-sale transactions and EFTs can now be executed over the Internet using a secure VPN tunnel. Dedicated dialup lines can be removed and long distance and toll charges are eliminated.

Simple management

Ease of management greatly affects the cost of deploying solutions to remote sites. The SpeedStream 5880 Broadband Security Router features an intuitive interface that the customer can use to quickly set up VPN and firewall features. Role-based management allows the customer to select which functions are managed locally and which will be managed centrally. Simple, secure management enables the customer to roll out VPN and firewall services for their branch offices and teleworkers quickly, minimizing deployment and operational expenses (Figure 2).

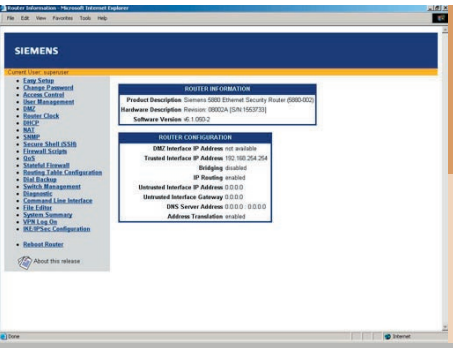

Figure 2: The easy-to-use interface accelerates setup of VPN and firewall services.

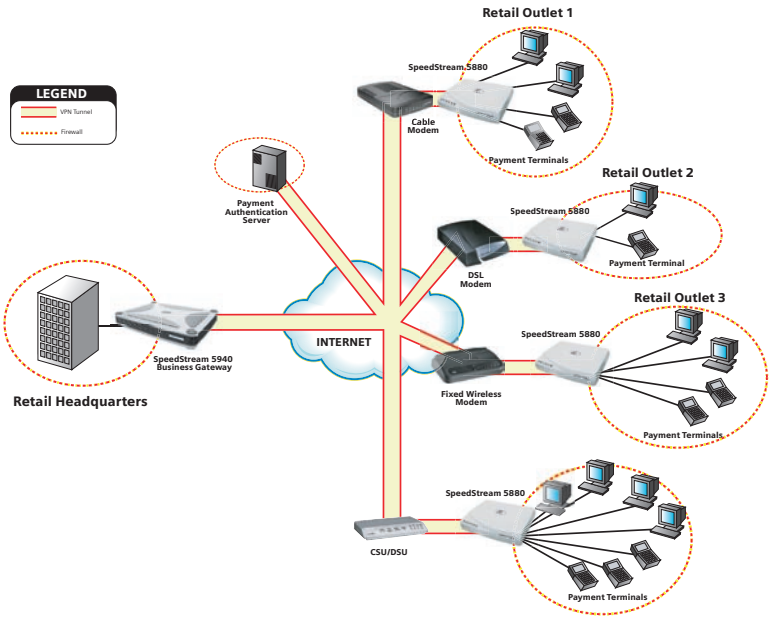

Figure 1: A high-performance Secure VPN based on the SpeedStream 5880 Broadband Security Router interconnects headquarters with retail outlets and enables POS and EFT transactions.

Feature	Benefit
Enterprise-Grade Security	
Basic Business Firewall	Secures users' networks from suspicious packets and denial of service attacks with four, easy-to-implement preset security level configurations, customization capabilities, and detailed event logs
ICSA-Certified Stateful Inspection Firewall	Provides enterprise-grade security to users who need further assurance for business sensitive data and applications
Secure Virtual Private Network (VPN) with IPSec, IKE, and 3DES encryption	Secures the datapath from interception, examination, alteration or DES, corruption by authenticating and encrypting data for all authorized network clients
DMZ port	Enables a computer host or small network to be included in a "neutral" zone between a company's high security, private network and the outside public network
VPN Encryption Engine	Accelerates IPSec, DES, and 3DES performance by providing hardware support for encryption processing
Powerful, Secure Management	
Remote and local management	Maximizes opportunities for managed services by providing tools to allow management over SNMP, Telnet, HTTP, or the console port. On-board scripting engine simplifies development of standard configuration scripts for mass-deployment
Secure management	Protects administrative access and communications with IPSec and SSH for authentication and encryption
Role-based management	Enables multi-level managed services by restricting the ability to view or change the configuration with up to 4 different predefined roles (up to 15 user names in the local database)
RADIUS management authentication	Reduces the cost of management by authenticating administrators in a single database
IP Quality of Service	
Weighted Fair Queuing (WFQ)	Enables value-added services by optimizing router throughput based on real-time or other latency sensitive traffic types
DiffServ	Enables differentiated services and SLAs by optimizing end-to-end throughput based on traffic types
High Availability	
External dial backup	Maximizes uptime by automatically using an external modem to connect to the Internet if the WAN link or IP datapath fails
Virtual Router Redundancy Protocol (VRRP)	Maximizes uptime by automatically rerouting traffic to an alternate router if the WAN link or IP datapath fails
Simplified Deployment	
Self-installation	Enables users to self-install services with no additional software and minimal knowledge of service and networking settings through any Web browser
Easy diagnostics	Simplifies self-installation by allowing users to access critical information to troubleshoot and correct issues without on-site technical help
Network address translation (NAT/NAPT)	Simplifies IP address assignment by hiding the address information of the end-user's local network
4-port 10/100Base-T Ethernet switch	Provides optimal LAN connectivity and performance
Reliable Investment	
Single, integrated solution	Provides a single point of management which minimizes deployment and support costs and space required
Platform and operating system independent	Reduces the cost of operations, due to interoperability with the IEEE 802.3 standards

Software Features

Security

Secure Management

- User authentication (PAP/CHAP) with PPP (RFC 1334, RFC 1994)
- Password control for configuration manager
- SNMP community name reassignment
- Telnet/SNMP port reassignment/Access Control List
- Role-based management
  - Four pre-configured templates
  - Up to 15 user names stored in the local database
- RADIUS management authentication support
- SSH and IPSec secure management channels

Basic Business Firewall

- Filter on source and/or destination IP address/port value
- Filter on SYN, ACK flags and ICMP
- Apply input, output, transmit, and receive filters on each interface
- Stateful inspection when NAT is enabled
- Logging and scripting

ICSA-Compliant Stateful Inspection Firewall

- Provides enterprise-grade firewall protection from
  - Common Denial of Service (DoS) attacks and exploits including Killwin, Land, Ping of Death, Smurf, Teardrop, Tiny Fragments, and WinNuke
  - Distributed Denial of Service (DDoS) attacks including ICMP, SYN and UDP floods
  - Other hacking attacks including IP address sweeping, IP spoofing, port scanning
- Opens ports to serve legitimate requests and automatically closes them when the request or session ends
- Full-time Stateful Packet Inspection with built-in support for most popular applications
- No pre-defined limit on the number of rules that can be created and applied
- All firewall messages can be logged to the router console and to syslog servers
- Maintains a log of the most recently dropped packets in the browser-based user interface

Secure Virtual Private Networking

- L2TP, IPSec, and L2TP inside of IPSec
- No pre-defined limit on VPN tunnels
- IPSec Tunnel and Transport modes with AH and ESP
- Internet Key Exchange (IKE) including Aggressive Mode
- DES (56-bit) and 3DES (168-bit) encryption
- Supports Perfect Forward Secrecy (DH Groups 1 and 2)
- Provides protection from replay attacks
- Implements RFCs 1321, 1828, 1829, 2085, 2104, 2401-2410, 2412, 2420, 2437, 2451, and 2631 (Groups 1 and 2)

Configuration, Management and Monitoring

- Easy setup through a browser-based user interface
- Configuration and management using HTTP, serial console, SNMP, SSH, or Telnet
- Out-of-band configuration and management using serial console port
- Supports dedicated routed management PVC in bridged and routed mode
- TFTP download/upload of new software, configuration files, and scripts
- Stores backup copy of firmware on dual bank flash memory for system recovery
- Performance monitoring data available using SNMP
- Dynamic event and history logging
- Network boot using a BootP server (RFC 2131, RFC 2132)
- Syslog server support

IP Quality of Service (IP QoS)

- DiffServ traffic prioritization through ToS byte marking
- Weighted Fair Queuing traffic prioritization
- Configurable queue weighting
- Configurable traffic prioritization policies by
  - Date, day of week, and time
  - Source and destination addresses
  - Port, protocol, and application

High Availability

- Dial backup support – Integrated v.90 modem
- Virtual Router Redundancy Protocol (VRRP) (RFC 2338) for failover support to other VRRP-capable routers

Protocols

ATM

- Encapsulation (IP, Bridging, and Bridge Encapsulated Routing) (RFC 2684/1483)
- PPP over ATM (LLC and VC multiplexing) (RFC 2364)
- Classical IP over ATM (RFC 2225)
- Classical IP (RFC 1577)
- AAL5
- Virtual Circuit (VC) traffic shaping (CBR, PCR, UBR, VBR)
- No pre-defined limit on VCs
- I.610 OAM F5 end-to-end and segment LoopBack
- Initiates and responds to LoopBack signaling

Frame Relay

- Support of frame relay ANSI T1.618 and CCITT Q.922 formats
- DLCI support
- Inverse ARP support
- LMI support including LMI protocol discovery
- LLCP auto-update
- CIR & EIR rate enforcement
- Network congestion management

PPP (RFC 1661, RFC 2364)

- PPP over Ethernet (RFC 2516)
- PPP over ATM (RFC 2364)
- Bridging (RFC 1638)
- IP Routing (RFC 1331)
- IPX Routing (RFC 1552)
- Multiclass extensions to MLPPP (RFC 2686)
- MLPPP (RFC 1990)
- Data compression of up to 4:1 (STAC™ LZS) (RFC 1974)
- Van Jacobson header compression (RFC 1144)
- Spoofing and filtering (IP-RIP, IPX-RIP, SAP, Watchdog serialization)
- Automatic IP and DNS assignment (RFC 1877)

Routing

- TCP/IP with RIP1 (RFC 1058), RIP1-compatible and RIP2 (RFC 1389), or static routing on the LAN and/or WAN
- Novell® IPX with RIP/SAP (RFC 1552)
- DHCP server (RFC 2131, RFC 2132), relay agent (RFC 1542), and client (RFC 2132)
  - Automatically defers to other DHCP servers on the network
  - Automatically adjusts to changes in LAN IP addressing
  - No pre-defined limit on DHCP clients
- DNS relay
- Multiple subnets on the LAN support NAT, RIP1, RIP2, ARP and IP filters
- Virtual routes can be defined based on user IP addresses or ranges

IP Address Translation

- Network renumbering (RFC 1631)
- Network Address Translation (NAT/PAT/NAPT)
- NAT passthrough support for numerous applications including IPSec, PPTP, H.323, SIP and NetMeeting
- Supports public Web and e-mail servers with NAT

Hardware Features

WAN Interface

- 1-10/100Base-T port

LAN Interface

- Built-in 4-port 10/100Base-T Ethernet switch
- Port 1 can be designated as the DMZ port

Serial Interface

- One asynchronous serial console port

VPN Encryption Engine

- Hardware acclerates IPSec and DES/3DES encryption

SpeedStream 5880 back panel view

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