



## SpeedTouch™ 610/610i/610s/610v Business routers

### The safe way to do business

#### Flexible solution

Specially designed for SMEs and SOHOs, the SpeedTouch 610 offers plenty of possibilities. With easy installation, an embedded firewall, IP VPN and remote management tools, the SpeedTouch 610 is a highly cost-effective and secure option. Beyond the small business market, the SpeedTouch 610 is the ideal solution for connecting regional and branch offices back to HQ. Home users and telecommuters will also appreciate its unique features, including a fail-proof setup wizard.

#### Security

Everyone knows about hackers and the dangers they can pose to business. SpeedTouch 610 routers have a built-in firewall that denies all unauthorized access.

End-users, equipment retailers or ISPs can configure this powerful firewall for a broad range of security policies and requirements.

Attacks are stopped in the router, and a log of attempted breaches of security is kept for audit purposes. The SpeedTouch 610 keeps you safe from security violations.

Remote sites can be securely connected at low cost with PKI as standard. With a PPP-client, firewall, and IP VPN client all embedded in the router, the SpeedTouch 610 is the low-maintenance option.

#### Easy installation

The SpeedTouch 610 routers are incredibly easy to install and use. Thanks to the integrated PPP-client, there is no software to be installed on your PC. The setup wizard guides you through the configuration to give you a secure teleworking solution.

Plug the router into a DSL line and you're ready to surf via PC, laptop, or LAN. Secure remote management is also possible using standard tools such as SNMP, Syslog, Telnet, and SNTIP.

#### Reduced cost

Operating a helpdesk is a costly business. With the SpeedTouch 610 routers, this cost is drastically reduced. As there is no need to install software, OS upgrades are trouble-free and the PC environment remains stable.

#### Reliability

Business-critical applications need to be available 24/7. This frequently means that servers (BASs) are duplicated with automatic switchover at time of failure. The SpeedTouch 610 allows connection to two servers with two PVCs.

The SpeedTouch 610 versions have a full range of network interfaces: ADSL over POTS, ADSL over ISDN, SHDSL, symmetric and asymmetric VDSL.



Built for excellence

speedtouch™  
ALCATEL

# Security

- **NAT/PAT**

- RFC1631 / 3022 network address translation (NAT)/ port address translation (PAT)
- Static NAT entries
- Zero-config incoming netmeeting / H.323 support via ILS snooping
- Support for default server

- **Embedded firewall**

- Packet filter firewall, capable of filtering all information available in the IP packet header:
  - Source and destination interface, IP address and port
  - TCP incoming / outgoing connections, TCP header (syn/ack/urg)
  - PINGs, ICMP type and code number, type of service, protocol
  - Arbitrary bytes in the packet header
  - Logging of intrusions to webpage and to syslog

- **IP VPN features**

- IPsec (RFC2401 / 2407)
- Key distribution:
  - Public key infrastructure (RFC2459, ITU-T Q.817) with X.509 digital certificates
  - On-line PKI enrollment: CEP (certificate enrollment protocol) interoperable with Entrust, VeriSign, Netscape and Baltimore CAs
  - Off-line PKI enrollment: PKCS#10 "Certification Request Syntax Standard" and PKCS#7 "Cryptographic Message Syntax Standard", compatible with Entrust, VeriSign, Netscape, RSA Security (RSAS) and Xcert
  - Shared secrets

- Tunnel set-up

- ISAKMP, IKE / Oakley (RFC2408 / 2409 / 2412)
- LDAP (RFC1777) and HTTP interface for certificate revocation list retrieval - ITU-T X.509v2
- Xauth authentication: PAP and CHAP

- Tunnel mode

- IPsec authentication header (AH - RFC2402) and encapsulating security payload header (ESP - RFC2406)
- IPsec IP payload compression (IPCOMP - RFC2393(bis)): Stac(TM) LZS (RFC1974 / 2395), deflate / zlib

- Encryption

- AES Rijndael, DES (RFC2405, FIPS-46-2, FIPS-74, FIPS-81), 3DES, RC5 (RFC2040), Blowfish, CAST, DES40, null encryption (RFC2410), perfect forward secrecy (PFS), ESP CBC-mode cipher algorithms (RFC2451)

- Hashing

- HMAC, MD5 (RFC2403), SHA1 (RFC2404), SHA2 available as option (under SW key)





## Easy installation and management features

- Fail-proof setup wizard on CD ROM, customizable per operator
- Fully configurable via user-friendly web-based GUI (HTTP)
- Command line interface over serial port (EIA / TIA-232) and over Telnet
- CLI fully available both in menu-mode and in text-mode
- SNMPv1 (RFC1157): MIB II (RFC1213), traps MIB (RFC1215), bridge MIB (RFC1493), ADSL MIB (RFC2662) / SHDSL MIB, Ethernet MIB (RFC2665), interface MIB (RFC2863), IPsec MIB
- Logging of events (alarms, warnings, operator sessions,...) on webpage and to standard syslog-server
- Time synchronisation SNTPv1 (RFC868), SNTPv2 (RFC1119), SNTPv3 (RFC1305) and SNTPv4 (RFC2030)
- Windows XP "uPNP": presentation and discovery
- Remote and host software download capability (web / HTTP, FTP)
- Configuration and software back-up and restore
- Storage of two software images, for fail-safe remote software upgrade and easy software roll-back
- Reset to ISP-specific defaults and to generic factory defaults
- DHCP server and client (RFC2131 / 2132), BOOTP client (RFC951 / 1542), DHCP-to-PPP spoofing, multiple DHCP pools
- DNS server and relay

# Data Features

- **Basic features**

- Up to 30 simultaneous PVCs, allowing multiple simultaneous destinations
- ATM QoS per PVC: CBR, VBR-nrt, UBR, with upstream traffic shaping per VP / VC
- Service monitoring through ITU-T I.610 F4/F5 loopback, alarms (AIS / RDI) and continuity checks
- RFC1483 / 2684 multiprotocol encapsulation over AAL5 / ATM: both LLC / SNAP and VC-based multiplexing supported
- Platform independent

- **Bridging features**

- Multiport (up to 10 PVCs) self-learning transparent bridge per IEEE 802.1D for LAN interconnect
- Remote bridge ports are isolated from each other
- Wirespeed bridging performance (over 160,000 pps)

- **'Dial-up networking' features (PPP Relay)**

- RFC2364 point-to-point protocol over ATM via PPPoA to PPTP relaying
- Multiple PPTP tunnels per end user allowing simultaneous VPN connections between multiple hosts and destinations

- **Encapsulations**

- IP over ATM (IPoA):
  - RFC1483 / 2684 routed encapsulation
  - Support for IP unnumbered and for multiple IP addresses
  - "True" RFC1577 / 2225 classical IP over ATM encapsulation: supports the ATMARP and InATMARP protocol, based on RFC1293
- IP over Ethernet (IPoE):
  - RFC1483 / 2684 MAC encapsulated routing encapsulation (RFC1483 / 2684 bridged)
  - Support for IP unnumbered and for multiple IP addresses

- Embedded PPP clients:

- RFC2364 PPP over ATM encapsulation
- RFC2516 PPP over Ethernet encapsulation
- Terminates multiple PPP sessions per RFC1661
- Dial-up networking user GUI allowing PPP session setup with service provider
- Session concept, PAP (RFC1334), CHAP (RFC1994 / 2484) and MS-CHAP (RFC2443) authentication
- Auto configuration IPCP (RFC1331 / 1877)
- Dial-in, dial-on-demand and always-on PPP modes
- DHCP to PPP spoofing
- IPCP subnet mask option: Internet access for multiple PCs on a single PPP session without NAT / PAT (using multiple IP addresses)

- **IP routing**

- Multi-port (up to 20 PVCs) router
- Static routing
- Automatic routes (PPP, LAN)
- Source and destination routing
- Dynamic routing RIPv1 (RFC1058) and RIPv2 (RFC1723 / 2453), configurable per interface - allows BSR redundancy
- Classless inter-domain routing (CIDR - RFC1518 / 1519): subnetting, supernetting (RFC1338), variable length subnet masks (VLSM - RFC1009); support for 31-bit prefixes (RFC3021)
- Support for RFC826 address resolution protocol; proxy ARP (RFC826) using configurable ARP table
- Wirespeed routing performance



## Hardware specifications

- **WAN interfaces**

- DSL line RJ-11
- Pin 3/4 for ADSL, 2-wire SHDSL and VDSL (pin 2/5 via adaptor)
- Pin 3/4 and 2/5 for 4-wire SHDSL

- **LAN interfaces – switch variants**

- 4-port 10/100BaseT auto-detect Ethernet switch IEEE 802.3 (RJ-45), half- / full-duplex with auto-MDI/MDI-X
- Available on SpeedTouch 610, 610i, 610s and 610v

- **LAN interfaces – ATMF variants**

- 10/100BaseT auto-detect Ethernet (RJ-45), half-/full-duplex
- 25.6 Mb/s ATM forum interface (RJ-45)
- Available on SpeedTouch 610, 610i and 610s

- **Serial interface**

- RS232 - EIA/TIA-232

- **Physical specifications**

- Height: 3.5 cm (1.38 in.)
- Width: 21.0 cm (8.27 in.)
- Depth: 18.5 cm (7.29 in.)

- **Operating environment**

- Temperature: 0° to 40° C (32° to 105° F)
- Humidity: 20% to 80%

- **Power requirements**

- AC voltage: 100 to 120 V AC, 220 to 240 V AC
- Frequency: 50/60 Hz
- Power consumption: 9W maximum

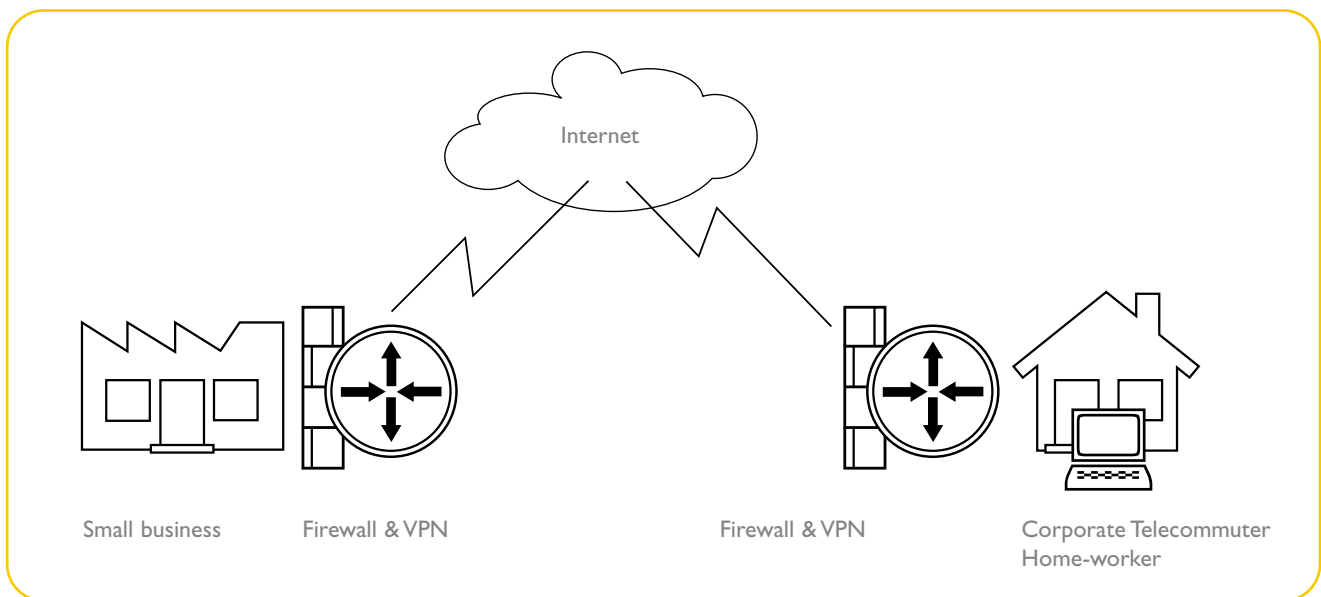
### Modem specifications

Physical layer	Product	Bandwidth	Standards	Notes
ADSL over POTS	SpeedTouch 610	Up to 8.192 Mb/s downstream and 832 kb/s upstream	<ul style="list-style-type: none"> <li>• ANSI issue 2 - ANSI T1.413i2</li> <li>• Full rate - G.dmt ITU-T G.992.1 Annex A</li> <li>• ADSL lite - G.lite ITU-T G.992.2</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-mode hand-shake - ITU-T G.994.1 (G.hs)</li> <li>• Complete embedded operations channel (EOC) implementation</li> <li>• Dying gasp (allows to distinguish cable cut and CPE power outage)</li> </ul>
ADSL over ISDN	SpeedTouch 610i		<ul style="list-style-type: none"> <li>• ETSI - ETSI ETR 006</li> <li>• Full rate - G.dmt ITU-T G.992.1 Annex A</li> <li>• Germany - U<sub>R2</sub></li> </ul>	
SHDSL	SpeedTouch 610s	Up to 2.304 Mb/s (2-wire mode) or 4.608 Mb/s (4-wire mode) downstream and upstream	<ul style="list-style-type: none"> <li>• SHDSL standard ITU-T G.991.2 (G.shdsl): symmetric PSDs and asymmetric PSDs in line with annex A (ANSI) and annex B (ETSI)</li> <li>• Hand-shake procedure ITU-T G.994.1 (G.hs), including automatic annex selection and rate adaptive mode</li> </ul>	<ul style="list-style-type: none"> <li>• Wetting current (annex A and B), including metallic termination (annex A)</li> <li>• Complete embedded operations channel (EOC) implementation: performance monitoring (bit errors, signal-to-noise ratio, loop-attenuation, ..), status reporting, remote loopback, remote inventory</li> <li>• Dying gasp (allows to distinguish cable cut and CPE power outage)</li> </ul>
VDSL	SpeedTouch 610v	Up to 23 Mb/s downstream and 4 Mb/s upstream (asymmetrical bandplan) or up to 13 Mb/s downstream and upstream (symmetrical bandplan)	<ul style="list-style-type: none"> <li>• Standard DMT VDSL: ETSI TS 101 270-1 &amp; -2; ANSI T1E1.4/2001-009R5 and 013R2; ITU-T G.vdsl.f</li> </ul>	<ul style="list-style-type: none"> <li>• Supports band plans 997, 998 and Fx with same hardware.</li> <li>• Excellent throughput performance, with aggregate (up + down) rates of 58 Mb/s over 350 m, 29 Mb/s over 1000 m and 14.5 Mb/s over 1500 m</li> </ul>

Approved for connection to all major network operators. (Please contact your service provider for details.)



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## Content of the box

- SpeedTouch 610 or 610i or 610s or 610v
- Power adapter
- DSL & LAN cables + cable filter (optional)
- Quick installation guide
- Orientation guide
- SpeedTouch set-up CD-rom

For more information: [www.speedtouch.com](http://www.speedtouch.com)

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