

Hardware specifications

- **WAN interfaces**

- DSL line RJ11
- 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 10/100Base-T auto-detect Ethernet switch IEEE 802.3 (RJ45), half- / full-duplex with auto-MDI / MDI-X
- Available on SpeedTouch 610, 610i, 610s and 610v

- **LAN interfaces – ATMF variants**

- 10/100Base-T auto-detect Ethernet (RJ45), half- / full-duplex
- 25.6 Mb/s ATM forum interface (RJ45)
- Available on SpeedTouch 610, 610i and 610s

- **Serial interface**

- RS232 - EIA / TIA-232

- **Physical specifications**

- Height: 35 mm (1.38 in.)
- Width: 210 mm (8.27 in.)
- Depth: 185 mm (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: 9 W maximum

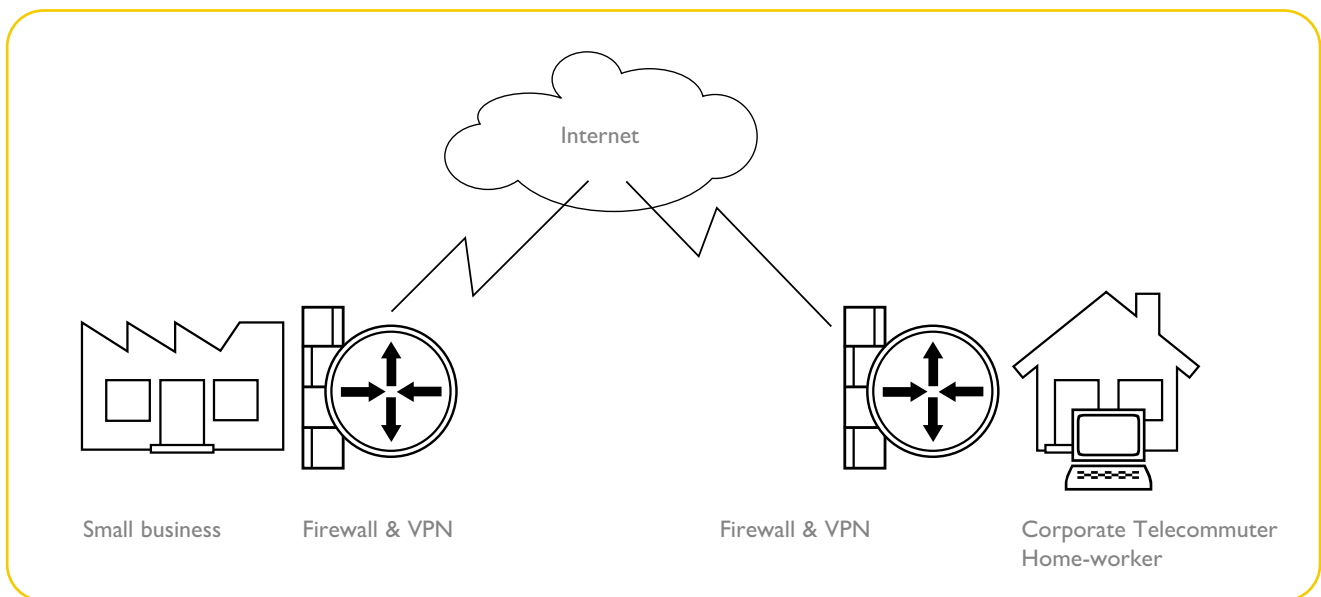
Modem specifications

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"> • ANSI issue 2 - ANSI T1.413i2 • Full rate - G.dmt ITU-T G.992.1 Annex A • ADSL lite - G.lite ITU-T G.992.2 	<ul style="list-style-type: none"> • Multi-mode hand-shake - ITU-T G.994.1 (G.hs) • Complete embedded operations channel (EOC) implementation • Dying gasp (allows to distinguish cable cut and CPE power outage)
ADSL-over-ISDN	SpeedTouch 610i	Up to 8.192 Mb/s downstream and 640 kb/s upstream	<ul style="list-style-type: none"> • ETSI - ETSI ETR 006 • Full rate - G.dmt ITU-T G.992.1 Annex B • Germany - U_{R2} 	
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"> • SHDSL standard ITU-T G.991.2 (G.shdsl): symmetric PSDs and asymmetric PSDs in line with annex A (ANSI) and annex B (ETSI) • Hand-shake procedure ITU-T G.994.1 (G.hs), including automatic annex selection and rate adaptive mode 	<ul style="list-style-type: none"> • Wetting current (annex A and B), including metallic termination (annex A) • Complete embedded operations channel (EOC) implementation: performance monitoring (bit errors, signal-to-noise ratio, loop-attenuation, ..), status reporting, remote loopback, remote inventory • Dying gasp (allows to distinguish cable cut and CPE power outage)
VDSL	SpeedTouch 610v	Up to 23 Mb/s downstream and 4 Mb/s upstream (asymmetrical band-plan) or up to 13 Mb/s downstream and upstream (symmetrical bandplan)	<ul style="list-style-type: none"> • Standard DMT VDSL: ETSI TS 101 270-1 & -2; ANSI T1E1.4/2001-009R5 and -013R2; ITU-T G.vdsl.f 	<ul style="list-style-type: none"> • Supports band plans 997, 998 and Fx with same hardware. • 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

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



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



Content of the box

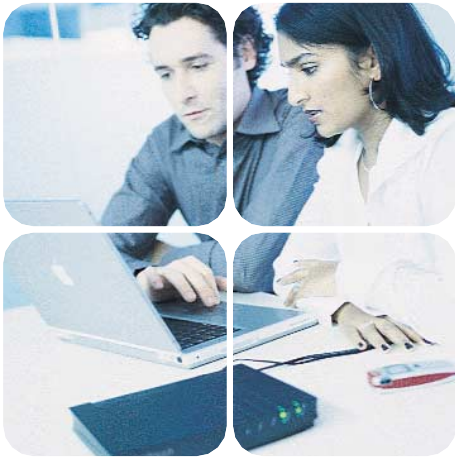
- SpeedTouch 610 or 610i or 610s or 610v
- Ethernet cable (RJ45)
- Telephone cable (RJ11)
- Cable filter (optional)
- Power adapter (9V)
- Quick installation guide
- Orientation guide
- SpeedTouch set-up CD-ROM

For more information: www.speedtouch.com

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SpeedTouch™ 610 / 610i / 610s / 610v Business DSL 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 series 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 IPSec, scalable through Public Key Infrastructure (PKI). With a PPP-client, firewall, and IP VPN client all embedded in the router, the SpeedTouch 610 Series 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 SNTTP.

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 series allows connection to two servers with two PVCs.

The SpeedTouch 610 series has 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

- RFC 1631 / 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 (RFC 2401 / 2407)
- Key distribution:
 - Public key infrastructure (RFC 2459, ITU-T Q.817) with X.509 digital certificates; support for cross-certification and chain of trust
 - 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" (RFC 2314 / 2986) 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 (RFC 2408 / 2409 / 2412)
- Diffie-Hellman dhgroup 1, 2 and 5
- Certificate revocation List (CRL) - ITI-T X.509v2: offline import; online import via LDAP (RFC 1777) and HTTP interface

- Tunnel mode

- IPSec authentication header (AH - RFC 2402) and encapsulating security payload header (ESP - RFC 2406)
- Support for NAT-T IPSec ESP on top of UDP
- IPSec IP payload compression (IPCOMP - RFC 2393/ 3173): LZS (RFC 2395, ANSI X3.241-1994), deflate / zlib RFC 2394

- Encryption

- AES Rijndael, DES (RFC 2405, FIPS-46-2, FIPS-74, FIPS-81), 3DES, RC5 (RFC 2040), null encryption (RFC 2410), perfect forward secrecy (PFS), ESP CBC-mode cipher algorithms (RFC 2451)

- Hashing

- HMAC, MD5 (RFC 2403), SHA1 (FIPS-180-1, RFC 2404 / 3174)

* 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 (RFC 1157): MIB II (RFC 1213 / 2011 / 2012 / 2013), traps MIB (RFC 1215), bridge MIB (RFC 1493), ADSL MIB (RFC 2662) / SHDSL MIB, Ethernet MIB (RFC 2665), interface MIB (RFC 2863), IPSec MIB
- Logging of events (alarms, warnings, operator sessions,...) on webpage and to standard syslog-server (RFC 3164)
- Time synchronisation SNTPv1 (RFC 868), SNTPv2 (RFC 1119), SNTPv3 (RFC 1305) and SNTPv4 (RFC 2030)
- 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 (RFC 2131 / 2132), BOOTP client (RFC 951 / 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
- RFC 1483 / 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)**

- RFC 2364 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):
 - RFC 1483 / 2684 routed encapsulation
 - Support for IP unnumbered and for multiple IP addresses
 - "True" RFC 1577 / 2225 classical IP over ATM encapsulation: supports the ATMARP and InATMARP protocol, based on RFC 1293
- IP over Ethernet (IPoE):
 - RFC 1483 / 2684 MAC encapsulated routing encapsulation (RFC 1483 / 2684 bridged)
 - Support for IP unnumbered and for multiple IP addresses

- Embedded PPP clients:

- RFC 2364 PPP over ATM encapsulation
- RFC 2516 PPP over Ethernet encapsulation
- Terminates multiple PPP sessions per RFC 1661
- Dial-up networking user GUI allowing PPP session setup with service provider
- Session concept, PAP (RFC 1334), CHAP (RFC 1994 / 2484) and MS-CHAP (RFC 2443) authentication
- Auto configuration IPCP (RFC 1331 / 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 (RFC 1058) and RIPv2 (RFC 1723 / 2453), configurable per interface - allows BAS redundancy
- Classless inter-domain routing (CIDR - RFC 1518 / 1519): subnetting, supernetting (RFC 1338), variable length subnet masks (VLSM - RFC 1009); support for 31-bit prefixes (RFC 3021)
- Support for RFC 826 address resolution protocol; proxy ARP (RFC 826) using configurable ARP table
- Wirespeed routing performance

