

# Telindus 1420 SHDSL Router



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The TELINDUS 1420 SHDSL ROUTER is a state-of-the-art base-band modem with integrated IP router offering full duplex transmission up to 2.3 Mbps over a single two-wire unconditioned unshielded twisted-pair cable. The line speed of the modem can be adapted to optimise the throughput as a function of the characteristics of the local loop. The equipment is based on a new modulation technology called TC-PAM (Trellis Coded Pulse Amplitude Modulation), which guarantees higher speeds and longer loop performance. The TC-PAM modulation also guarantees spectral compatibility with legacy and ADSL transmission systems in the same cable bundle, offering an attractive solution for the deployment of high-speed services for business and home-working applications.

The TELINDUS 1420 SHDSL ROUTER can be used as CPE in combination with Frame Relay or PPP based DSLAMs (e.g. Copper Mountain) or in a point to point set-up.

The unit comes with a direct Ethernet 10Base-T connections with integrated bridge and IP router functionality.

The Telindus 1420 SHDSL Router is ideal for high-speed symmetrical LAN connectivity as it is generally required in professional environments for rolling out Internet or LAN-to-LAN connectivity.

When the integrated IP router forwards the packets, the LAN traffic is encapsulated for transmission over the WAN link. The router supports PPP and Frame-Relay encapsulation.

## Features & Benefits

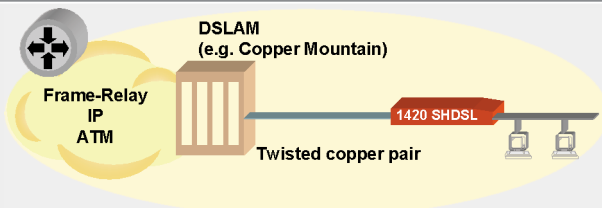
- High-speed base-band modem with integrated IP Router for use on a single unshielded twisted copper pair
- Based on the new G.SHDSL standard for higher speeds and longer loop ranges
- Variable line-transmission rates up to 2.3 Mbps
- Directly compatible with PPP or Frame-Relay based DSLAM equipment (e.g. Copper Mountain)
- Direct 10Base-T Ethernet connectivity
- Advanced free maintenance software
- Managed under HP OpenView®

The state-of-the-art features of the Telindus 1420 SHDSL Router include static IP routing, RIP version 2, filtering of IP packets (basic firewall functionality), Network Address Translation (NAT) and Port Address Translation (PAT). The Telindus 1420 SHDSL Router supports auto-install features over the WAN network for both PPP and Frame-Relay. This makes it ideally suited for plug-and-play installation at customer premises while the configuration is prepared at a central site.

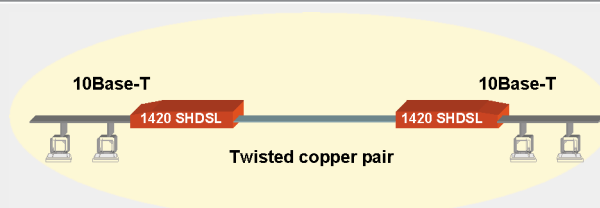
With a free user-friendly graphical Windows® application, the operator can locally configure the equipment, but also a remotely installed unit by using simple IP connectivity. In addition, the software permits performance monitoring and retrieval of statistics from the equipment.

The unit is also suited to be controlled through a Telnet Session or by any SNMP browser.

For larger networks, the TELINDUS 1420 SHDSL ROUTER can be managed with a management application running on the HP OpenView® management platform. On this platform one can combine the management of the Telindus 1420 SHDSL Router with the management of all Telindus and many third party equipment.



In combination with a Frame-Relay DSLAM



In a point-to-point configuration

## Technical Specifications

### Line interface

- Single pair line access
- Connector: RJ12
- Impedance: 135 ohm
- Coding: TC PAM, compliant to G.991.2 (G.SHDSL)
- Line speeds: Nx 64 kbps (N=1..36), framed or unframed mode
- Handshaking: compliant G.994.1

### Ideal maximum distance (noise-free)

SPEED (KBPS)	0.4 MM 26AWG (KM)	0.5 MM 24AWG (KM)	0.6 MM (KM)	0.8 MM 20AWG (KM)	1.0 MM 18AWG (KM)	1.2 MM (KM)
128	7.9	10.8	15.5	19.5	27.3	30.5
192	6.5	8.9	12.7	16.1	22.5	25.1
384	6.0	8.2	11.8	14.8	20.8	23.2
512	5.7	7.8	11.2	14.1	19.7	22.0
768	5.3	7.3	10.4	13.1	18.3	20.5
1024	5.1	7.0	10.0	12.6	17.6	19.7
1152	4.8	6.6	9.4	11.9	16.6	18.5
1536	4.2	5.8	8.2	10.4	14.5	16.2
2048	3.9	5.3	7.6	9.6	13.5	15.1
2304	3.8	5.2	7.4	9.4	13.1	14.7

### Front panel Indications

- PWR: Power
- TST : Test indicator
- TXD: Transmit Data on WAN and SDSL Link status
- RXD: Receive data on WAN
- LAN/TXD: Transmit Data on LAN and Ethernet Link status
- LAN/RXD: Receive data on LAN
- COL: Collision detected on the LAN

### LAN interface

- RJ45 Unshielded Twisted Pair (UTP) with automatic TP polarity reversal
- Fully IEEE 802.3 compatible

### Supported LAN protocols

- IP
- Bridging of other protocols

### Supported WAN encapsulation protocols

- Frame-Relay (RFC 1490, RFC2427)
  - Support of multiple DLCI's (PVC)
  - CIR (Committed Information Rate) configurable per DLCI
  - EIR (Excess Information Rate) configurable per DLCI
  - Support of Inverse ARP over Frame-Relay for automatic gateway config.
  - Support of LMI (revision 1 LMI, ANSI T1.617 and ITU-T)
- PPP (RFC1661, RFC1662)
  - Support of Chap authentication with MD5 hashing (RFC 1994)

### Routing Performance

- Processing speed: up to 14400 packets/sec
- Forwarding on WAN link: up to 4000 packets/sec
- Buffering: up to 4800 packets (64 bytes/packet)

### Ip Routing and bridging

- Static routes
- RIP version 2 with MD5 hashing and authentication (RFC2453)
- Bridging with spanning tree

### AutoInstall support

- DLCI number configuration
  - LMI (Frame-Relay only)
- IP address configuration
  - BootP client (RFC951)
  - IPCP (for PPP only)
- Gateway configuration
  - Inverse ARP (for Frame-Relay only)
  - IPCP (for PPP only)
- Full configuration
  - Automatic TFTP configuration download (RFC1350)

### Firewall functions

- Access filtering on LAN and WAN interfaces
  - Source IP Address
  - Destination IP Address
  - Source port number
  - Destination port number
  - IP protocol field

### Additional router features

- NAT (Network Address Translation) with dynamic or static IP address conversion
- PAT (Port Address Translation)
- BOOTP/DHCP server, relay agent (RFC2131, RFC2132)
- Numbered/unnumbered WAN Interface

### Maintenance and management support

- Local console (command line interface or interactive interface)
- TELNET (command line interface or interactive interface)
- TMA (Telindus Maintenance Application)
- TFTP configuration download
- PING
- SNMP Mib2, private Mib
- Software flash download
- TMA CLI stand-alone command line console software: optional
- TMA for HP OV management integration in HP Openview: optional

### Conformity to international standards

- EN60950 (class I equipment)
- EN41003
- EN55022B
- EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5\*
- EN61000-4-6, EN61000-4-8, EN61000-4-11
- ENV50204
- EN61000-3-2, EN61000-3-3
- K.21 (lightning surge)
- G.991.2, G.994.1

### Mechanical data

- H x W x D: 38 x 150 x 270 mm
- weight: 0.6 kg (excl. power supply)

### Power requirements

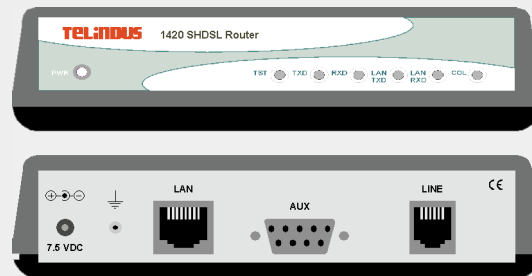
- 7.5 Vdc, 500mA
- 230 Vac Power adapter included

### Environmental requirements

- Ambient operational temperature : -10°C to 50°C
- Operational relative humidity : 0% to 95% non-condensing
- Compliant to ETSI ETS 300 019-1-3 Class 3.1 & 3.1e
- Storage temperature : -25°C to +70°C
- Maximum altitude : 3000 m

### Sales code

- 172729 TELINDUS 1420 SHDSL ROUTER 230VAC (with 230Vac power adapter)
- 172730 TELINDUS 1420 SHDSL ROUTER NPWR (without power adapter)



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Note: Telindus may make improvements and/or changes in the products described above at any time, without notice and shall in no way be held responsible for errors in this document

Your partner:

# TELINDUS

## Access Products

Geldenaaksebaan 335 - B-3001 Heverlee - Belgium  
Tel +32 16 38 20 11 - Fax: +32 16 40 01 02

www.telindus.com/accessproducts