

# 1423 SHDSL Router



The 1423 SHDSL Router is a professional state-of-the-art multi-port router with built-in SHDSL line interface offering symmetric full-duplex transmission up to 2.3 Mbps over a single two-wire unconditioned unshielded twisted-pair cable.

## 1423 ROUTER

The line speed can be automatically adapted to optimize the throughput as a function of the characteristics of the local loop. To achieve even higher speeds (up to 4.6 Mbps) or a longer reach, a 2-line pair version is also available.

The basic unit features one DSL interface, and one or multiple independent 10/100 Base-T connections. The latter one can be used for creating a DMZ (Demilitarised Zone) or for backup purposes.

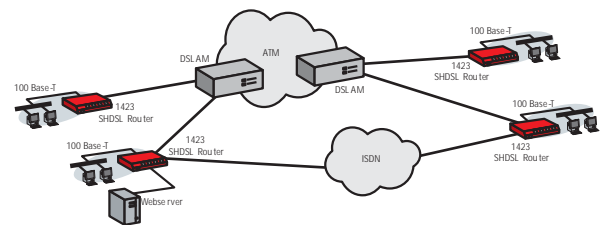
Additional models offer the possibility for securing the DSL connection using up to two Basic Rate ISDN connections (Four B channels).

All 1423 SHDSL Routers can be used as CPE in combination with any OneAccess or third-party DSLAM (Digital Subscriber Line Access Multiplexer), and in point-to-point configurations.

Additionally the 1423 SHDSL Router can also be used in combination with traditional TDM, Frame Relay or PPP based access networks.

Fully supported by the TDRE (Total Dynamic Routing Engine), the unit supports advanced features such as IP Quality of Service, IP Virtual Private Networks and support for VLANs. With a routing performance of up to 90 kpps, the 1423 SHDSL Router is capable to handle any type of multimedia or delay-sensitive traffic. This makes the 1423 SHDSL Router the ideal access device for connecting business users, offering secured managed IP services at the highest possible speeds.

The equipment supports different management interfaces on different levels of network.



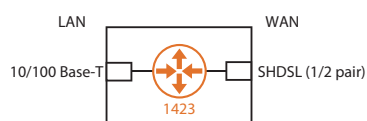
In combination with DSLAM

## FEATURES AND BENEFITS

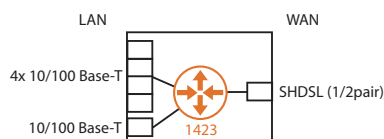
- Feature-rich multi-port router with built-in SHDSL line interface
- 1 or 2 SHDSL line pairs (up to 2.3 or 4.6 Mbps)
- Built-in 4-port 10/100 Base-T Ethernet switch
- Second independent Ethernet Interface for creation of DMZ or back-up
- Optional ISDN back-up for securing the DSL line
- For use in point-to-point configurations or in combination with a DSLAM
- Support for advanced services based on VPN and VLANs
- Advanced QoS mechanisms for supporting VoIP traffic
- Fully manageable with a variety of tools



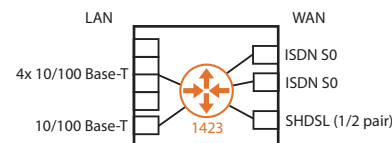
1423 SHDSL Router Model



1423 SHDSL 2ETH-4P Router Model



1423 SHDSL 2ETH-4P ISDN Router Model



## 1423 ROUTER SPECIFICATIONS

### Line Interface

- Applicable standards: ITU-T G.991.2, G.994
- Single pair or two pair line access
- Connector: RJ12/RJ45
- Impedance: 135 Ohm
- Coding: TC PAM, compliant ITU-T G.991.2 Annex A&B (G.SHDSL), ETSI TS 101524
- Line speeds:
  - Single pair: N x 64 kbps (N = 1 ... 36)
  - Two pair: N x 128 kbps (N = 1 ... 36)
- Handshaking: compliant G.994.1 (automatic speed negotiation) or fixed speed
- Handshaking: compliant G.994.1 (automatic speed negotiation) or fixed speed
- Performance monitoring: compliant G.826 (errored seconds, severely errored seconds, unavailability seconds)

### Ideal maximum distance (noise free) on a single pair

1p line speed (kbps)	2p line 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)
64	128	11.0	15.1	21.5	27.2	38.2	42.4
128	256	8.0	11.0	15.6	19.8	27.8	30.8
256	512	8.2	11.3	16.0	20.3	28.5	31.6
512	1024	7.2	9.9	14.0	17.8	25.0	27.7
1024	2048	5.5	7.6	10.7	13.6	19.1	21.2
1536	3072	4.0	5.5	7.8	9.9	13.9	15.4
2048	4096	4.2	5.8	8.2	10.4	14.6	16.2
2304	4608	4.0	5.5	7.8	9.9	13.9	15.4

### LAN Interfaces

- Compliant with IEEE 802.3 10 Mbps HDX/FDX Ethernet
- Compliant with IEEE 802.3u 100 Mbps HDX/FDX Ethernet
- 10/100 Mbps auto-sense
- Auto cross-over
- RJ45 Unshielded Twisted Pair (UTP)
- Number of interfaces: 1+4

### Integrated VLAN switch (on selected models)

- Number of ports: 4
- VLAN tagging per port
- Tagged, untagged or trunking VLAN operation
- Maximum total number of VLANs: 16

### Sales Code

- >195280 1423 SHDSL 230VAC
- >195284 1423 SHDSL-2P 230VAC
- >188493 1423 SHDSL 2ETH-4P 230VAC
- >188500 1423 SHDSL-2P 2ETH-4P 230VAC
- >188495 1423 SHDSL 2ETH-4P HWA 230VAC
- >188503 1423 SHDSL-2P 2ETH-4P HWA 230VAC
- >188498 1423 SHDSL 2ETH-4P ISDN HWA 230VAC
- >188507 1423 SHDSL-2P 2ETH-4P ISDN HWA 230VAC

Units without external power module and separate power adapters can be found in the sales codes quick reference

### BRI interface (on selected models only)

- PPP WAN encapsulation
- Connector: RJ45 S0 DTE
- Applicable standards: 1.420, 1.412, 1.430, 1.440 (= Q.920), 1.441 (= Q.921), 1.450 (= Q.930), 1.451 (= Q.931)
- Number of interfaces: 2

### Control interface

- Applicable standards: ITU-T V.24, V.28, EIA/TIA 574
- DCE signals: RXD, TXD, SGND
- Connector: female DB9

### Supported DSL Encapsulation Protocols

- ATM
- Frame Relay
- PPP
- HDLC

### IP Routing

- Conform TDRE 12.0 (Total Dynamic Routing Engine)

### Routing and Bridging Performance

- Routing performance: 60.000 / 85.000 pps\*
- Bridging performance: 75.000 / 110.000 pps\*
- Routing and bridging performance: 50 / 90 kpps\*
- Supported number of Frame-Relay DLCIs: 200 (on HWA models)
- Supported number of ATM PVCs: 31
- Supported number of IP VPN tunnels: 25
- Supported number of VLANs: 200
- Supported number of bridge-groups: 13

\* Highest value for versions with hardware accelerator

### Memory

- 16 MByte DRAM
- 8 MByte Flash

### Maintenance and management support

- Conform TDRE (Total Dynamic Routing Engine)
- Reset button for reloading default configuration

### Front Panel Indications

- PWR: Power
- LINE / LNK1: first line pair status
- LINE / LNK2: second line pair status (on 2 pair versions only)
- LINE / ACT: WAN encapsulation protocol status (DSL or ISDN)
- LINE / BACKUP: ISDN status (only on ISDN models)
- LAN1 / 1.4: LAN status on Ethernet switch
- LAN2: LAN status of second Ethernet port

### Mechanical Data

- Dimensions: 45 x 220 x 135 mm, Weight: 500 g

### Power Requirements

- Input voltage: 12 Vdc, 1 A
- Power ON/OFF switch
- External power adapters available for 24 Vdc and -48 Vdc, 115 Vac and 230 Vac
- Power consumption: max 6,5 - 9,5 W depending on version

