

DATASHEET

1424X

SHDSL.bis Ethernet Access Device



The 1424X is OneAccess' Ethernet Access Device with SHDSL.bis EFM technology. It targets business customers with a need for high speed symmetrical bandwidth at various local loop distances. With its advanced Ethernet services and MEF compliance, the 1424 X meets all the requirements for access to Metro Ethernet networks. The device is interoperable with all major IP DSLAM vendors.

- SHDSL.bis EAD up to 4 pairs
- Connection speeds up to 22 Mbps over copper
- Advanced Ethernet services
- EFM or ATM IMA pair bonding
- Extensive Maintenance and Management features
- MEF CE2.0 certified

High Speed DSL Access

The 1424X EAD delivers high speed symmetrical bandwidth in various DSL networks and at various local loop distances. It includes a SHDSL.bis interface up to 4 copper pairs. This provides line rates up to 22 Mbps on short distances and up to 10 Mbps on operator standard loop lengths. The various pair bonding techniques make it suitable for any type of DSL infrastructure. The symmetrical line rates of SHDSL perfectly match the traffic profiles of business users. Providing Ethernet in the First Mile over SHDSL.bis, the 1424X is interoperable with the major IP DSLAM vendors.

Metro Ethernet Services

Using Ethernet in the WAN has introduced new requirements to Ethernet. Advanced VLAN functions provide flow separation and service bundling. Ethernet OAM delivers link monitoring and SLA measurements. Filtering and classification based on layer 2 and layer 3 characteristics, priority policing and shaping provide the Quality of Service and Bandwidth control. These features match the requirements of operators for the delivery of E-Line and E-LAN services.

These services can also be combined with IP services in the same device. With a bidirectional forwarding performance of 250 Kpps, the 1424X EAD easily handles all Ethernet and IP services at 22 Mbps.

Smooth Migration from ATM to EFM Networks

Operators gradually migrate from ATM based access networks to Ethernet based access networks. The 1424X supports both network types. This means that a 1424X can be installed in an existing ATM network. When the network migrates to Ethernet, the same unit can be re-used in the Ethernet network without on-site intervention. The unique feature of combining ATM and EFM access in the same device leverages a smooth migration of the access network.

EAD Product Family

The 1424X is part of the OneAccess EAD family of products with DSL and fibre network access. All these products are MEF compliant. They enable fixed line and wholesale operators to satisfy the escalating demands of the mid market with innovative, agile and margin rich Ethernet products.

Accelerated Deployment and Service Provisioning

The OneAccess 1424X EAD can be integrated in any managed environment and supports all the common management interfaces such as SNMP, Telnet, SSH, HTTP and HTTPS. In addition to these interfaces a number of management tools are available to facilitate the integration of these access devices in a managed environment.

These include:

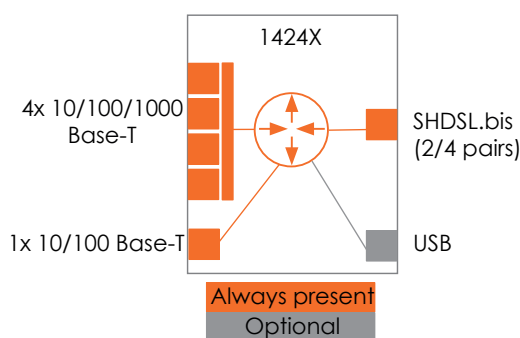
- TMA GUI application
- A customisable Web-configuration utility
- A CLI for scripting and simple integration with provisioning and management systems
- Element and Inventory Management for control and monitoring of large access networks

SHDSL.bis Ethernet Access Device

Quality Monitoring and Service Level Agreements

The 1424X keeps statistics of the last 2 hours, 24 hours and 7 days. Selected statistics can be stored over a longer period on the device for later retrieval and processing on a management platform. Traffic quality monitoring provides pro actively all the information to offer Service Level Agreements to the customer.

Technical Specifications



Basic Hardware

- G.SHDSL.bis line interface: 2/4 pairs
- 1 Fast Ethernet uplink
- 4 port Gigabit Ethernet VLAN switch
- 1 console port
- IPsec encryption accelerator for DES, 3DES and AES

SHDSL Interface

- G.SHDSL.bis 2/4 line pairs
- RJ-45 connector
- ATM, EFM and ATM/EFM auto detect
- Bonding based on EFM, SHDSL with ATM and ATM IMA
- Synchronisation LEDs
- IEEE 802.3 2BASE-TL (aka 802.3ah) (for EFM operation)

Copper Ethernet Interfaces

- 4 port switch 10/100/1000BASE-T
- Independent 10/100Base-T port
- Half/full duplex with auto-sense, automatic cross-over
- Link status and activity LEDs
- MTU size 10K bytes on Ethernet ports (Jumbo frames)

Console Port

- V.24/V.28
- RJ-45 connector

Ethernet Services

- IEEE 802.1D Transparent Bridging
- IEEE 802.1D Spanning Tree Bridging
- IEEE 802.1W Rapid Spanning Tree Bridging
- IEEE 802.1S Multiple Spanning Tree Bridging
- IEEE 802.1Q VLAN Tagging

- IEEE 802.1p QOS on MAC level
- Basic and extended MAC filtering
- VLAN Switching
- Port-based VLANs
- IEEE 802.1ad Provider Bridges or QinQ
- OAM IEEE 802.3 chapter 57 (for EFM operation)
- OAM IEEE 802.1 ag & ITU-T Y.1731
- MEF CE2.0 certified for E-Line, E-LAN and E-Tree services

IP Services

- NAT/PAT
- DHCP client/relay/server
- DNS server/relay
- IGMPv1, v2
- Stateful Inspection Firewall
- Basic and Extended IP filtering
- DMZ

IP Routing

- Static routing
- Policy based routing
- RIP v1 and v2, OSPF, BGP-4
- VRF (VPN Routing & Forwarding)
- VRRP (Virtual Router Redundancy Protocol)

Virtual Private Networks

- GRE tunnelling
- L2TP tunnelling
- IPsec (tunnel and transport mode)
- GRE or L2TP transport mode
- IKE and Manual Key Management
- AH and ESP Protocol
- DES, 3DES and AES encryption
- SHA-1 and MD5 Authentication

Technical Specifications



Quality of Service (QoS)

- Traffic Classification and Policing (inbound/outbound)
- Priority Queuing Layer 3 (8 levels)
- Priority Queuing Layer 2 (8 levels)
- Traffic Shaping CIR/EIR
- Queuing mechanisms: SP, RR, WFQ, LDWFQ

Performance and Scalability

- Routing and bridging performance: 250 Kpps
- Number of IPSEC, L2TP or GRE tunnels: 25
- Number of VLANs: 200
- Number of bridge-groups: 13

Maintenance and Management Support

- Console port, CLI, Telnet, SSH
- Multilevel password protection, Radius AAA
- HTTP, HTTPS, customised Web Interface
- FTP/TFTP upload/download configuration/firmware
- SNMPv1, v2, v3, MIB II, proprietary MIB
- Statistics 15min, 2h, 24h, 7 days
- IP traffic monitoring: roundtrip delay, jitter, loss
- Syslog, SNTP
- PC-based maintenance tool
- Element management application
- Inventory management application
- TR-069

Dimensions

- Desktop, metal housing, wall mountable
- W x H x D : 275 x 55 x 146 mm (10.8 x 2.16 x 5.75 in)
- Weight : 1.3 kg (2.86 lb)

Power Supply

- External adapter 12V – 2A
- Voltage range: 110-230 VAC – 50/60 Hz
- Power consumption: <24 W

About  EKinops

Ekinops is a leading provider of open and fully interoperable Layer 1, 2 and 3 solutions to service providers around the world. Our programmable and highly scalable solutions enable the fast, flexible and cost-effective deployment of new services for both high-speed, high-capacity optical transport networks and virtualization-enabled managed enterprise services

Our product portfolio consists of three highly complementary product and service sets: Ekinops360, OneAccess and Compose.

- Ekinops360 provides optical transport solutions for metro, regional and long-distance networks with WDM for high-capacity point-to-point, ring and optical mesh architectures, and OTN for improved bandwidth utilization and efficient multi-service aggregation.
- OneAccess offers a wide choice of physical and virtualized deployment options for Layer 2 and Layer 3 access network functions.
- Compose supports service providers in making their networks software-defined with a variety of software management tools and services, including the scalable SD-WAN Xpress.

As service providers embrace SDN and NFV deployment models, Ekinops enables future-proofed deployment today, enabling operators to seamlessly migrate to an open, virtualized delivery model at a time of their choosing.

A global organization, with operations in 4 continents; Ekinops (EKI) - a public company traded on the Euronext Paris exchange - is headquartered in Lannion, France, and Ekinops Corp., a wholly-owned subsidiary, is incorporated in the USA.

EKinops360
Dynamic Optical Transport

 **COMPOSE**

ONEACCESS
Fast Network Virtualization