



Ethernet ACCESS DEVICES

ABOUT OneAccess

OneAccess designs and develops a range of world-class Multi-Service Routers and Ethernet Access Devices for over 140 global service provider customers including four of the top five operators in Europe. The products are tailored to the services offered by telcos for their enterprise customers.

With an international support network operating from offices in North America, Europe and Asia, OneAccess is able to work closely and cooperatively with all its clients throughout the development and roll-out phases for new services.

Features and Benefits

- SHDSL.bis EAD up to 4 pairs
- Connection speeds up to 22 Mbps over copper
- Advanced Layer 2 features
- EFM or ATM IMA pair bonding
- Extensive Maintenance and Management Functionalities
- MEF certified

The 1424 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 layer 2 features and MEF certification, the 1424 meets all the requirements for access to Metro Ethernet networks. The device is interoperable with all major IP DSLAM vendors.

High Speed DSL Access

The 1424 SHDSL.bis EAD targets business customers with a need for 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 22Mbps on short distances and up to 10Mbps 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 1424 is interoperable with the major IP DSLAM vendors.

Extensive feature set

This access equipment has been designed to be used in a professional environment requiring advanced features such as native layer 2 support, advanced routing protocols (OSPF, BGP), advanced multilevel QoS support, several VPN implementations (IPSec, GRE, L2TP) and many management options. Backup scenarios are available including 3G backup via an external USB dongle. This eliminates the need to install additional router equipment to deliver Internet or IP VPN services to business customers.

With a bidirectional forwarding performance of 250Kpps, the 1424 SHDSL.bis EAD easily handles all layer 2 and 3 services at 22Mbps.

Metro Ethernet services

Ethernet features include many bridge cache options, STP, RSTP, MSTP, advanced VLAN features and Ethernet OAM.

Quality of Service is available both on IP and Ethernet packets with filtering, classification and colouring based on layer 2 and layer 3 characteristics, many priority scheduling options, policing and shaping. The 1424 fully complies with the MEF.9 and MEF.14 requirements as defined by the Metro Ethernet Forum.

Smooth Migration from ATM to EFM Networks

Operators gradually migrate from ATM based access networks to Ethernet based access networks. The 1424 supports both network types. This means that a 1424 can be installed in an existing ATM network. When the network migrates to Ethernet, the same 1424 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.

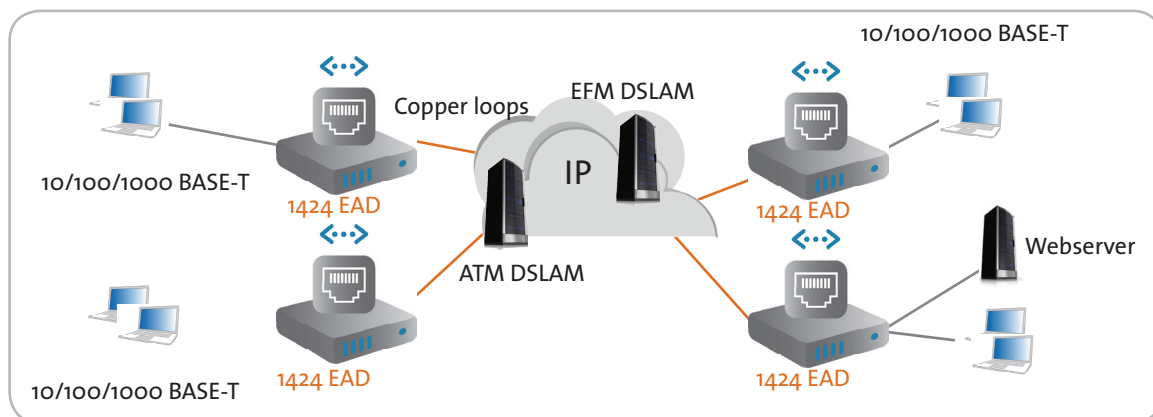
Accelerated Deployment and Service Provisioning

The OneAccess 1424 Fibre 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 Management System for monitoring of large networks

Quality monitoring and Service Level Agreements

The 1424 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: 1/2/4 pairs
- 1 Fast Ethernet uplink
- 4 port Fast Ethernet VLAN switch
- 1 console port
- IPsec encryption accelerator for DES, 3DES and AES

SHDSL interface

- G.SHDSL.bis1/2/4 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 10/100BASE-T
- Independent 10/100Base-T port
- Half/full duplex with auto-sense, automatic cross-over
- Link status and activity LEDs

USB Port (options)

- USB 2.0 compliant at USB 1.1 speed
- Support for mobile USB devices

Layer-2 functionality

- 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
- MEF9 and MEF14 certified

IP Functionality

- 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

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

Dimensions

- Desktop, metal housing, wall mountable
- W x H x D: 275 x 65 x 145 mm; Weight: 0,8 kg

Power supply

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