

# ONE100D/M

Voice enabled SHDSLbis EFM Business Router



The ONE100 D/M is a voice enabled SHDSL router targeted to business customers who are hungry for bandwidth and a complete service. The ONE100 D/M connects phones, faxes, PABX and LAN stations to the network. The SHDSL multi-pair interface offers a bandwidth up to 22Mbps over up to 4 copper pairs. The router relies on the robust OneOS software, the OneAccess IP software designed for the delivery of enterprise-grade services such as VoIP, SIP PBX, Quality of Service, IP VPN and Wireless LAN. The product is available with different feature packs tailored to your needs. The great manageability enables a reduced network Total Cost of Ownership.

## HIGH SPEED DSL ACCESS

The ONE100 D/M targets business customers with a need for high speed symmetrical bandwidth in various DSL networks and at various local loop distances. It includes a SHDSLbis 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 meet the traffic profile of business users.

The ONE100 D/M also supports network based VPNs based on MPLS / IP and on VPLS / VLAN technology. It provides best-in-class IP Quality of Service features including real-time processing of high priority, delay sensitive applications and guaranteed bandwidth for selected flows.

Each of the 4 LAN ports can be reserved for a server. Specific policies can be applied per port. The optional wireless LAN gives access to different types of users. Several user authentication schemes and policy based routing can be applied so that a public hotspot service can be offered while securing the company's LAN from intrusions.

## RELIABLE VOICE SOLUTION

Based on many years of experience in voice processing and signalling, the ONE100 D/M offers a complete and proven voice over packet solution. With various signalling protocols and flexible voice routing, the ONE100 D/M is a secure choice in evolving networks.

Delivering a high-quality VoIP network is a great challenge for carriers with many vendors and network equipment pieces being involved. Troubleshooting is accelerated by the ONE100 D/M, which embeds voice quality audit functions monitoring voice frame jitter and estimated echo. It also features measurement probes delivering statistics about the network quality of service.

## ACCELERATED DEPLOYMENT AND SERVICE PROVISIONING

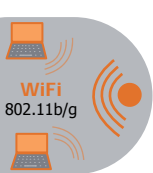
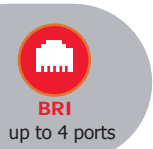
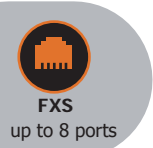
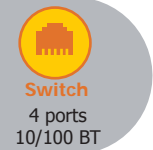
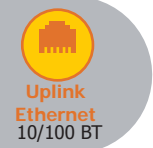
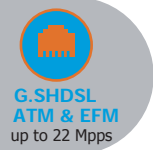
As all ONE products, the ONE100 D/M uses the Industry standard Command Line Interface (CLI). This facilitates the configuration management for the service provider's technicians and integrates rapidly with automated tools. Several auto discovery and update features make the network roll-out straightforward. Technicians or the customer install the units with a standard configuration. Once connected to the network the ONE100 D/M automatically retrieves all customer specific information from the service provider's databases and thus becomes ready for the service.

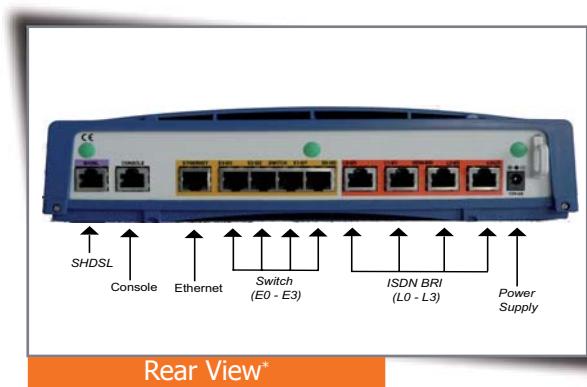
A set of embedded tools and service level indicators enable responsive customer support. On the other hand a web based user interface provides the customer with all the service information that relevant to him.

## FULL SERVICE GATEWAY

As communication over the Internet is cheaper than other alternatives, companies use or want to use it not only for browsing and e-mail, but also for many other services like business processes between offices and with home workers, web hosting, voice and video communication. On their local network they need wired and wireless access. To support all these services in a secure and reliable manner in one box, they need a full service gateway. Based on the OneOS software the ONE100 D/M is a full service gateway for businesses with data and voice needs.

The ONE100 D/M provides secured Internet access through a stateful inspection firewall. Employees working at home and personnel on the road can use the business applications based on central databases through IP VPNs.





## ONE100 D/M SPECIFICATIONS

### Basic Configuration

- G.SHDSL line interface
- 1 Fast Ethernet uplink
- Fast Ethernet 4 port switch
- Up to 4 BRI and up to 8 FXS voice ports (8 voice channels)
- 1 console port
- IPsec encryption accelerator for DES, 3DES, AES
- Memory: 32MB Flash, 64MB RAM

### SHDSL Interface

- G.SHDSLbis 2 / 4 line pairs
- RJ-45 connector
- ATM, EFM and ATM/EFM auto detect
- Bonding based on EFM, SHDSL with ATM and ATM IMA

### Ethernet Interfaces

- 10/100Mbps, half/full duplex with auto-sense
- Automatic cross-over

### Wireless LAN (factory option)

- Dual mode IEEE 802.11b/g
- Two antennas
- WMM QoS
- Encryption options WEP, WPA 1.2 (TKIP) and WPA 2.0 (802.11i, AES-CCMP)
- Authentication options WPA-PSK (pre-shared key) and 802.1x with a RADIUS server (PEAP, EAP-SIM, EAP-TLS and EAP-TTLS)

### BRI Ports (factory option)

- 2 or 4 ports
- CTR3 / Euro-ISDN / Euro-numeris compliant, S0 and T0, NT or TE mode
- Point-to-point and multipoint
- Power source type 1 (2W / port)
- Fax / modem / unrestricted BC detection and transport

### FXS Ports (factory option)

- 2, 4 or 8 ports
- Loop start
- On-hook voltage: 35 V RMS
- Support of caller-id (DTMF and FSK)
- Support of fax and modem

### Voice over IP

- H.323 version 4
  - H.245 tunneling
  - DTMF: inband or out-of-band
- SIP
- MGCP

### Voice Call Routing

- Hunt groups
- Insertion / suppression of digits
- Local port switching
- Selection of voice processing

### Fax and Modem over IP

- Fax: V.27ter, G3, Super G3, V.29
- T.38 fax over IP
- Modem detection and transport in clear channel mode

\*Rear view depends on the router configuration

### Voice Processing

- Echo cancellation: G.165/168 compliant, non-linear processing
- Voice compression: G.711 (a/μ law), G.726, G.729a, configurable packet length
- DTMF detection and generation
- Country specific tone generation and customisation
- Silence suppression and comfort noise generation
- Adaptive jitter buffer

### IP Addressing & Routing

- NAT/NAPT: static/dynamic NAT, NAPT, selective NAT, twice NAT, Application pass-through
- DHCP client, server, relay, DNS proxy
- Routing protocols: RIP v1/v2, OSPF v2, BGP v4
- Multicast Routing: PIM-SM and IGMP v2/v3
- Policy-Based Routing
- VRRP
- Server load balancing

### IP Quality of Service

- IP Classification and priority (DiffServ)
- Class-Based Queuing (CBQ), CB-WFQ on LAN/WAN interfaces
- Low Latency Queuing, fragmentation and interleaving
- Policing and remarking
- RED, WRED, ECN

### Security

- Stateful packet inspection firewall
- Standard and extended access lists
- Session monitoring and limiting
- Configurable timers per port and application
- All firewall log messages can be buffered, viewed or sent to a syslog server

### IP VPNs

- Tunnels: IPsec, GRE, IPMP, L2TP
- IPsec encryption: AES, DES, 3DES
- IPsec tunnel and transport mode: IKE and PKI, AH and ESP with SHA1 and MD-5 hashing
- UDP-based encapsulation for NAT traversal
- IKE with pre-shared secret, symmetrical or client-server mode
- Perfect Forward Secrecy
- DNS server update protocol: DynDNS

### Bridging & VLANs

- Bridging and Integrated Routing and Bridging (IRB)
- VLAN tagging and untagging
- Multiple VLAN IDs per port
- 802.1p priority tagging, TOS/COS and COS/TOS mapping

### ATM

- Up to 10 PVCs
- OAM-F5 (send/receive): loopback, continuity check
- Shaping: UBR, VBR-NRT, VBR-RT, CBR
- Encapsulations (LLC or Mux): IP, IPoE, PPP, PPPoE

### EFM

- IEEE 802.3 2BASE-TL (aka 802.3ah)
- OAM IEEE 802.3 chapter 57

### PPP

- PPP over ATM, PPP over Ethernet (PPPoE) on Ethernet, EFM and ATM interfaces
- Automatic IP address assignment
- PAP/CHAP authentication

### Management

- Industry standard Command Line Interface (CLI)
- Web-based GUI for LAN, WLAN and IBC settings by end-users (can be turned off)
- SNMP V1/V2C/V3
- Support of user privileges
- File upload/download via FTP/TFTP
- QoS measurement probe
- Traceroute, ping, extended ping
- User authentication via RADIUS or TACACS+
- RADIUS accounting
- Global statistics screens (console, web-based)
- Event and trace buffering
- Syslog client
- Flow capture and decoding

### Dimensions

- Desktop, wall mountable
- W x H x D: 270 x 65 x 145 mm; Weight: 1,0 kg