

# ONE80 XM

Multi-SHDSLbis EFM Business



The ONE80 XM is a secure SHDSLbis router targeted to business customers who are hungry for bandwidth and a complete service. It is the next generation of the popular ONE80 M business router with support for increased bandwidth and Ethernet in the First Mile (EFM). The SHDSL multi-pair interface offers a bandwidth up to 22Mbps over 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 Quality of Service, IP VPN and Wireless LAN. The great manageability enables a reduced network Total Cost of Ownership.

## HIGH SPEED DSL ACCESS

The ONE80 XM 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 interface up to 4 copper pairs supporting both the SHDSL and SHDSLbis speeds. 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.

The ONE80 XM 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.

## HIGH NETWORK AVAILABILITY

A dedicated Ethernet interface is available as a backup when the DSL network is not available. Traffic is automatically routed to the available network. Alternatively this interface can be used for a DMZ zone (De-Militarised Zone) on the customer's network. With a routing performance of over 20Mbps bidirectionally the ONE80 XM can also be used as a full service CPE with Ethernet uplink behind a simple NTU.

Optionally ISDN S0 interfaces are also available as a backup, providing continuous access to the Internet. It can also be used as an access point for telecommuters or remote equipment configuration.

## ACCELERATED DEPLOYMENT AND SERVICE PROVISIONING

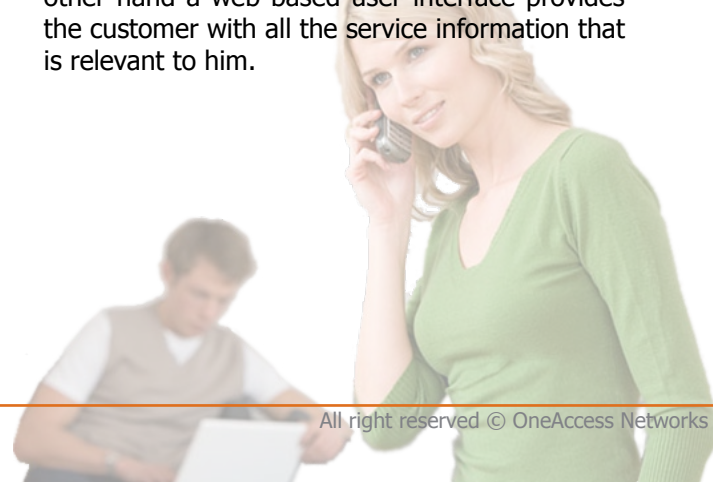
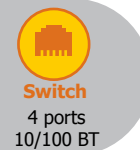
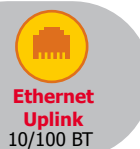
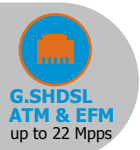
As all ONE products, the ONE80 XM uses the Industry standard Command Line Interface (CLI). This facilitates the configuration management for the service provider's technicians and integrates rapidly with automated tools. Several auto discovery and update features make the network roll-out straightforward. Technicians or the customer install the units with a standard configuration. Once connected to the network the ONE80 XM automatically retrieves all customer specific information from the service provider's databases and thus becomes ready for the service.

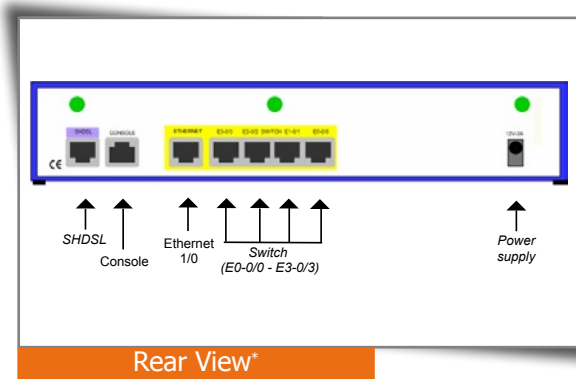
A set of embedded tools and service level indicators enable responsive customer support. On the other hand a web based user interface provides the customer with all the service information that is relevant to him.

## FULL SERVICE ROUTER

As communication over the Internet is cheaper than other alternatives, companies 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... On their local network they need wired and wireless access. Based on the OneOS software the ONE80 XM is a router that supports all these services in a secure and reliable manner in one box.

The ONE80 XM provides secured Internet access. Employees working at home and personnel on the road can use the business applications based on central databases through IP VPNs.





## ONE80 XM SPECIFICATIONS

### Basic Configuration

- G.SHDSL line interface
- 1 Fast Ethernet uplink
- Fast Ethernet 4 port switch
- 1 console port
- IPsec encryption accelerator for DES, 3DES, AES
- Memory: 32MB Flash, 64MB RAM

### SHDSL Interface

- G.SHDSLbis 4 line pairs
- RJ-45 connector
- ATM and EFM
- Bonding based on EFM, SHDSL with ATM or IMA
- Synchronisation LEDs

### Ethernet Interfaces

- 10/100Mbps, half/full duplex with auto-sense
- Automatic cross-over
- Link status and activity LEDs

### Console Port

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

### 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)
- Status LED

### ISDN S0 Interface (factory option)

- For dial back-up and remote configuration
- Up to 2 ISDN-BRI S0 interfaces
- PPP and Multilink PPP
- RJ-45 connectors

### IP Addressing & Routing

- NAT/NAPT: static/dynamic NAT, NAPT, selective NAT, twice NAT, Application pass-through
- DHCP client, server, relay
- IP helper addresses
- 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

- Firewall
- Standard and extended access lists
- Stateful packet inspection
- 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, IPIP, 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 and 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 (segment and end to end)
- UNI 3.1
- AAL-1, AAL-2, AAL-5
- 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)
- Telnet, SSH, HTTPS
- Web-based configurator for LAN and WLAN settings by end-users (can be turned off)
- SNMP V1/V2C/V3
- Support of user privileges
- Upload/download of configuration and binaries 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, metal housing, wall mountable
- W x H x D: 275 x 55 x 146 mm; Weight: 1,3 kg

\*Rear view depends on the router configuration