

Oxygen Office



Modular Solution
Ethernet / SFP / ADSL2+ /
G.SHDSL.bis WAN
Ethernet Switch LAN
FXS, FXO Voice Interfaces
BRI ISDN for Voice or Data
IP-PBX functionality
VoIP Phone support
Wireless 802.11b/g/n
USB 2.0 Host
VPN and Firewall

Oxygen Office is the ideal total solution for the SOHO / SME market. It is more than a broadband access gateway. Integrating a VPN Router, Ethernet Switch, Security Appliance as well as a fully functional IP-PBX, it provides all the basic and supplementary services required for a complete data and voice service offering.

Multiple services can share a single WAN where extensive policy based Quality of Service (QoS), together with complete service separation, ensures services quality for real-time applications.

Its fully modular structure supports different WAN access options (Electrical or Optical Ethernet, ADSL2+, VDSL2, G.SHDSL) and a variable combination of voice interfaces (options of 4 to 16 FXS and/or 4 to 8 FXO and/or 1 to 4 BRI ports). With the addition of an embedded managed 4/8-port Ethernet switch and the 2 USB 2.0 Host interfaces, Oxygen Office covers all the communication needs of the SOHO / SME users.



This flexibility to support both PSTN and ISDN mixed interfaces along with the expansibility provided by the SFP and USB Host interfaces, a free mini-PCI expansion slot, the embedded IP-PBX, the ability to cascade multiple units and the increased memory and CPU capacities, make the Oxygen Office a future-proof platform capable of supporting converged services in both current and future broadband networks.

Technical Specifications

Network Interfaces

- 3 x WAN / LAN / Voice module slots
- 802.11b/g/n WiFi, 2 external antennas
- 2 x USB 2.0 Host (master) interfaces
- 1 x mini-PCI expansion slot

WAN Modules

- 1/2 x ADSL, ADSL2, ADSL2+ (Annex A, B, M, L)
- 1/2/4 x G.SHDSL G.991.2.bis
- 1 x Ethernet (10/100Base-T, Auto-MDIX)
- 1 x SFP connector for 100Base-FX/SX/BX
- 1 x VDSL2 port (*)

LAN Modules

- 4/8 x Ethernet (10/100Base-T, Auto-MDIX) ports

Voice Modules

- 4/8 x FXS phone ports, 5 REN, ringing voltage: min 42 V rms (sine)
- Maximum loop length: > 1000m/3300 feet
- Software configured impedance, loop voltage, loop current, ringing frequency
- 2/4 x ISDN BRI ports, progr. NT or TE mode
- 2/4 x FXO PSTN ports

Routing/Bridging

- RFC 2364 PPPoA, RFC 2684 MPoA, RFC 1577 Classical IPoA, RFC 2516 PPPoE
- Up to 8 Virtual Circuits
- UBR, VBR-rt, VBR-nrt, CBR
- Per-PVC Queuing and Traffic Shaping
- PVC-to-Service mapping support
- 802.1d bridging
- 802.1q VLAN support, Private VLANs
- RIP v1/2, OSPF, BGP, Static Routing
- DHCP Client/Server/Relay
- IPv6 support
- NAT
- NAT, PAT and DNS relay agent
- IP QoS (ToS/DSCP)
- Ethernet QoS (802.1p/q CoS)
- Queuing, rate limitation, fragmentation
- Low latency handling of VoIP/Video services
- Multihoming, Load-balancing, Data-Backup
- GRE Tunneling
- Multiple WLAN SSIDs
- Dynamic DNS

Telephony

Embedded IP-PBX

- SIP, H.323 (optional), MGCP (optional)
- Full IP PBX functionality
- Individual number per FXS port & DECT handset
- Automatic provisioning of external VoIP phones
- Automatic fallback to PSTN upon power loss, WAN or VoIP service failure

Battery Backup for mains failure (optional)

Speech Codecs

- G.711 A-law & u-law, G.726-32, GSM, G.729ab*, G.723.1*
- Packet Loss Concealment
- VAD / CNG
- Adaptive Dynamic Jitter Buffer
- G.168, variable tail length echo cancellation

Fax/modem

- Fax/modem tone detection & dynamic codec switching
- G.711 pass-through
- T.38 fax-relay

DTMF support

- According to ETSI ES 201235-3
- RFC 2833 / RFC 2976 relay

Supplementary Services

- Country specific tones and supplementary service codes
- Call Forward (Unconditional, on Busy, on No Answer)
- Call Hold, Call Waiting
- Message Waiting Indication (with LED)
- Call Transfer (Blind, with Consultation)
- 3-party Call
- Anonymous Call Block, Black List
- CLIP (DTMF and FSK), CLIR
- Line Hunting
- Voice Prompts
- Do Not Disturb (DND)
- Call Park

Dial-plan

- Web based control of call-routing
- Abbreviated-Dialing (Speed-Dialing) numbers
- Call Detail Records (CDR)
- DDI / IVR support
- Built in answering machine (optional)
- Unified Voice Mail: e-mail, wav-format (optional)
- Emergency call routing
- PIN for call access-control

Security

- Enhanced policy-based and SPI firewall
- Standard and Extended Access Lists
- URL Filter, Virtual Server, DMZ
- MAC filtering
- VPN IPSec, TLS/SSL OpenVPN, L2TP, PPTP
- VPN pass-through
- WEP 64/128-bit encryption, WPA, WPA2, 802.1x

Management

- DSL Forum TR-069, TP-104
- Automatic PVC scanning
- Multilevel Web-based graphical user interface
- Local RJ45 console port
- Embedded modem for remote dial-in (optional)
- SSH/Telnet remote access to CLI
- SNMP v1/2c/3
- EFM 802.3ah OAM
- ATM F4&F5 OAM
- Diagnostic and performance monitoring
- Connection test (end-user), ping, traceroute
- Syslog with network support
- Packet capturing (sniffer)
- Zero-touch deployment mechanism
- Configuration backup and restore
- Automatic firmware upgrades
- Dual firmware image support
- WiFi Protected Setup (WPS)
- UPnP IGD, NAT-PMP
- Wake on LAN

USB Services

- Print Server support
- File Server support (FTP, SMB/CIFS)
- Data-backup through external modem

Additional specifications

- Memory capacity: Flash 32MB-1GB, RAM 128MB-1GB
- Functional LED indicators
- Power on/off switch
- Factory reset button
- Power input: 90-240V AC, 50-60Hz
- Operating temperature: 0 to 45°C
- Storage temperature: -20 to 70°C
- Operating humidity: 10% to 90% (non-cond.)
- Storage humidity: 5% to 95% (non-cond.)
- Certification: CE Mark, IEC 60950, EN 60950, CSA 950, UL1950
- ADSL: TR-67 / TR-100
- RoHS compliance

(*) Future