Oxygen
*mini*Office series

VDSL, LTE, Fiber, SFP *or*
Ethernet WAN
Ethernet Switch LAN
VoIP with IP-PBX functionality
FXS, FXO Voice Interfaces
BRI ISDN for Voice or Data
DECT base-station
Embedded Smart Battery
WiFi 802.11n / ac, dual-band
USB Host
Firewall, VPN server/client
PoE for VoIP Phones

OXYGEN
Broadband

Oxygen *mini*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 or multiple WAN connections where extensive policy based Quality of Service (QoS), together with complete service separation, ensures services quality for real-time applications.

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

This flexibility to support both PSTN and ISDN mixed interfaces along with the expansibility provided by the SFP and USB Host interfaces, the optional internal hard-disk, the embedded IP-PBX and the increased memory and CPU capacities, make the Oxygen miniOffice a future-proof platform capable of supporting converged services in both current and future broadband networks.

Technical Specifications

Network Interfaces
WAN Access Options
- 1/2 x VDSL1, VDSL2, VDSL2-Vplus
  G.993.2 (VDSL2), G.993.1-2004 (VDSL)
  G.INP (G.998.4), ANSI T1.424-2004
  ETSI TS 101 270-1 and TS 101 270-2
  G.992.x (auto ADSL2+, ADSL2, ADSL fallback)
  8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a, 35b, G.fast*
and/or
  1/2/4 x G.SHDSL G.991.2.bis
and/or
  1 x 10/100/1000 BaseT, Auto-MDIX
and/or
  1 x GPON G.983.1/2/3/4/5, G.984.1/2/3/4,
  2.5/1.24Gbps, 1490/1310nm +
  1 x CATV 75Ω interface 1550-1560nm
and/or
  1 x SFP slot for FTTH (Ethernet, GPON, G.fast)
and/or
  1 x internal LTE/HSPA+ module, Cat4 or Cat6
  GPRS/EDGE/HSPA+/DC-HSPA+/LTE

Support for availability and simultaneous use of multiple WAN access technologies

LAN Interface Options
- 4/8 x Ethernet ports (10/100/1000 BaseT,
  Auto-MDIX) with 802.3af PoE *(optional)*
- 802.11b/g/n 2.4GHz MIMO (2x2 or 3x3)
and/or
  802.11a/ac 5 GHz MIMO (2x2, 3x3 or 4x4),
  with on/off switch, external antennas
- 2 x USB Host (master) interfaces
- Internal Hard-Disk *(field-upgradeable)*

Voice Interface Options
- 2/4/8 x FXS phone ports,
  5 REN, ringing voltage: min 42 V rms (sine)
  Maximum loop length: > 100m
  Software configured impedance, loop
  voltage, loop current, ringing frequency
- 2/4/6 x FXO PSTN port
- 2/4 x ISDN BRI, progr. NT or TE mode
- ISDN external synchronization port
- ISDN power feeding 1/2W
- DECT support for up to 6 handsets

Routing/Bridging
- RFC 2364 PPPoA, RFC 2684 MPoA, RFC 1577
  Classical IPoA, RFC 2516 PPPoE
- 8 Virtual Circuits, UBR, VBR-rt, VBR-nrt, CBR
- Per-PVC/VLAN Queuing and Traffic Shaping
- PVC/VLAN-to-Service mapping support
- 802.1d bridging, 802.1q VLAN, Private VLANs
- RIP v1/v2, OSPF*, BGP*, Static Routing
- DHCP Client/Server/Relay
- SNTP Client/Server

- IPv6 support (dual-stack, DS-lite, MAP-T, MAP-E)
- NAT, PAT and DNS relay agent
- IGMP v1/2/3, proxy, snooping
- IP QoS (ToS/DSCP), Ethernet QoS (802.1p/q CoS)
- Queuing, rate limitation, fragmentation
- Low latency handling of VoIP/Video services
- Multihoming, Load-balancing, 3G/4G backup
- Multilink PPP
- Dynamic DNS
- Muliple WLAN SSIDs, WLAN Captive Portal
- Radius Server
- PPP Server / Proxy
- VRRP

Telephony Options
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/ISDN/3G/4G upon
  WAN or VoIP service failure
- SIP Trunking, Media Gateway functionality
Smart Battery Backup > 1h operation *(optional)*
Speech Codecs
- G.711 A-law & u-law, G.726-32*, GSM*, G.729ab*,
  G.723.1*, G.722*, AMR*
- Packet Loss Concealment, VAD / CNG
- Adaptive Dynamic Jitter Buffer
- G.168, variable tail length echo cancellation
Fax/modem
- Fax/modem tone detection & 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 suppl. service codes
- Call Forward (Unconditional, Busy, No Answer)
- Call Hold, Call Waiting, Call Park
- Message Waiting Indication (with LED)
- Call Transfer (Blind, with Consultation)
- 3-Party Call
- Anonymous Call Block, Black List, DND
- CLIP (DTMF and FSK), CLIR
- Line Hunting, Hunt Groups
- Voice Prompts
- Advice of Charge (FXS 12/16KHz, ISDN AOC)
- RFC 4040, Unrestricted Digital ISDN Call
Dial-plan
- Web based control of call-routing
- Abbreviated-Dialing (Speed-Dialing) numbers
- Call Detail Records (CDR)
- MSN / 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, L2TPv3*,
  PPTP*, GRE, VPN pass-through
- WLAN: WEP 64/128-bit, WPA, WPA2, 802.1x, WPS

Management
- DSL Forum TR-069, TR-098, TR-104, TR-181
- Multilevel Web-based graphical user interface
- Embedded modem for remote dial-in *(optional)*
- SSH/Telnet remote access to CLI
- Local RJ45 console port
- SNMP v1/2c/3
- ATM F4&F5, EFM 802.3ah* OAM
- Automatic LAN device detection and provision
- Diagnostic and performance monitoring
- Connection test (end-user), ping, traceroute
- Local management through telephone
- Remote management through SMS*
- E-mail / SMS alerts
- Syslog with network support
- Packet capturing (sniffer)
- Configuration backup and restore
- Zero-touch deployment mechanism
- Automatic remote firmware upgrades
- Dual firmware image support
- WiFi Protected Setup (WPS), WDS
- UPnP IGD, NAT-PMP
- Wake on LAN
- Time-of-day Schedule, Patental control

USB Services
- Print Server support
- File Server support (FTP, SMB/CIFS)
- UPnP Media Server support
- Data-backup through external LTE modem

Additional specifications
- Flash/RAM: 128MB-1GB / 128MB-1GB
- Functional LED indicators
- Power on/off switch, Factory reset pin
- External power adaptor: 12V DC, 2 or 3A /
  90-240V AC, 50-60Hz
or
  Embedded 802.3af PoE module, with external
  power adaptor: 52V DC, 2A
- Temperature: 0 to 45ºC (oper.), -20 to 70ºC (stor.)
- Humidity *(non-cond.)*: 10-90% (oper.), 5-95% (stor.)
- Dimensions: 249x168x42mm
- CE Mark, IEC 60950, EN 60950, K.21, RoHS
- ADSL: TR-67 / TR-100

(*) Optional