

# ONE100

VoIP, ADSL2/2+ Router for Integrated Enterprise Communication



The ONE100 expands the OneAccess portfolio of business-class routers with built-in VoDSL/VoIP gateway and an integrated ADSL2/2+ modem delivering surpassing reach and bandwidth to end-users. It is available with a 4-port Ethernet switch, 2 or 4 BRI, up to 8 FXS ports and an optional WLAN antenna. The ONE100 provides the best-in-class interface combination to connect phones, faxes, PABX and LAN workstations. The interface mix makes it ideally sized for carriers wanting to deliver high-quality, bundled voice and data services to small and medium-sized businesses. The router relies on the robust OneOs software, which is designed for the delivery of enterprise-grade services. The ONE100 enables carriers to fully enjoy the benefits of OneOs available throughout OneAccess product line, consisting of an advanced firewall, multicast routing, VPN features, auto-configuration and abundant management functions that in turn enables a reduced network Total Cost of Ownership.

## RELIABLE VOICE SOLUTIONS

The ONE100 is the result of years of experience in developing voice processing that enables toll-quality voice over packet networks. With a large installed base of VoDSL/VoIP access routers, OneAccess delivers a knowledgeable and proven technology.

OneAccess partners with leading softswitch vendors to maximize interoperability and minimize overheads when designing a VoIP solution.

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, 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.

The VoIP software features a flexible voice routing: the user can adapt the gateway to the various numbering plans, insert/remove call number digits and apply differentiated voice processing. It also enables routing calls on local ports for voice backup or for dial-in calls from the PSTN network.

## NEXT-GENERATION BUSINESS COMMUNICATION

The ONE100 encompasses all enterprise communications over one broadband ADSL2/2+ access. It is especially designed for carriers wanting to market bundled Voice over IP and Internet/VPN offers. The voice interfaces meet small and medium business requirements with 2 or 4 BRI S0/T0 to connect ISDN phones or a PBX. An optional daughter-board with 2/4/8 FXS connects to analog terminals such as fax machines.

The ONE100 is fitted with an optional WLAN interface, which can be divided into multiple sub-networks by assigning multiple SSIDs. 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.

## ADVANCED ROUTER AND MANAGEMENT FUNCTIONS

The ONE100 is provided with best-in-class IP Quality of Service features. They include real-time processing of high-priority, delay-sensitive applications and guaranteed bandwidth for selected flows. All flows can be processed in as many classes of service as needed and managed on any interfaces, including the WLAN and ADSL interfaces.

Companies today recognize the loss of productivity due to a weak protection of their network resources. Setting up the firewall not only blocks unauthorized accesses, but also protects LAN workstations from being flooded with malicious flows. Security challenges become even more critical now, because voice (over IP) is a crucial need for businesses and is therefore the new target of hackers. To prevent such attacks, the Context Based Access Control realizes a stateful packet inspection to monitor the validity of protocol transactions.

Service providers can streamline their operations using the industry's standard Command Line Interface (CLI): the router integrates rapidly with automated tools for configuration generation and the in-house expertise is leveraged. The router also features a web-based interface that enables quick set-up: end-users with reduced skills can configure their router without intervention from the service provider. When enabling configuration discovery, the router starts up with a default configuration and downloads its configuration settings. All devices are shipped with the same configuration and the number of operations for shipping a router through to installing a router in customer premises is thus reduced, which streamlines logistics and lowers costs.



ADSL2  
ADSL2+



Uplink  
Ethernet  
10/100 BT



Switch  
4 ports  
10/100 BT



FXS  
up to 8 ports



BRI  
up to 4 ports



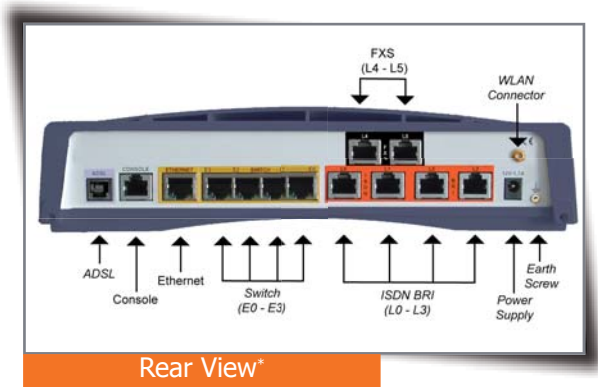
8  
Voice  
Channels



H.323  
SIP  
MGCP



WiFi  
802.11b/g



Rear View\*

## ONE100 SPECIFICATIONS

### Product Architecture

#### ADSL2/2+ Uplink

- ADSL: G.DMT Annex A (ADSL over POTS), G.DMT Annex B (ADSL over ISDN, U-R2 compatible)
- ADSL2 (G.992.3) / ADSL2+ (G.992.5) / RE-ADSL (Reach-Extended ADSL, G.992.3 annex L - annex M)
- RJ-11 Interface
- Synchronisation LEDs

#### Ethernet Switch (4 ports)

- Automatic crossover
- 10/100 Mbps, half/full duplex with autosensing
- Link status and activity LEDs

#### Console Port

- RS-232
- RJ-45 connector

#### Wireless LAN (Optional)

- WMM QoS
- Dual mode IEEE 802.11b/g
- Encryption: WEP (key length: 64, 128 bits), TKIP
- Single antenna
- WPA 1.2 and 2.0 (802.11i) WPA-PSK and 802.1X (EAP, EAP-TLS, Authentication via RADIUS servers)

#### Voice: 0/2/4 BRI ports (factory mounted)

- 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

#### Optional Daughter Board: 2/4/8 FXS

- 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 (RFC2833) or out-of-band (H.245 alphanumeric mode)
- SIP
- MGCP

### Voice Call Routing

- Line Hunting
- Insertion/suppression of digits
- Local port switching
- Selection of voice processing

### Fax and Modem over IP

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

\* Rear view depends on the router configuration

\*\* Please check with OneAccess marketing for availability.

### 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

- Network address translation: static/dynamic NAT, NAT, selective NAT, twice NAT
- DHCP client, server, relay
- IP address helpers
- DNS proxy
- Routing protocols: RIP v1/v2, OSPF v2, BGP v4
- Multicast Routing: PIM-SM and IGMP v2/v3
- Policy-Based Routing
- VRP
- Server load balancing
- Tunnel: IPsec, GRE, L2TP

### IP Quality of Service

- 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

#### VLAN

- 802.1p Tagging
- Supports multiple VLAN ID per ports
- Configurable layer-two switching

#### IP Security

- Optional hardware-based encryption\*\* (DES, 3DES, AES)
- Software encryption: DES, 3DES, AES
- Tunnel mode with AH and ESP
- UDP-based encapsulation for NAT traversal
- IKE with pre-shared secret, symmetrical or client-server mode
- Perfect Forward Secrecy
- DNS server update protocol: DynDNS

### Management

- Voice quality audit and call history
- Voice call generator
- Industry standard Command Line Interface (CLI)
- Web-based configurator for LAN and WLAN settings by end-users (can be turned off)
- SNMP V1/V2C/V3
- Support of user privilege
- 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

### ATM

- Up to 8 PVC
- OAM-F5 (send/receive): loopback, continuity check (segment and end to end)
- Shaping: UBR, VBR-NRT, VBR-RT, CBR
- Encapsulation (LLC or Mux): IPoE (bridge), PPPoA, PPPoE

### PPP

- PPPoA, PPPoEoA
- MLPPP fragmentation and interleaving
- PAP/CHAP authentication

### Mechanical Data

- W x H x D: 27 x 5 x 14,5 cm
- Weight: 1,1 Kg