MULTI-SERVICE INTEGRATED ACCESS DEVICE OFFERS BROADBAND
VOICE AND DATA SERVICES FOR SMALL AND MEDIUM BUSINESS, WITH
AUTOMATIC SUBSCRIBER ACTIVATION AND FULL REMOTE MANAGEMENT

COMPACT DSL IAD WITH 4 VOICE PORTS
- High-performance, multi-service voice and data integration over a single line
- Standards-based implementation for a high level of interoperability
- Plug-and-play installation with local or remote configuration and management
- SDSL (up to 2.3Mbps), HDSL 2 and G.SHDSL ATM WAN capabilities
- Cost-effective for small/medium business, branch office and remote access users
- Feature-rich, low-profile, compact unit
- Integral component of Zhone’s comprehensive access solution
- 4 ISDN/BRI or POTS ports

FULL-FEATURED VOICE AND DATA ACCESS SOLUTION

The Z-EDGE 64 is a managed broadband Integrated Access Device (IAD) designed to leverage the multi-service capability of local access links. The Z-EDGE 64 combines four analog or ISDN/BRI voice connections with high-speed data services, all over a single ATM/DSL trunk. The Z-EDGE 64 offers these services in a low-cost, standards-based platform that is an integral element of Zhone’s comprehensive access solution, built on the Zhone Single Line Multi-Service (SLMS™) network architecture.

The Z-EDGE 64 supports a broad range of voice and data capabilities. Voice ports on the unit connect to telephones, faxes, key systems and PBXs. The Z-EDGE 64 provides a cost-effective alternative to installing individual analog (POTS) lines for the small/medium business, while offering leading-edge ATM communications links with multiplexed voice and data to the network. The Z-EDGE 64 connects to the network over an SDSL, HDSL 2, or G.SHDSL ATM trunk. By implementing the ATM Forum’s Loop Emulation Services (LES) standard, the Z-EDGE 64 ensures high interoperability with LES-based voice gateways.

The Z-EDGE 64 offers an integral router with a comprehensive feature set, enabling seamless integration of data services with small/medium office LANs. A built-in Dynamic Host Configuration Protocol (DHCP) server automatically assigns IP addresses to PCs and other devices on the LAN. Network Address Translation (NAT) capabilities allow PCs connected to the Z-EDGE 64 over a LAN to share a single IP address for Internet access.
COST-EFFECTIVE, BUNDLED SERVICE DEPLOYMENT

The Z-EDGE 64 is a cost-effective and compact solution that allows service providers to bundle their service offerings while maximizing the use of bandwidth over existing deployed local loop links. This service bundling capability over a single line enables service providers to offer their small/medium business subscribers both voice and data services cost-effectively and without the expense or time required for deploying additional lines.

SIMPLE PROVISIONING AND MANAGEMENT

The Z-EDGE 64 can be configured, remotely monitored, tested, or upgraded through a command line interface (CLI) or through Zhone's end-to-end subscriber and network management system, the Zhone Management System (ZMS™). ZMS provides a remote software download feature that saves costly site visits.

TOLL-QUALITY VOICE WITH CLASS FEATURES

The Z-EDGE 64 transparently passes through CLASS and custom calling features and therefore provides complete voice support for existing telephone equipment, including analog phones, ISDN phones, fax machines and key telephone systems.

The Z-EDGE 64 provides toll-quality voice support, including silence suppression, echo cancellation, fax and modem detection. Voice traffic is carried over a dedicated AAL2 PVC that terminates at a voice gateway in the network. G.711 (PCM) and G.726 (ADPCM 32kbps) voice encoding techniques are supported and are user selectable.

RICH SET OF DATA AND TRAFFIC MANAGEMENT FEATURES

The Z-EDGE 64 supports IP routing (RIP V1, V2), address assignment (DHCP) and network address translation (NAT) as well as a set of host services.

In addition, two ATM classes of service are supported for data traffic over AAL5 – CBR for high priority data traffic and UBR for best effort. Traffic management features allow voice traffic over AAL2 to always get priority and dynamic bandwidth allocation permits data traffic to use additional bandwidth when the voice bandwidth is not in use.

FULL ISDN/BRI SUPPORT

The Z-EDGE 64 supports 4 ISDN/BRI S/T ports, allowing service providers to offer a cost-effective broadband voice and data access solution for ISDN subscribers.

TOTAL ACCESS SOLUTION

The Z-EDGE 64 is an integral part of the overall Zhone Single Line Multi-Service (SLMS) network architecture. When used with the MALC™, BAN™ and ZMS, the Z-EDGE 64 enables service providers to offer a complete access solution that minimizes the total cost of network ownership and service deployment while maximizing revenue through total local loop coverage, service bundling, efficient use of bandwidth and flow-through provisioning.
INTEGRATED BROADBAND ACCESS OVER A SINGLE DSL LINE

In a traditional VoDSL architecture, the Z-EDGE 64 interoperates, through a DSLAM, with a standards-based voice gateway, such as the Zhone Sechtor 100A, to offer both data and toll-quality voice services to subscribers over a single DSL line. The Z-EDGE 64 dynamic bandwidth allocation and traffic management capabilities optimize bandwidth utilization for both voice and data traffic.

Both voice and data services can be offered cost-effectively over a single line while maintaining the service quality subscribers expect from separate voice and high-speed data services.

When combined with a Zhone SECHTOR 100A Voice Gateway and the Zhone Management System (ZMS), the Z-EDGE 64 provides integrated broadband access over a single DSL line.

AUTOMATIC SUBSCRIBER ACTIVATION

In addition to the service bundling benefits and efficient use of bandwidth, the Z-EDGE 64 is designed to self-configure when connected to Zhone Broadband Access Node (BAN). Zhone Management System (ZMS) capabilities enable service providers to remotely monitor, provision, test, troubleshoot and upgrade the Z-EDGE 64 without the need for costly on-site visits.

With automatic subscriber activation, the BAN and ZMS configure the Z-EDGE 64 and service provisioning is made transparent to the end-user.
About Zhone Technologies, Inc. (Zhone)
Zhone's strategy combines existing solutions with Zhone's internally developed intellectual property to create a portfolio of scalable next-generation network products supporting a rich array of voice, data, video, and entertainment services. Zhone's advanced networking solutions include the Single Line Multi-Service (SLMS™), Broadband Access Node (BAN™), Zhone Management System (ZMS™), Sechtor™ universal voice gateway, ARCA-DACS™ digital cross-connect, and Z-Plex™ and Z-Edge™ access products. For more information about Zhone and its products, please visit the Zhone Web site at www.zhone.com or e-mail info@Zhone.com.

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TECHNICAL SPECIFICATIONS

Physical Specifications
- Dimensions: 1.2 in x 10.0 in x 7.6 in (HWD) / 3.1 cm x 25.4 cm x 19.3 cm (HWD)
- Weight: 1.45 lbs / 0.658 kg

Installation
- Desktop or wall mount

Power Requirements
- AC: 90 to 264 VAC, 47 to 63 Hz
- External power module included

Environmental
- Operating temperature: 32°-122° F, 0°-50° C
- Safety: UL 1950 3rd Edition, CSA Approved, CAN / CSA C22.2 No. 950-95, EN 60950
- Emissions: FCC Part 15 Class A, EN 55022A
- Immunity: EN 55024, EN 50082

LAN Interface
- 10/100BaseT with rate auto-detection

Serial Interface
- RS-232 asynchronous console port

Voice Interface
- 4 FXS or 4 BRI S/T ports
- FXS: loop start, ground start, A-Law, µ-Law, 2 REN
- BRI: CTR3 (0.430 compliant)

WAN Interface
- SDSL, HDSL 2, G.SHDSL (up to 2.3Mbps)

Management Features
- SNMP v1/v2 configuration MIBs
- TFTP configuration load/save
- CLI
- Fully manageable via Zhone Management System (ZMS)

ATM Features
- Adaptation: AAL2 (voice), AAL5 (data)
- Encapsulation: RFC 1483 routed
- Voice QoS - VBR-rt
- Data QoS - UBR and CBR

Voice over ATM
- Encoding: G.726 (32kbps ADPCM) & G.711 (PCM)
- Call signaling: AAL2 BLES
- G.165/G.168-compliant hybrid line echo cancellation
- Transparent passing of CLASS and custom calling features
- Silence suppression
- Fax and modem detection
- Caller line ID detection

IP Features
- Routing
- Static
- RIP V1 and V2 (RFC 1056, RFC 2453)

Address assignment
- DHCP server (RFC 2131, RFC 2132)
- DHCP client

Network address translation
- Port-based NAT - many-to-one mapping

Host Services
- TFTP (RFC 1350)
- Telnet (RFC 854, RFC 855)
- Ping
- DNS (client)
- Traceroute

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-EDGE-64-BH2A</td>
<td>4 BRI S/T ports, WAN: SDSL / HDSL 2 / G.SHDSL</td>
</tr>
<tr>
<td>Z-EDGE-64-H2A</td>
<td>4 FXS (POTS) ports, WAN: SDSL / HDSL 2 / G.SHDSL</td>
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Z-EDGE 64 BACK PANEL

ZTID-DS-ZE64-0601