

CTDI Products

Features

- 4 or 8 POTS ports with ADSL WAN interface
- Toll-quality voice
- Complete routing and bridging
- Integrated firewall: IP filtering
- 10/100 Ethernet LAN interface
- Remote management and provisioning
- Supports emerging VoIP specifications (SIP, MGCP) "S" versions only

Verilink 8100 Series

VoIP/VoDSL IAD (ADSL)

Extend the Power of Convergence Across Your Networks

The Verilink 8100 is ideal for service providers looking to offer small to medium-sized businesses with high-quality voice and data services over asymmetric digital subscriber lines (ADSL). With four or eight POTS ports and a full range of integrated features, the Verilink 8100 offers toll quality voice and high-speed Internet access over a single copper pair via one box.



Flexible and Scalable

The Verilink 8100 consists of access products available in two models, the Verilink 8100 base model which supports VoATM only and the Verilink 8100S which supports VoATM/VoIP via one device. Both the base and Verilink 8100S models are available and equipped with four or eight POTS ports and an Ethernet interface capable of dynamic and static IP routing and bridging.

Interoperability

The Verilink 8100 is unique, offering the industry's broadest interoperability with DSLAMs and voice gateways as well as providing support for Emulated Loop Control Protocol (ELCP). In addition, the Verilink 8100 is designed for both international and North American markets. Country specific line impedance and ring frequency settings are user selectable, providing for optimized configuration and operation.

Subscriber Value

The Verilink 8100 is particularly valuable to a carrier's subscribers because the integrated firewall and router eliminate the need to purchase additional hardware. With Dynamic Host Control Protocol (DHCP) and Network Address Translation (NAT), the Verilink 8100 automatically generates unique addresses for different workstations. This allows subscribers to ensure the heightened security of hidden internal addresses without purchasing additional costly IP addresses. Additionally, remote diagnostics, provisioning, and easy upgrades are critical benefits to services providers since they dramatically simplify the deployment process and eliminate the need for costly truck rolls.

Proven Reliability

The Verilink 8100 offers superior reliability and field proven success - both critical elements to service providers today. The Verilink 8100 IADs are designed to meet Class 5 call completion rates of 99.999% and provide voice quality that is virtually indistinguishable from toll quality.

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Verilink 8100 Series Technical Specifications

Voice Specifications

Analog

- Voice Ports: 4/8 POTS ports (RJ-11)
- Failover: Analog input fails over to Line 1 (RJ-11)
- Signaling: Loop start, ground start
- Dialing: DTMF (tone), Pulse
- Ring Source: Internal
- Impedance: 600, 900, Complex (country specific)
- REN: 5 REN per port, 16 REN total
- Loop Current: 20, 24 mA typical (country specific)
- Idle State Voltage: 48 V typical
- Ring Voltage: Balanced 65 V rms $\pm 5\%$ at 5 REN load
- Ring Frequency: 20, 25, 50 Hz (country-specific)
- Gain/System Loss: Programmable, +3 to -9 dB

Digital

- Compression: G.711 (64 kbps PCM), G.726 (32 kbps ADPCM), G.729a (8 kbps) "S" version only
- Encoding: A-law, μ -law
- Echo Cancellation: G.168 compliant (single reflector)
- Protocol Support: CopperCom, ELCP (af-vmoa-0145), Jetstream, LES (af-vmoa-0145), MGCP, SIP
- Fax Support: G3, G4, and analog V.17, V.29
- Modem Support: V.34, V.90
- Calling Features: Caller ID, flash hook, distinctive ringing, stutter dial tone, call forwarding, call waiting

WAN Features

Interface

- WAN: ADSL-Annex A (RJ-11)
- Standards: ANSI T1.413 Issue 2; ITU-T G.992.2, G.992.1
- Transport: ATM
- Adaption Layers: AAL2 (voice), AAL5 (data)
- Encapsulation: RFC 1483 multiprotocol encapsulation over ATM; RFC 2364 (PPP over ATM); ITU 366.1, ITU 366.2 (AAL2)
- AAL2 Profiles: ATM: 9, 10, 11 and ITU: 1; "S" versions also support ATM Profiles 7, 8, 12 and ITU 2
- Data: Up to 8 AAL5 PVCs
- Security: Software-configurable payload scrambling
- Voice QoS: CBR
- Data QoS: CBR, UBR
- Cell Delay Variation Buffer: Configurable 0-30 ms
- OAM Cell Handling: F4/F5 segment and end-to-end loopbacks

Voice Gateway Supported

- DSLAMs Supported: ATM: Lucent, Nortel, Nokia, AccessLan, CopperMountain, Paradyne
 - Voice Gateways Supported: , CopperCom, JetStream, TdSoft, Broadsoft, MetaSwitch, CirPack, NuERA Tollbridge, Nortel CS2K MGCP, General Bandwidth, Accelerated AAL2/LES and ELCP and any af-vmoa-0145 compliant gateway
 - SoftSwitches: NCS, LCS, MGCP 1.0, (RFC 2705.bis), SIP

Data Features

- LAN Interface: 10/100Base-T (RJ-45)
- Bridging: IEE 802.1d including spanning tree
- Routing: Default, Static, RIP1 (RFC 1058), RIP2 (RFC 2453), ICMP for IP Packet Processing DHCP: Server, Client (RFC 2131), Relay Agent (RFC 1542)
- PPP: PPOA, PPOE, PAP, CHAP, IPCP (RFC 1332) HCLC Support
- Management: SNMP via IP or EOC, MIB1, MIB2 (RFC 1213), Enterprise MIB, LES MIB
- Configuration: Console, Telnet (local, remote)

Configuration and Management

- 10/100 Ethernet (Management or IP Gateway)
 - Connection: 8-pin modular
 - Network Protocol: TCP/IP based networks
 - Data Rate: 10/100 Mbps
 - Compatibility: 10/100Base-T
- Supervisory Port
 - Connection: DB-9 female
 - Data Rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps (default: 19.2 kbps)
 - Upgrades: Trivial File Transfer Protocol (TFTP) server and client for software upgrades and configuration
 - Software download via gateway (wherever supported)
 - Telnet (local and remote)
 - Management: SNMP 1.0, SNMP 3.0, Telnet, Console

Security Features

- Firewall: IP filtering (in and out)
- NAT: RFC 1631, Port translation, exported services, multi-NAT (up to 8 public IP addresses)
- Security: Multilevel password protection
- Other: Radius client support (RFC 2865)

Physical Characteristics

- Dimensions: 11.8" W x 8.3" D x 1.8" H (30cm W x 21cm D x 4.6cm H)
- Weight: 1.8 lbs (1.35 kg)
- Mounting: Stand alone or wall mountable
- LEDs: Power, LAN link, LAN act, WAN link, Voice

Power

- Power Supply: External 90-240 VAC, 50/60 Hz
- Power:
 - 04 port model: 15-watt nominal, 30-watt max operating
 - 08 port model: 20-watt nominal, 50-watt max operating

Environmental Tolerances

- Operating Temp: 0° C to 40° C
- Storage Temp: -10° C to 70° C
- Operating Humidity: 5%-90% non-condensing

Regulatory – Compliance and Agency Approval

- This product complies with or has obtained Regulatory Agency approval at least against the following standards:
 - EMC - Emission - Class B : FCC Part 15, EN 55022:1998 + A1 + A2, AS/NZS 3548
 - EMC - Immunity: EN 55024:1998 + A1 + A2
 - Safety: UL 60950, CSA C22.2 No 60950, IEC 60950-1, EN 60950-1, AS/NZS 3260
 - Telecom: FCC Part 68, IC CS-03 Issue 8, AS/ACIF S041

Warranty and Support

- One (1) year warranty

