

Key Features

- SHDSL speeds from 192 Kbits/s to 2.304 Mbits/s
- Supported on distributions by Redhat, SuSE, Slackware, Mandrake, Debian, Fedora and more
- Support for TCP/IP over PPP, Cisco HDLC and Frame Relay networking protocols (PPPoA, MPoA)
- Bus mastering DMA Intelligent adapter
- PCI / PCI-X (Universal PCI) Ver 2.2 compliant card
- Low profile short card for compact systems



FarSync DSL-S1 shown fitted with standard height connector plate

Overview

The intelligent FarSync DSL-S1 adapter brings comprehensive SHDSL support to Linux. Full duplex 2 wire bandwidth of 2.304 Mbits/s is supported down to fractional speeds of 192 Kbits/s with automatic configuration.

Whether you are connecting to the Internet, private networks using TCP/IP or interconnecting sites for back to back operation using leased lines, a FarSync adapter provides the connectivity solution replacing standalone routers and firewalls with an integrated solution on a PC/Server.

The adapter installs seamlessly under Linux kernel series 2.4 and 2.6 on single, multiprocessor, 32 and 64 bit systems. The drivers are included as standard in the kernel. **Distributions by Redhat, SuSE, Slackware, Mandrake, Debian, Fedora and many more are supported.**

Under TCP/IP the link level protocol can be **PPP over ATM AAL5 (PPPoA) or Cisco HDLC, Frame Relay, Ethernet 802.2 over ATM (MPoA)**. The SHDSL port provides a standard point-to-point network interface controllable with all the standard Linux networking tools.

Typical Applications

The FarSync DSL-S1 is suitable for connection to TCP/IP and Frame Relay networks. Typical applications include:

- Integration with embedded Linux based Products
- SHDSL Internet Access
- Remote office access back to back operation over leased lines
- Server-based network hub (Routers & Firewalls)
- Video Conferencing

About G.SHDSL

Also known as SHDSL and G.991.2, G.SHDSL is an international standard for symmetric DSL developed by the ITU. G.SHDSL provides for sending and receiving high-speed symmetrical data streams over a single pair of copper wires (2 wire) at rates between 192 Kbits/s and 2.304 Mbits/s. G.SHDSL was developed to replace several incompatible symmetric DSL technologies (e.g. SDSL, HDSL, HDSL2) with a globally supported standardised technology incorporating performance and interoperability enhancements.

High Performance and Flexibility

The FarSync DSL-S1 is designed for high performance and flexibility. The intelligent adapter is driven by an AMD processor, zero wait state SRAM with a PCI Bus mastering DMA interface to provide a very high performance whilst minimising PCI and Server CPU loads.

Multiple FarSync DSL-S1 adapters can be installed and also intermixed with the other adapters in the FarSync WAN T-Series range that provide E1, X.21, V.35 and RS-530 network interfaces.

PCI Bus Compatibility

The FarSync DSL-S1 is PCI version 2.2 compliant and PCI-X compatible. This Universal PCI adapter can operate in PCs using either 3.3 volt or 5 volt signaling. The card is suitable for PCs with either 32 bit bus or 64 bit bus configurations. The power for the cards is derived from the 3.3 volt supply rail.

Installation and Configuration

A simple installation procedure will make the device driver available via the standard kernel configuration mechanism. The driver may be either permanently linked to the kernel or used as a dynamically loadable module.

A configuration tool is provided to set the interface parameters and the protocol, after which the ports may be configured with standard networking tools. The line speed is automatically detected and configured and there is also provision for a manual override. Examples and default configurations are provided with the on-line documentation.

Port Monitoring

A daemon is included that allows the Activation Status of the port to be automatically monitored. The network interface associated with the specific SHDSL port can then be brought up or down to reflect the line state. This allows routing tables to be dynamically recalculated to reflect destinations actually available.

Product Packaging

The product includes the communications adapter, RJ11 2 metre cable, standard and low profile PCI connector plates, driver software (with source), utilities, test program and documentation supplied on CD-ROM. The latest versions of the software can be downloaded from www.farsite.co.uk as they become available.

Technical Specifications

Product name	FarSync DSL-S1
Product code	FS8160
Warranty	5 years
Hardware Features	
Card type	Intelligent Universal PCI bus mastering PCI card, AMD processor, zero wait state SRAM, PCI-X compatible, PCI v2.2 compliant; compatible with 3.3 & 5 volt signalling, Suitable for 32 and 64 bit PCI bus slots; short card - height 65 mm, length 167mm
Network Modes and Compatibility	RT (remote terminal - Client), COT (central office terminal - Server), Analogue Loopback for testing, transparent and non-transparent, ITU G991.2 Annex A (US operation), Annex B (Europe), G.994.1
Network connection	RJ11, 2 metre RJ11 cable included
Link speed range	2 wire operation - 192 Kbits/s to 2.304 Mbits/s
ESD Protection	Line protection meets TBR12/13
Back panel Indicators	Line status reporting via 4 LEDs
Approvals	EN55022 class B, CE, FCC class B, TBR12 and TBR13
Power requirements	< 1.5 Amp @ +3.3v, < 5 watts
Software Features	
Standard interface	Configurable and controllable with all standard networking tools
Multiple cards	Yes, up to 12 or more in a Server, only limited by PCI slots, can be mixed with FarSync WAN T-Series cards
Protocols	PPPoA - PPP over AAL5 ATM (RFC 2364), MPoA - Multiple Protocols over ATM (Frame Relay, Cisco HDLC, Ethernet 802.2 - RFC 2684 formerly 1483), TCP/IP, ATM PVC support configurable with VPI/VCI, PPP (RFC 1661), SNMP (RFC 1213)
Authentication	PAP, CHAP, MSCHAP (Microsoft CHAP) and RADIUS
Utilities	Port Monitoring Daemon - Monitors Activation Status and configures the network interfaces
Linux support	Distributions by Redhat, SuSE, Slackware, Mandrake, Debian, Fedora and more. Drivers for kernel series 2.4 and 2.6 on both single and multiprocessor 32 and 64 bit systems