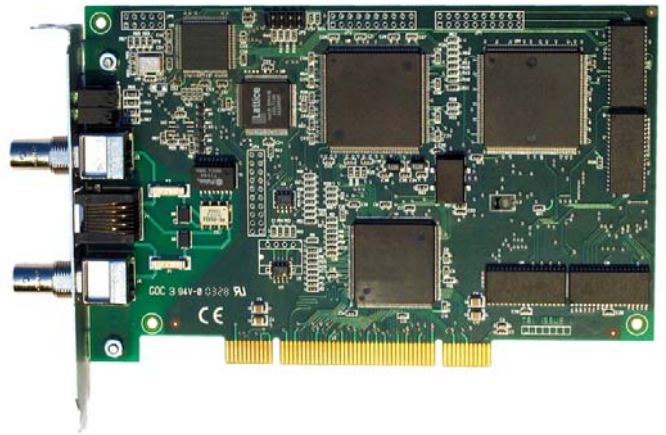


Key Features

- E1 unstructured and fractional (G.703 and G.704)
- T1 unstructured and fractional (G.703 and G.704)
- Supported on Linux distributions by Redhat, SuSE, Slackware, Mandrake, Debian, Fedora and more
- Support for Windows 2000, XP and Server 2003
- Support for TCP/IP over PPP, Cisco HDLC and Frame Relay networking protocols
- Bus mastering DMA Intelligent adapter
- PCI / PCI-X (Universal PCI) Ver 2.2 compliant card



Overview

The intelligent FarSync WAN TE1 adapter brings comprehensive T1 and E1 support to Linux and Windows. Full bandwidth on T1 and E1 G.703 lines, fractional T1 and E1 (G.703 and G.704) are supported with easy software configuration.

Both the modern RJ48C (RJ45) connectors and the traditional twin coax are available on the card so if you are not sure what connector type is being used, use the FarSync WAN TE1.

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

Linux

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

The link level protocol can be PPP, Cisco HDLC or Frame Relay, optional authentication by CHAP, MSCHAP or PAP (RFC 1334). The serial port provides a standard point-to-point network interface controllable with all the standard Linux networking tools.

Windows

The adapter installs seamlessly as a plug and play device under **Windows 2000, XP or Server 2003 on both single and multiprocessor systems.** The interface to the adapter is presented as an NDIS (LAN) driver with TCP/IP running over PPP with optional authentication by CHAP or PAP. **FarSync WAN drivers have been validated by Microsoft as 'Designed for Windows XP'.**



Typical Applications

The FarSync WAN TE1 adapter is suitable for connection to TCP/IP networks on Windows and TCP/IP and Frame Relay networks on Linux. Typical applications include:

- High speed Internet Access
- Internet access over Frame Relay
- Remote office access over leased lines
- Server-based network hub (Routers & Firewalls)
- Integration with embedded Linux based Products
- Satellite multicasting
- Video Teleconferencing

High Performance and Flexibility

The FarSync WAN TE1 is designed for high performance and flexibility. The adapter is driven by an AMD processor with 1Mbyte of on board zero wait state SRAM. The PCI Bus mastering DMA interface provides a very high performance interface to the adapter whilst minimising PCI and Server CPU loads.

The FarSync WAN TE1, T1U, T2U and T4U adapters can all be intermixed.

PCI Bus Compatibility

The FarSync WAN TE1 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 adapter is suitable for PCs with both 32 bit bus and 64 bit bus configurations. The power for the cards is derived from the 3.3 volt supply rail.

Installation and Configuration

Linux

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 line speed, interface and the protocol, after which the ports may be configured with standard networking tools. Examples and default configurations are provided with the on-line documentation. The driver for the adapter is included as standard in 2.4 and 2.6 kernels.

Windows

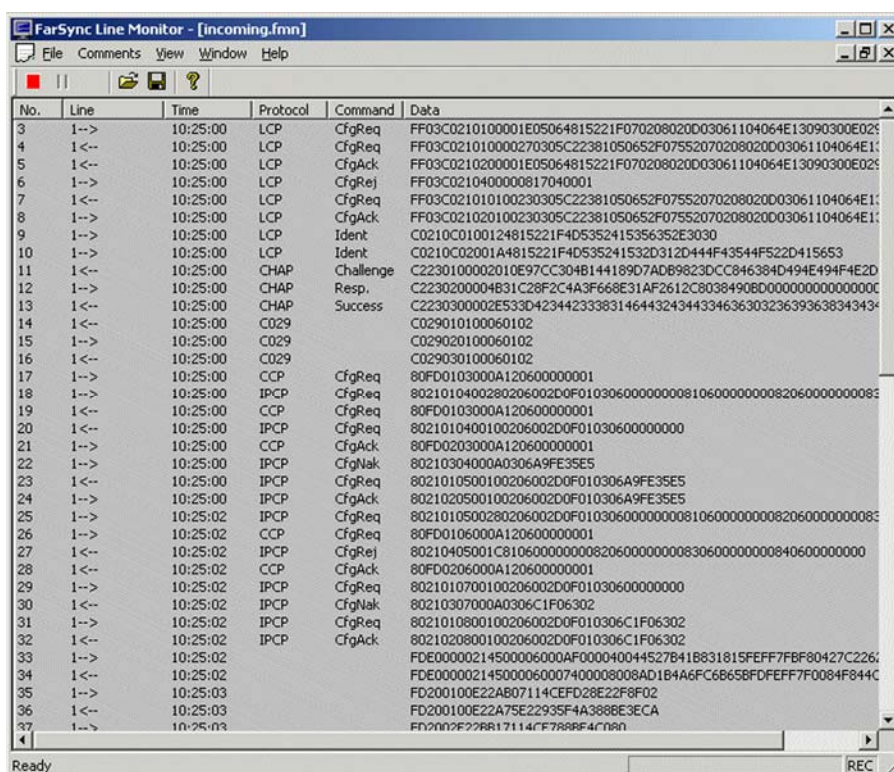
The FarSync WAN TE1 is very quick and easy to install. The product is supplied with an NDIS (LAN) interface that allows the connection to appear to the system as a LAN adapter. This means that all the configuration complexities are hidden, making for a very quick installation. A configuration application is available to configure the E1 and T1 parameters if required. FarSync WAN drivers have been validated by Microsoft as 'Designed for Windows XP'

Linux Line Monitoring

The standard Linux utilities TCPDump and Ethereal can both be used to monitor the data traffic on the T1 or E1 line.

Windows Line Monitor

The product is supplied with a high performance multi-channel line monitor that allows the user to record, display and store line traffic with protocol decoding (sample screen below). Comments can even be inserted into the line trace to assist later analysis.



Product Packaging

The product includes the communications adapter, RJ48C (RJ45) 2 metre cable, driver software, (source is provided for Linux driver), utilities and documentation supplied on CD-ROM, quick start guide. The latest versions of the software can be downloaded from www.farsite.co.uk as they are released.

Technical Specifications	
Product name	FarSync WAN TE1
Product code	FS8150
Warranty	5 years
Hardware Features	
Card type	Intelligent Universal PCI bus mastering PCI card, PCI-X compatible, PCI version 2.2 compliant; compatible with 3.3 & 5 volt signaling, 1 Mbyte zero wait state SRAM; AMD processor, Suitable for 32 and 64 bit PCI bus slots; short card - height 107mm, length 167mm
Network connectors	E1: 120-ohm RJ48C (often referred to as RJ45) or Twin 75 ohm BNC T1: 100-ohm RJ48C (RJ45)
Link speed range	E1 unstructured (G.703): 2.048 Mbits/s E1 fractional (G.703/G.704): 64 Kbits/s to 1.984 Mbits/s T1 unstructured (G.703): 1.544 Mbits/s T1 fractional (G.703/G.704): 64 Kbits/s to 1.536 Mbits/s
T1 frame structure and modes	T1 - HDLC-framed data over G.703 unframed/unstructured or G.703/G.704 framed/structured F4 (FT), F12 (D3/D4, SF), F24 (D5, Fe, ESF) and F72 (SLC96) modes. Manual long (range) and short (LBO) equalization methods configurable.
E1 frame structure and modes	E1 - HDLC-framed data over G.703 unframed/unstructured or G.703/G.704 framed/structured Doubleframe and CRC4 multiframe modes
ESD Protection	Yes - Sidactor and telelink fuse, designed for zero maintenance. The FarSync WAN TE1 uses solid state fuses unlike many T1 / E1 interface cards, no parts need to be replaced after a survivable lightening strike
Back panel Indicators	LEDs for Port open, Loss of Signal (LOS), Receive Remote Alarm (RRA), Alarm Indication Signal (AIS)
Approvals	EN55022 class B, CE, FCC class B, TBR12 and TBR13
Power requirements	< 1.4 Amp @ +3.3v, < 5 watts
Cables	2 metre RJ48 cable included
Linux 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 intermixed with other FarSync WAN T-Series adapters
Protocols	TCP/IP over PPP, Cisco HDLC and Frame Relay with CHAP, MSCHAP or PAP authentication (RFCs 1661, 1332, 1334)
Documentation	Full installation and configuration instructions provided
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
Windows Software Features	
Standard interface	Configurable and controllable with all standard networking tools
Protocols	TCP/IP, over PPP, with CHAP or PAP authentication (RFCs 1661, 1332, 1334)
Driver	NDIS (LAN) driver, the E1 / T1 line appears as an LAN port The FarSync WAN TE1 can be intermixed with other FarSync WAN T-Series adapters
Utilities	Multi-channel line Monitoring Utility, with protocol decode
Documentation	Full installation and configuration instructions provided
Windows Operating Systems	Windows XP, Windows 2000, Windows Server 2003. Windows 64 bit support will be available later in 2006.