FarLinX® Connect Mini

A Compact HDLC Bridge and TCP to HDLC converter

FarSite COMMUNICATIONS

Key Features

- **TCP to HDLC conversion with the route created statically or dynamically, handles a variety of modes including: character streaming and frame length defined**

- **HDLC ↔ Internet ↔ HDLC bridging including static or dynamic routing**

- **LAN accessible HDLC line as a sharable remotely manageable resource**

- **Choice of HDLC network interface connections: RS232 (V.24), V.35, RS422, RS530, RS449, X.21, RS485**

- **HDLC line speeds up to 1Mbps and over 1,200 frames per second each way**

- **Line Monitor to view HDLC traffic for easy network problem diagnosis**

- **Optional support for authentication and data security using IPSEC**

- **IP and IPv6 support**

- **Browser graphical configuration, SNMP alerts for critical events and activity logging**

- **Real time display of current connections, line performance, errors, connections and much more**

- **Small rugged low profile all metal case, low power consumption**

Overview

The FarLinX Connect Mini is a multi mode HDLC bridging appliance. HDLC lines can be bridged securely across the Internet or other TCP/IP networks and HDLC connection data can be converted to operate over a TCP connection.

All this is easy to securely manage from your browser. There are also daily activity logs with a selectable level of detail automatically archived on a daily basis. The SNMP support provides alerts for numerous different conditions including critical events such as line down and line up. A line monitor supplied permits analysis of the HDLC line.

Typical Applications

- **Transparently bridge HDLC type lines over the Internet, reducing line rental costs**

- **Allow TCP/IP access to a HDLC line where the HDLC line data is provided over the TCP connection**

- **LAN accessible and sharable HDLC port resource**

Diagram illustrates an HDLC connection being bridged over the TCP/IP network such as the Internet using a FarLinX Connect Mini at each end

Diagram illustrates an application running on a TCP/IP network connecting to a device with an HDLC connection. The FarLinX Connect Mini providing the conversion between TCP and HDLC

Encryption over TCP/IP (IPSEC)

Available as an option at the time of ordering, the FarLinX Connect Mini can be supplied with an IPSEC capability that can provide communications security in IP networks. This can be especially important when public Internet connections are used for part of the communications path.

IPSEC operates between a pair of FarLinX Connect Appliances. Each must know details of the remote appliance in order to authenticate communications and successfully encrypt/decrypt data being sent and received. In the case of the FarLinX Connect Mini, the details of the partner Bridge can be configured. Once authentication has completed an exchange of encryption keys takes place under the pre-shared key. The session key is used only for a single session.

FarLinX Connect Mini models without IPSEC can be supplied to any country. Models with IPSEC capability can be exported without a special export licence to some countries. Where IPSEC is required and the destination country is not on the pre-approved list, FarSite will apply for an export license for that customer. See Order Information for more details.

Statistics, Event Logging and SNMP

Statistics

The FarLinX Connect maintains a comprehensive set of statistics and activity counts. This information can be used to indicate the total loads on the bridge and also to give early warning of line performance problems and even misconfigured systems elsewhere in the network.

Logging

All connections setup through the Connect bridge can be logged. The logs are automatically saved on a daily basis. Old logs can be displayed as required. Log events can also be routed to a syslog to allow logging centrally and also permit real time viewing of the log.

SNMP

The Connect bridge supports SNMP alerts with 3 configurable levels. Alerts can be issued for connections, disconnections, connection routing errors, line up and line down events and many more.

Rear Panel View

*Rear panel view showing, 12V, 1.5A power input, system reset button,
AUX port (not used), WAN port for the HDLC connection and a LAN connection*

Configuration

The FarLinX Connect is configured from a Browser - IE, Firefox and Chrome are all supported. Access to the configuration is secured through a user name and password. Secure configuration access is through https.

The majority of configuration changes to the appliance are made dynamically so continuous operation of the FarLinX Connect Mini can be maintained.

Configurations can be saved for later use.

Example configuration page

System Upgrades

Upgrades to the firmware can be remotely and securely uploaded to the appliance to allow the latest revision firmware to be used. Rollback to a previous version is supported.

Maintenance Contract

FarSite recognises that this product is frequently used as a key component in networked systems and as such a guaranteed response to unexpected problems is required. Maintena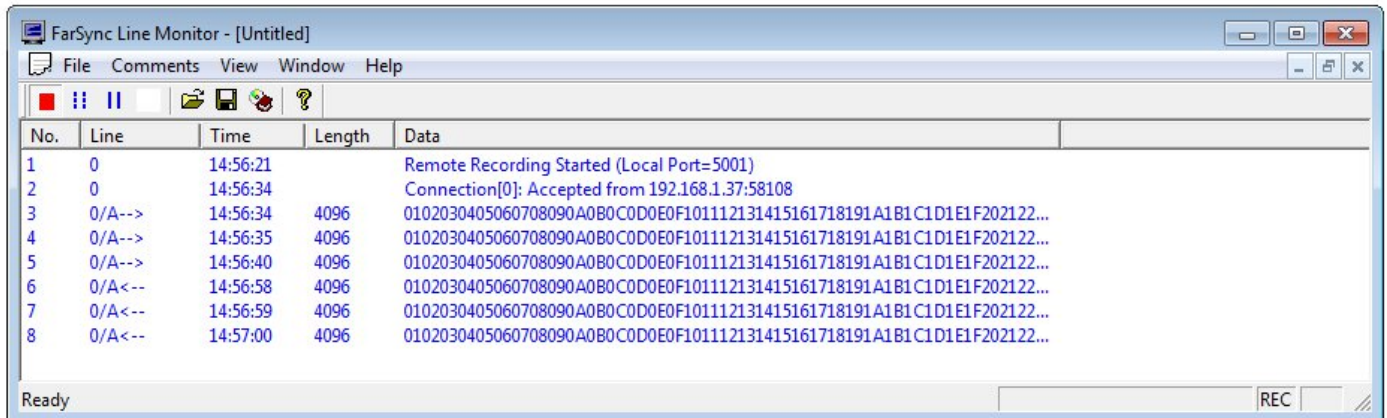nce contracts are available for the FarLinX Connect Mini for fast hardware swap out, priority service and rapid problem resolution.

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Built in HDLC Line Monitor

The FarLinX Connect includes Line Monitor software installable from CD onto a Windows PC. This allows HDLC traffic to be recorded and displayed in real time. Multiple FarLinX Connects and FarLinX Gateways can be monitored simultaneously. Support to allow the popular Wireshark line monitor to record and display the HDLC and TCP/IP is also included.

This very useful feature allows Network Managers and System Installers to locally or remotely analyse and rapidly diagnose problems that may occur on the HDLC lines without the need for expensive external line monitors.

The line traces can be saved and viewed later, for example in a customer support situation.

Order Information

Name	Description	Product Code
FarLinX Connect Mini	HDLC line Bridge supporting HDLC to TCP/IP conversion and HDLC bridging across TCP/IP. Compact solid state appliance. This appliance is available with or without IPSEC encryption over TCP/IP. Product codes ending in N indicate no encryption, those ending in E indicate with encryption allowed. The FarLinX Connect Mini when supplied with encryption requires an export license for some countries.	FL2751N FL2751E
Cable types available for the FarLinX Connect Mini		
GCR1-DTE	RS232/RS530 DTE (V.24, EIA530, RS422) cable with DB25M connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6006
GCX1-DTE	X.21 DTE (V.11) cable with DB15M connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6007
GCV1-DTE	V.35 DTE cable with V.35M connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6008
GCR1-DCE	RS232/RS530 DCE (V.24, EIA530, RS422) cable with DB25F connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6001
GCX1-DCE	X.21 DCE (V.11) cable with DB15F connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6002
GCV1-DCE	V.35 DCE cable with V.35F connector, suitable for Gateway generated or external clock generation, 1.5 metres.	FS6003

Product Feature Summary

TCP/IP <-> HDLC conversion	Converts data between HDLC and TCP. The route can be setup all the time (Static) or created dynamically on receipt of data.
HDLC - TCP - HDLC connection bridging	Permits a HDLC connection to be bridged over a TCP network such as the Internet. The route used for the bridge can be setup all the time (Static) or created dynamically on receipt of data.
Frame encoding options	Character stream, FarLinX Formatted Header, Length+Data
Secure connections over TCP/IP	Secure connections over TCP/IP
HDLC data frames per second	Over 1200 HDLC data frames per second (in each direction)
Logging key events	Events log maintained for events such as the HDLC line down, and HDLC line up. Log auto archived daily. Can be routed to syslog for remote logging and real time viewing.
Line Monitor	Line monitor application included for display of frames and frames on HDLC connections, can be run locally or remotely. Wireshark supported.
Secure connections	IPSEC option selectable for support of authenticated and encrypted data connectivity over TCP/IP.
Configuration	Securely configured by a Browser using XML and https, login required. Configurations can be saved.
SNMP Alerts	Configurable levels, generated for events such as HDLC line down, HDLC line up, connections established and disconnections and appliance failures.
Statistics	Statistics provided for line activity, line errors, bridge activity. resetable on demand on both local and remote bridges.
Network connections	Connections for RS232 (V.24), X.21, V.35, RS530 (RS422), RS449 and RS485 2 and 4 wire operation available. Line speeds up to 1Mbits/s; internal and external generated line clocks. HDLC network cables are ordered separately, see Order Information for a list of available cables
Line signal encoding options	NRZ, NRZI (with and without clock lines), FM0, FM1
TCP/IP	IP and IPv6 supported
LAN	10/100 BaseT LAN port, RJ45
Approvals	CE: EN55022:2006+A1:2007, EN55024:1998+A1:2001+A2:2003, EN61000-3-2:2006, EN61000-3-3:1995+A1:2001:A2:2005. FCC part 15. UL. Safety: EN 60950-1: 2006. RoHS2 compliant.
Power Requirements	Input voltage 100vac to 240vac, 50/60Hz Power: 6 watts.
Physical	Solid state design, all metal case, software selectable power down. Reset to factory defaults switch. Dimensions: metric - 170(W) x 158(D) x 34(H) mm, imperial - 6.7"(W) x 6.2"(D) x 1.4"(H) Weight: 0.57 kg (1.25 lbs). Operating Temperature range: 5 to 40°C (41 to 104°F), Humidity: 20% to 95% RH (non-condensing) Storage Temperature range: 0 to 70°C (32 to 158°F), Humidity: 5% to 95% RH (non-condensing)
Warranty period	2 years

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