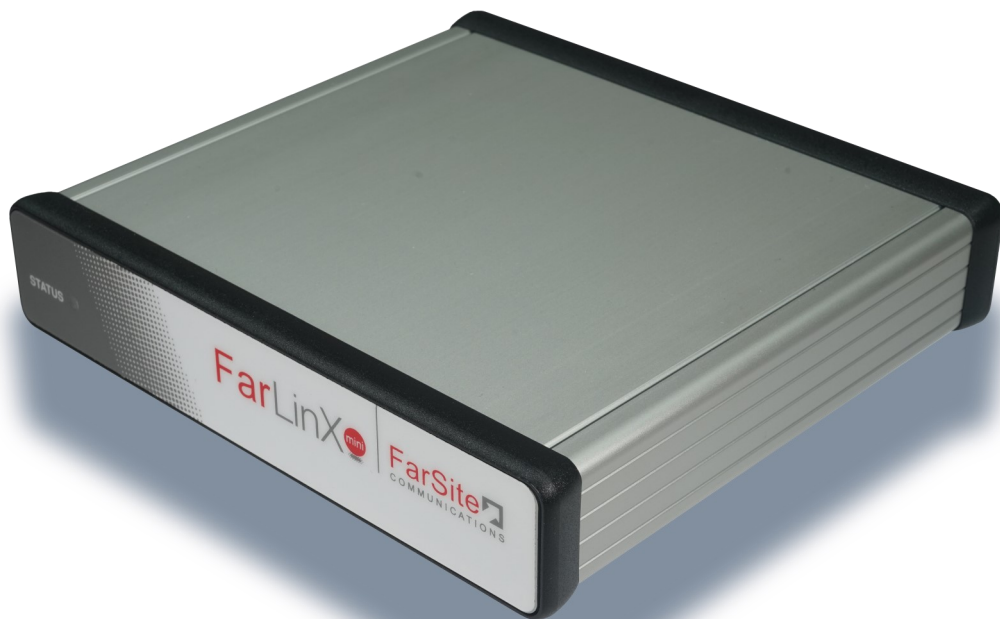




FarLinX[®] Connect Mini

HDLC Bridge and TCP to HDLC/LAPB converter

Datasheet v2.10



The FarLinX[®] Connect Mini

A Compact HDLC Bridge and TCP to HDLC/LAPB converter



Key Features

- TCP to HDLC or LAPB 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/LAPB 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/LAPB traffic for easy network problem diagnosis
- 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.



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

Typical Applications

- Transparently bridge HDLC lines over the Internet, reducing line rental costs
- Allow TCP/IP access to a HDLC/LAPB line where the HDLC/LAPB line data is provided over the TCP connection
- LAN accessible and sharable HDLC/LAPB 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

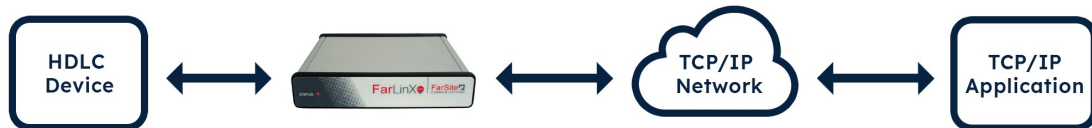


Diagram illustrates an application running on a TCP/IP network connecting to a device with an HDLC connection. The FarLinX Connect Mini providing the conversion between TCP and HDLC

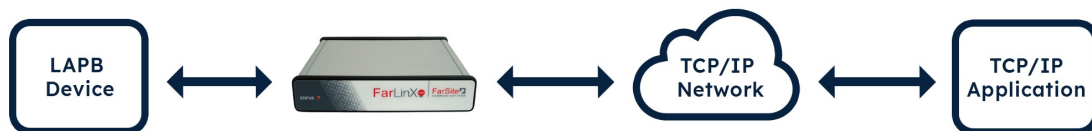


Diagram illustrates an application running on a TCP/IP network connecting to a device with an LAPB connection. The FarLinX Connect Mini providing the conversion between TCP LAPB

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/gateway 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 Mini can be logged. The logs are automatically saved on a daily basis. Old logs can be displayed as required.

SNMP

The Connect Mini 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.

Configuration

The FarLinX Connect Mini is configured from a Browser – Chrome, Edge, and Firefox 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.

The screenshot shows the configuration page for a Serial Line on the FarLinX Connect Mini. The interface includes a navigation bar with 'Line', 'Route', and 'Global' sections. The 'Line' section is active, showing 'Line 0 Serial Line' with status indicators for 'Line started', 'DTR', 'RTS', 'CTS', and 'DCD'. Below this are control buttons: Save, Cancel, Delete, Stop, Restart, and Start Monitor. The main configuration area is a table with 'Setting' and 'Value' columns, and a 'Value' column with a dropdown menu. The settings include Link, Line Name, Autostart Line, Line Speed, Line Interface, Line Mode, Line Encoding, Clocking Options, Ignore Signals, Clock Inversion, NRZI Clocking, Flow Control, Filled buffer behaviour, Frame Size, Frame Rate, and Buffering.

Setting	Value
Link	Route 0 – TCP Route – 1.1.1.1 – 1234 – 5000
Line Name	Serial Line
Autostart Line	<input checked="" type="checkbox"/>
Line Speed	Line Speed 64000
Line Interface	RS530/449
Line Mode	HDLC
Line Encoding	NRZ
Clocking Options	Clocking Internal
Ignore Signals	<input type="checkbox"/>
Clock Inversion	<input type="checkbox"/>
NRZI Clocking	<input type="checkbox"/>
Flow Control	None
Filled buffer behaviour	Discard oldest frames first
Frame Size	265
Frame Rate	30
Buffering	2

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

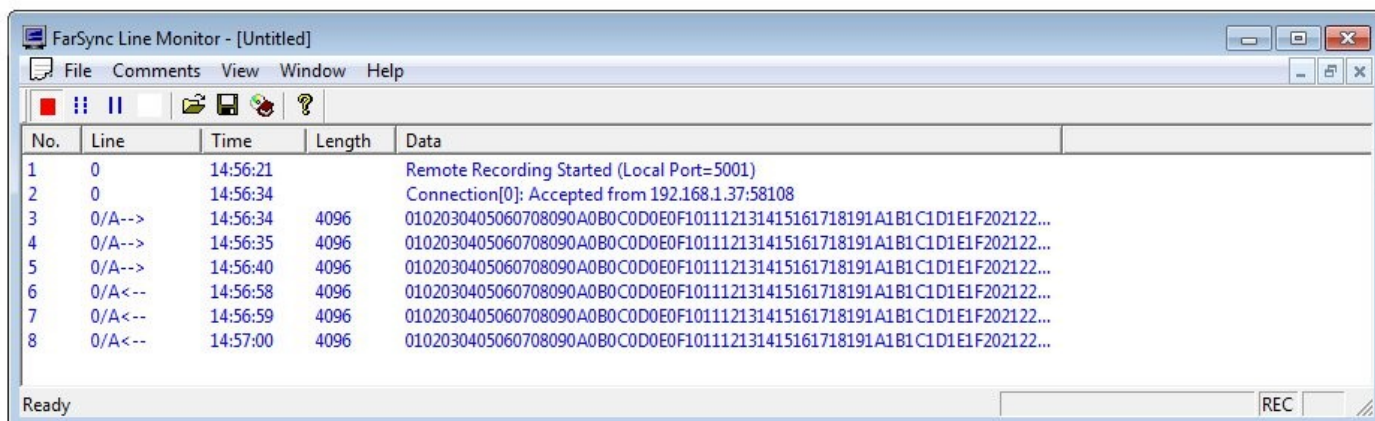
FarSite recognises that this product is frequently used as a key component in networked systems and as such a guaranteed response to unexpected problems is required. Maintenance and supports contracts are available for the FarLinX Connect Mini for fast hardware swap out, priority service and rapid problem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

Built in HDLC Line Monitor

The FarLinX Connect Mini includes the windows based Line Monitor software package. This allows HDLC traffic to be recorded and displayed in real time. Multiple FarLinX Connects and FarLinX Gateways can be monitored simultaneously. Saved traces can be read in popular line analysis tool Wireshark.

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	A Compact HDLC Bridge and TCP to HDLC/LAPB converter.	FL2751N
Compatible Cables		
GCR1-DTE	RS232/RS530 DTE (V.24, X.21bis/ EIA530, RS422) cable with DB25M connector, suitable for Connect Mini generated or external clock generation, 1.5 metres.	FS6006
GCX1-DTE	X.21 DTE (V.11) cable with DB15M connector, suitable for Connect Mini generated or external clock generation, 1.5 metres.	FS6007
GCV1-DTE	V.35 DTE cable with V.35M connector, suitable for Connect Mini generated or external clock generation, 1.5 metres.	FS6008
GCR1-DCE	RS232/RS530 DCE (V.24, X.21bis/ EIA530, RS422) cable with DB25F connector, suitable for Connect Mini generated or external clock generation, 1.5 metres.	FS6001
GCX1-DCE	X.21 DCE (V.11) cable with DB15F connector, suitable for Connect Mini generated or external clock generation, 1.5 metres.	FS6002
GCV1-DCE	V.35 DCE cable with V.35F connector, suitable for Connect Mini 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.
TCP/IP <-> LAPB conversion	Converts data between LAPB 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
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.
Line Monitor	Line monitor application included for display of frames and frames on HDLC connections.
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. resettable 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 1Mbps/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
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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