

## FarSync M1P v2 - PCMCIA synchronous adapter – for Windows and Windows CE



### Overview

The FarSync WAN M1P v2 adapter provides the solution for your X.21, V.35, RS530 (RS422) and RS232C synchronous connectivity requirements in a PCMCIA adapter format. Whether you are connecting to the Internet, a satellite link, a private network using TCP/IP, connecting sites using Leased Lines or need to use the adapters API, this FarSync adapter provides the connectivity solution.

The product includes support for the standard Windows SDCI API. This provides applications with direct access to the adapter's communications port for bit synchronous (HDLC) framing.

The adapter installs seamlessly as a plug and play device under Windows XP, Vista, Server 2003 on both single and multi core 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 (RFC 1334). The FarSync drivers are signed by Microsoft for easy installation.

The product is supplied with its own multi-channel Line Monitor utility.

The FarSync WAN M1P v2 adapter supports PC connections to secure BRENT units using an X.21 connection.

A driver is available for API development on Windows CE.

### Typical Applications

The synchronous FarSync M1P v2 adapter is suitable for a very wide variety of applications, examples include:

- Laptop access to synchronous based services
- WAN access to systems using PCMCIA for external devices
- HDLC framing support for non standard or specialist protocols
- Data generators for test systems
- Engineering monitoring and control systems
- Internet access from laptops
- Remote office access over leased lines
- Connections to BRENT units
- Portable Satellite data access

### FarSync M1P - Product Details

The FarSync M1P is supplied with software drivers for Windows. This includes a low level driver that allows access to the communications features available in the hardware and an optionally installable driver that connects with the standard TCP/IP protocol stack to allow access to IP based networks such as the Internet.

### Adapter Hardware

The adapter uses a multifunction SEROCCO communications chip supporting, sync, transparent data, NRZ, NRZI, FM1 and FM0 encoding. The synchronous port can run to speeds of up to 512 Kbits/s full duplex.

## Network Interfaces

The multi function line drivers available support X.21 (V.11), V.35, RS232C (V.24, X.21bis), RS530 (EIA530, RS422), RS449 (RS422), network interfaces, all soft configurable and ESD protected from static charges.

## Clock Generation

The M1P supports accurate internal clock generation at a wide range of standard frequencies from 9,600 baud to 512 Kbits/s, dual clocks can be generated in V.11 mode if required. Adapter generated clocking is selectable for the RS232C, X.21 and RS449 network interfaces.

## Key Features supported on Windows

The FarSync M1P installs easily under Windows Vista, Windows XP, Windows Server 2003 and Windows Server 2008 on single or multi-core 32 and 64 bit systems. A low level SDCI driver is installed with the optional installation of an NDIS (LAN) driver. The NDIS driver supports TCP/IP running over PPP with optional authentication by CHAP or PAP (RFC 1334) providing a standard point-to-point network interface. The drivers are signed by Microsoft for easy installation.

The product is supplied with a comprehensive configuration utility and its own Line Monitor that allows the user to record, display and store line traffic with WAN protocol decoding for fast debugging.

The FarSync M1P enhanced SDCI API allows applications developed using the FarSync SDK to exactly control the type of data sent and received in bit sync (HDLC framed) in NRZ, NRZI, FM1, FM0 signal modes.

## FarSync SDK - The Developers Toolkit

The SDK includes support for writing applications on Windows and contains documentation, working sample applications, development and test utility applications. There is everything a user needs to rapidly develop and test a wide variety of applications such as specialist sync (HDLC framed) protocols.

The FarSync SDK is ordered separately from the FarSync M1P.

Our Engineering department provides free email and telephone assistance to application developers using the API as part of the package provided when the FarSync SDK is purchased.

## FarSync M1P - Software Technical Specifications

### Windows

<b>O/S Types</b>	Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008 Windows CE 32 and 64 bit (single and multi-core systems)
<b>Protocol Supported</b>	TCP/IP, PPP, CHAP, PAP (RFCs 1661, 1332, 1334)
<b>API and Interfaces</b>	Extended SDCI API, NDIS (LAN) where the line appears as a LAN interface

### Hardware Technical Specifications

<b>Adapter type</b>	PCMCIA type II PC adapter
<b>PC adapter cable connector</b>	FCI rocard
<b>Port count</b>	1 port
<b>Network Interfaces</b>	<b>RS232C</b> (V.24) - DTE 25 pin male D type, <b>X.21</b> (V.11) - DTE 15 pin male D type, <b>V.35</b> - DTE MRAC-34 male 'brick' type, <b>RS530</b> (EIA-530, RS422) - DTE 25 pin male D type, <b>RS449</b> .
<b>Link speed range</b>	RS232C: up to 128 Kbits/s X21, V35, RS530: up to 512 Kbits/s
<b>Line signal encoding</b>	NRZ, NRZI, FM1 and FM0 and other special modes
<b>ESD protection</b>	Yes, Littelfuse high speed ESD and over-voltage protection
<b>Approvals</b>	EN55022 class B, CE
<b>MTBF</b>	468,787 hours. Bellcore Method 1 Case 3, 40 deg.C ambient, 15 deg.C case temperature rise above ambient
<b>Power requirements</b>	< 150 mA @ +5v < 0.75 watts
<b>Internal/External Line Clocking</b>	Both. Internal clock range selectable for X.21 and RS232C modes, range 9,600 baud to 512 Kbits/s. No special cables are required to use internal clocks.

### Order Information

Product name	Description	Product Code
FarSync M1P	PCMCIA 1 port sync adapter (X.21 / V.35 / RS232C / EIA530 / RS422 ), HDLC support. Provides an API and operation on TCP/IP links. For Windows XP, Server 2003, Server 2008 and Vista. Cables are ordered separately.	FS4133
FarSync SDK	Windows Developers Toolkit for the FarSync M1P v2 and other FarSync adapters - this is required if you want to write software to use the adapter's API	FS9610
FarSync X25 M1P	If you require X.25 see the FarSync X.25 M1P product	FS6133

### Cables for the FarSync M1P v2

QCR1	RS232C (V.24) cable with DB-25M connector, 1.5 metres	FS6085
QCX1	X.21 (V.11) cable with DB-15M connector, 1.5 metres	FS6086
QCV1	V.35 cable with standard MRAC-34 (brick) male connector, 1.5 metres	FS6087
Q530	RS530 (EIA-530, RS422 signalling) cable, DB-25M connector, 1.5 metres	FS6088

### Special Purpose Cables

Null-MX	X.21 double shielded crossover cable, 15 pin D type female connectors, 0.5 metres. Suitable for FarSync T-Series adapters	FS6090
X21-EXT	X.21 double shielded 15 metre extension cable, 15 pin D type female to 15 pin D type male connector	FS6091
Null-MR3	V.24 (RS232C) double shielded crossover cable, 25 pin D type female connectors, 0.5 metres. Suitable for FarSync T-Series adapters	FS6092
X21-449-INT	X21-449-INT X.21 to RS449 - conversion cable for use when the FarSync adapter generates the clock (internal clocking), 0.5 metres	FS6093
X21-449-EXT	X21-449-EXT X.21 to RS449 - conversion cable for use when the clock is externally generated (DCE Clock), 0.5 metres	FS6094