JetCard 1404
4-port RS-422/485 Universal PCI Card

- Supports 32 bit-Universal PCI bus
- Easy-to-install driver and self-diagnostic utility
- Built-in 15KV ESD protection
- High speed up to 921.6 Kbps
- Automatic Flow Direction Switching Technology
- Supports 128-byte FIFO
- Supports on-board automatic hardware/software flow control
- Supports over current/ voltage protection

Overview

JetCard 1404 is 4-port RS-422/485 Universal PCI Multiport Serial Card, specially designed for long distance industrial applications that require high speed RS-422/485 interfaces. JetCard 1404's Universal PCI bus supports both 3.3V/5V slots. The self-diagnostic utility and the easy-to-install driver that come with JetCard make it easier for you to set up your complex system. And with its 15KV ESD surge protection, and overload current/voltage protection, JetCard 1404 is ideal for industrial applications in harsh environments.

With its powerful features and functions, JetCard 1404 is your perfect choice for applications in building automation, security, retail and POS systems, billboard broadcasting, and telecom management.

High Performance

JetCard Series uses Oxford OXmPCI954 chip, a 4-port Universal Asynchronous Receiver Transmitter, which is well-known for its high performance. Each UART channel in the JetCard offers data transmission speed up to 921.6 Kbps, and bi-directional 128-byte FIFO for each port. Deep FIFO can reduce the CPU's loading, saving CPU's resources for other important tasks. This chip also allows JetCard to be compatible with the widely-used industry-standard 16C550 devices and PCI bus.

In addition to high speed of 921.6 Kbps and 128-byte FIFO, Oxford chip also equips JetCard with on-board flow control function. Instead of using a driver on the PC to control the traffic flow, JetCard uses the on-board flow control function to reacts directly without waiting for the PC to respond. In this way, the respond time and CPU's loading can be largely reduced, greatly enhancing your system's performance. You can either choose software flow control, which uses Tx and Rx to send/ receive XON/XOFF signals, or select hardware flow control, which uses CTS#/RTS# to send/ receive the signals. The flow control function is to prevent FIFO from overflow. JetCard is ideally suitable for PC applications, enabling PC users to take advantage of the maximum performance of analog modem or ISDN terminal adapters. JetCard is also suitable for any communications that require high speed RS-232/RS-422/RS-485 interfaces. JetCard 1402 also comes with on-board Automatic Flow Direction Switching Technology. Under a multi-drop 2-wire RS-485 mode, the timing for switching between Idle Mode (data not being transmitted) and Active mode (data being transmitted) must be precise and accurate. With this technology, JetCard can effectively increase RS-485 transmission performance, and largely relieve the PC from the burden of using the driver to switch modes.

Multiport Serial Card

Specifications

Interface
Bus Interface: 32-bit Universal PCI
Number of Ports: 4
Max. Number of Boards: 4
IRQ: Assigned by PCI plug and play
Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2
Parity Bits: None, Even, Odd, Space, Mark
RS-422 Signals: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-, GND
RS-485(4-wire) Signals: Tx+, Tx-, Rx+, Rx-, GND
RS-485(2-wire) Signals: Data+, Data-, GND
RS-485 Data Control:
On-chip Automatic Data Flow Direction Switching Technology (2-wire)

Hardware
Communication Controller: 16C950 compatible (OXFORD)
Board Connector: DB37 Female
Cable Connection:
DB9 Male or DB25 Male, 100 cm cable length (optional)
Cable Model: CM37M9x4-100 or CM37M25x4-100 (optional)

Performance
FIFO Size: 128 Bytes
Speed: 50 bps to 921.6 Kbps

Surge Protection: Embedded 15KV ESD Surge Protection
Terminator: Built-in termination resistor

Power Requirements
Power Consumption: 1.06A (+5V)

Mechanical
Dimensions: 138 x 108 mm

Environmental
Operating Temperature: -10˚C to 70˚C (14˚F to 158˚F)
Operating Humidity: 5% to 95% (Non-condensing)
Storage Temperature: -20˚C to 85˚C (-4˚F to 185˚F)
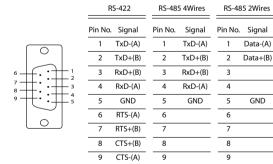**OS Supported:**
Windows 98/Me/NT/2000/XP/2003,
Linux RedHat Enterprise 4.0 (2.6.9)/RedHat Enterprise 3.0 (2.4.21)/
RedHat 9.0 (2.4.20)/RedHat 8.0 (2.4.18)/RedHat 7.3 (2.4.18)/
RedHat 7.2 (2.4.7)/FC3(2.6.9)/FC2(2.6.5)/FC1(2.4.22)/
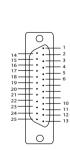Mandrake 10.1(2.6.8)/Mandrake 9.2 (2.4.22)

Regulatory Approvals
EMI: FCC, CE
Warranty: 5 years

Pin Assignments

RS-422/485 DB9 Male

RS-422		RS-485 4Wires		RS-485 2Wires	
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	TxD-(A)	1	TxD-(A)	1	Data-(A)
2	TxD+(B)	2	TxD+(B)	2	Data+(B)
3	RxD+(B)	3	RxD+(B)	3	
4	RxD-(A)	4	RxD-(A)	4	
5	GND	5	GND	5	GND
6	RTS-(A)	6		6	
7	RTS+(B)	7		7	
8	CTS+(B)	8		8	
9	CTS-(A)	9		9	

RS-422/485 DB25 Male

RS-422		RS-485 4Wires		RS-485 2Wires	
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
2	RxD+(B)	2	RxD+(B)	2	
3	TxD+(B)	3	TxD+(B)	3	Data+(B)
4	RTS+(B)	4		4	
5	CTS+(B)	5		5	
6	RTS-(A)	6		6	
7	GND	7	GND	7	GND
8	TxD-(A)	8	TxD-(A)	8	Data-(A)
20	RxD-(A)	20	RxD-(A)	20	
22	CTS-(A)	22		22	

Ordering Information
JetCard 1404 4-port RS-422/485 Universal PCI Card
Includes:
- 4-port RS-422/485 Card
- Quick Installation Guide
- Documentation and Software CD-ROM

Optional Accessories
CM37M9x4-100   4-port male DB37 to male DB9 connection cable, 100cm
CM37M25x4-100   4-port male DB37 to male DB25 connection cable, 100cm