**2**

Multi-port Serial Cards

**NEW**

# VXC-182iU

Serial Communication Board with
1 Isolated RS-422/485 port and 1 RS-232 port

## Features

- Built-in COM-Selector
- Short Card Design
- Provides 1 isolated RS-422/485 port and 1 RS-232 Port
- +/-4 kV ESD Protection
- Self-Tuner Inside
- 2500 V$_{rms}$ Isolated RS-422/485 Port
- Up to 128 KB Software FIFO for Each COM Port Under Windows
- Supports 3.3 V/5 V PCI bus, Plug and Play
- 128-byte Hardware FIFO for Each Port

## Introduction

The VXC-182iU serial card provides two communication ports, one is RS-422/485 and the other is RS-232 port. RS-422/RS-485 serial ports can withstand isolation voltage up to 2.5 kV. It can be configured as either RS-485 for half-duplex or RS-422 for full-duplex communication, offers speed up to 115200 bps and long distance communication link.

Users can select a specified COM port number manually by setting DIP switch, or let the driver choose an available number automatically. The driver provides a maximum of 128 KB software FIFO for each COM port under Windows. It's practical for large file transmission.

In harsh industrial environments, the on board ESD protection component diverts the potentially damaging charge away from sensitive circuit and protects the computer and equipment from being damaged by high potential voltage.

The serial communication card are designed for use with intelligent devices like bar code reader, serial printers, intelligent sensors, instrumentation equipment, computers and almost any device with an RS-232 port.
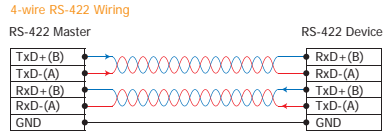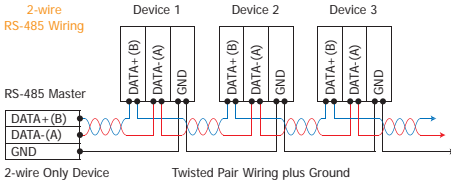
## Applications

- Industrial Machinery
- Building Automation
- Restaurant Appliances
- Laboratory Equipment & Research
- Industrial Communication

## Software

- DOS Lib
- Driver for Windows NT 4.0
- Driver for Windows 2000/XP/2003/Vista (32-bit)
- Driver for Linux

## Hardware Specifications

| Communication Port | | | |
|---|---|---|---|
| COM1 | RS-422/485 | | The RS-422 and RS-485 cannot be used simultaneously |
| | RS-422 | | TxD+, TxD-, RxD+, RxD-, RTS+, RTS-, CTS+, CTS-, GND (with 2.5 kV Isolation) |
| | RS-485 | | Data+, Data-, GND (with 2.5 kV Isolation) |
| COM2 | | | RS-232 (TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND) |
| UART | | | 16C950 compatible |
| Baud Rate | | | 50 ~ 115200 bps |
| Data Bit | | | 5, 6, 7, 8 |
| Stop Bit | | | 1, 1.5, 2 |
| Parity | | | None, Even, Odd, Mark, Space |
| FIFO | | | Internal 128 bytes |
| General | | | |
| Bus Type | | | Universal PCI, 3.3 V and 5 V, 33 MHz, 32-bit, Plug and Play mechanism |
| COM-Selector | | | Yes (8-bit DIP switch) |
| Connector | | | 2 x DB-9 (Male) |
| Power Consumption | | | 200 mA @ 5 V |
| Operating Temperature | | | 0 °C ~ +50 °C |
| Storage Temperature | | | -20 °C ~ +70 °C |
| Humidity | | | 0 ~ 90% RH, non-condensing |
| Dimensions (L x W x D) | | | 134 mm x 90 mm x 22 mm |

VXC Series Communication Boards

VXC-182 Series

## Wiring

| DTE Device (Computer) | DB-9 | | DTE to DCE Connections | DCE Device (Modem) | DB-9 | |
|---|---|---|---|---|---|---|
| Pin# DB-9 | RS-232 Signal Names | | Signal Direction | Pin# DB-9 | RS-232 Signal Names | |
| #1  Carrier Detector | DCD | ← | | #1  Carrier Detector | DCD | |
| #2  Receive Data | RxD | ← | | #2  Transmit Data | TxD | |
| #3  Transmit Data | TxD | → | | #3  Receive Data | RxD | |
| #4  Data Terminal Ready | DTR | → | | #4  Data Set Ready | DSR | |
| #5  Signal Ground/Common (SG) | GND | ←→ | | #5  Signal Ground/Common (SG) | GND | |
| #6  Data Set Ready | DSR | ← | | #6  Data Terminal Ready | DTR | |
| #7  Request to Send | RTS | → | | #7  Clear to Send | CTS | |
| #8  Clear to Send | CTS | ← | | #8  Request to Send | RTS | |
| #9  Ring Indicator | RI | ← | | #9  Ring Indicator | RI | |
| Soldered to DB-9 Metal Shield | FGND | ←→ | | Soldered to DB-9 Metal Shield | FGND | |



2-wire RS-485 Wiring

Device 1   Device 2   Device 3

DATA+(B) DATA-(A) GND

RS-485 Master
DATA+(B)
DATA-(A)
GND

2-wire Only Device          Twisted Pair Wiring plus Ground

4-wire RS-422 Wiring

| RS-422 Master | | RS-422 Device |
|---|---|---|
| TxD+(B) | | RxD+(B) |
| TxD-(A) | | RxD-(A) |
| RxD+(B) | | TxD+(B) |
| RxD-(A) | | TxD-(A) |
| GND | | GND |

## Pin Assignments

| Pin Assignment | Terminal | No. | Pin Assignment |
|---|---|---|---|
| GND/VEE | 05 | | |
| RxD-(A) | 04 | 09 | CTS-(A) |
| RxD+(B) | 03 | 08 | CTS+(B) |
| TxD+(B)/Data+(B) | 02 | 07 | RTS+(B) |
| TxD-(A)/Data-(A) | 01 | 06 | RTS-(A) |

COM1: RS-422/485 Male DB-9 Connector

| Pin Assignment | Terminal | No. | Pin Assignment |
|---|---|---|---|
| GND | 05 | | |
| DTR | 04 | 09 | RI |
| TxD | 03 | 08 | CTS |
| RxD | 02 | 07 | RTS |
| DCD | 01 | 06 | DSR |

COM2: RS-232 Male DB-9 Connector

## Dimensions (Unit: mm)



134
120.6
22
121
10.5
18.4
122.1
126.6
89.6
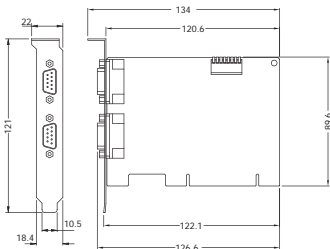
## Ordering Information

| VXC-182iU CR | Universal PCI Bus, Serial Communication Board with 1 Isolated RS-422/485 port and 1 RS-232 port (RoHS) |
|---|---|

## Accessories

| CA-0910F | 9-Pin Female-Female D-Sub Cable 1 m |
|---|---|
| CA-0915 | 9-Pin Male-Female D-Sub Cable, 1.5 m |
| CA-090910 | 9-Pin Female D-Sub Cable for RS-422 Connector, 1 m |
| CA-PC09F | 9-Pin Female D-Sub Connector with Plastic Cover |
| DN-09-2F | I/O Connector Block with DIN-Rail Mounting and Two 9-Pin Male Header. Includes CA-0910F x 2 (9-Pin Female-Female D-Sub Cable 1 m) |