

IPC-P2002

2 ports RS-422 / 485 Universal PCI



Features

- Expands 2 independent RS-422/485 serial ports with communication speeds up to 921.6Kbps
- High speed SUNX single chip solution with built-in 16C750 compatible UART controller
- Compliance with PCI 33MHz Ver 3.0, 2.3 & 2.2 specifications
- Low profile boards for smaller PC
- Supports both 64-bit & 32-bit PCI bus slot and 3.3V & 5V power
- RS-422/485 auto detect and switching technology – jumper and software free
- AHDC/CS™ technology for collision free communication
- Built-in 15KV ESD protection for all serial signals
- Plug-n-Play, I/O address and IRQ assigned by BIOS
- Certified by CE, FCC, RoHS, and Microsoft WQHL approval
- Support Microsoft Windows, Linux, and DOS

Introduction

SUNIX IPC-P2002, Universal PCI serial communication card, allows users to add or expand 2 RS-422/485 ports on Industrial PC-based system. IPC-P2002 is compatible with both 64 / 32-bit PCI architecture supporting 3.3 and 5V Bus, allowing it to be installed in virtually any PC-based systems. IPC-P2002 has 64-bytes onboard FIFO buffer and compatible with 16C750 UART specification.

SUNIX IPC-P2002, industrial serial card used the most advanced chipset developed by SUNIX called MATRIX for high performance and reliable communication. IPC-P2002 is single chip solution with built-in UART controllers. It is designed with many of SUNIX advanced features and technologies, making it the best solution for industrial and mission critical applications.

Tech Forum

RS-422/485 Auto Detect & Switching Design

SUNIX developed a unique technology "Auto Detect and Switching RS-422/485", which can automatically detect the state of RS-422 full duplex or RS-485 half duplex and control the data transmitting and receiving wires at the same port without any jumper settings.



Low Power Consumption

SUNIX has pursued this issue via various approaches, as it seeks to provide special cell-bases ASICs that meet today's challenging needs for lower power consumption during active and standby modes.



0.35W

AHDC/CS™ Technology

SUNIX developed a new design to control the direction of driver (On or off) automatically which is called Auto Hardware Direction Control/Carrier Sense. AHDC/CS™ works on the same principle and only turns on the driver when UART needs to transmits some data; but the advantage is that AHDC/CS™ will check to see if the bus is idle or not before it starts transmission. If the bus is not idle (some data flows in the bus), then it will postpone the transmission of UART until the bus is idle. This is for the CS (carrier sense) part.

AHDC/CS™ RS-485 Hardware Direction Control/Carrier Sense

Data+
Data-



XRF Detecting Instrument

Specifications

Serial Communication

Interface	RS-422 / 485	Baud rate	75bps ~921.6Kbps
Controller	SUNIX MATRIX (16C750 UART Compatible)	Stop bit	1, 1.5, 2
BUS	Universal PCI 64/32bit 3.3V/5V PCI Ver 3.0, 2.3, 2.2	Parity	even, odd, none, mark, space
No. of Port	2 ports	Flow Control	Xon/Xoff (software)
IRQ & IO	Assigned by System	Protection	15KV ESD protection
FIFO	64byte Hardware	PCB Connector	DB44 Male
Signal	RS-422: TxD+, TxD-, RxD+, RxD-, GND 4-wire RS-485: TxD+, TxD-, RxD+, RxD-, GND 2-wire RS-485: Data+, Data-, GND	Cable Connector	DB9 / DB25 Male

Driver Support

Microsoft Windows	3.1/95/98/ME/2000/XP/Vista/7 (X86/X64)
Microsoft Embedd	CE5.0/XP Embedded
Microsoft Server	2003/2008 (X86/X64)
Linux	Linux 2.4.x / 2.6.x
Unix	SCO Unixware 7.1.3, SCO OpenServer 5.0.6/5.0.7/6.0
IBM OS2	WARP 3/4
DOS	DOS

Regulatory Approvals

Hardware	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, FCC Part 15 Class B, RoHS
Software	Microsoft WHQL

Operation Environment

Operation Temperature	0°C to 70°C
Operation Humidity	5 to 95% RH
Storage Temperature	-40°C to 85°C

Dimension(Unit = mm)

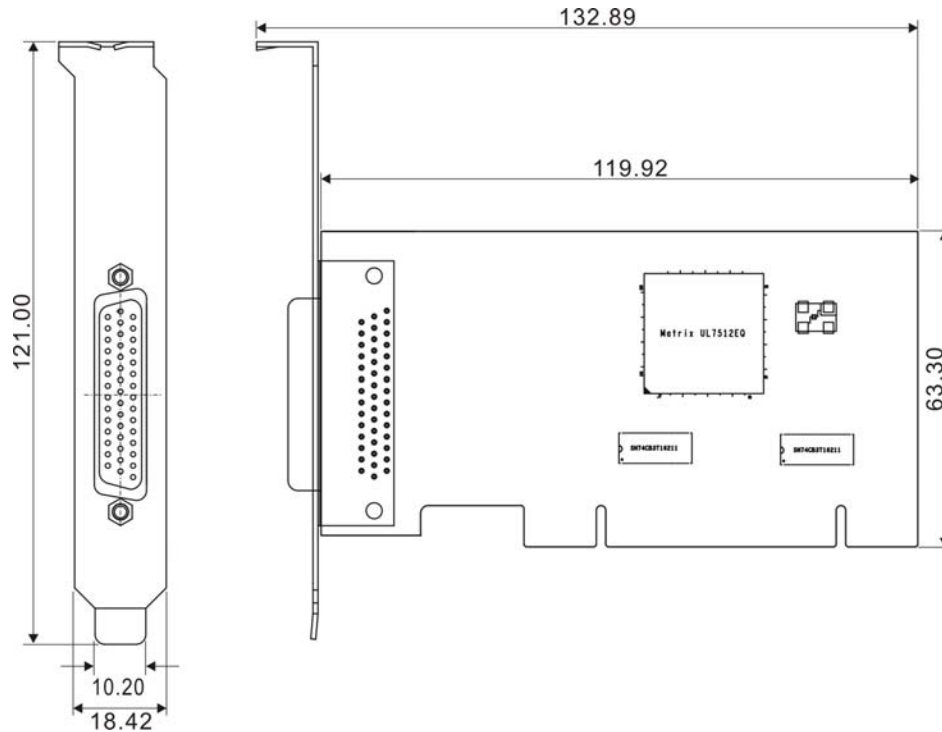
PCB Dimension	120 x 63.5 mm
Bracket	Standard (121mm) Low Profile (79.2mm)



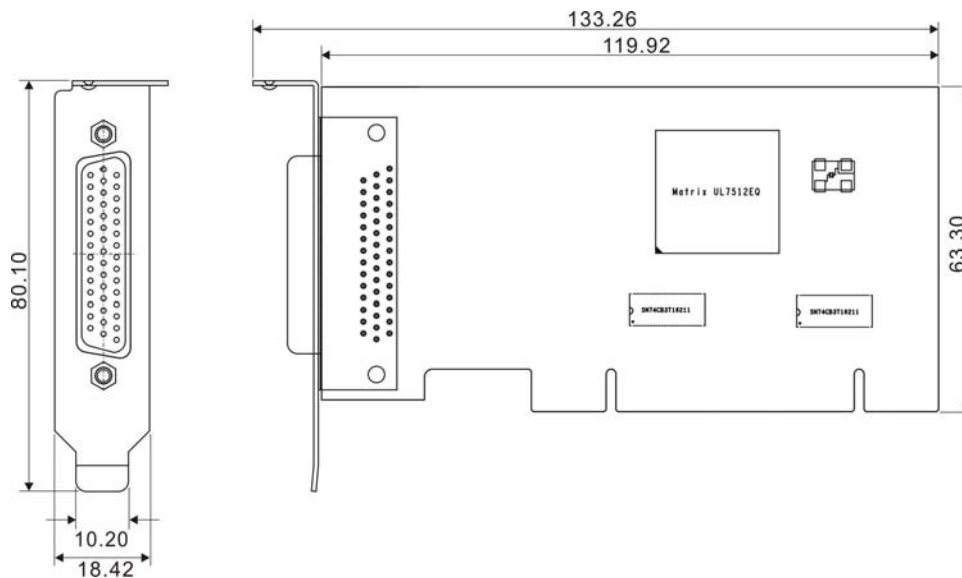
SUNIX

Mechanical Drawings(Unit = mm)

■ Standard

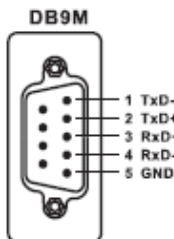
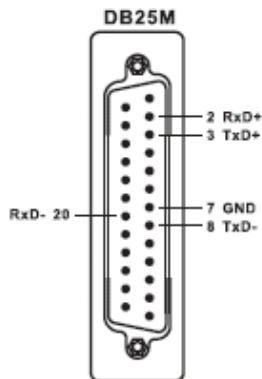


■ Low Profile

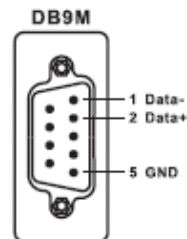
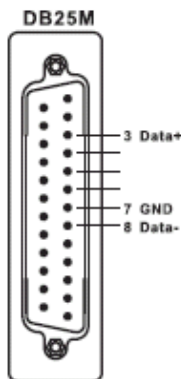


Pin Assignment

• RS-422



• RS-485



Optional Accessories

DB44 to 2 ports DB9 male connection cable,
40/100 cm



DB44 to 2 ports DB25 male connection cable,
40/100 cm



Ordering Information

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|---------------|--|
| ◆ IPC-P2002 | 2 ports RS-422/485 Universal PCI Serial Board |
| ◆ IPC-P2002SI | 2 ports RS-422/485 Universal PCI Serial Board with Surge & Isolation |
| ◆ IPC-P2004 | 4 ports RS-422/485 Universal PCI Serial Board |
| ◆ IPC-P2004SI | 4 ports RS-422/485 Universal PCI Serial Board with Surge & Isolation |
| ◆ IPC-P2008 | 8 ports RS-422/485 Universal PCI Serial Board |
| ◆ IPC-P2008SI | 8 ports RS-422/485 Universal PCI Serial Board with Surge & Isolation |