



# IPC-C2204S

**Industrial 4 ports RS-422/485  
with Surge Mini PCIe Serial Card**



## Introduction

SUNIX IPC-C2204S, Industrial 4 ports RS-422/485 with Surge Mini PCIe Serial Card, allows users to expand two RS-422/485 ports on Mini PCIe slot PC-based system. The RS-422/485 COM ports can be attached to a housing or slot bracket. Each serial port achieves data rates up to 921.6 Kbps and utilizes 16C950 UART with an on-chip 128-bytes hardware FIFO buffer for reliable, high-speed serial I/O. With SUNIX patented Auto-Switching RS-422/485 and RS-485 AHDC™ technology, user can easily manage different serial interfaces selection and RS-485 signal direction control. SUNIX IPC-C2204S board is provided with 2KV IEC6100-4-5 Level 3 Surge Suppressor and ±15KV IEC61000-4-2 ESD Discharge Transceiver. Besides, board supports a wide variety of operating systems, including Windows, Linux, DOS, and UNIX. It is the best serial communicating solution for industrial and harsh environment applications.

## Features

- Suitable for Mini PCIe slot on PCI Express communication.
- Expands 4 independent RS-422/485 serial ports with communication speeds up to 921.6Kbps.
- With high reliable SUNIX SUN2410 native PCI Express 16C950 UART controller.
- Designed to meet PCI Express Base Specification Revision 2.0.
- RS-422 and RS-485 auto detect and switching technology by software settings.
- Optional 120ohms termination resistor for each RS-485 COM port by jumper settings.
- AHDC/CS™ technology for collision free communication.
- On-chip hardware auto flow control to guarantee no data loss.
- Ultra low power consumption design for Green Environment.
- 15KV ESD protection for all serial signals meets IEC-61000-4-2 standard.
- 2KV surge protection for all serial signals meets IEC-61000-4-5 Level 3 standard.
- Plug-n-Play, I/O address and IRQ assigned by BIOS.
- Certified by CE, FCC, VCCI, BSMI, RoHS, and Microsoft WHQL approval.

# Specifications

## Serial Communication

<b>Interface</b>	RS-422/485	<b>Baud rate</b>	50bps ~921.6Kbps
<b>Controller</b>	SUNIX SUN2410 (16C950 UART Compatible)	<b>Stop bit</b>	1, 1.5, 2
<b>BUS</b>	PCI Express 2.0 x 1(single lan)	<b>Parity</b>	even,odd,none,mark,space
<b>No. of Port</b>	4-port	<b>Flow Control</b>	Xon/Xoff (software)
<b>IRQ &amp; IO</b>	Assigned by System	<b>FIFO</b>	128byte Hardware
<b>Signal</b>	RS-422: TxD+, TxD-, RxD+, RxD-, GND 4-wire RS-485: TxD+, TxD-, RxD+, RxD-, GND 2-wire RS-485: Data+, Data-, GND		
<b>Protection</b>	±15KV ESD IEC6000-4-2 Air Discharge ±8KV ESD IEC61000-4-2 Contact Discharge ±4KV ESD IEC61000-4-2 Level 2 Line-to-Line 2KV Surge IEC61000-4-5 Level 3 Surge Immunity Test		
<b>PCB Connector</b>	WAFER 2x5P pitch 1.0mm (180°)		
<b>Cable</b>	Dual serial RS-422/485 D-Sub 9 pin male cable		

## Driver Support

<b>Microsoft Client</b>	XP/Vista/7/8.x/10 (X86/X64) / 11
<b>Microsoft Server</b>	2000/2003/2008/2012/2016 (X86/X64)
<b>Microsoft Embedded</b>	Windows CE5.0/6.0/XP Embedded/POS Ready/Embedded System
<b>Linux</b>	Linux 2.x / 3.x / 4.x / 5.x
<b>DOS</b>	DOS

## Regulatory Approvals

<b>Hardware</b>	CE/ FCC / VCCI / BSMI
<b>Software</b>	Microsoft WHQL Windows

## Environment

<b>Operation Temperature</b>	0 to 70°C (32 to 158°F)
<b>Operation Humidity</b>	5 to 95% RH
<b>Storage Temperature</b>	-20 to 85°C (-4 to 185°F)

## Headquarters

### Taiwan

Sunix Co., Ltd.  
Tel : +886-2-8913-1987  
Fax : +886-2-8913-1986  
Website : [www.sunix.com.tw](http://www.sunix.com.tw)  
E-mail : [info@sunix.com.tw](mailto:info@sunix.com.tw)

### China

Shanghai Office  
Tel : +86-21-6469-1670  
Fax : +86-21-6468-8346  
Website : [www.sunix.com.cn](http://www.sunix.com.cn)  
E-mail : [info@sunix.com.cn](mailto:info@sunix.com.cn)

### Beijing Office

Tel : +86-010-65308421  
Fax : +86-010-62653864  
Shenzhen Office  
Tel : +86-755-33500418

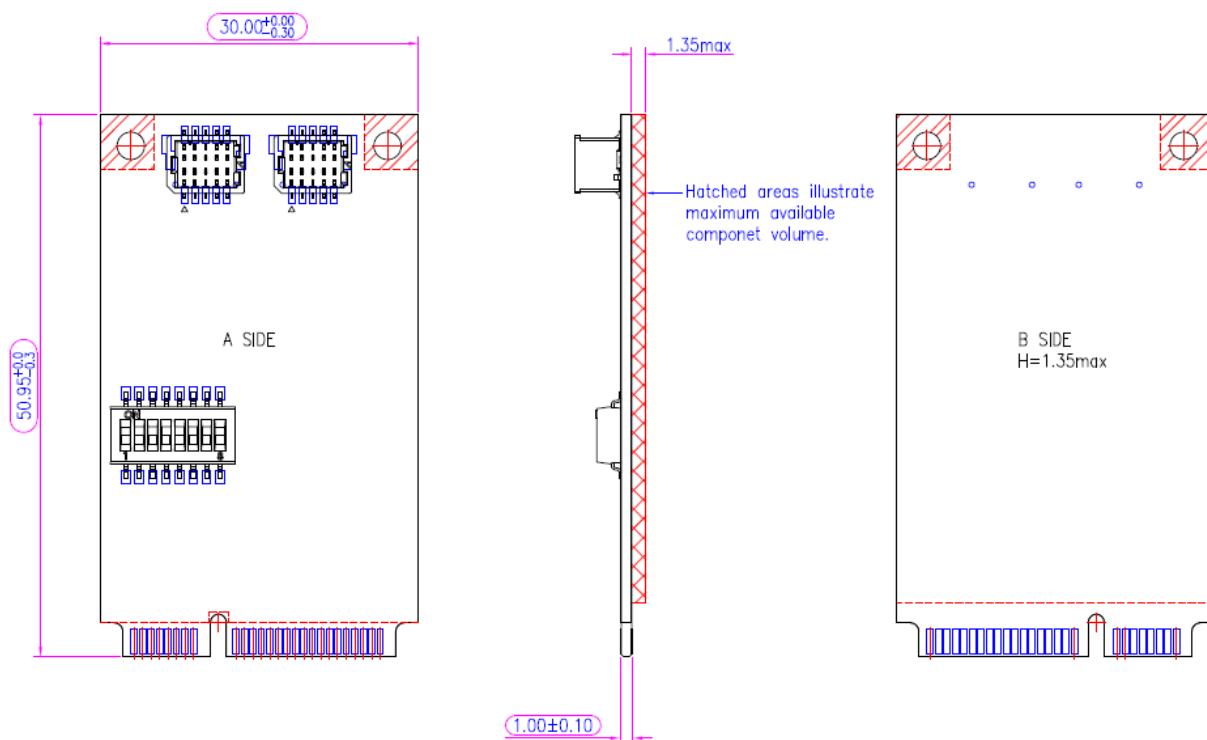
### Germany

Sunix Vertriebs GmbH  
Tel : +49(0)6146-60 1345  
Fax : +49(0)6146-60 1346  
Website : [www.sunix-europe.com](http://www.sunix-europe.com)  
E-mail : [info@sunix-gmbh.de](mailto:info@sunix-gmbh.de)

### Factory

Kunshan Factory  
Tel : +86-512-5745-6488  
Fax : +86-512-5745-6193  
Website : [www.sunix.com.cn](http://www.sunix.com.cn)

## Mechanical Drawing (Unit = mm)



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E-mail : [info@sunix.com.cn](mailto:info@sunix.com.cn)

Beijing Office

Tel : +86-010-65308421  
Fax : +86-010-62653864

Shenzhen Office

Tel : +86-755-33500418

#### Germany

Sunix Vertriebs GmbH

Tel : +49(0)6146-60 1345  
Fax : +49(0)6146-60 1346

Website : [www.sunix-europe.com](http://www.sunix-europe.com)  
E-mail : [info@sunix-gmbh.de](mailto:info@sunix-gmbh.de)

#### Factory

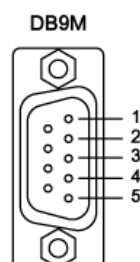
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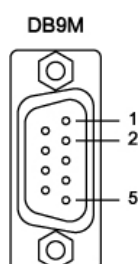
## Pin Assignment

### ■ RS-422



PIN	DB9M
1	TxD-
2	TxD+
3	RxD+
4	RxD-
5	GND

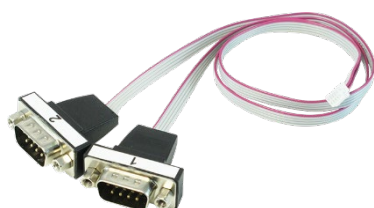
### ■ RS-485



PIN	DB9M
1	Data-
2	Data+
5	GND

## Package

- IPC-C2204S - Industrial 4 ports RS-422/485 with Surge Mini PCIe Serial Card
- Dual Serial RS-422/485 D-Sub 9-pin male cable, 30 cm x 2pcs



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