



IPC-E2204S

Industrial 4-port RS-422/485
with Surge PCI-Express Serial Card



Introduction

SUNIX IPC-E2204S, Industrial 4-port RS-422/485 with Surge PCI-Express Serial Card, allows users to expand four RS-422/485 ports on PC-based system. 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-E2204S 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

- 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 – jumper and software free.
- 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, C-Tick, BSMI, RoHS, and Microsoft WHQL approval.
- Support Microsoft Windows, Linux, and DOS OS.

Specifications

Serial Communication

Interface	RS-422/485	Baud rate	50bps ~921.6Kbps
Controller	SUNIX SUN2410 (16C950 UART Compatible)	Stop bit	1, 1.5, 2
BUS	PCI Express 2.0 x 1 (single lan)	Parity	even, odd, none, mark, space
No. of Port	4-port	Flow Control	Xon/Xoff (software)
IRQ & IO	Assigned by System	FIFO	128byte Hardware
Signal	RS-422: TxD+, TxD-, RxD+, RxD-, GND 4-wire RS-485: TxD+, TxD-, RxD+, RxD-, GND 2-wire RS-485: Data+, Data-, GND		
Protection	±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		
PCB Connector	DB44 Female		

Driver Support

Windows Client	Windows XP/Vista/7/8/8.1 (X86/X64)
Windows Server	Windows 2000 / 2003 / 2008 / 2008 R2 / 2012 / 2012 R2 (X86/X64)
Windows Embedded	Windows CE 4.2/5.0/6.0/XP Embedded/POSReady 2009/POSReady 7/ Embedded System 2009/Embedded Standard 7
Linux	Linux 2.4.x/2.6.x/3.x
DOS	DOS

Regulatory Approvals

Hardware	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, FCC Part 15 Class B, BSMI: CNS13438, C-Tick: CISPR22 AS/NZS, RoHS
Software	Microsoft WHQL Windows <ul style="list-style-type: none"> ● Microsoft Client: XP/Vista/7/8/8.1 (X86/X64) ● Microsoft Server: 2000 / 2003 / 2008 / 2008 R2 / 2012 / 2012 R2 (X86/X64)

Environment

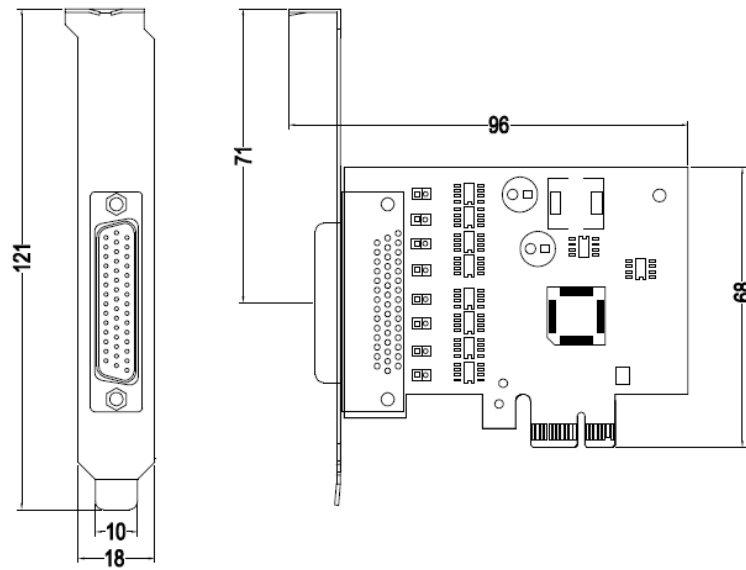
Operation Temperature	0 to 70°C (32 to 158°F)
Operation Humidity	5 to 95% RH
Storage Temperature	-20 to 85°C (-4 to 185°F)

Dimension

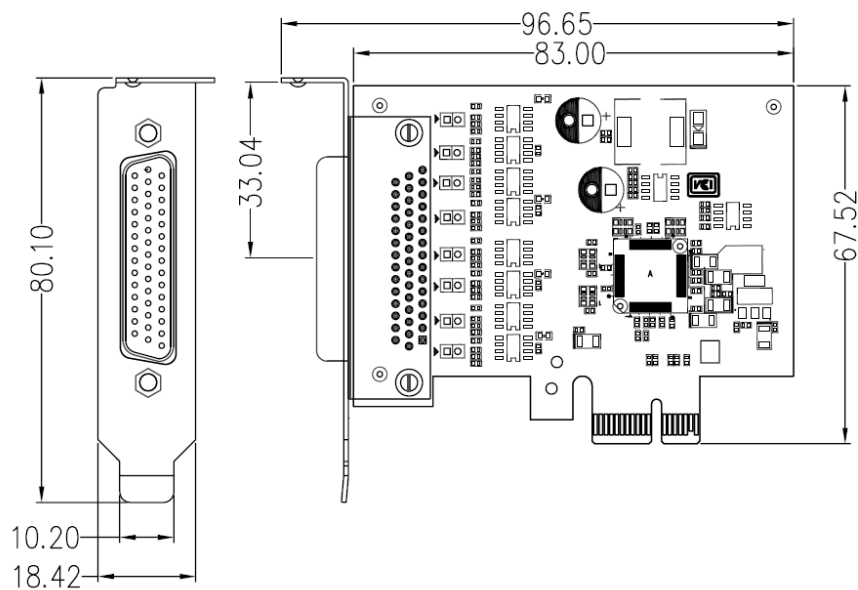
PCB Dimension	96 x 68 mm
Bracket	Standard 121 mm / Low Profile 80mm
Bracket Space	1

Mechanical Drawings (Unit = mm)

■ Standard Bracket

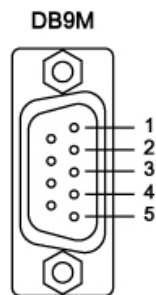


■ Low Profile



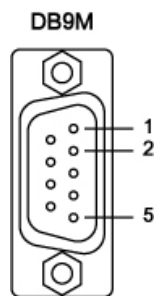
Pin Assignment

■ 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-E2204S - Industrial 4-port RS-422/485 with Surge PCI-Express Serial Card
- Quick Installation Guide
- Software CD Driver
- DB44 to 4-port DB9 Male Connection Cable, 40 cm
- Low Profile Bracket 80mm

Optional Accessories

- DB44 to 4-port DB9 Male Connection Cable, 40cm
Part No.: 1WDB-44M04009D4001
- DB44 to 4-port DB25 Male Connection Cable, 40cm
Part No.: 1WDB-44M04025D4000
- DB44 to 4-port DB9 Male Connection Cable, 100cm
Part No.: 1WDB-44M10009C4000
- DB44 to 4-port DB25 Male Connection Cable, 100cm
- PCIe Add-on Card Holder
Part No.: 13BF-PCIEFIX010000



Ordering Information

Bus	Port	Connector	ESD			Surge	Isolation	Model No.	
			IEC-6100-4-2			IEC-6100-4-5	IEC60747-5-5		
			Air Discharge	Contact Discharge	Line-to-Line Level 2	Surge Immunity Level 3	Hi-Pot		
PCI Express	8	DB44 Female	±15KV	±8KV	±4KV	2KV	-	IPC-E2108	
							1.5KV	IPC-E2108SI	
	4	DB44 Female					-	IPC-E2204S	
							1.5KV	IPC-E2204SI	
	2	DB9 Male					-	IPC-E2204SL	
							1.5KV	IPC-E2204LI	
							DB44 Female	-	IPC-E2202S
								1.5KV	IPC-E2202SI
							-	IPC-E2202SL	
1.5KV	IPC-E2202LI								

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