

## SER5456A

4-port RS-232 PCI Express  
Serial Board



### Introduction

SUNIX SER5456A, PCI Express serial communication boards meet the PCI Express Base Specification Revision 1.1. It is compatible with PCI Express x1, x2, x4, x8 and x16 lane Bus. The majorities of today's motherboards is not equipped with serial ports or only have one serial port. With SUNIX PCI Express serial board, users can add four serial ports to their system, allowing them to use serial devices further. SUNIX SER5456A card has 128-bytes onboard FIFO buffer and compatible with 16C950 UART specification. It is designed with SUNIX UART controller, SUN1999 and as well built with many of SUNIX advanced features and technologies, making it the best solution for commercial and industrial automation applications.

### Features

- Expands 4 independent RS-232 serial ports with communication speeds up to 115.2Kbps.
- High speed SUN1999 16C950 compatible UART controller on-board.
- Designed to meet PCI Express Base Specification Revision 1.1.
- Supports x1, x2, x4, x8, x16 (lane) PCI Express Bus connector keys.
- On-chip hardware auto flow control to guarantee no data loss.
- Built-in  $\pm 15$ KV ESD protection for all serial signals meets IEC1000-4-2 standard.
- Plug-n-Play, I/O address and IRQ assigned by BIOS.
- Certified by CE, FCC, RoHS, and Microsoft WHQL approval.
- Support Microsoft Windows, Linux, and DOS.



## Specifications

### Serial Communication

<b>Interface</b>	RS-232	<b>Signal</b>	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND, RI
<b>Controller</b>	SUNIX SUN1999 (16C950 UART Compatible)	<b>Baud rate</b>	50bps ~115.2Kbps
<b>BUS</b>	PCI Express one lane (x1)	<b>Stop bit</b>	1, 1.5, 2
<b>No. of Port</b>	4-port	<b>Parity</b>	even, odd, none, mark, space
<b>IRQ &amp; IO</b>	Assigned by System	<b>Flow Control</b>	None, Xon/Xoff, RTS/CTS
<b>FIFO</b>	128byte Hardware	<b>PCB Connector</b>	DB44 Female
<b>Protection</b>	±15KV ESD protection for each signal Human Body Model (HBM) ±15KV IEC1000-4-2 Air Gap Discharge ±8KV IEC1000-4-2 Contact Discharge		

### Driver Support

<b>Microsoft Client</b>	Windows XP/Vista/7 (X86/X64)
<b>Microsoft Server</b>	Windows 2000/2003/2008 (X86/X64)
<b>Microsoft Embedded</b>	Windows CE5.0/6.0/XP Embedded/POS Ready 2009/Embedded System 2009
<b>Linux</b>	Linux 2.4.x/2.6.x
<b>DOS</b>	DOS
<b>FreeBSD</b>	FreeBSD 5.3~5.5 / 6.0~6.4
<b>QNX</b>	QNX 6.3.2/6.4.0
<b>* IBM OS/2</b>	WARP 3/WARP 4
<b>* SCO UnixWare</b>	UnixWare 7.1.3/7.1.4/ Open Server 5.0.7/6.0
<b>* Sun Microsystems</b>	Solaris 10
Note : " * " Supported by special inquiry.	

### Regulatory Approvals

<b>Hardware</b>	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, FCC Part 15 Class B, BSMI: CNS13438, C-Tick: CISPR22 AS/NZS, RoHS
<b>Software</b>	Microsoft WHQL Windows ◆ Microsoft Client: XP/Vista/7 (X86/X64) ◆ Microsoft Server: 2000/2003/2008 (X86/X64)

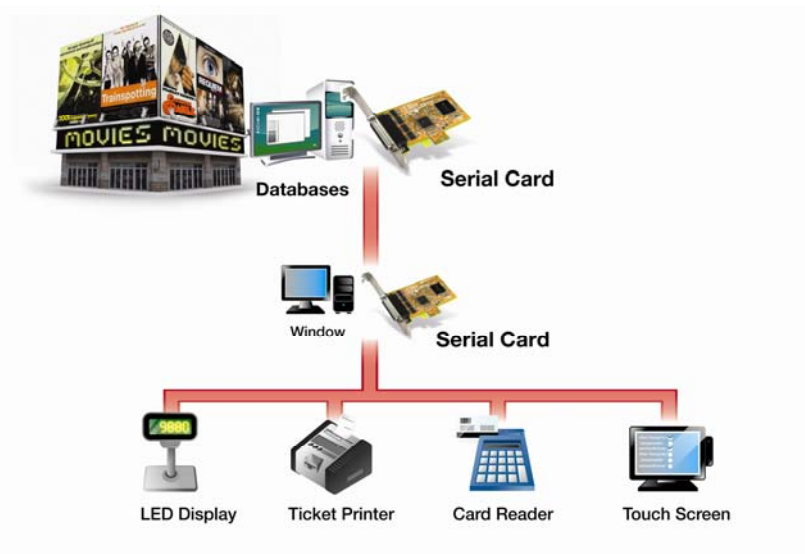
### Environment

<b>Operation Temperature</b>	0 to 60°C (32 to 140°F)
<b>Operation Humidity</b>	5 to 95% RH
<b>Storage Temperature</b>	-20 to 85°C (-4 to 185°F)

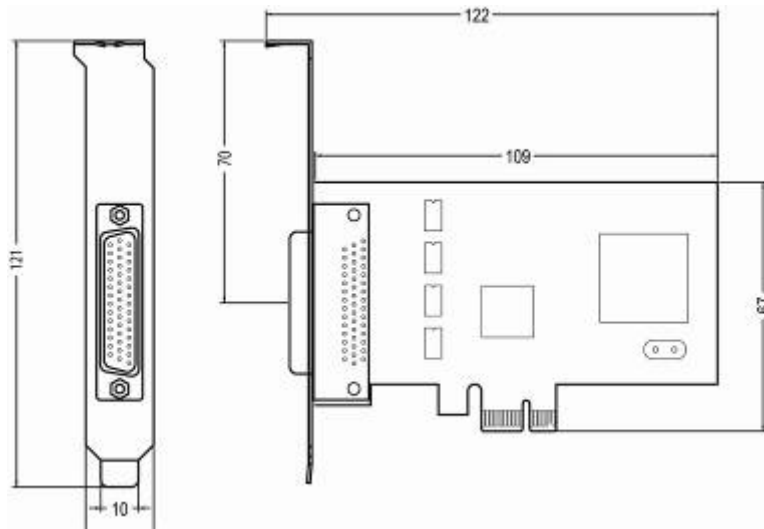
### Dimension

<b>PCB Dimension</b>	109 x 67 mm
<b>Bracket</b>	Standard 121 mm
<b>Bracket Space</b>	1

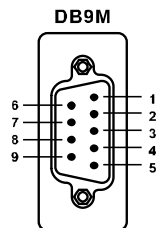
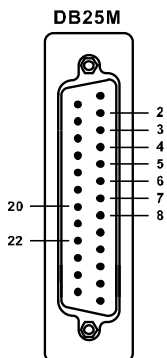
## Application



## Mechanical Drawings (Unit = mm)



## Pin Assignment



PIN	DB9M	DB25M
DCD	1	8
RxD	2	3
TxD	3	2
DTR	4	20
GND	5	7
DSR	6	6
RTS	7	4
CTS	8	5
RI	9	22



## Packing List

### Packing Content

- SER5456A – 4-port RS-232 PCI Express Serial Board
- Quick Installation Guide
- Software CD ROM
- DB44 to 4-port DB9/DB25 Male Connection Cable, 40 cm



## Optional Accessories

- DB44 to 4-port DB9 Male Connection Cable, 40/100 cm



- DB44 to 4-port DB25 Male Connection Cable, 40/100 cm



Order Information

Serial RS-232 Interface

Bus	Port	Connector	Baud Rate	ESD Protection	Power output	Bracket	Model NO.		
PCI Express	8	DB62 Female	115.2 kbps	±15KV	-	Standard	SER5466A		
			921.6Kbps		-		SER5466H		
		Mini SCSI 68 Female	115.2 kbps		-	Low profile	SER5466AL		
			921.6Kbps		-		SER5466HL		
	4	DB44 Female	115.2 kbps		-	Standard	SER5456A		
					5V/12V		-	SER5456P	
			921.6Kbps		-	Low profile	SER5456AL		
					5V/12V		-	SER5456PL	
		DB9 Male	115.2 kbps		-	Standard	SER5456H		
					5V/12V		-	SER5456PH	
			921.6Kbps		-	Low profile	SER5456HL		
					5V/12V		-	SER5456PHL	
	2	DB9 Male	115.2 kbps		-	Standard	SER5437A		
					5V/12V		-	SER5437P	
		DB44 Female	921.6Kbps		-	Low profile	SER5437AL		
					5V/12V		-	SER5437PL	
		DB9 Male	921.6Kbps		-	Standard	SER5437H		
					5V/12V		-	SER5437PH	
DB44 Female	921.6Kbps	-	Low profile	SER5437HL					
		5V/12V		-	SER5437PHL				
PCI	8	DB62 Female	115.2 Kbps	±2KV	-	Standard	SER5066A		
					Mini SCSI 68 Female		-	SER5066AL	
		5x2 Pin Header			-	Low profile	SER5066U		
					-		SER5066UL		
		DB62 Female			921.6Kbps	±15KV	-	Standard	SER5066H
							Mini SCSI 68 female		-
	5x2 Pin Header	-	Low profile	SER5066UH					
		-		SER5066UHL					
	4	DB44 Female	115.2 Kbps	±2KV			-	Standard	SER5056A
							5V/12V		-
		5x2 Pin Header	921.6Kbps		±15KV	-	Low profile	SER5056AL	
						5V/12V		-	SER5056PL
		DB44 Female	-			Standard	SER5056U		
			-				SER5056UL		
	5x2 Pin Header	-	Low profile	SER5056H					
		-		SER5056HL					
	2	DB9 Male	115.2Kbps	±15KV	5V/12V	Standard	SER5056PH		
					-		SER5056UH		
		5x2 Pin Header	921.6Kbps		-	Low profile	SER5056UHL		
					-		SER5056PHL		
		DB44 Female	115.2Kbps		±2KV	-	Standard	SER5037A	
						5V/12V		-	SER5037P
		5x2 Pin Header	921.6Kbps	-		Low profile	SER5037U		
				-			SER5037AL		
		DB9 Male	115.2Kbps	-		Standard	SER5037H		
				5V/12V			-	SER5037PH	
		5x2 Pin Header	921.6Kbps	-	Low profile	SER5037UH			
				-		SER5037HL			
	1	DB9 Male	115.2Kbps	±15KV	-	Standard	SER5027A		
					5V/12V		-	SER5027P	
		5x2 Pin Header	921.6Kbps		-	Low profile	SER5027U		
					-		SER5027AL		
		DB9 Male	115.2Kbps		-	Standard	SER5027H		
					5V/12V		-	SER5027PH	
		5x2 Pin Header	921.6Kbps	-	Low profile	SER5027UH			
				-		SER5027HL			
DB9 Male		115.2Kbps	±2KV	-	Standard	SER5027A			
				5V/12V		-	SER5027P		
5x2 Pin Header		921.6Kbps		-	Low profile	SER5027U			
				-		SER5027AL			
DB9 Male	115.2Kbps	-		Standard	SER5027H				
		5V/12V			-	SER5027PH			
5x2 Pin Header	921.6Kbps	-	Low profile	SER5027UH					
		-		SER5027PHL					
Express Card	4	DB44 Female	921.6Kbps	±15KV	-	34mm	ECS4000		
	2				-	34mm	ECS2000		
	1				-	34mm	ECS1000		
CardBus	4	DB44 Female	115.2Kbps	±15KV	-	54mm	CBS4000		
	2				-	54mm	CBS2000		
	1				-	54mm	CBS1000		