

SER5416H

16-port RS-232 High Speed
PCI Express Serial Board



Introduction

SUNIX SER5416H, 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 16 serial ports to their system, allowing them to use serial devices further. SUNIX SER5416H 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 16 independent RS-232 serial ports with communication speeds up to 921.6Kbps.
- 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 $\pm 15KV$ 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

Interface	RS-232	Signal	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
Controller	SUNIX SUN1999 (16C950 UART Compatible)	Baud rate	50bps ~921.6Kbps
BUS	PCI Express one lane (x1)	Stop bit	1, 1.5, 2
No. of Port	16-port	Parity	even, odd, none, mark, space
IRQ & IO	Assigned by System	Flow Control	None, Xon/Xoff, RTS/CTS
FIFO	128byte Hardware	PCB Connector	Mini SCSI 68 Female
Protection	±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

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

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 ◆ Microsoft Client: XP/Vista/7 (X86/X64) ◆ Microsoft Server: 2000/2003/2008 (X86/X64)

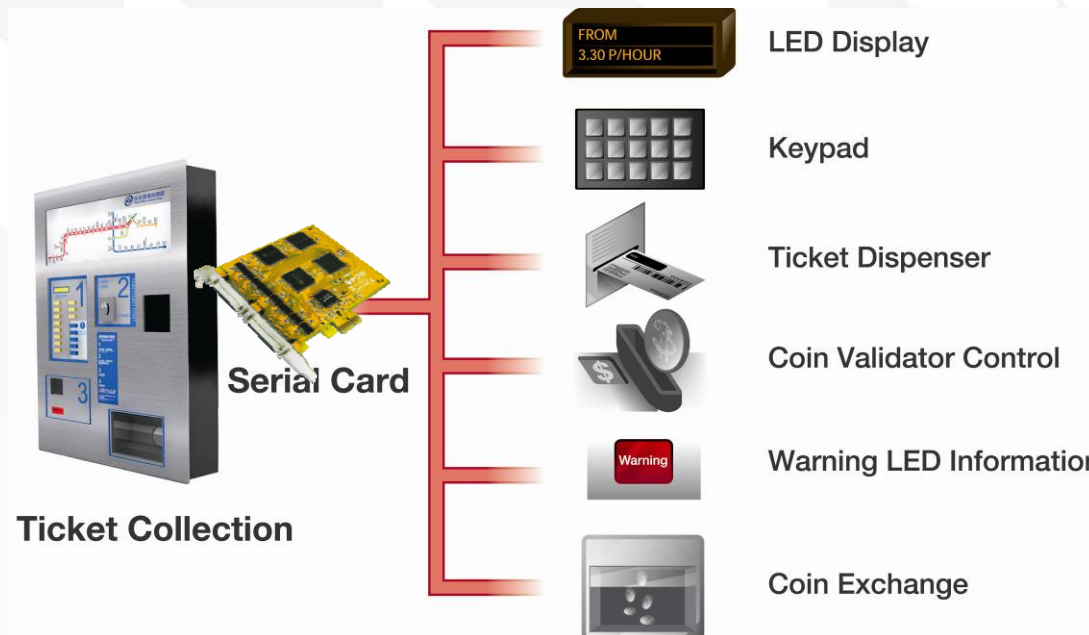
Environment

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

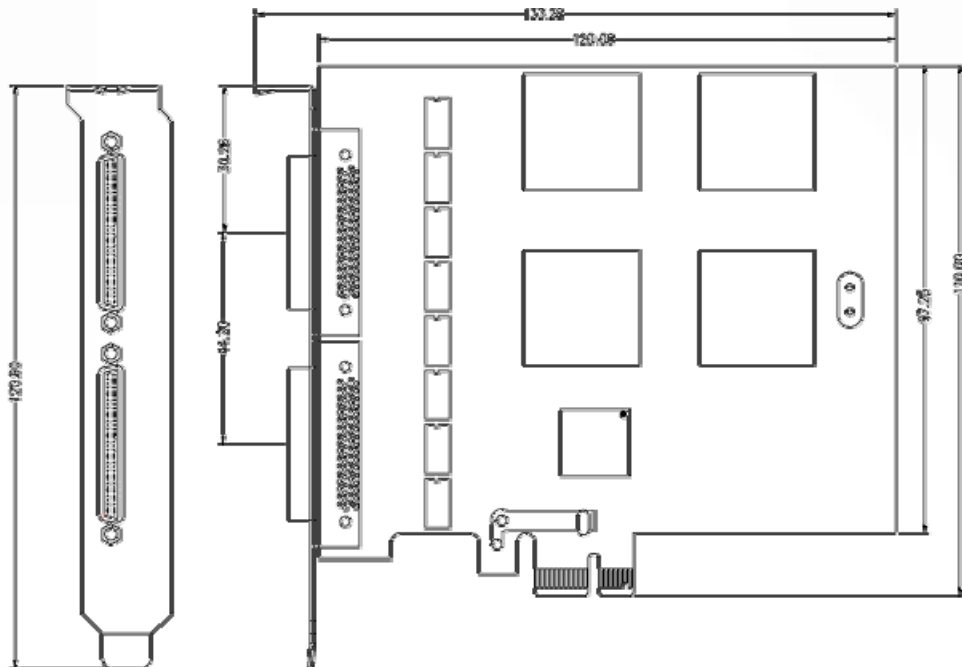
Dimension

PCB Dimension	120 x 110 mm
Bracket	Standard 121 mm
Bracket Space	1

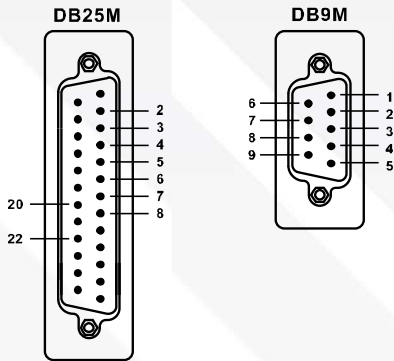
Application



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

Package

- SER5416H – 16-port RS-232 High Speed PCI Express Serial Board
- Quick Installation Guide
- Software CD ROM
- Mini SCSI 68 to 8-port DB9/DB25 Male Connection Cable, 40 cm (2PCS)



Optional Accessories

- Mini SCSI 68 to 8-port DB9 Male Connection Cable, 40 cm





Ordering 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		5V/12V	Standard	SER5456A			
					-		SER5456P			
			921.6Kbps		5V/12V	Low profile	SER5456AL			
					-		SER5456PL			
		DB9 Male	115.2 kbps		5V/12V	Standard	SER5456H			
					-		SER5456PH			
			921.6Kbps		5V/12V	Low profile	SER5456HL			
					-		SER5456PHL			
	2	DB9 Male	115.2 kbps		5V/12V	Standard	SER5437A			
					-		SER5437P			
		DB44 Female	921.6Kbps		5V/12V	Low profile	SER5437AL			
					-		SER5437PL			
PCI	8	DB62 Female	115.2 Kbps	±2KV	-	Standard	SER5066A			
					5V/12V		SER5066AL			
		Mini SCSI 68 Female			921.6Kbps	±15KV	-	Low profile	SER5066U	
							5V/12V		SER5066UL	
		4			DB44 Female	115.2 Kbps	±2KV	-	Standard	SER5066H
								5V/12V		SER5066HL
	5x2 Pin Header		921.6Kbps	±15KV	-	Low profile		SER5066UH		
					5V/12V			SER5066UHL		
	2	DB44 Female	115.2 Kbps	±2KV	-	Standard	SER5056A			
					5V/12V		SER5056P			
		5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5056AL			
					5V/12V		SER5056PL			
		DB44 Female	115.2Kbps	±2KV	-	Standard	SER5056U			
					5V/12V		SER5056UL			
		5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5056H			
					5V/12V		SER5056HL			
1		DB9 Male	115.2Kbps	±2KV	-	Standard	SER5056PH			
					5V/12V		SER5056PHL			
	5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5056PH				
				5V/12V		SER5056PHL				
	DB9 Male	115.2Kbps	±2KV	-	Standard	SER5037A				
				5V/12V		SER5037P				
	5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5037U				
				5V/12V		SER5037AL				
DB9 Male	115.2Kbps	±2KV	-	Standard	SER5037H					
			5V/12V		SER5037PH					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5037UH					
			5V/12V		SER5037UHL					
DB9 Male	115.2Kbps	±2KV	-	Standard	SER5037H					
			5V/12V		SER5037PH					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5037UH					
			5V/12V		SER5037UHL					
DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027A					
			5V/12V		SER5027P					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5027U					
			5V/12V		SER5027AL					
DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027H					
			5V/12V		SER5027PH					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5027UH					
			5V/12V		SER5027UHL					
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5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5027UH					
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DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027A					
			5V/12V		SER5027P					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5027U					
			5V/12V		SER5027AL					
DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027H					
			5V/12V		SER5027PH					
5x2 Pin Header	921.6Kbps	±15KV	-	Low profile	SER5027UH					
			5V/12V		SER5027UHL					



Express Card	4	DB44 Female	921.6Kbps	±15KV	-	34mm	ECS4000
	2				-	34mm	ECS2000
CardBus	1	DB9 Male	115.2Kbps	±15KV	-	34mm	ECS1000
	4	DB44 Female			-	54mm	CBS4000
	2	DB9 Male			-	54mm	CBS2000
	1	DB9 Male			-	54mm	CBS1000

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