

## SER5037P

2-port RS-232 Universal PCI  
Serial Board with Power Output



### Introduction

SUNIX SER5037P, Universal PCI serial communication board, allows users to add or expand two RS-232 ports on PC-based system. This board supports +5 or +12VDC of power from each serial port via COM 1st and 9th pin output. It's convenient for users connecting serial devices without addition external power supply.

SUNIX SER5037P is compatible with both 32/64-bit PCI architecture supporting 3.3 and 5V Bus, allowing this multi-port card to be installed in any slim size PC-based system with low profile bracket structure. Furthermore, SUNIX SER5037P card has 128-bytes onboard FIFO buffer and compatible with 16C950 UART specification. It is designed with SUNIX UART controller, SUN1989 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 2 independent RS-232 serial ports with communication speeds up to 115.2Kbps.
- High speed SUN1989 16C950 compatible UART controller on-board.
- Compliance with PCI 33MHz Ver. 3.0/2.3/2.2./2.1 specification.
- Supports both 64-bit & 32-bit PCI bus slot and 3.3V & 5V power.
- Provides RS-232 serial ports with +5 or +12 VDC power output via COM 1<sup>st</sup> or 9<sup>th</sup> pin.
- On-chip hardware auto flow control to guarantee no data loss.
- Built-in  $\pm 2$ KV ESD protection for all serial signals.
- 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, GND, 5V/12V/DCD, 5V/12V/RI
<b>Controller</b>	SUNIX SUN1989 (16C950 UART Compatible)	<b>Baud rate</b>	50bps ~115.2Kbps
<b>BUS</b>	Universal PCI 64/32bit 3.3V/5V PCI Ver 3.0, 2.3, 2.2, 2.1	<b>Stop bit</b>	1, 1.5, 2
<b>No. of Port</b>	2-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>	DB9 Male
<b>Protection</b>	±2KV ESD protection for each signal Human Body Model (HBM)		

### 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

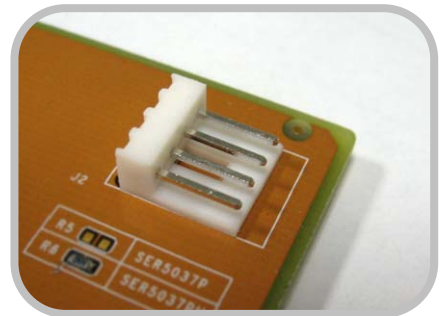
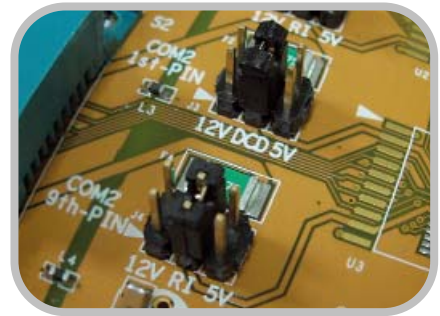
<b>PCB Dimension</b>	120 x 82 mm
<b>Bracket</b>	Standard 121 mm
<b>Bracket Space</b>	1



### Optional 5V / 12V / Signal Output over COM

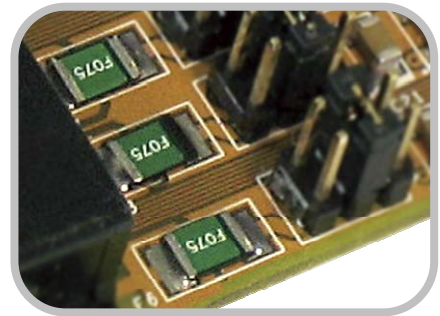
For SUNIX PoweredIO Serial card, user can select +5VDC and +12VDC power output over both COM 1<sup>st</sup> or 9<sup>th</sup> pins. In addition, this board also keeps the original RS-232 signal for traditional application using. In order to make sure the power stable and convenient, the DC power sources from the system power supply.

For example, user can select +12VDC output to invoice printer on first port, +5VDC output to barcode scanner on second port, and RI signal to modem on the third port. SUNIX PoweredIO Serial card is designed for users who want to connect serial peripherals without using extra power adaptor.

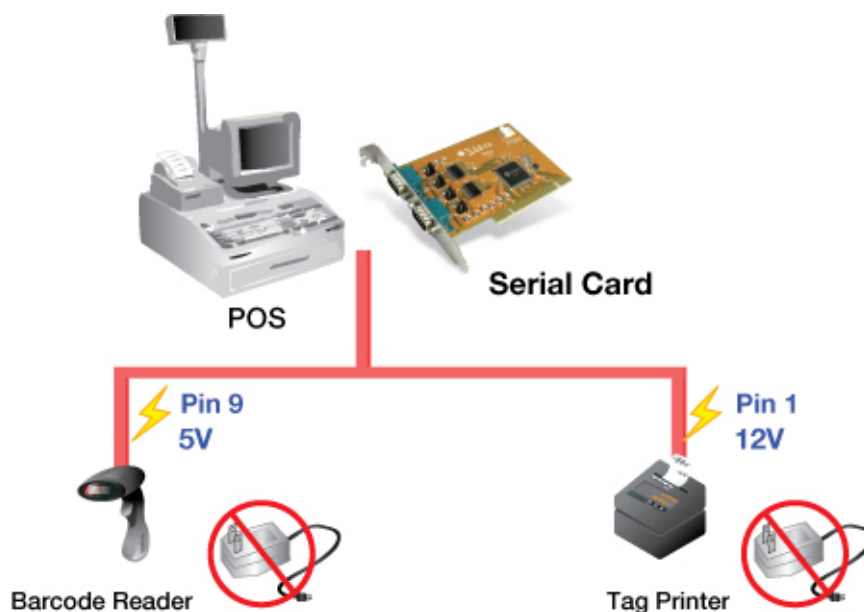


### Reliable Circuit Protection

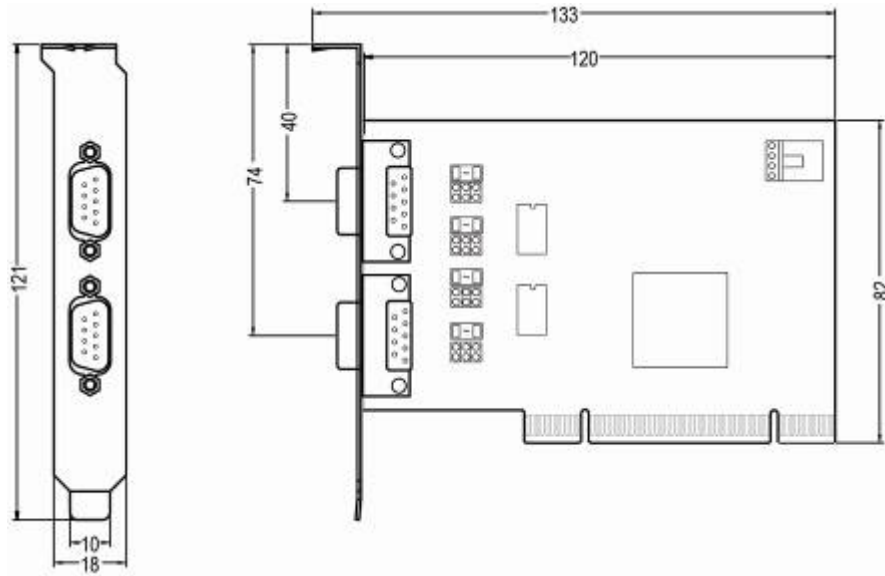
Each RS-232 port is protected with a 0.75 Amp PTC (Positive Temperature Coefficient) resettable fuse. The PTC may temporarily allow more than 0.75 Amp to be drained. Typically, a PTC will shut off after approximately 15 seconds drawing more than 1.5 Amp. The PTC will turn off the power for each individual port if an unusual overload is sustained. Besides in order to satisfy kinds of serial device power requirements, each RS-232 port can support 750mA current output in the PCB circuit design.



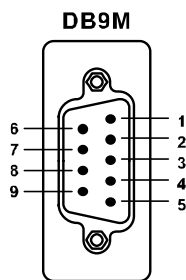
### Application



### Mechanical Drawings (Unit = mm)



### Pin Assignment



PIN	DB9M
DCD/5V/12V	1
RxD	2
TxD	3
DTR	4
GND	5
DSR	6
RTS	7
CTS	8
RI/5V/12V	9

**Note:**

SUNIX provides special cable for user who needs the DB9M connector fourth pin power output. This cable is the additional accessory for options.

### Packing List

**Packing Content**

- SER5037P – 2-port RS-232 Universal PCI Serial Board  
    With Power Output
- Quick Installation Guide
- Software CD ROM



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	
					-		Low profile	SER5456AL	
			5V/12V		-	SER5456PL			
			921.6Kbps		-	Standard	SER5456H		
					5V/12V		-	SER5456PH	
	-	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			-	Low profile	SER5056AL		
					5V/12V		-	SER5056PL	
		DB44 Female			921.6Kbps	±15KV	-	Standard	SER5056U
							-		SER5056UL
	5x2 Pin Header	-	Low profile	SER5056H					
		-		SER5056HL					
	DB44 Female	-	Low profile	SER5056PH					
		5V/12V		-			SER5056PHL		
	2	DB9 Male	115.2Kbps	±2KV	-	Standard	SER5037A		
					5V/12V		-	SER5037P	
		5x2 Pin Header			-	Low profile	SER5037U		
					-		SER5037AL		
		DB44 Female			-	Low profile	SER5037PH		
					5V/12V		-	SER5037PHL	
		921.6Kbps	DB9 Male	±15KV	-	Standard	SER5037H		
					5V/12V		-	SER5037PH	
			5x2 Pin Header		-	Low profile	SER5037UH		
					-		SER5037HL		
			DB44 Female		-	Low profile	SER5037PHL		
					5V/12V		-	SER5037PHL	
	1	DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027A		
					5V/12V		-	SER5027P	
		5x2 Pin Header			-	Low profile	SER5027U		
					-		SER5027AL		
		DB9 Male			921.6Kbps	±15KV	-	Standard	SER5027H
							5V/12V		-
5x2 Pin Header	-	Low profile	SER5027UH						
	-		SER5027HL						
DB9 Male	-	Low profile	SER5027PHL						
	5V/12V		-	SER5027PHL					
Express Card	4	DB44 Female	921.6Kbps	±15KV	-	34mm	ECS4000		
	2				-	34mm	ECS2000		
	1				DB9 Male	-	34mm	ECS1000	
CardBus	4	DB44 Female	115.2Kbps	±15KV	-	54mm	CBS4000		
	2				-	54mm	CBS2000		
	1				DB9 Male	-	54mm	CBS1000	