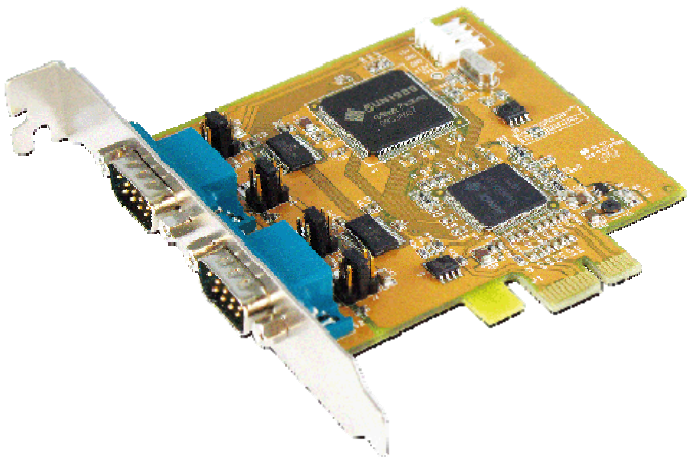

SER5437P

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

Introduction

SUNIX SER5437P, PCI Express 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 SER5437P meets the PCI Express Base Specification Revision 1.1. It is compatible with PCI Express x1, x2, x4, x8 and x16 lane Bus, allowing this multi-port card to be installed in virtually any available PC and compatible with all major operating systems. Furthermore, SUNIX SER5437P 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.
- Designed to meet PCI Express Base Specification Revision 1.1.
- Supports x1, x2, x4, x8, x16 (lane) PCI Express Bus connector keys.
- Provides RS-232 serial ports with +5 or +12 VDC power output via COM 1st or 9th pin.
- On-chip hardware auto flow control to guarantee no data loss.
- Built-in ± 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.

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Specifications

Serial Communication

Interface	RS-232	**Signal**	TxD, RxD, RTS, CTS, DTR, DSR, GND, 5V/12V/ DCD, 5V/12V/RI
Controller	SUNIX SUN1989 (16C950 UART Compatible)	**Baud rate**	50bps ~115.2Kbps
BUS	Universal PCI 64/32bit 3.3V/5V PCI Ver 3.0, 2.3, 2.2, 2.1	**Stop bit**	1, 1.5, 2
No. of Port	2-port	**Parity**	even, odd, none, mark, space
IRQ & IO	Assigned by System	**Flow Control**	None, Xon/Xoff, RTS/CTS
FIFO	128byte Hardware	**PCB Connector**	DB9 Male
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	Windows XP/Vista/7 (X86/X64)
Microsoft Server	Windows 2000/2003/2008 (X86/X64)
Microsoft Embedded	Windows CE4.2/5.0/6.0/XP Embedded/POS Ready 2009/Embedded System 2009
Linux	Linux 2.4.x/2.6.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	86 x 68 mm
Bracket	Standard 121 mm
Bracket Space	1

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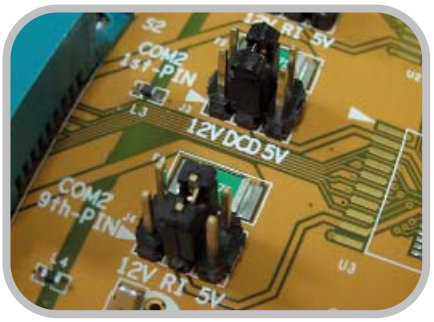
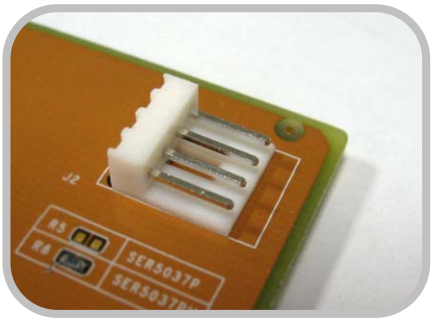
Optional 5V / 12V / Signal Output over COM

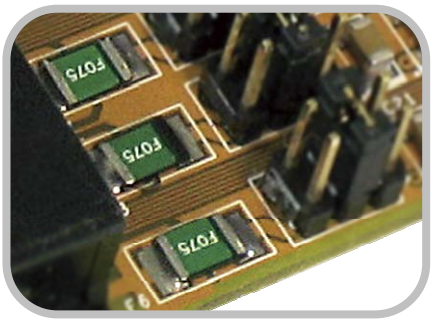


For SUNIX PoweredIO Serial card, user can select +5VDC and +12VDC power output over both COM 1st or 9th pins. In addition, this board also keeps the original RS-232 signal for traditional application using. In order to make sure the power stable and convenient, the DC power sources from the system power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



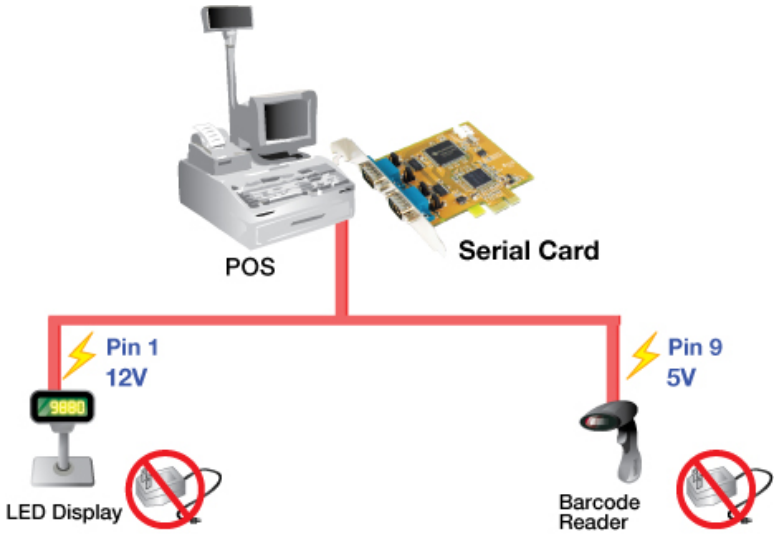
For example, user can select +12VDC output to invoice printer on first port, +5VDC output to barcode scanner on second port, and RI signal to modem on the third port. SUNIX PoweredIO Serial card is designed for users who want to connect serial peripherals without using extra power adaptor.

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 that 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



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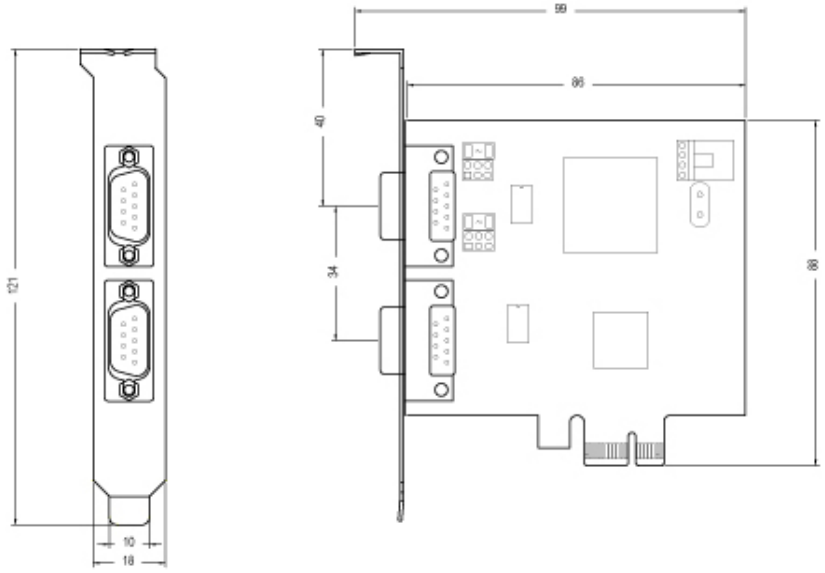
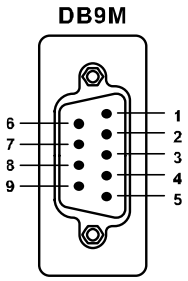
Mechanical Drawings (Unit = mm)



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

- SER5437P – 2-port RS-232 PCI Express Serial Board
  With Power Output
- Quick Installation Guide
- Software CD ROM

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Order Information

Serial RS-232 Interface

Bus	Port	Connecter	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			-	Low profile	SER5437AL
					5V/12V		SER5437PL
		DB9 Male	921.6Kbps		-	Standard	SER5437H
					5V/12V		SER5437PH
		DB44 Female			-	Low profile	SER5437HL
					5V/12V		SER5437PHL
PCI	8	DB62 Female	115.2 Kbps	±2KV	-	Standard	SER5066A
		Mini SCSI 68 Female			-	Low profile	SER5066AL
		5x2 Pin Header				Standard	SER5066U
					-	Low profile	SER5066UL
		DB62 Female	921.6Kbps	±15KV	-	Standard	SER5066H
		Mini SCSI 68 female			-	Low profile	SER5066HL
		5x2 Pin Header			-	Standard	SER5066UH
					-	Low profile	SER5066UHL
	4	DB44 Female	115.2 Kbps	±2KV	-	Standard	SER5056A
					5V/12V		SER5056P
					-	Low profile	SER5056AL
					5V/12V		SER5056PL
		5x2 Pin Header			-	Standard	SER5056U
					-	Low profile	SER5056UL
		DB44 Female	921.6Kbps	±15KV	-	Standard	SER5056H
					-	Low profile	SER5056HL
					5V/12V	Standard	SER5056PH
		5x2 Pin Header			-		SER5056UH
					-	Low profile	SER5056UHL
		DB44 Female			5V/12V		SER5056PHL
	2	DB9 Male	115.2Kbps	±2KV	-	Standard	SER5037A
					5V/12V		SER5037P
		5x2 Pin Header			-		SER5037U
		DB44 Female			-	Low profile	SER5037AL
					5V/12V		SER5037PL
		5x2 Pin Header			-		SER5037UL
		DB9 Male	921.6Kbps	±15KV	-	Standard	SER5037H
					5V/12V		SER5037PH
		5x2 Pin Header			-		SER5037UH
		DB44 Female			-	Low profile	SER5037HL
					5V/12V		SER5037PHL
	1	DB9 Male	115.2Kbps	±2KV	-	Standard	SER5027A
					5V/12V		SER5027P
		5x2 Pin Header			-		SER5027U
		DB9 Male			-	Low profile	SER5027AL
					5V/12V		SER5027PL
		5x2 Pin Header			-		SER5027UL
		DB9 Male	921.6Kbps	±15KV	-	Standard	SER5027H
					5V/12V		SER5027PH
		5x2 Pin Header			-		SER5027UH
		DB9 Male			-	Low profile	SER5027HL
					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

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