

PCI-AD64SU

Universal PCI, 1 MS/s, 64-ch, 16-bit AI Board
(4 K WORD FIFO)

Features

- Universal PCI (3.3 V/5 V) Interface
- Supports Card ID (SMD Switch)
- 64 Single-ended/32 Diff erential Analog Input Channels
  - 16-bit ADC with Max. 1 MS/s Sampling Rate
  - 4096-sample Hardware FIFO for Analog Input
  - AD Trigger Mode: Software, Pacer
  - AD Data Transfer: Polling, Interrupt

Introduction

PCI-AD64SU is a high-resolution high channel count analog input card for the Universal PCI bus. Its sampling rate is up to 1 MS/s and 16-bit resolution provides the power needed for most data acquisition applications. PCI-AD64SU provides 64 single-ended, 32 differential analog input channels. It also has built in a 4k-sample FIFO buffer for analog input data.

The PCI-AD64SU also includes an onboard Card ID that enables the board to be recognized via software if two or more PCI-AD64SU cards are installed in the same computer.

Hardware Specifications

Hardware	
Connector	Female SCSI II 68-pin x 1
Card ID	Yes (4-bit)
Analog Input	
Channels	64 Single-ended/32 Diff erential
Range	Gain: 1, 2, 4, 8 Bipolar Range: ±10 V, ±5 V, ±2.5 V, ±1.25 V
Accuracy	0.1% of FSR ±1 LSB @ 25°C, ±10 V
Sampling Rate	Fixed channel: 1 MS/s (Max.) Scan channel: 250 kS/s (Max.)
Overvoltage Protection	Continuous ±35 Vp-p
FIFO Size	4096 Samples
PC Bus	
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz
Power	
Consumption	1 A @ +5 V (Max.)
Mechanical	
Dimensions (mm)	146 X 120.5 X 21.6 (W x L x D)
Environment	
Operating Temperature	0 ~ +60°C
Humidity	5 ~ 85% RH, Non-condensing

Software

Drivers

- ☑ 32/64-bit Windows 10/11

Sample Programs

- ☑ VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB

Pin Assignments

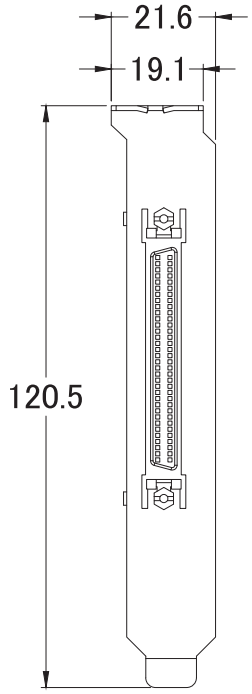
Pin Assignment S.E.	Pin Assignment Diff.	Terminal	No.	Pin Assignment Diff.	Pin Assignment S.E.
AI00	AI00+	68	34	AI00 -	AI01
AI02	AI01+	67	33	AI01 -	AI03
AI04	AI02+	66	32	AI02 -	AI05
AI06	AI03+	65	31	AI03 -	AI07
AI08	AI04+	64	30	AI04 -	AI09
AI10	AI05+	63	29	AI05 -	AI11
AI12	AI06+	62	28	AI06 -	AI13
AI14	AI07+	61	27	AI07 -	AI15
AGND		60	26	AGND	
AI16	AI08+	59	25	AI08 -	AI17
AI18	AI09+	58	24	AI09 -	AI19
AI20	AI10+	57	23	AI10 -	AI21
AI22	AI11+	56	22	AI11 -	AI23
AI24	AI12+	55	21	AI12 -	AI25
AI26	AI13+	54	20	AI13 -	AI27
AI28	AI14+	53	19	AI14 -	AI29
AI30	AI15+	52	18	AI15 -	AI31
AI32	AI16+	51	17	AI16 -	AI33
AI34	AI17+	50	16	AI17 -	AI35
AI36	AI18+	49	15	AI18 -	AI37
AI38	AI19+	48	14	AI19 -	AI39
AI40	AI20+	47	13	AI20 -	AI41
AI42	AI21+	46	12	AI21 -	AI43
AI44	AI22+	45	11	AI22 -	AI45
AI46	AI23+	44	10	AI23 -	AI47
AGND		43	9	AGND	
AI48	AI24+	42	8	AI24 -	AI49
AI50	AI25+	41	7	AI25 -	AI51
AI52	AI26+	40	6	AI26 -	AI53
AI54	AI27+	39	5	AI27 -	AI55
AI56	AI28+	38	4	AI28 -	AI57
AI58	AI29+	37	3	AI29 -	AI59
AI60	AI30+	36	2	AI30 -	AI61
AI62	AI31+	35	1	AI31 -	AI63



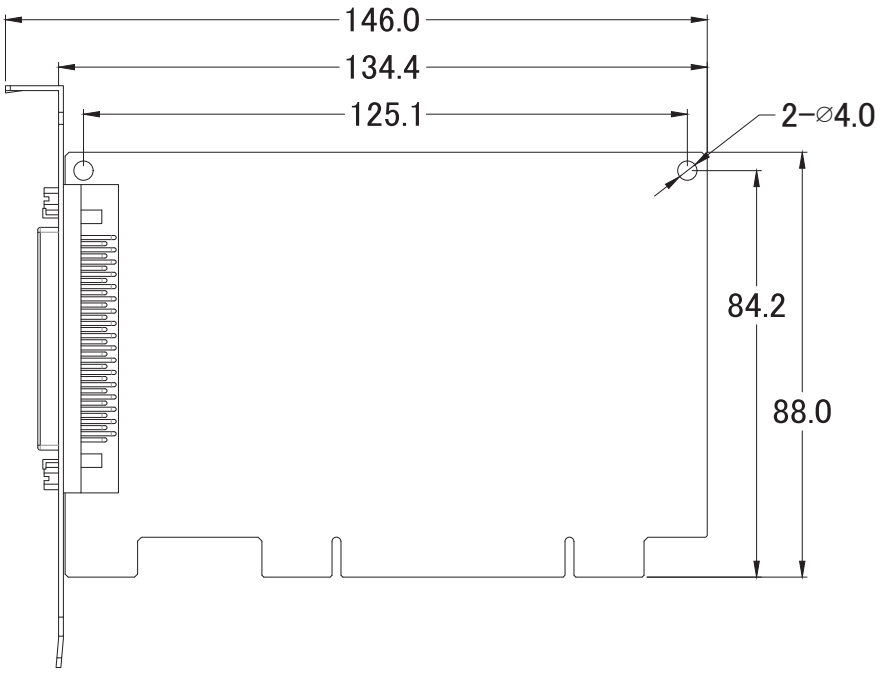
SCSI 68-pin/DB-68-pin

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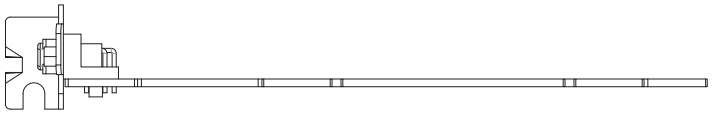
Dimensions (Units: mm)



Left Side View



Front View

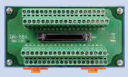


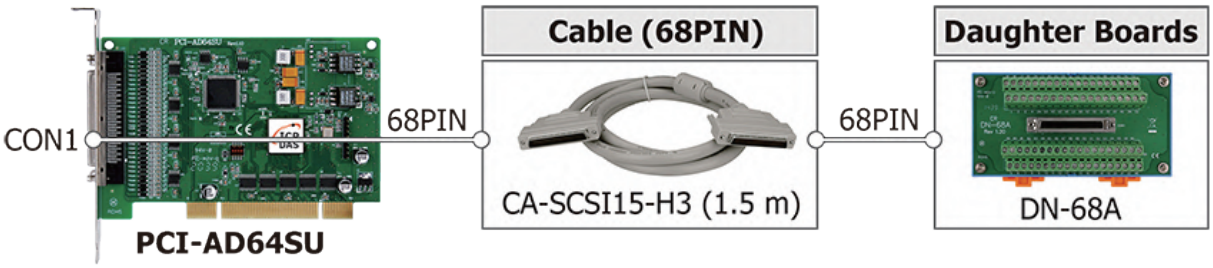
Bottom View

Ordering Information

PCI-AD64SU CR	Universal PCI, 1 MS/s, 64-ch, 16-bit AI Board (4 K WORD FIFO) (RoHS)

Accessories

 DN-68A CR	DIN-Rail Mountable I/O Connector Block with 68-pin Female SCSI II Connector (RoHS)
 CA-SCSI15-H CR	68-pin SCSI-II Connector Cable, 1.5 m (RoHS)
 2AB125R CR	Resistor DIP 125R 0.1% 1/4W MF 50PPM (1PCS) (RoHS)



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