

PC/104+ to
PCMCIA PC-Card/CardBus
Adapter

Model 335 (Rev.A)

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Special handling instructions

The circuit board contains CMOS circuitry that is sensitive to Electrostatic Discharge (ESD).

Special care should be taken in handling, transporting, and installing circuit board to prevent ESD damage to the board. In particular:

- Do not remove the circuit board from its protective anti-static bag until you are ready to install the board into the enclosure.
- Handle the circuit board only at grounded, ESD protected stations.
- Remove power from the equipment before installing or removing the circuit board.

Introduction

Model 335 is a PC/104+ to PCMCIA adapter. It supports dual PC card slots.

The PCMCIA (PC card) interface uses Texas Instruments PCI-1520, an advanced PCI-to-PC-Card/CardBus controller, between the PC/104+ and the PC card connectors. Two PC card slots are built onto the board. All Type I, Type II, and Type III PC cards are acceptable. The power management through the power switch is implemented and supported with the module. In addition to passing the interrupt through the PC/104+ (PCI) bus in INT#, a parallel interrupt passing scheme through PC/104 (ISA) bus is implemented to support the board working with a wide range of CPU boards, their BIOS, and different OS. Both Linux kernel 2.6 and older kernel 2.4 are supported.

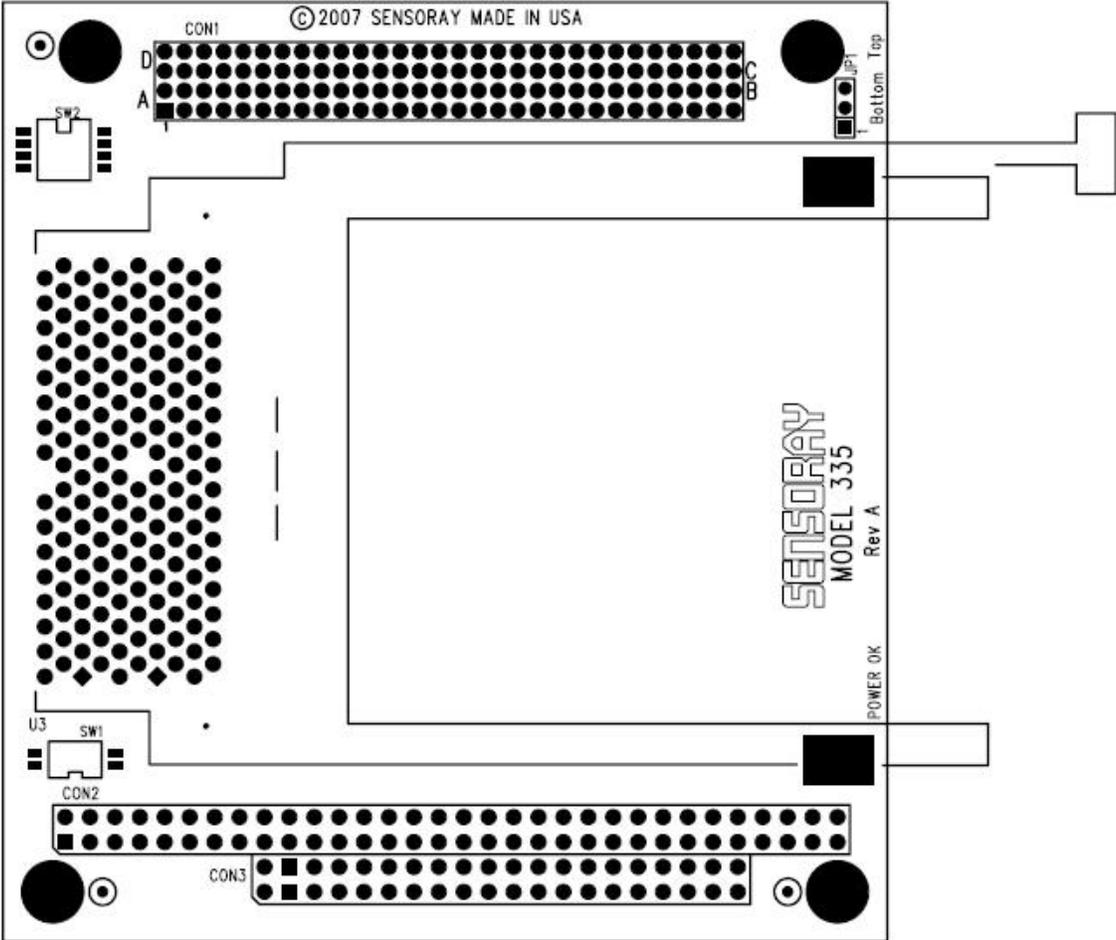
A single +5V input power supply is required to power the board. Power of +12V is required only when the PC card needs +12V. All pass through from PC/104+ connector.

Feature Summary

- PC/104 form factor base.
- PC/104+ bus for all PCI signals and power; PC/104 bus only for passing parallel PCMCIA interrupts.
- Single power source (+5V) operation; +12V only for PC cards.
- Dual PC card slots; Accepts one/two Type I or Type II or one Type III;
- 16-bit PCMCIA and/or 32-bit CardBus.

Reference

Connectors



PC/104+ Bus Connector, CON1.

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
A1	Ground	B1	n/c	C1	+5 V	D1	AD0
A2	VIO*	B2	AD2	C2	AD1	D2	+5 V
A3	AD5	B3	Ground	C3	AD4	D3	AD3
A4	C/BE0#	B4	AD7	C4	Ground	D4	AD6
A5	Ground	B5	AD9	C5	AD8	D5	Ground
A6	AD11	B6	VIO*	C6	AD10	D6	M66EN*
A7	AD14	B7	AD13	C7	Ground	D7	AD12
A8	n/c	B8	C/BE1#	C8	AD15	D8	n/c
A9	SERR#	B9	Ground	C9	SB0*	D9	PAR
A10	Ground	B10	PERR#	C10	n/c	D10	SDONE*
A11	STOP#	B11	n/c	C11	LOCK*	D11	Ground
A12	n/c	B12	TRDY#	C12	Ground	D12	DEVSEL#
A13	FRAME#	B13	Ground	C13	IRDY#	D13	n/c
A14	Ground	B14	AD16	C14	n/c	D14	C/BE2#
A15	AD18	B15	n/c	C15	AD17	D15	Ground
A16	AD21	B16	AD20	C16	Ground	D16	AD19
A17	n/c	B17	AD23	C17	AD22	D17	n/c
A18	IDSEL0	B18	Ground	C18	IDSEL1	D18	IDSEL2
A19	AD24	B19	C/BE3#	C19	VIO*	D19	IDSEL3
A20	Ground	B20	AD26	C20	AD25	D20	Ground
A21	AD29	B21	+5 V	C21	AD28	D21	AD27
A22	+5 V	B22	AD30	C22	Ground	D22	AD31
A23	REQ0#	B23	Ground	C23	REQ1#	D23	VIO*
A24	Ground	B24	REQ2#	C24	+5 V	D24	GNT0#
A25	GNT1#	B25	VIO*	C25	GNT2#	D25	Ground
A26	+5 V	B26	CLK0	C26	Ground	D26	CLK1
A27	CLK2	B27	+5 V	C27	CLK3	D27	Ground
A28	Ground	B28	INTD#	C28	+5 V	D28	RST#
A29	+12 V	B29	INTA#	C29	INTB#	D29	INTC#
A30	n/c	B30	n/c	C30	n/c	D30	Ground

Note:

* not connected.

n/c not connected.

PC/104 Bus Connector AB, CON2.

Pin	Signal	Pin	Signal
A1	n/c	B1	Ground *
A2	SD7	B2	RSTDRV
A3	SD6	B3	+5 V
A4	SD5	B4	IRQ9 *
A5	SD4	B5	-5 V
A6	SD3	B6	DRQ2
A7	SD2	B7	-12 V
A8	SD1	B8	n/c
A9	SD0	B9	+12 V
A10	IOCHRDY	B10	n/c
A11	AEN	B11	n/c
A12	SA19	B12	n/c
A13	SA18	B13	IOW#
A14	SA17	B14	IOR#
A15	SA16	B15	DACK3#
A16	SA15	B16	DRQ3
A17	SA14	B17	n/c
A18	SA13	B18	n/c
A19	SA12	B19	REFRESH#
A20	SA11	B20	n/c
A21	SA10	B21	IRQ7 *
A22	SA9	B22	IRQ6
A23	SA8	B23	IRQ5
A24	SA7	B24	IRQ4
A25	SA6	B25	IRQ3
A26	SA5	B26	DACK2#
A27	SA4	B27	TC
A28	SA3	B28	BALE
A29	SA2	B29	+5 V
A30	SA1	B30	OSC
A31	SA0	B31	Ground *
A32	Ground *	B32	Ground *

Note:

* connected.

PC/104 Bus Connector CD, CON3.

Pin	Signal	Pin	Signal
C0	Ground *	D0	Ground *
C1	SBHE#	D1	MEMCS16#
C2	LA23	D2	IOCS16#
C3	LA22	D3	IRQ10 *
C4	LA21	D4	IRQ11 *
C5	LA20	D5	IRQ12 *
C6	LA19	D6	IRQ15 *
C7	LA18	D7	IRQ14 *
C8	LA17	D8	n/c
C9	MEMR#	D9	n/c
C10	MEMW#	D10	DACK5#
C11	SD8	D11	DRQ5
C12	SD9	D12	DACK6#
C13	SD10	D13	DRQ6
C14	SD11	D14	DACK7#
C15	SD12	D15	DRQ7
C16	SD13	D16	+5 V
C17	SD14	D17	n/c
C18	SD15	D18	Ground *
C19	n/c	D19	Ground *

Note:

* connected.

PCMCIA (PC Card) Connectors (Top, Bottom)

Pin	Signal	Pin	Signal
1	GND	2	D3
3	D4	4	D5
5	D6	6	D7
7	CE1#	8	A10
9	OE#	10	A11
11	A9	12	A8
13	A13	14	A14
15	WE	16	READY(IREQ#)
17	Vcc	18	Vpp1
19	A16	20	A15
21	A12	22	A7
23	A6	24	A5
25	A4	26	A3
27	A2	28	A1
29	A0	30	D0
31	D1	32	D2
33	WP(IOIS16#)	34	GND
35	GND	36	CD1#
37	D11	38	D12
39	D13	40	D14
41	D15	42	CE2#
43	VS1#	44	IORD#
45	IOWR#	46	A17
47	A18	48	A19
49	A20	50	A21
51	Vcc	52	Vpp2
53	A22	54	A23
55	A24	56	A25
57	VS2#	58	RESET
59	WAIT#	60	INPACK#
61	REQ#	62	BVD2(SPKR#)
63	BVD1(STSCHG#)	64	D8
65	D9	66	D10
67	CD2#	68	GND

LEDs

The LED D1 and D2 are used for indicating the status of PCMCIA PC-cards:

- D1 (Red) -- for Slot#-Top
- D2 (Red) -- for Slot#-Bottom

For both D1 and D2:

- On -- card inserted and active
- Off -- no card inserted or inactive

The LED D5 is used for indicating the status of Power-Ok:

- On -- Power is good
- Off -- Power is not good or not on the board

Configuration DIP Switches

Slot# selection, SW1

The DIP switch SW1 is used for selecting the PC/104+ module slot number. Refer to the table below for slot number selection.

SW1-1	SW1-2	Module Slot #
on	on	Slot#0
off	on	Slot#1
on	off	Slot#2
off	off	Slot#3

Interrupt routing selection, SW2

The DIP switch SW2 is used for selecting an interrupt routing for the PC card controller TI PCI-1520 to submit the interrupt. Refer to the table below for the routing selection.

SW2-1	SW2-2	SW2-3	SW2-3	Interrupt Routing
on	off	off	off	INTA#
off	on	off	off	INTB#
off	off	on	off	INTC#
off	off	off	on	INTD#

Device drivers

Since Windows XP and Linux kernel 2.4.19 or later have a built-in device driver for TI PCI-1520 natively, the 340 under XP or Linux will be treated as a Plug&Play (PnP) board. For Linux kernel older than 2.4.18, upgrading pcmcia-cs modules to pcmcia-cs-3.2.4 will get PCI-1520 device driver installed. See <http://www.linuxhowtos.org/PCMCIA/PCMCIA%20Howto.htm> or http://www.ibiblio.org/pub/Linux/docs/HOWTO/other-formats/html_single/PCMCIA-HOWTO.html for Linux-PCMCIA-HOWTO.

For other Windows-based OS like 98(SE) and 2000, the device drivers are available upon request.

Accessories

For standard PCMCIA PC-cards, no adapters are needed. But, for Flash cards like Compact Flash (CF), Secure Digital (SD), Smart Media (SM), Multi Media, and Memory Stick, a PCMCIA CompactFlash PC-card adapter or 4-in-1 PCMCIA PC-card adapter (reader/writer) is needed. Many manufacturers like SanDisk, Lexar, Antec, and Dazzle supply such PCMCIA PC-card adapters. Sensoray redistributes their adapter(s) for 335 PCMCIA users upon customer's request.

Specifications

Dimension	96mm x 105mm x 23mm
Weight	150g
Power	+ 5 V, 150mA (without PC-cards) +12 V, current upon PC-card's consumption
Buses	PC/104+ and PC/104
PC card	PCMCIA 16-bit, CardBus 32-bit, TI PCI1520 PCI PC-card/CardBus controller Two Type I or Type II, or one Type III PC cards
Temperature	0 – 70 C