

PM-1054A
DUAL PCMCIA SLOT
PC/104-Plus SBC
PCB Version 1.0

User Manual Version 1.0

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1. Introduction

PM-1054A is a PC/104-*Plus* interface card with standard industrial mechanical dimension. It is equipped with a high performance 32-bit PCI bus Interface to CardBus interface chipset (Ricoh R5C486), which supports 32-bit CardBus (Card-32) and 16-bit CardBus (Card-16). It supports dual PCMCIA slots: upper slot (slot one) and lower slot (slot two).

1.1 Chipset

R5C486 is a PC card control that offers a single chip solution as a bridge between PCI bus and CardBus. The card control interface of R5C486 register set is compatible with Intel 82365SL and Ricoh RF5C396/366. It is able to maintain backward compatibility with an existing 16-bit PC Card compliant with PCMCIA2.1/JEIDA4.2 to ensure the PC card is available.

1.2 Features

- 2 PCMCIA PC-Card 95/97 sockets. (Two type I & type II cards or one type III card)
- CardBus (Card-32) card and 16-bit (PCMCIA2.1/JEIDA4.2) card are available.
- PCI Bus Interface.
- PCI signals –Interrupt, IDSEL, Clock, REQ, and GNT are selectable.
- Socket voltage control. (5.0V, 3.3V auto-detect control.)

2. Installation

2.1 Hardware Installation

It is quick and simple to install PC104-Plus modules on CPU card. The following steps describe how to mount the PC/104-*Plus* modules:

- i. Complete jumper setting or cable connection before the PC/104-*Plus* module is mounted onto the CPU card.
- ii. Plug in the PC/104-*Plus* module to the connectors carefully.
- iii. Use the four mounting spacers and screws to secure the PC/104-*Plus* module.

Note: Ground yourself to remove any static electricity before touching PM-1054A. You can do it by using a wrist strap connected to the ground or by frequently touching any conducting materials connected to the ground.

2.2 PM-1054A Board Layout and Dimension

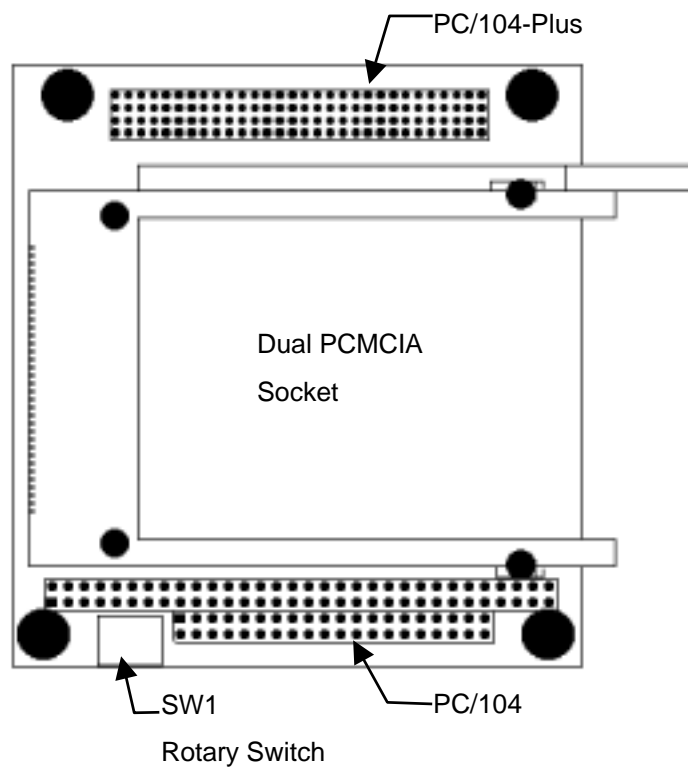


Figure 1 PM-1054A Board Layout

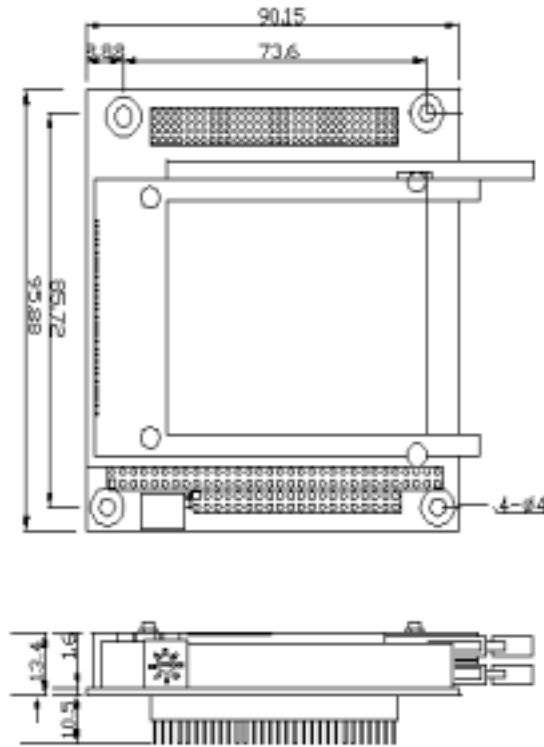


Figure 2 PM-1054A Board Dimension

2.3 PCI Signal Grouping Selection

- SW1 (Rotary Switch): Group selection of PCI configuration for PC/104-PLUS modules.

Group	SW1 Position
0	0, 4
1	1, 5
2	2, 6
3	3, 7

- Signal Grouping Description

Group	PCICLK	ID Address	INT0	INT1	REQ	GNT
0	PCICLK0	IDSEL0	INTA	INTB	REQ0	GNT0
1	PCICLK1	IDSEL1	NTB	INTC	REQ1	GNT1
2	PCICLK2	IDSEL2	INTC	INTD	REQ2	GNT2
3	PCICLK3	IDSEL3	INTD	INTA	REQ3*	GNT3*

*Note: REQ3# and GNT#3 are not signals defined in PC104-plus. Do not use MODE3 if your card does not have these signals on PC104-plus connector.

2.4 OS Support

PM-1054A is fully supported by the following OS:

- Windows 98 SE
- Windows ME
- Windows 2000
- Windows XP

3. Connection

3.1 CardBus Connector

The PM-1054A provides a CardBus interface for CardBus devices and PCMCIA devices.

- CardBus Connector

PIN NO.	FUNCTION	PIN NO.	FUNCTION
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
17	VCC	18	VCC
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	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	VCC
53	A22	54	A23
55	A24	56	A25
57	VS2#	58	RESET
59	WAIT#	60	INPACK#
61	REG#	62	BVD2
63	BVD1	64	D8
65	D9	66	D10
67	CD2#	68	GND
69	GND	70	GND

3.2 PCI Bus Connector

- CN1: PC/104-PLUS Connector

PIN	DEFINE	PIN	DEFINE	PIN	DEFINE	PIN	DEFINE
A1	GND	B1	N.C	C1	+5V	D1	AD00
A2	VIO	B2	AD02	C2	AD01	D2	+5V
A3	AD05	B3	GND	C3	AD04	D3	AD03
A4	CBE0#	B4	AD07	C4	GND	D4	AD06
A5	GND	B5	AD09	C5	AD08	D5	GND
A6	AD11	B6	VIO	C6	AD10	D6	M66EN
A7	AD14	B7	AD13	C7	GND	D7	AD12
A8	+3.3V	B8	CBE1#	C8	AD15	D8	+3.3V
A9	SERR#	B9	GND	C9	SB0	D9	PAR
A10	GND	B10	PERR#	C10	+3.3V	D10	SDONE
A11	STOP#	B11	+3.3V	C11	LOCK#	D11	GND
A12	+3.3V	B12	TRDY#	C12	GND	D12	DEVDEL#
A13	FRAME#	B13	GND	C13	IRDY#	D13	+3.3V
A14	GND	B14	AD16	C14	+3.3V	D14	CBE2#
A15	AD18	B15	+3.3V	C15	AD17	D15	GND
A16	AD21	B16	AD20	C16	GND	D16	AD19
A17	+3.3V	B17	AD23	C17	AD22	D17	+3.3V
A18	IDSELO	B18	GND	C18	IDSEL1	D18	IDSEL2
A19	AD24	B19	CBE3#	C19	VIO	D19	IDSEL3
A20	GND	B20	AD26	C20	AD25	D20	GND
A21	AD29	B21	+5V	C21	AD28	D21	AD27
A22	+5V	B22	AD30	C22	GND	D22	AD31
A23	REQ0#	B23	GND	C23	REQ1#	D23	VIO
A24	GND	B24	REQ2#	C24	+5V	D24	GNT0#
A25	GNT1#	B25	VIO	C25	GNT2#	D25	GND
A26	+5V	B26	PCICLK0	C26	GND	D26	PCICLK1
A27	PCICLK2	B27	+5V	C27	PCICLK3	D27	GND
A28	GND	B28	INTD#	C28	+5V	D28	RST#
A29	+12V	B29	INTA#	C29	INTB#	D29	INTC#
A30	-12V	B30	REQ3#	C30	GNT3#	D30	GND

3.3 ISA Bus Connector

- CN3: PC/104-40 Connector

PIN NO.	Description	PIN NO.	Description
1	GND	21	GND
2	SBHE#	22	MCS16#
3	LA23	23	IOCS16#
4	LA22	24	IRQ10
5	LA21	25	IRQ11
6	LA20	26	IRQ12
7	LA19	27	IRQ15
8	LA18	28	IRQ14
9	LA17	29	DACK0#
10	MEMR#	30	DRQ0
11	MEMW#	31	DACK5#
12	SD8	32	DRQ5
13	SD9	33	DACK6#
14	SD10	34	DRQ6
15	SD11	35	DACK7#
16	SD12	36	DRQ7
17	SD13	37	VCC
18	SD14	38	MASTER#
19	SD15	39	GND
20	GND	40	GND

- CN2: PC/104-64 Connector

PIN NO.	Description	PIN NO.	Description
1	IOCHCK#	33	GND
2	SD7	34	IRSTDRV
3	SD6	35	VCC
4	SD5	36	IRQ9
5	SD4	37	-5V
6	SD3	38	DRQ2
7	SD2	39	-12V
8	SD1	40	ZWS
9	SD0	41	+12V
10	IOCHRDY	42	GND
11	AEN	43	SMEMW#
12	LA19	44	SMEMR#
13	LA18	45	IOW#
14	LA17	46	IOR#
15	SA16	47	DACK3#
16	SA15	48	DRQ3
17	SA14	49	DACK1#
18	SA13	50	DRQ1
19	SA12	51	REFRESH#
20	SA11	52	SYSCLK
21	SA10	53	IRQ7
22	SA9	54	IRQ6
23	SA8	55	IRQ5
24	SA7	56	IRQ4
25	SA6	57	IRQ3
26	SA5	58	DACK2
27	SA4	59	TC
28	SA3	60	BALE
29	SA2	61	VCC
30	SA1	62	OSC
31	SA0	63	GND
32	GND	64	GND