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PMC Storage Module

User's Manual

1500-0024 Rev D
(7/13/2016)

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1 GENERAL INFORMATION

1.1 Product Overview

The Red Rock Technologies' PMC storage modules allow usage of COTS drives through the PCI interface provided by the PMC slot. The following PMC storage options are available:

- PMC Removable 1.8" SATA module.
- PMC Compact Flash module.
- PMC Removable Compact Flash module.
- Conduction Cooled PMC Compact Flash module for extended temperature applications.

1.2 Features

- Ideal for high shock & vibration environments using solid state drives.
- PCI 32-bit data at 33MHz.
- 3.3V and 5.0V PCI interface compliant.
- High density mass storage within the PMC slot.
- Utilizes COTS mechanical and solid state devices (SSDs).
- VxWorks®, Linux and Windows® drivers available.

1.3 Compatability

- Standard PMC form factor (IEEE 1386.1)
- 3.3V and 5V, 32-bit, 33MHz, PCI Bus 2.2.
- Standard COTS drives.

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2 UNPACKING INSTRUCTIONS

Inspect the shipping carton carefully upon receipt. If the shipping carton is damaged upon receipt, request that the carrier's agent be present during unpacking and inspection of equipment. If the carrier's agent is not present and the equipment is found to be damaged, save the carton and packing material for the carrier agent's inspection.

Refer to the packing list when unpacking equipment to verify that all items are present. Save the carton and packing material for storing and future shipping of equipment.

Caution: Electrostatic discharge can damage electronic circuits. Use anti-static handling procedures when handling this equipment. Avoid touching integrated circuits and connector contacts.

3 CONFIGURATION

There are no settings that are configurable by the user.

4 INSTALLATION

Caution: Do not insert or remove PMC Module or drive while power is applied. Damage may result.

Remove any front panel filler panels on the base board front panel and fasten the PMC Module to the base board, assuring that connectors are fully engaged and that all mounting hardware is properly installed.

5 OPERATION

Refer to driver installation and operation procedures for the particular operating system.

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6 SUPPORT INFORMATION

6.1 Connector Pin-outs

6.1.1 PMC Connector Pin-Outs

Table 6.1: PMC Connector P11

P11			
PIN	**SIGNAL**	**PIN**	**SIGNAL**
1	N.C.	33	FRAME_N
2	N.C.	34	GND
3	GND	35	GND
4	INTA_N	36	IRDY_N
5	N.C.	37	DEVSEL_N
6	N.C.	38	+5V
7	BUSMODE1_N	39	GND
8	+5V	40	N.C.
9	N.C.	41	N.C.
10	N.C.	42	N.C.
11	GND	43	PAR
12	N.C.	44	GND
13	CLK	45	N.C.
14	GND	46	AD15
15	GND	47	AD12
16	GNT_N	48	AD11
17	REQ_N	49	AD09
18	+5V	50	+5V
19	N.C.	51	GND
20	AD31	52	C/BE0_N
21	AD28	53	AD06
22	AD27	54	AD05
23	AD25	55	AD04
24	GND	56	GND
25	GND	57	N.C.
26	C/BE3_N	58	AD03
27	AD22	59	AD02
28	AD21	60	AD01
29	AD19	61	AD00
30	+5V	62	+5V
31	N.C.	63	GND
32	AD17	64	N.C.

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Table 6.2: PMC Connector P12

P12			
PIN	**SIGNAL**	**PIN**	**SIGNAL**
1	N.C.	33	GND
2	N.C.	34	N.C.
3	N.C.	35	TRDY_N
4	TDO	36	+3.3V
5	TDI	37	GND
6	GND	38	STOP_N
7	GND	39	PERR_N
8	N.C.	40	GND
9	N.C.	41	+3.3V
10	N.C.	42	SERR_N
11	N.C.	43	C/BE1_N
12	+3.3V	44	GND
13	RST_N	45	AD14
14	N.C.	46	AD13
15	+3.3V	47	M66EN
16	N.C.	48	AD10
17	N.C.	49	AD08
18	GND	50	+3.3V
19	AD30	51	AD07
20	AD29	52	N.C.
21	GND	53	+3.3V
22	AD26	54	N.C.
23	AD24	55	N.C.
24	+3.3V	56	GND
25	IDSEL	57	N.C.
26	AD23	58	N.C.
27	+3.3V	59	GND
28	AD20	60	N.C.
29	AD18	61	N.C.
30	GND	62	+3.3V
31	AD16	63	GND
32	C/BE2_N	64	N.C.

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6.1.2 Compact Flash Connector Pin-outs

Table 6.3: CF Connectors

J2 and J3			
PIN	**SIGNAL**	**PIN**	**SIGNAL**
1	GND	2	D03
3	D04	4	D05
5	D06	6	D07
7	-CS0	8	A10
9	-ATA SEL	10	A09
11	A08	12	A07
13	VCC	14	A06
15	A05	16	A04
17	A03	18	A02
19	A01	20	A00
21	D00	22	D01
23	D02	24	N.C.
25	-CD2	26	-CD1
27	D11	28	D12
29	D13	30	D14
31	D15	32	-CS1
33	N.C.	34	-IORD
35	-IOWR/STOP	36	-WE
37	INTRQ	38	VCC
39	-CSEL	40	N.C.
41	-RESET	42	IORDY
43	DMARQ	44	-DMACK
45	-DASP	46	N.C.
47	D08	48	D09
49	D10	50	GND

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6.1.3 SATA Connector Pin-outs

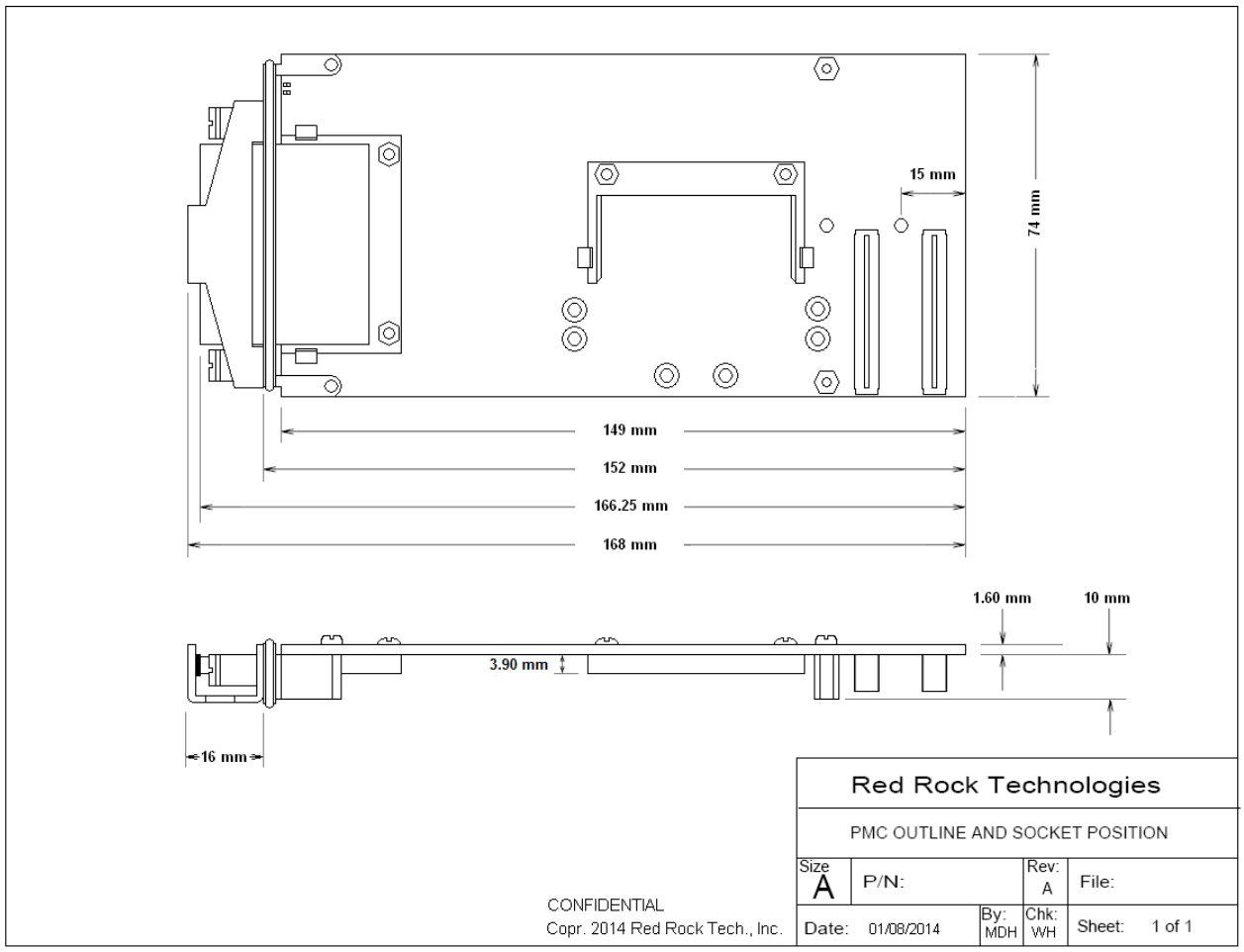
Table 6.4: SATA Connector

P4	
PIN	**SIGNAL**
S1	GND
S2	TX_P
S3	TX_M
S4	GND
S5	RX_M
S6	RX_P
S7	GND
P1	3.3V
P2	3.3V
P3	GND
P4	GND
P5	5V
P6	5V
P7	NC
P8	NC
P9	NC

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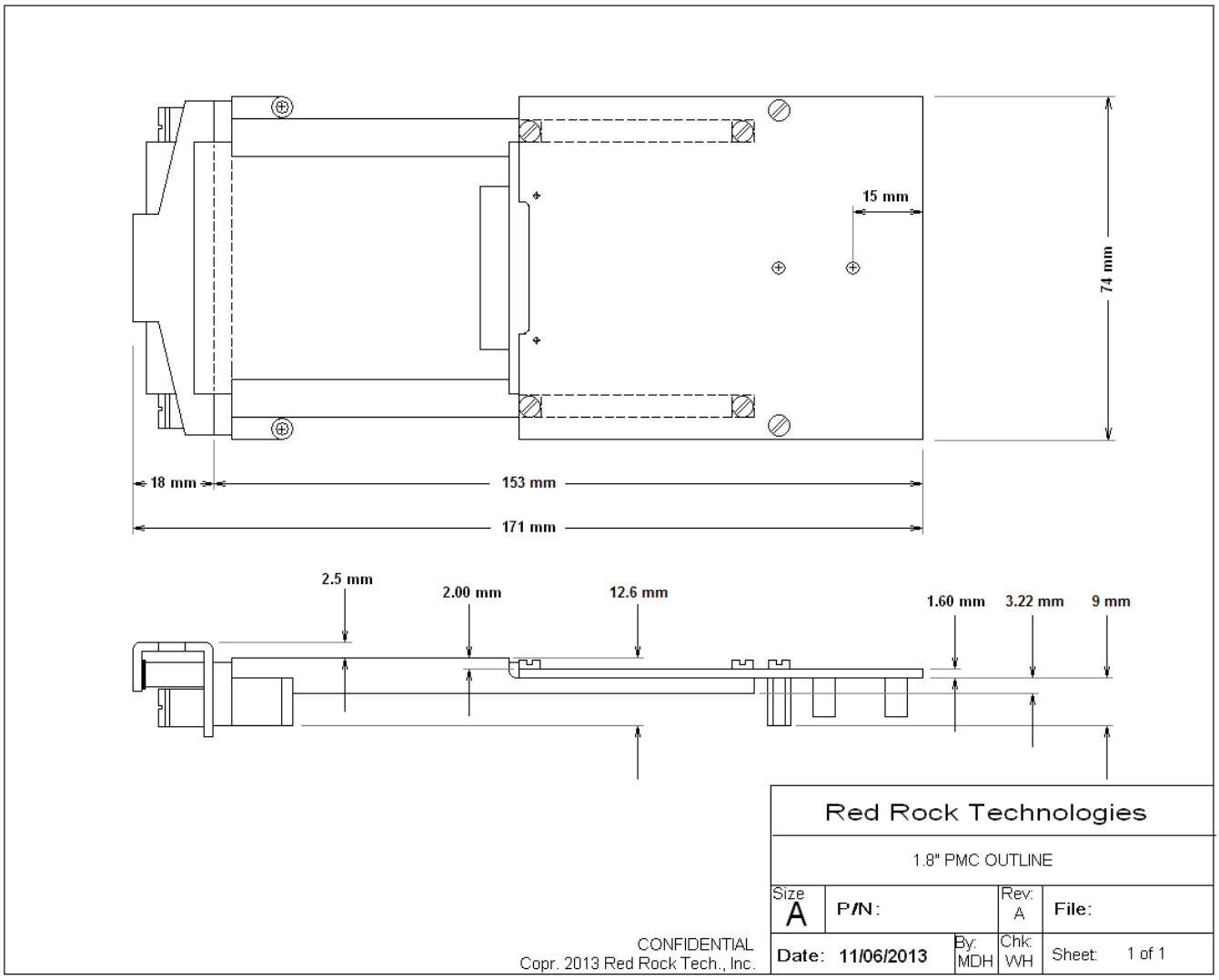
6.2 Mechanical Drawings

6.2.1 PMC Fixed/Removable Compact Flash Module



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6.2.2 PMC Removable 1.8" SATA Module



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7 SERVICE PROCEDURE

Should the product require repair under warranty, contact Red Rock Technologies, Inc. to obtain a return materials authorization (RMA) number. Include the RMA number, contact name, contact telephone number, contact email address and explanation of problem with the returned product.

Ship the product to be repaired to Red Rock Technologies, Inc. pre-paid, in its original packing material and carton or packaged in such a manner as to protect it from any damage during return shipping. Product must be handled and packaged using Industry Standard ESDS procedures and materials. Shipping, insurance and any applicable duties and handling charges for returned material must be pre-paid to Red Rock Technologies' dock or the returned material will be refused. Within the continental U.S., Red Rock Technologies will pay for shipment of the repaired or replacement product to the customer via surface carrier. For warranty repair outside the U.S., the customer will be responsible for return shipping, insurance and any applicable duties.

Repairs made out of warranty or for damages excluded from warranty coverage will be performed at Red Rock Technologies' normal rate. Under these circumstances, applicable shipping, insurance and duty charges will be the responsibility of the customer.

Ship to: Red Rock Technologies, Inc.
206 West Julie Drive
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Tempe, Arizona 85283
Telephone: 480-483-3777

STANDARD WARRANTY

Products are warranted against defects in materials and workmanship for a period of one year unless otherwise stated. Red Rock Technologies will, at its sole discretion, either repair or replace the product at no charge to the customer during the warranty period. Repaired or replacement product will be warranted for the remainder of the warranty period or 90 days, whichever is longer.

This warranty does not cover damage due to abuse, negligence, exposure to hostile environments, or any attempt by the customer (or anyone other than Red Rock Technologies' technical personnel) to modify or repair the product. The warranty is extended to the original purchaser or through the original purchaser if the product has been resold to an end-user.

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