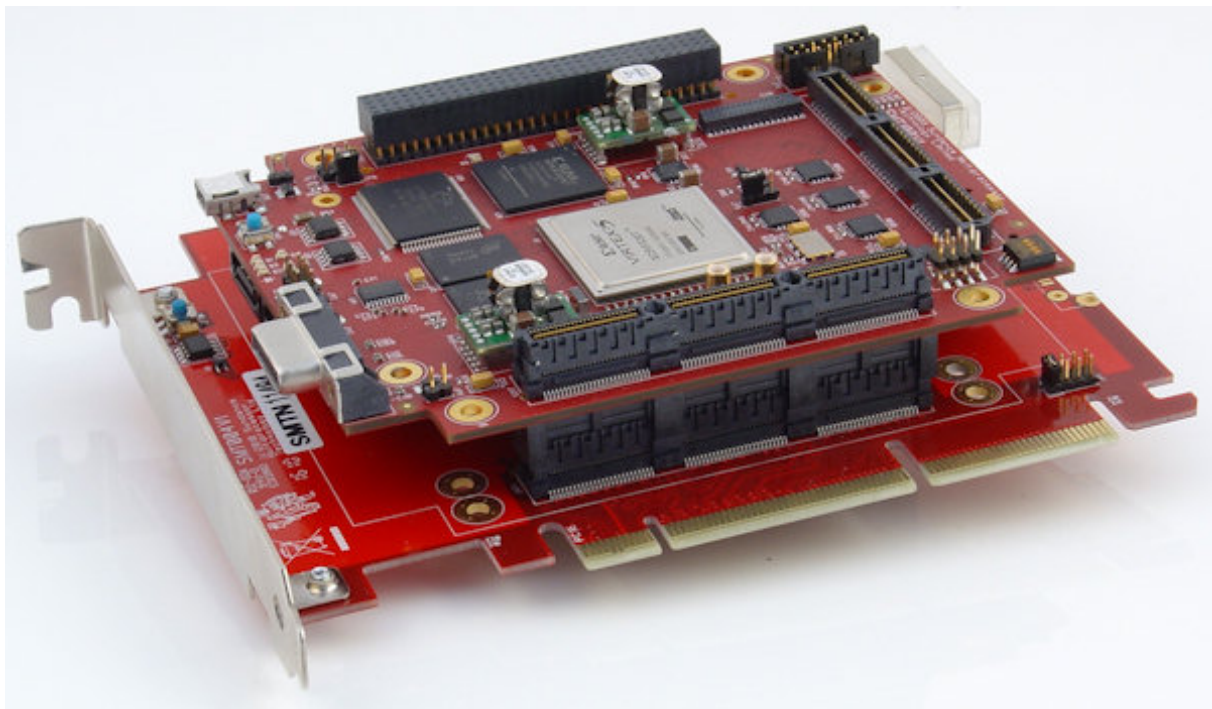


Unit / Module Description:	PCIe PCI/104-Express
Unit / Module Number:	SMT004
Document Issue Number:	1.2
Issue Date:	8 th Feb 2013
Original Author:	G Parker

Product Specification for SMT004



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Certificate Number FM 55022

Revision History

Issue	Changes Made	Date	Initials
1.0	First release.	29/03/10	GKP
1.1	Corrected lane size.	30/03/10	GKP
1.2	Added Schematics and photo to front page.	8/2/13	CH

Table of Contents

1	Introduction / Description	4
2	Related Documents (hyperlinks)	4
3	Acronyms, Abbreviations and Definitions.....	4
4	Functional Description.....	5
4.1	Block Diagram	5
4.2	Module Description.....	6
4.2.1	Power Supplies	7
5	Verification, Review & Validation Procedures	8
6	Circuit Description / Diagrams.....	9
7	Footprint.....	10
7.1	Top View.....	10
8	Support Packages	11
9	Physical Properties.....	11
10	Safety.....	12
11	EMC.....	12
12	Ordering Information.....	12

1 Introduction / Description

The SMT004 is a PCI/104-Express carrier board in the PCI-Express (http://www.pc104.org/pci104_Express_specs.php) format.

The main features of the SMT004 are listed below:

- PCIe form factor card acting as a PCI/104-Express carrier.
- 4-lane PCIe interface.
- Stack-up or stack-down configurations.

2 Related Documents (hyperlinks)

[PCI/104-Express specification.](#)

[PCI/104 specification.](#)

3 Acronyms, Abbreviations and Definitions

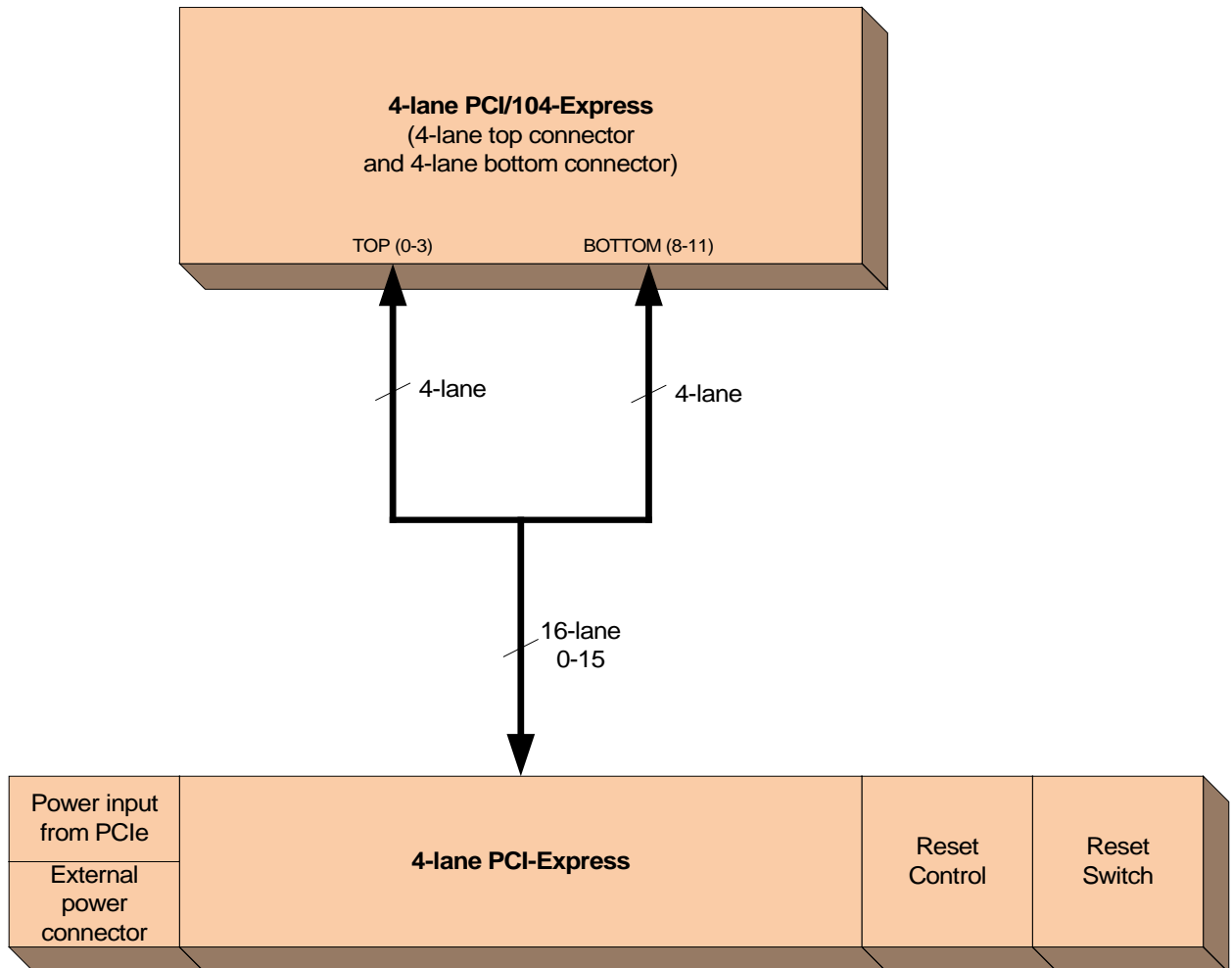
A list of acronyms etc:

<http://www.sundance.com/web/files/static.asp?pagename=acc>

4 Functional Description

The major elements of the SMT004 are shown in the block diagram below.

4.1 Block Diagram



4.2 Module Description

The SMT004 is a 4-lane PCIe form-factor plug-in board.

The 4-lane PCIe interface is connected directly to the top PCI/104-Express connector using lanes 0-3. This allows a stack to be constructed on the top side of the card.

The 4-lane PCIe interface is also connected to the bottom PCI/104-Express connector using lanes 8-11.

4.2.1 Power Supplies

+3.3V is supplied via a total of 3 pins from the PCIe connector.

+5V is obtained from a hard-disk connector.

+12V is supplied via 5 pins from the PCIe connector and from the hard-disk connector.

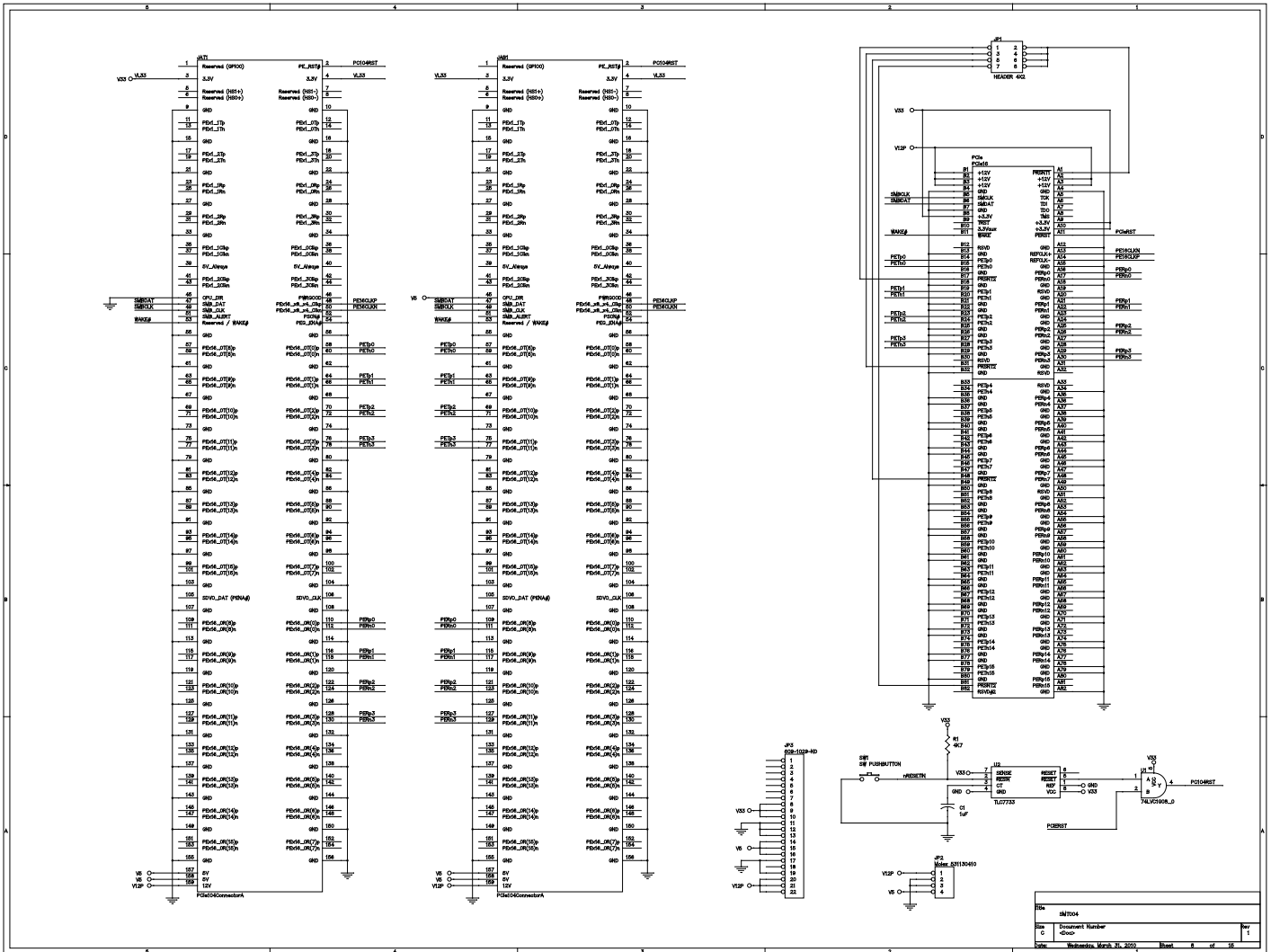
-12V is NOT available.

Supplementary +3.3V may be obtained via a Molex mini-fit jnr connector.

5 Verification, Review & Validation Procedures

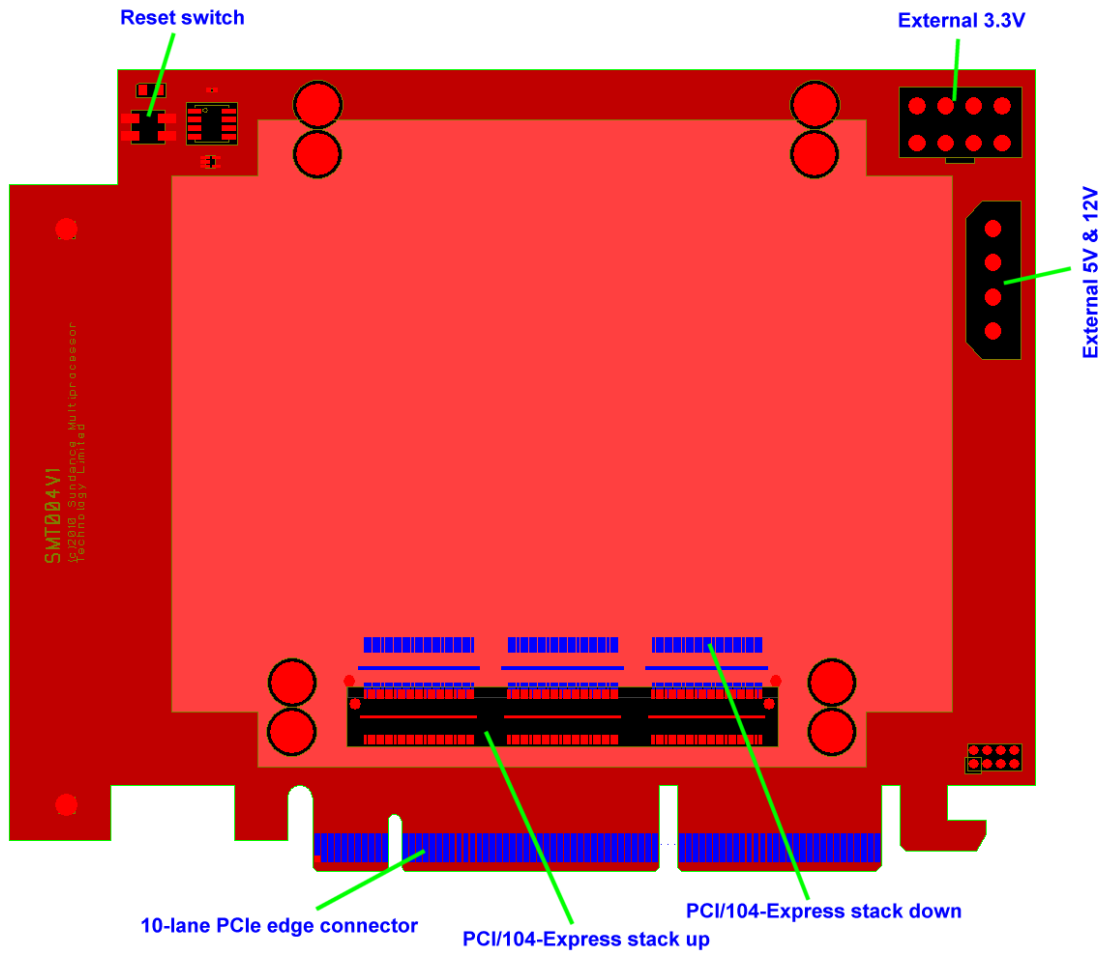
To be carried out in accordance with the Sundance Quality Procedures (ISO9001).

6 Circuit Description / Diagrams



7 Footprint

7.1 Top View



8 Support Packages

9 Physical Properties

Dimensions		
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Weight	
--------	--

Voltage	Current (estimate)
+12V	0
+5V	0
+3.3V	0
-5V	0
-12V	0

MTBF	
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Note that the above current requirements are estimates and actual values depend entirely on Virtex 5 configuration, memory utilisation, and type of SLB fitted.

10 Safety

This module presents no hazard to the user when in normal use.

11 EMC

This module is designed to operate from within an enclosed host system, which is build to provide EMC shielding. Operation within the EU EMC guidelines is not guaranteed unless it is installed within an adequate host system.

This module is protected from damage by fast voltage transients originating from outside the host system which may be introduced through the output cables.

Short circuiting any output to ground does not cause the host PC system to lock up or reboot.

12 Ordering Information

Order number:

SMT004