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ASCOR INCORPORATED
AGiga-tronicsCompany

Technical Manual

Model 7015

2x16 SHIELDED MATRIX 70MHz

Rev: B
07/25/03

Manual Part No.
07507015

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Introduction

This manual provides the necessary information for the Model 7015 card assembly.

General Description

This CompactPCI assembly consists of a 2x16 shielded matrix. This card is compatible with National Instruments series chassis.

Weight and Dimensions

Size: 3U PXI
Width: .80 in.
Height: 5.2 in.
Length: 6.5 in.
Weight: 0.5 lbs.

Features

- ASCOR's Pixie series card assembly.
- Insertion Loss: < -1.1dB @ 50 MHz
- Bandwidth: > 70 MHz @ -3dB
- Crosstalk Isolation: > -30dB @ 50 MHz

Electrical Specifications

Switching Voltage (DC/Peak, AC, Resistive):	200 Volts DC
Switching Current (DC/Peak, AC, Resistive):	0.5 Amps
Carry Current (DC/Peak, AC, Resistive)	1.0 Amps
Contact Power Rating (DC/Peak, AC, Resistive):	60 Watts
Life expectancy @ 2A, 30 VDC	1,000,000 cycles
Contact resistance:	< 0.25 ohm
Connectors:	J1 & J2 SMB Coax
	J3 - 68 pin Robinson

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Product Warranty

Your ASCOR PXI/CompactPCI module comes with a 1 year limited warranty. ASCOR warranty obligations are described by and limited to the terms set forth below and apply only in the United States of America. ASCOR warrants this PXI /CompactPCI module against defect in material and workmanship for a period of one (1) year from the date of purchase from ASCOR or an authorized ASCOR agent. This warranty applies only to the original purchaser of the PXI/CompactPCI module and is not transferable unless authorized in writing by ASCOR in advance of such transfer. This warranty does not cover any incompatibilities due to the user's test environment, hardware, software or any other related system configuration in which the ASCOR PXI/CompactPCI module interfaces. Proof of purchase will be required BEFORE any warranty consideration by ASCOR occurs.

This warranty does not cover any damage caused by negligence, non-authorized modifications, or parts installed or removed without prior written permission from ASCOR. This warranty does not apply if the PXI/CompactPCI module has been damaged by accident, abuse, misuse, or misapplication, nor as a result of service to the product by anyone other than ASCOR or an authorized ASCOR representative. ASCOR PXI/CompactPCI products are not designed for or permitted to be used in on-line control systems in hazardous environments such as operation of nuclear facilities, aircraft navigation or control or direct life support. If you use the ASCOR products in such hazardous environments, this warranty is immediately null and void.

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This warranty applies to all ASCOR modules and is governed by the laws of the State of California.

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Programming

The Model 7015 is a PXI register based card assembly design to be used with the National Instrument PXI chassis. The Model 7015 can be programmed in 8, 16 or 32 bit wide data format. Through your PXI controller, write the data to the appropriate register as shown on the register map for the relay or relays in the register that is being closed. When the data bit is true, the relay chosen will be closed. The state of the relays in a register can be determined by reading the desired register. Data read back represents the value of the desired register. In addition, you can read back the coil state to verify that the coil is driven correctly by the program register. This scenario verifies that the program register has correctly controlled the relay coil.

The register map is organized to show the relay designation in each register. It is followed by the register's functionality and the path connections to the front panel. PXI will automatically assign the starting address of the card, called Bar0. This will be the starting address of the first register. Each address location controls 8 bits. Shown are the control functions using 16 format.

Programming of the Model 7015 is very simple. The module is PIXIE-Flex mixed signal module. The location of the first register is assigned by the PCI enumerator. This is designated as "Bar0" or the starting address of the card. The program registers using 16 bit format are located as follows:

Register #1:	**read/write function:**	**Bar0 + 0000h**
	coil read back:	**Bar0 + 0008h**
Register #2:	**read/write function:**	**Bar0 + 0002h**
	coil read back:	**Bar0 + 000Ah**

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J1 - CHANNEL A (COAX)

J2 - CHANNEL B (COAX)

J3

DESCRIPTION	*PIN #*	PIN #	DESCRIPTION
Shield	68	67	Shield
Digital 1	66	65	I/O 1
Shield	64	63	Shield
Digital 2	62	61	I/O 2
Shield	60	59	Shield
Digital 3	58	57	I/O 3
Shield	56	55	Shield
Digital 4	54	53	I/O 4
Shield	52	51	Shield
Digital 5	50	49	I/O 5
Shield	48	47	Shield
Digital 6	46	45	I/O 6
Shield	44	43	Shield
Digital 7	42	41	I/O 7
Shield	40	39	Shield
Digital 8	38	37	I/O 8
Shield	36	35	Shield
Digital 9	34	33	I/O 9
Shield	32	31	Shield
Digital 10	30	29	I/O 10
Shield	28	27	Shield
Digital 11	26	25	I/O 11
Shield	24	23	Shield
Digital 12	22	21	I/O 12
Shield	20	19	Shield
Digital 13	18	17	I/O 13
Shield	16	15	Shield
Digital 14	14	13	I/O 14
Shield	12	11	Shield
Digital 15	10	9	I/O 15
Shield	8	7	Shield
Digital 16	6	5	I/O 16
Shield	4	3	Shield
Shield	2	1	Shield

Connector Pin Assignments

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MODULE ASSEMBLY AND SCHEMATIC DRAWINGS

Module

PL91000040

Assy91000040

Assembly/Schematics

PL85002590

Assy85002590

SCH85002590

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