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Model 3000-80
6(1x6) 26.6GHz
90401160



Page 1

Operation Manual

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This product complies with the essential requirements of the following applicable European Directives, and carries the CE mark accordingly.

89/336/EEC and 73/23/EEC	EMC Directive and Low Voltage Directive
EN61010-1 (1993)	Electrical Safety
EN61326-1 (1997)	EMC – Emissions and Immunity
Manufacturer's Name:	**Manufacturer's Address**
Giga-tronics, Incorporated	4650 Norris Canyon Road San Ramon, California 94583 U.S.A.
Type of Equipment:	**Model Series Number**
Switching Module	3000-80

Declaration of Conformity on file. Contact Giga-tronics at the following;

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Revision History			
Revision	**Description of Change**	**Chg Order #**	**Approved By**
A	Initial Release		
B	Updated		
C	Reformatted 3/12		RCW

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Chapter 1 **Introduction**

1.1 Safety and Manual Conventions

This manual contains conventions regarding safety and equipment usage as described below.

1.1.1 Product Reference

Throughout this manual, the term “Common Core Switching Platform, Series 8800” refers to all models of within the series, unless otherwise specified.

1.1.2 Personal Safety Alert



WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

1.1.3 Equipment Safety Alert



CAUTION: Indicates a situation which can damage or adversely affect the product or associated equipment.

1.1.4 Notes

Notes are denoted and used as follows:

NOTE: Highlights or amplifies an essential operating or maintenance procedure, practice, condition or statement.

1.1.5 Electrical Safety Precautions

Any servicing instructions are for use by service-trained personnel only. To avoid personal injury, do not perform any service unless you are qualified to do so.

For continued protections against fire hazard, replace the AC line fuse only with a fuse of the same current rating and type. Do not use repaired fuses or short circuited fuse holders.

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Chapter 2 **Configuration Table**

90401160	Top level Assembly Drawing
PL90401160	Top Assembly Bill of Materials

88101770	Cable Assembly (Switch to Circuit)
85005010-011	Printed Circuit Assembly
PL85005010-011	Printed Circuit Assembly Bill of Materials
SCH85005010-011	Printed Circuit Assembly Schematic

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Chapter 3 **Functional Description**

3.1 Introduction

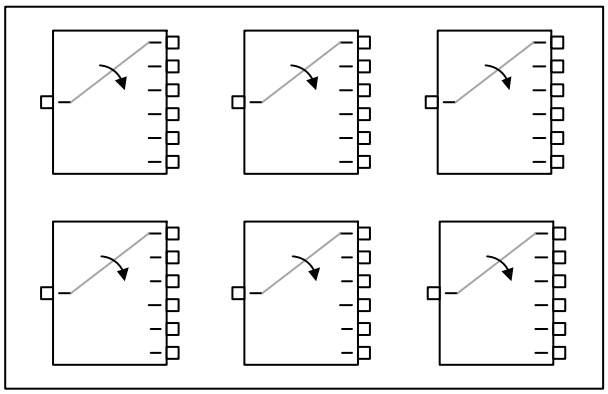
This manual provides the necessary information for the operation and maintenance of the Model 3000-80 General Purpose VXI Switch Module.

3.2 General Description

The 3000-80 is a 1-WIDE VXI module containing up to six 1x6 Non-Terminated RF switches.

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Chapter 4 **Block Diagram**



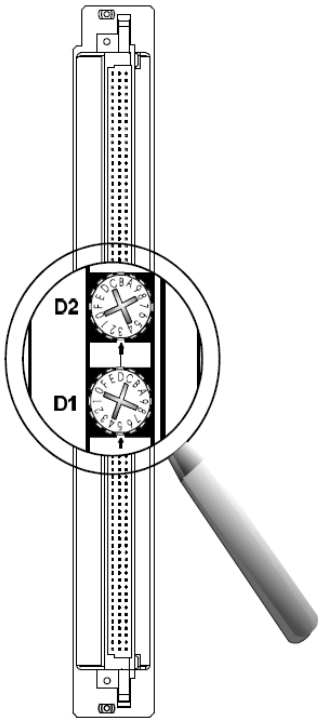
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Controls and Indicators

The following controls and indicators are provided to select and display the functions of the ASCOR 3000-80 Module's operating environment.

4.1 VXI LOGICAL ADDRESS

The Logical Address Switch is dual circular switches, D1 and D2 which are located at the rear of the module. The address can be set to any value between 1 and 255 (decimal) or 1 and FF (hexadecimal), (address 0 is reserved for the resource manager). However, the Module fully supports Dynamic Configuration as defined in ***Section F of the VXI specification,*** address 255 (FF) should be selected only if the Resource Manager also supports Dynamic Configuration.



4.2 LEDs

The following LEDs are visible at the Module's front panel to indicate the

status of the module's operation:

4.2.1 "BUS" LED

This green color LED is normally off and will flash on when the module is addressed by the system.

4.2.2 "PWR" LED

This red color LED is normally on when the Module is Powered up.

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Chapter 5 Internal Settings

The following items are inside the module and can be reached by removing the side cover.

5.1 Fuse

The 3000-80 uses a 8 Amp fuse (F1) in the +5v input and a 7 Amp fuse (F2) in

the +12 v input.

5.2 VXI_{bus} Interrupt Level Selection

The VXIbus interrupt level is set with three bits in the “3Eh” register.

See the section on “A16 ADDRESS SPACE REGISTER DESCRIPTION”.

The interrupt level is factory set to “no interrupt”.

5.3 Internal Jumpers

J107 (SCH85005010-011, pg. 2)
This set of jumpers is used to select either the A32 mode or the A24 mode of operation.
Normal factory is mode A24, J107-1 to J107-2.

J105 (SCH85005010-011, pg 2)
Factory setting is J105-1 to J105-2

J106 (SCH85005010-011, pg 3)
This set of jumpers allows various time delays to be used during development.
Normal factory setting is J106-1 to J106-2

J3-3 to J3-4 (pg 5) Provides +12 V to Switch S1 and to S1 driver diode suppression

J7-3 to J7-4 (pg 5) Provides +12 V to Switch S2 and to S2 driver diode suppression

J2-3 to J2-4 (pg 6) Provides +12 V to Switch S3 and to S3 driver diode suppression

J6-3 to J6-4 (pg 6) Provides +12 V to Switch S4 and to S4 driver diode suppression

J13-3 to J13-4 (pg 7) Provides +12 V to Switch S5 and to S5 driver diode suppression

J3-17 to J17-4 (pg 7) Provides +12 V to Switch S6 and to S6 driver diode suppression

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Chapter 6 **Specifications**

RF SWITCH 1X6, 50Ω

FREQUENCY (GHz)	0 – 3	3 – 8	8 – 12.4	12.4 – 18	18 – 26.5
V.S.W.R. <=	1.15 : 1	1.25 : 1	1.35 : 1	1.45 : 1	1.9 : 1
INSERTION LOSS <=	0.15 dB	0.25 dB	0.35 dB	0.45 dB	0.80 dB
ISOLATION >=	85 dB	75 dB	65 dB	65 dB	45 dB

COMMON CHARACTERIETICS

Life	>1,000,000 CYCLES per position
Switching Time	< 15 ms
RF Connectors	SMA
Operating Temp Range	(°C) : -35 , +70
Actuator Voltage	+12V

Environmental Specifications

Temperature:

Operating:	0º to 55ºC
Storage:	- 40º to 75ºC

Relative Humidity:

Operating:	0 to 90% non-condensing
Storage:	0 to 95% non-condensing

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Chapter 8 **Register Map**

ADDRESS = 8000 (HEX)

BIT	INTERNAL CONNECTION	FRONT PANEL CONNECTIONS
15	J5-3	N/A
14	J5-5	N/A
13	J5-7	S2-6
12	J5-9	S2-5
11	J5-10	S2-4
10	J5-8	S2-3
9	J5-6	S2-2
8	J5-4	S2-1
7	J1-3	N/A
6	J1-5	N/A
5	J1-7	S1-6
4	J1-9	S1-5
3	J1-10	S1-4
2	J1-8	S1-3
1	J1-6	S1-2
0	J1-4	S1-1

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ADDRESS = 8002 (HEX)

BIT	INTERNAL CONNECTION	FRONT PANEL CONNECTIONS
15	J8-3	N/A
14	J8-5	N/A
13	J8-7	S4-6
12	J8-9	S4-5
11	J8-10	S4-4
10	J8-8	S4-3
9	J8-6	S4-2
8	J8-4	S4-1
7	J4-3	N/A
6	J4-5	N/A
5	J4-7	S3-6
4	J4-9	S3-5
3	J4-10	S3-4
2	J4-8	S3-3
1	J4-6	S3-2
0	J4-4	S3-1

Reference : Schematic 85005010-011, pages 5 & 6
N/C = No Connection
J1-1, J5-1, J4-1, J8-1 = +12 V
J1-2, J5-2, J4-2, J8-2 = DGND

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ADDRESS = 8004 (HEX)

BIT	INTERNAL CONNECTION	FRONT PANEL CONNECTIONS
15	J15-3	N/A
14	J15-5	N/A
13	J15-7	S6-6
12	J15-9	S6-5
11	J15-10	S6-4
10	J15-8	S6-3
9	J15-6	S6-2
8	J15-4	S6-1
7	J11-3	N/A
6	J11-5	N/A
5	J11-7	S5-6
4	J11-9	S5-5
3	J11-10	S5-4
2	J11-8	S5-3
1	J11-6	S5-2
0	J11-4	S5-1

Reference : Schematic 85005010-011, page 7
N/C = No Connection
J11-1, J15-1 = +12 V
J11-2, J15-2 = DGND

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