

General

The relay-based G2R10 is a general purpose 2-wire relay matrix (NxM) module. It is a non-buffered, hard-contact type of general purpose matrix. It provides a high performance, low cost solution for many applications like ATE. It is available in different sizes, and additional special configurations can be made per spec by contacting the factory.

Ultra-high reliability relay elements are coupled with control and status circuitry. The module also features hot-swap control technology for easy maintenance.

For control and DC power, the module must be installed into any G2 type mainframe controller. The mainframe must have either the -200, D200, -207 or -D207 power supply configuration. Optionally, the -600, -D600, -100 or -D100 power supply configuration could be used if the -6x suffix is specified on the module.

Applications

- ATE systems
- Communication installations
- General purpose signal routing
- Switching power (AC/DC)
- Satellite control centers
- Ground station signal routing

Features

- High reliability relay elements
- DC to 10MHz bandpass (min)
- Standard DC-37 connectors (others optional)
- Hot-Swap module technology
- Rugged aluminum shielded enclosure

Configurations

Model Number	Configuration	Conn	Contacts
■ G2R10-D0804-21	4 input, 4 output	DC-37	1 amp
■ G2R10-D1204-21	8 input, 4 output	DC-37	1 amp
■ G2R10-D1604-21	12 input, 4 output	DC-37	1 amp
■ G2R10-D2004-21	16 input, 4 output	DC-37	1 amp
■ G2R10-D1608-21	8 input, 8 output	DC-37	1 amp
■ G2R10-D2408-21	16 input, 8 output	DC-37	1 amp
■ G2R10-D3216-21	16 input, 16 output	DC-37	1 amp

Modules with Expander Port included

■ G2R10-D0804E-21	4 input, 4 output	DC-37	1 amp
■ G2R10-D1204E-21	8 input, 4 output	DC-37	1 amp
■ G2R10-D1604E-21	12 input, 4 output	DC-37	1 amp
■ G2R10-D2004E-21	16 input, 4 output	DC-37	1 amp
■ G2R10-D1608E-21	8 input, 8 output	DC-37	1 amp
■ G2R10-D2408E-21	16 input, 8 output	DC-37	1 amp
■ G2R10-D3216E-21	16 input, 16 output	DC-37	1 amp

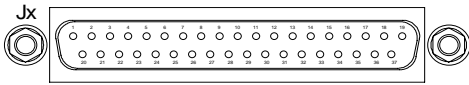


Model G2R10 with optional expander ports

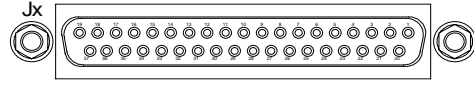


Model G2R10 with no expander ports





TYPICAL INPUT CONNECTOR
37 POSITION D-SUB MALE
(DC-37P)



TYPICAL OUTPUT CONNECTOR
37 POSITION D-SUB FEMALE
(DC-37S)

Connector J1: (Inputs 1-16)

Pin	Signal	Pin	Signal
1	Input 1 (+)	20	Input 1 (-)
2	Input 2 (+)	21	Input 2 (-)
3	Input 3 (+)	22	Input 3 (-)
4	Input 4 (+)	23	Input 4 (-)
5	Input 5 (+)	24	Input 5 (-)
6	Input 6 (+)	25	Input 6 (-)
7	GND	26	GND
8	Input 7 (+)	27	Input 7 (-)
9	Input 8 (+)	28	Input 8 (-)
10	Input 9 (+)	29	Input 9 (-)
11	Input 10 (+)	30	Input 10 (-)
12	Input 11 (+)	31	Input 11 (-)
13	Input 12 (+)	32	Input 12 (-)
14	GND	33	GND
15	Input 13 (+)	34	Input 13 (-)
16	Input 14 (+)	35	Input 14 (-)
17	Input 15 (+)	36	Input 15 (-)
18	Input 16 (+)	37	Input 16 (-)
19	GND		

Connector J3: (Outputs 1-16)

Pin	Signal	Pin	Signal
1	Output 1 (+)	20	Output 1 (-)
2	Output 2 (+)	21	Output 2 (-)
3	Output 3 (+)	22	Output 3 (-)
4	Output 4 (+)	23	Output 4 (-)
5	Output 5 (+)	24	Output 5 (-)
6	Output 6 (+)	25	Output 6 (-)
7	GND	26	GND
8	Output 7 (+)	27	Output 7 (-)
9	Output 8 (+)	28	Output 8 (-)
10	Output 9 (+)	29	Output 9 (-)
11	Output 10 (+)	30	Output 10 (-)
12	Output 11 (+)	31	Output 11 (-)
13	Output 12 (+)	32	Output 12 (-)
14	GND	33	GND
15	Output 13 (+)	34	Output 13 (-)
16	Output 14 (+)	35	Output 14 (-)
17	Output 15 (+)	36	Output 15 (-)
18	Output 16 (+)	37	Output 16 (-)
19	GND		

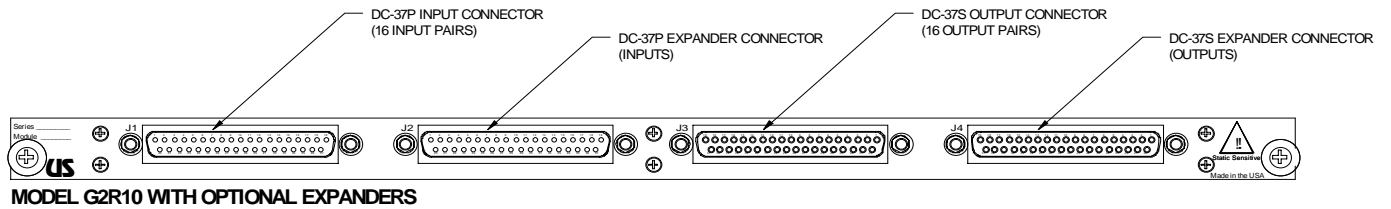
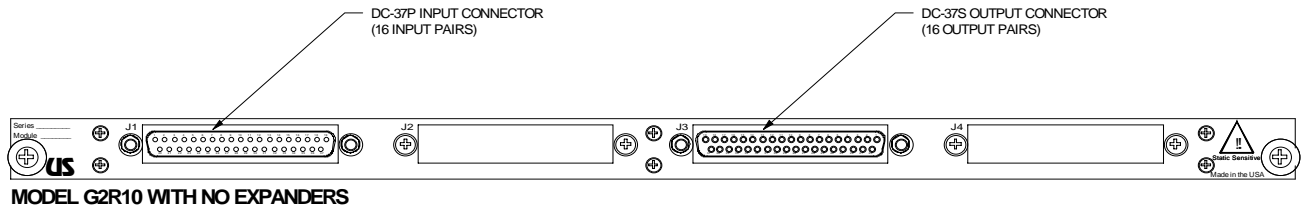
Connector J2: (Input Expander 1-16)

Pin	Signal	Pin	Signal
1	Input 1 (+)	20	Input 1 (-)
2	Input 2 (+)	21	Input 2 (-)
3	Input 3 (+)	22	Input 3 (-)
4	Input 4 (+)	23	Input 4 (-)
5	Input 5 (+)	24	Input 5 (-)
6	Input 6 (+)	25	Input 6 (-)
7	GND	26	GND
8	Input 7 (+)	27	Input 7 (-)
9	Input 8 (+)	28	Input 8 (-)
10	Input 9 (+)	29	Input 9 (-)
11	Input 10 (+)	30	Input 10 (-)
12	Input 11 (+)	31	Input 11 (-)
13	Input 12 (+)	32	Input 12 (-)
14	GND	33	GND
15	Input 13 (+)	34	Input 13 (-)
16	Input 14 (+)	35	Input 14 (-)
17	Input 15 (+)	36	Input 15 (-)
18	Input 16 (+)	37	Input 16 (-)
19	GND		

Connector J4: (Output Expander 1-16)

Pin	Signal	Pin	Signal
1	Output 1 (+)	20	Output 1 (-)
2	Output 2 (+)	21	Output 2 (-)
3	Output 3 (+)	22	Output 3 (-)
4	Output 4 (+)	23	Output 4 (-)
5	Output 5 (+)	24	Output 5 (-)
6	Output 6 (+)	25	Output 6 (-)
7	GND	26	GND
8	Output 7 (+)	27	Output 7 (-)
9	Output 8 (+)	28	Output 8 (-)
10	Output 9 (+)	29	Output 9 (-)
11	Output 10 (+)	30	Output 10 (-)
12	Output 11 (+)	31	Output 11 (-)
13	Output 12 (+)	32	Output 12 (-)
14	GND	33	GND
15	Output 13 (+)	34	Output 13 (-)
16	Output 14 (+)	35	Output 14 (-)
17	Output 15 (+)	36	Output 15 (-)
18	Output 16 (+)	37	Output 16 (-)
19	GND		

NOTE: The optional input and output expander ports are not switched, but are directly connected (J1 is connected to J2, and J3 is connected to J4).



Signal Specifications

Switching elementsRelay-based (2-wire)
Operating modeNormally open (no terminations)
Signal typeAnalog or digital, bi-directional
Input signal connector . . .D-Sub Type (DC-37P)
Output signal connector . .D-Sub Type (DC-37S)
Frequency rangeDC - 10MHz (min)
On resistance<700 mOhms
Contact rating1 amp, 30 watts (optional 2 amp)
Switching speed<5mS (plus control time)

General Specifications

Module size1 slot height
Control typeG2 compatible
SparingHot-Swappable
ConstructionShielded aluminum case
DC power-200, D200, -207 or -D207 configuration
Weight<1.5lbs
Operating temp0 to +70C
Non-operating temp-20 to +85C
Humidity0 to 95% (NC @ +25C)
Contact life>500,000 operations (@1A)
MTBF (estimated)>120,000 hours
(per MIL-HDBK-217F, N1
ground benign @ +25C)

Universal Switching's policy is one of continuous development, and consequently the company reserves the right to vary from the descriptions and specifications shown in this publication.