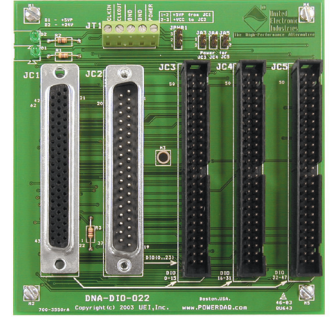


# DNA-DIO-022

## PowerDNA Digital Input/Output Accessory Panel

10-Year Availability Guarantee

- Use with standard Opto-22 accessories
- Connect 48 DIO lines (DNA-DIO-403) to 3 IDC-50 (Opto-22) connectors
- Compatible with PD-DIO-BPLANE
- Jumper-selectable power connection options to Opto-22



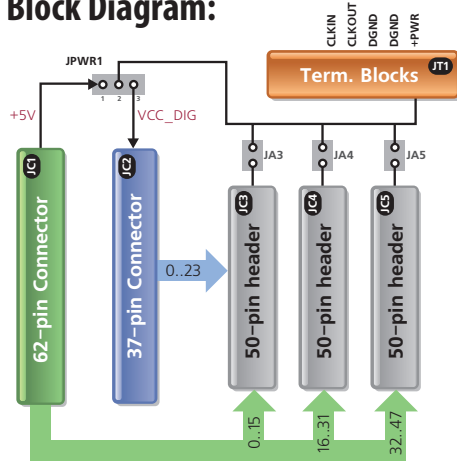
### General Description:

The DNA-DIO-022 is an external accessory panel for the DNA-DIO-403 layer. Panel distributes 48 DIO channels, into 3 groups of 16 lines which connect to three Opto-22 compatible connectors. Using PD2-DIO-BPLANE16, you can add 16 relays to each of the 3 connectors. Each DNA-DIO-403 port (in groups of 8 lines) direction can be configured in software as either input or output. This allows you to mix various relays when connecting via the DNA-DIO-022.

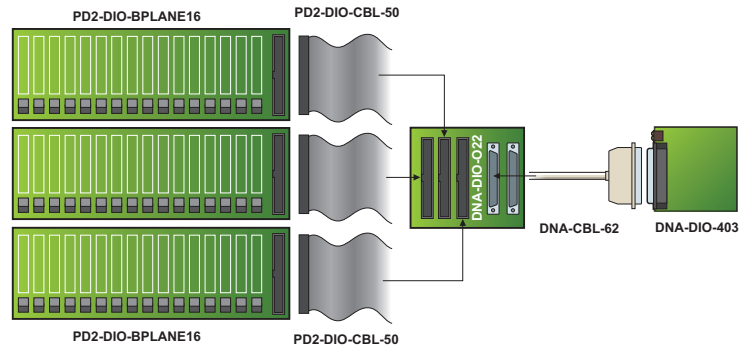
### Technical Specifications:

Connection Settings for DNA-DIO-403:	
JPWR1	1-2 (optional)
JA3, JA4, JA5	fitted (optional, needed if Opto-22 accessory requires power)
+PWR Terminal	output (200mA max)

### Block Diagram:



### Connection Diagram:



### Pinout Diagrams:

**JC1 — DB-62 (female) 62-pin connector:**

This connector is used for signals coming from DNA-DIO-403. All DIO lines in groups of 16 channels are mapped to JC3, JC4 and JC5 connectors.

62	DIO2	42	DGND	21	+5V
61	DIO1	41	DIO1	20	DIO0
60	DIO5	40	DIO4	19	DIO3
59	DIO8	39	DIO7	18	DIO6
58	DIO11	38	DIO10	17	DIO9
57	DIO14	37	DIO13	16	DIO12
56	DIO17	36	DIO16	15	DIO15
55	DIO20	35	DIO19	14	DIO18
54	DIO23	34	DIO22	13	DIO21
53	DIO26	33	DIO25	12	DIO24
52	DIO29	32	DIO28	11	DIO27
51	DIO32	31	DIO31	10	DIO30
50	DIO35	30	DIO34	9	DIO33
49	DIO38	29	DIO37	8	DIO36
48	DIO41	28	DIO40	7	DIO39
47	DIO44	27	DIO43	6	DIO42
46	DIO47	26	DIO46	5	DIO45
45	DGND	25	CLKOUT	4	CLKIN
44	DGND	24	DGND	3	DGND
43	DGND	23	DGND	2	DGND
		22	DGND	1	DGND

**JC2 — DB-37 (male) 37-pin connector:**

This connector currently is not used - reserved for upcoming PowerDNA digital I/O layers.

DIO0	20	1	DGND
DIO2	21	2	DIO1
DIO3	22	3	DGND
DIO5	23	4	DIO4
DIO6	24	5	DGND
DIO8	25	6	DIO7
DIO9	26	7	DGND
DIO11	27	8	DIO10
DIO12	28	9	DGND
DIO14	29	10	DIO13
DIO15	30	11	DGND
DIO17	31	12	DIO16
DIO18	32	13	DGND
DIO20	33	14	DIO19
DIO21	34	15	DGND
DIO23	35	16	DIO22
DIO24	36	17	DGND
VCC_DIG	37	18	VCC_DIG
		19	VCC_DIG

**JPWR1 — 3-pin Jumpers Header**

3	VCC_DIG
2	+PWR
1	+5V

**JT1 — Screw Terminal Block:**

1	CLKIN
2	CLKOUT
3	DGND
4	DGND
5	+PWR

**JC3 — IDC-50 (male) 50-pin connector:**

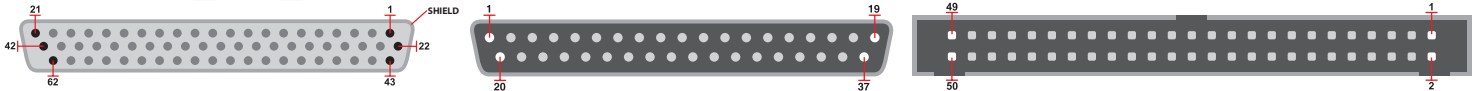
RESERVED	1	2	DGND
RESERVED	3	4	DGND
RESERVED	5	6	DGND
RESERVED	7	8	DGND
RESERVED	9	10	DGND
RESERVED	11	12	DGND
RESERVED	13	14	DGND
RESERVED	15	16	DGND
DIO15	17	18	DGND
DIO14	19	20	DGND
DIO13	21	22	DGND
DIO12	23	24	DGND
DIO11	25	26	DGND
DIO10	27	28	DGND
DIO9	29	30	DGND
DIO8	31	32	DGND
DIO7	33	34	DGND
DIO6	35	36	DGND
DIO5	37	38	DGND
DIO4	39	40	DGND
DIO3	41	42	DGND
DIO2	43	44	DGND
DIO1	45	46	DGND
DIO0	47	48	DGND
+PWR	49	50	DGND

**JC4 — IDC-50 (male) 50-pin connector:**

1	2	DGND	
3	4	DGND	
5	6	DGND	
7	8	DGND	
9	10	DGND	
11	12	DGND	
13	14	DGND	
15	16	DGND	
DIO31	17	18	DGND
DIO30	19	20	DGND
DIO29	21	22	DGND
DIO28	23	24	DGND
DIO27	25	26	DGND
DIO26	27	28	DGND
DIO25	29	30	DGND
DIO24	31	32	DGND
DIO23	33	34	DGND
DIO22	35	36	DGND
DIO21	37	38	DGND
DIO20	39	40	DGND
DIO19	41	42	DGND
DIO18	43	44	DGND
DIO17	45	46	DGND
DIO16	47	48	DGND
+PWR	49	50	DGND

**JC5 — IDC-50 (male) 50-pin connector:**

1	2	DGND	
3	4	DGND	
5	6	DGND	
7	8	DGND	
9	10	DGND	
11	12	DGND	
13	14	DGND	
15	16	DGND	
DIO47	17	18	DGND
DIO46	19	20	DGND
DIO45	21	22	DGND
DIO44	23	24	DGND
DIO43	25	26	DGND
DIO42	27	28	DGND
DIO41	29	30	DGND
DIO40	31	32	DGND
DIO39	33	34	DGND
DIO38	35	36	DGND
DIO37	37	38	DGND
DIO36	39	40	DGND
DIO35	41	42	DGND
DIO34	43	44	DGND
DIO33	45	46	DGND
DIO32	47	48	DGND
+PWR	49	50	DGND



### Ordering Information:

Part Number	Description
DNA-DIO-022	Accessory panel for PowerDNA DIO layers
DNA-CBL-62	62-way cable (for connection with DNA-DIO-403)
PD2-DIO-CBL-50	50-way, 18in flat ribbon cable (for connection with PD2-DIO-BPLANE16 - solid state relay backplane)
PD2-DIO-BPLANE16	16-channel solid state relay backplane