1280 Enterprise Series

Digital I/O Expansion Card Installation

The Digital I/O (DIO) Expansion Card (PN 164684) provides 24 additional DIO, able to be configured as either inputs or outputs. The first eight DIO can be accessed with a pluggable connector on J1. To use all 24 DIO, a 60 pin ribbon cable can be plugged into header J2 (this ribbon cable sold separately).

Manuals can be viewed and downloaded from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties

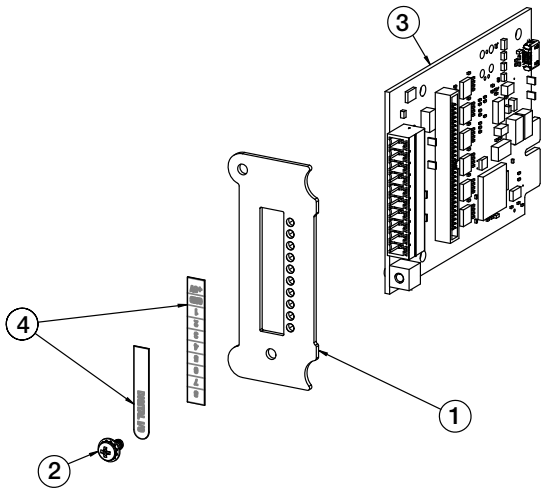

Figure 1. Digital IO Card Kit

Item No.	Part No.	Description	Qty
1	164677	Face Plate, Option Card	1
2	14822	Screw, Mach 4-40 NCx1/4	1
3	160761	Board Assy, 1280 Dual Com	1
4	167193	Label, Digital I/O Opt 1280	1

Table 1. Digital IO Card Kit Parts List

The included parts kit contains items used for installation of the card. Items listed for stud grounding of the shields pertain to the panel mount enclosure. See the 1280 technical manual for more information on shield grounding.

Part No.	Description	Qty
14621	Nut, Kep 6-32NC HEX (used for stud grounding)	1
14822	Screw, Mach 4-40 NCx1/4 (secures card to controller assembly)	1
15130	Washer, Lock NO 6 Type A (used for stud grounding)	1
164918	Connector, 10 Pos Screw Terminal (interface connector)	1
15631	Cable Tie,3 inch Nylon (secures cable in panel mount installation)	4
53075	Clamp, Ground Cable Shield (used for stud grounding)	1

Table 2. Parts Kit (PN 164691)

WARNING *Always disconnect power before opening the indicator. Option card is not hot swappable.*

CAUTION *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

1. Open the indicator as instructed in the 1280 technical manual.
2. Remove a slot cover plate from the controller assembly to open a slot for the card.
3. Remove protective tape from pins J3 on the option card prior to installation. Make sure the pins are clean of any sticky residue by carefully wiping with rubbing alcohol.
4. Align the card to the slot; the screw hole in the faceplate of the card should align with the screw hole on the controller assembly.
5. Slide the card into the top and bottom grooves of the slot. Push the card until it is securely seated in the back plane.
6. Secure with screw 4-40 NC x 1/4 (provided).
7. Route the cable using one of the following connections.

   Connection to J1:

   - Cable 14-30 AWG

   Connection to J2:

   - Flat Ribbon Cable (PN 170008), 24 inch
   - Round Ribbon Cable, (PN 170009) 60 inch
   - Round Ribbon Cable with cord grip, (PN 170736) 60 inch

Note *Connection cables for J2 include a 60 to 50 pin adapter for relay rack connection.*

The ribbon cables are fed though the face plate by positioning the cable on the top indent.

8. Make connections to the option card. See Figure 2 and Table 3.

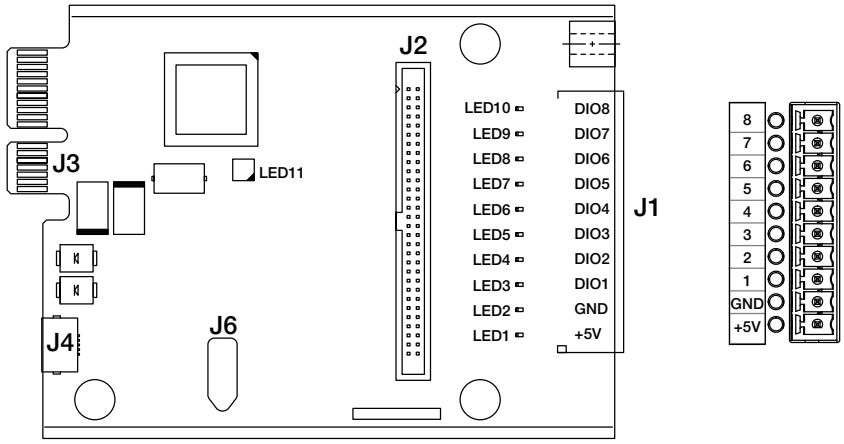

Figure 2. Digital I/O Card

Pin	Signal	Pin	Signal
1	DIO24	27	DIO11
3	DIO23	29	DIO10
5	DIO22	31	DIO9
7	DIO21	33	DIO8
9	DIO20	35	DIO7
11	DIO19	37	DIO6
13	DIO18	39	DIO5
15	DIO17	41	DIO4
17	DIO16	43	DIO3
19	DIO15	45	DIO2
21	DIO14	47	DIO1
23	DIO13	49, 51-60	+5V
25	DIO12	even pins	GND

Table 3. Pin Assignments

***Note** The slot of the controller assembly that is selected for the installation of the card will determine the Digital I/O's available (DIO_1 through DIO_24).*

9. Ensure no excess cable is left inside the enclosure and tighten cord grips.
10. Ground the cables:
    - Ground the shield cable using the ground washer in the metal cord grip, or use the grounding stud on the enclosure with the cable clamp included in the parts kit.
    - The round ribbon cable includes a grounding wire that attaches to the ground stud.
    - For the wall mount or panel mount, the cable does not need to be brought outside of the enclosure, but connected to an internal relay rack.

    See the 1280 technical manual for more information.
11. Reconnect power to the indicator.
12. Press ≡ on the weigh mode screen. The ***Main Menu*** will display.
13. Press Configuration for access to the Configuration menu.

***Note** Access to the Configuration menu may be restricted. Refer to the 1280 technical manual for more information.*

14. To configure the Digital I/O card, select I/O to enter the ***Digital I/O*** menu.
15. Select the slot to be used from the selection field drop down list.
16. Select the ***DIO*** to be formatted. The ***Function Screen*** displays.
17. Select the function desired.
18. Press **DONE**.

See the 1280 technical manuals for more information on Digital I/O.

LED Status Indicators

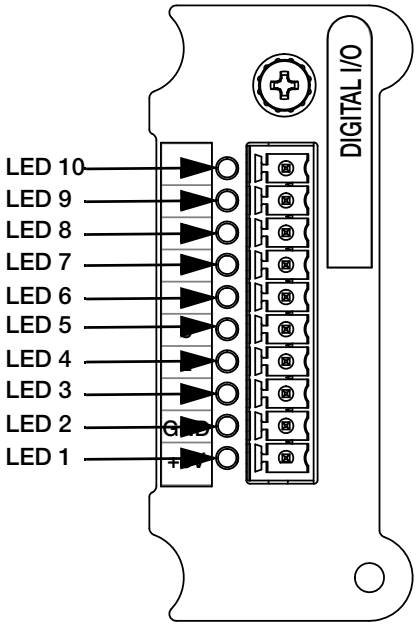

Figure 3. Digital I/O Card Faceplate

LED	Status
1	Green flashing indicates card is working. Red indicates it is faulty
2	Not Used
3 -10	Green indicates if the input or output is active

Table 4. LED Status Lights

Specifications

I/O Channels	Up to 24, 5V/TTL, each software configurable as input or output
Relay Supply Voltage	5 VDC, 500 mA, PTC Fuse 750 mA
Input Voltage	0–5.5V maximum
Digital Outputs	24 mA balanced outputs with sink/source capability
Input Protection	8-screw terminal: 600W transient voltage suppression for ESD, EFT (electrical fast transients), tertiary lightning, and system-generated transients per IEC 60001-4-2, 60001-4-4, and 60001-4-5; European Standards EN50082 and EN61000-4
	Remaining I/O: 2KV HBM, 200V machine model
I/O Connection	60-pin ribbon connector, 8-screw terminal connector

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