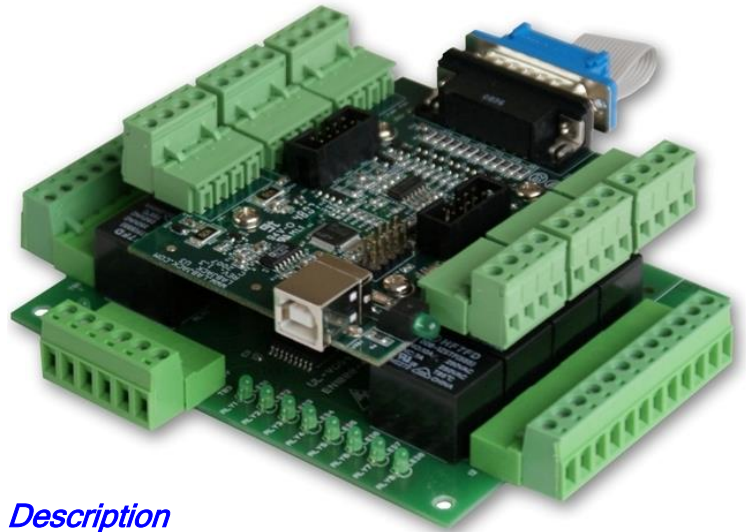


Features

- Data Acquisition and Automation/Control module
- LabJack U3-HV general purpose DAQ card and 8 channel, opto isolated relay card (240VAC@10Amps or 30VDC@8Amps), two separate cards mounted via pillars. Relays powered from the USB connection.
- Supplied as a fully assembled & tested module. Includes mounting pillars, ribbon cables & nylon feet
- Wide range of SW examples available via the LabJack website (www.labjack.com)
- LabJack offer U3 DAQ module support for Windows, Mac & Linux based apps (we currently use this product in XP & Vista based projects)
- LabJack U3 DAQ module offers 16 'flexible' chans, 2 DAC chans (10 bit, 0-4.95V) & 4 DIO chans. First 4 chans are configured as +/-10V analogue inputs (12 bit), the other 12 can be configured as either 0-2.44V (12 bit) analogue inputs (2 of which can be configured as counter/timers), digital I/O, or a mixture of both
- All FIO channels + 4 DIO chans are available via LJU3-DAQ screw terminal blocks or onboard header connectors. USB read/write cycle typically 1mS (1KHz) depending on number of FIO channels read.
- 8 of the FIO chans (EIO0-7) are connected to the LJU3-DAQ DB15 connector and can be used to control up to 8 opto-isolated relays of the LJ/U3 relay card (5000VAC Vrms min) opto-isolation.
- LabJack U3/9 DAQ, DIO signals & USB 0/+5V are available via onboard header connectors & screw terminal blocks.
- PCB tracking and relays are designed to handle 240VAC@10Amps or 30VDC@8Amps (switched or continuous). Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts. Screw terminal blocks connect directly to the N/O COM & N/C relay contacts. All relay contacts uncommitted. Detailed relay spec – see page 2
- Choice of either fixed or 2 part (male/female) screw terminal blocks allowing rapid connect/dis-connect in a maintenance or swap over situation connection
- LJ-U3 module includes onboard ambient temperature sensor (not an FIO chan, +/- 1 Deg K)
- LED status indicators for power and relay activation status
- Supplied with nylon feet. Clear Perspex cover/base & DIN rail base mount option also available
- CE, RoHS & BS9001:2000 compliant



Description

Low cost, general purpose, 8 channel, opto-isolated relay card. Compatible with (& powered from) the LabJack U3/9 USB DAQ modules. Fitted with a choice of fixed or 2 part (male/female) screw terminal blocks allowing rapid connect/disconnect. Two separate cards (with hex mounting pillars) allowing easy maintenance replacement.

The screw terminal blocks give access to all DIO/FIO chans, N/O, COM & N/C relay contacts, four general purpose LJ-U3/9 DIO signals and the 0V/5V DC supply terminals. Relays are single pole changeover type, capable of switching 240VAC @ 10Amps. PCB tracking is designed to handle 10 Amps.

Relays are powered from the USB port (350mA max, assuming all relays activated). Power is fed via the ribbon cable connection. Relays are opto-isolated (5000VAC Vrms min).

Specifications

FIO (ADC, DAC & DIO + timer counter functions)

See page 2

Operating temp range

-40 to +85°C

Power

USB powered, 5V DC @ 350mA (max – all relays active)

Relays

See page 2

Dimensions

Dimensions Mx/Mx2, 125/145mm (D) 120/145mm (W) 40/45mm (H) (inc feet cons & ribbon), Weight (inc ribbon cable), Mx=250g, Mx2 = 325 g.

Order codes

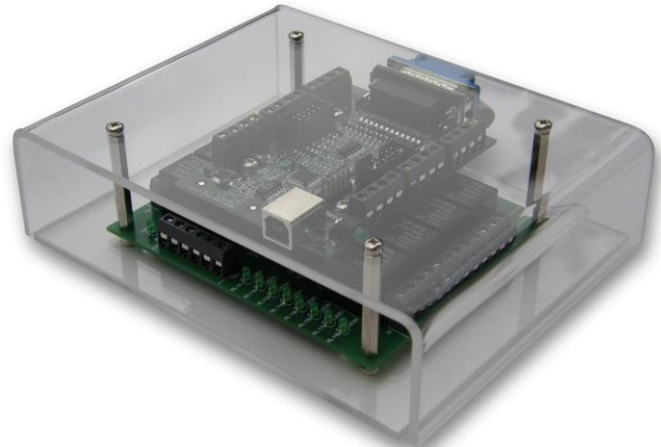
DaqPodMx/DaqPodMx2

General purpose, 8 channel, opto-isolated relay card, fitted with fixed (Mx) or 2 part (Mx2) screw terminal connectors. Compatible with (& powered from) the LabJack U3/9 USB DAQ modules

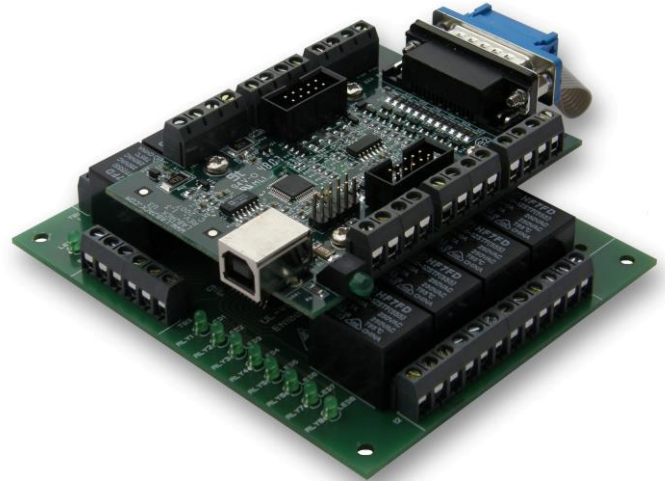
Product Datasheet 39

Specifications: USB DAQ Functions

Parameter	Specification (Power relays)
Based on LabJack model:	U3-HV
Interface type	USB1/2
Powered by USB port	USB powers DAQ + relay card
Channels provided	16 FIO, + 2 DAC + 4 DIO
FIO (flexible IO) modes	Dual mode Analogue or DIO
FIO 0-3 voltage input range	+/- 10V
FIO 4-7 voltage input	+/- 2.44V
Counter timers (2)	FIO 4,5,6, or 7 can be used
DAC outputs (2, 10 bit)	Voltage range 0.04 to 4.95V
FIO 8-15	Used to switch relays 1-8
DIO 0-3*	General purpose DIO chans (0/3.3V) – * available on relay card screw terminal block



DAQPodMx & Perspex cover.
Offers general protection & clear visibility of all status LED's & good access for all wiring



DAQPodMx DAQ module with fixed screw terminal connectors

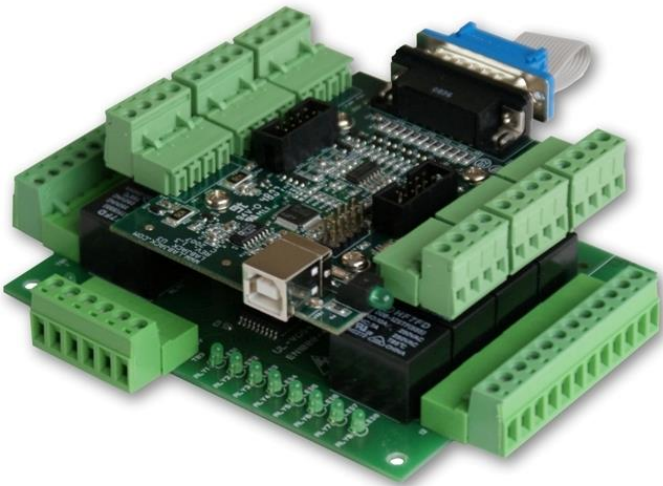
Counter timer modes available*:

Timer mode:	Specified function*
0	16 bit PWM output
1	8 bit PWM output
2	Period input (32 bit, rising edges)
3	Period input (32 bit, falling edges)
4	Duty cycle input
5	Firmware counter input
6	Firmware counter input (with debounce)
7	Frequency output
8	Quadrature input
9	Timer stop input
10	System timer low read (default mode)
11	System timer high read
12	Period input (16 bit rising edges)
13	Period input (16 bit falling edges)

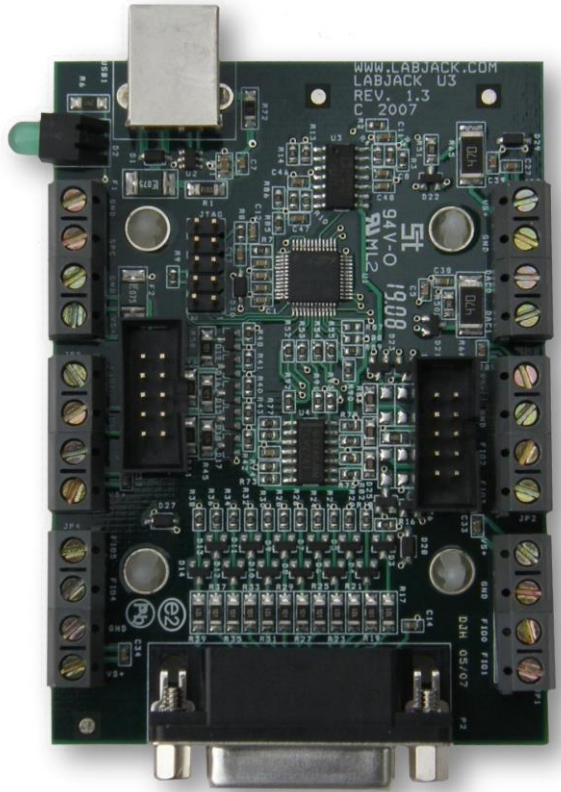
Specifications: Relays

Parameter	Specification (Power relays)
Rated voltage/current	5VDC/80mA
Contact ratings	10A/240VAC/8A 30VDC
Contact resistance	100mΩ max
Operate/release time	10mS/5mS
Contact bounce period	0.6mS operate/ 7.2mS release
Contact material	AgSnO ₂
Operational life (min)	Mechanical 10 ⁷ / Electrical 10 ⁵
Contact arrangement	SPDT, Form C (NO/COM/NC)
Relay contacts available:	Via edge mounted screw terminal blocks (NO/COM/NC)

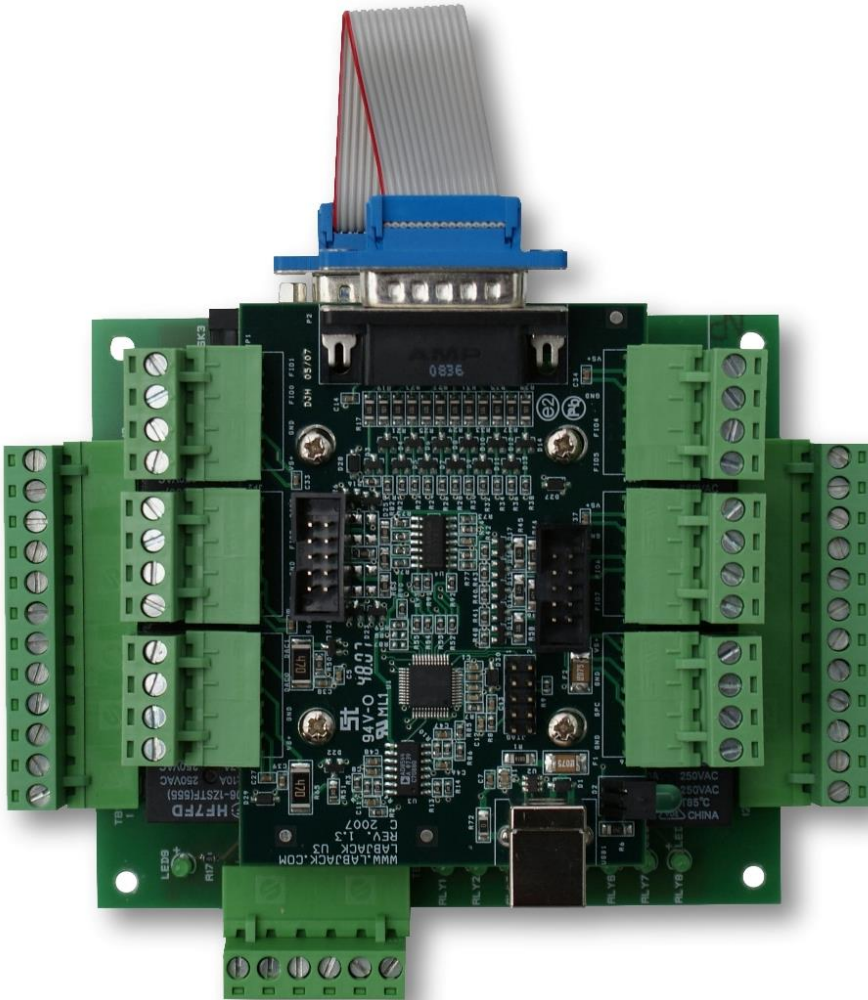
***See LabJack U3 User Guide for more detailed description**



DAQPodMx2 DAQ module with 2 part (male/female) screw terminal connectors



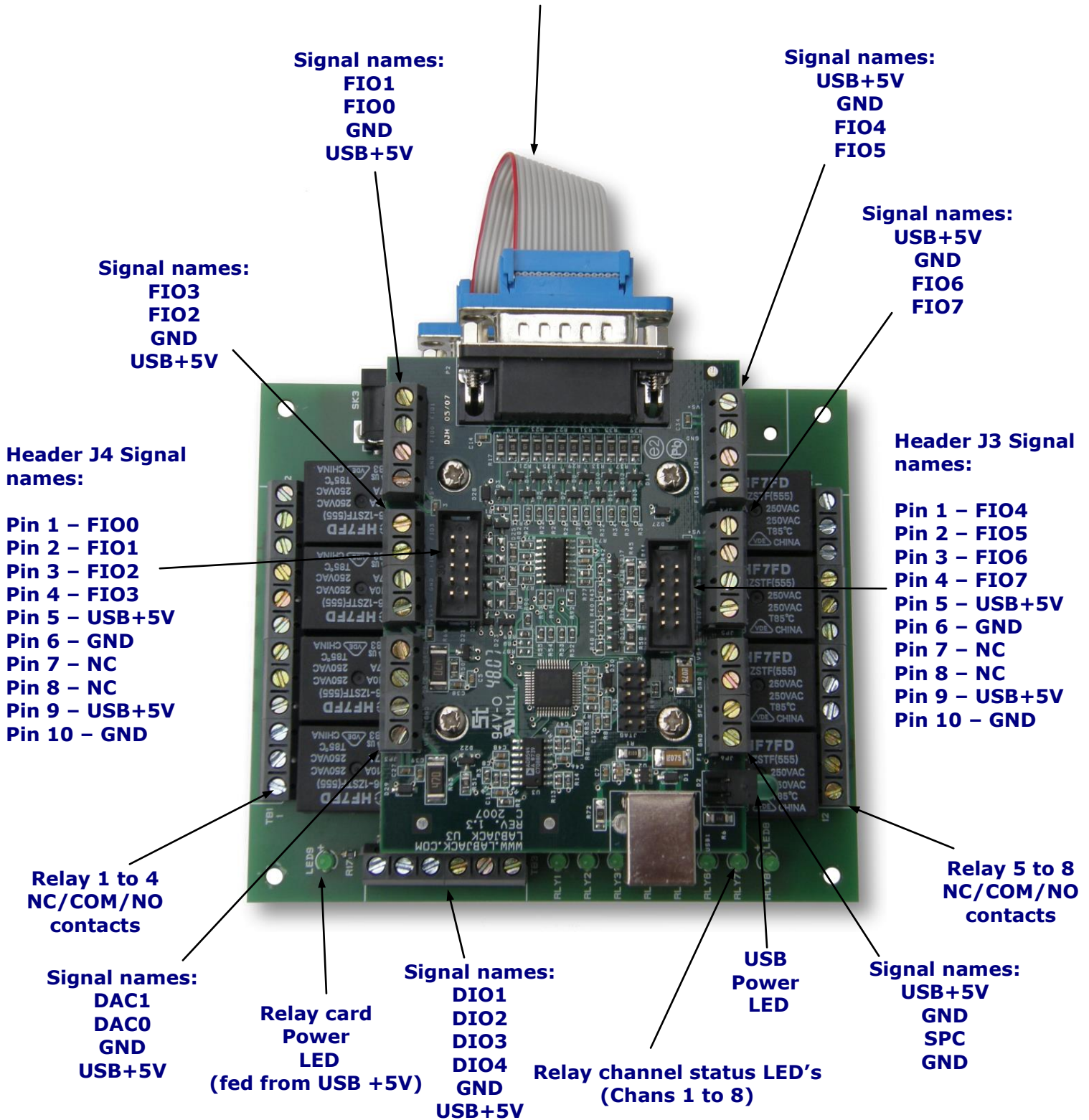
USBDAQMx-U3HV (Face view)



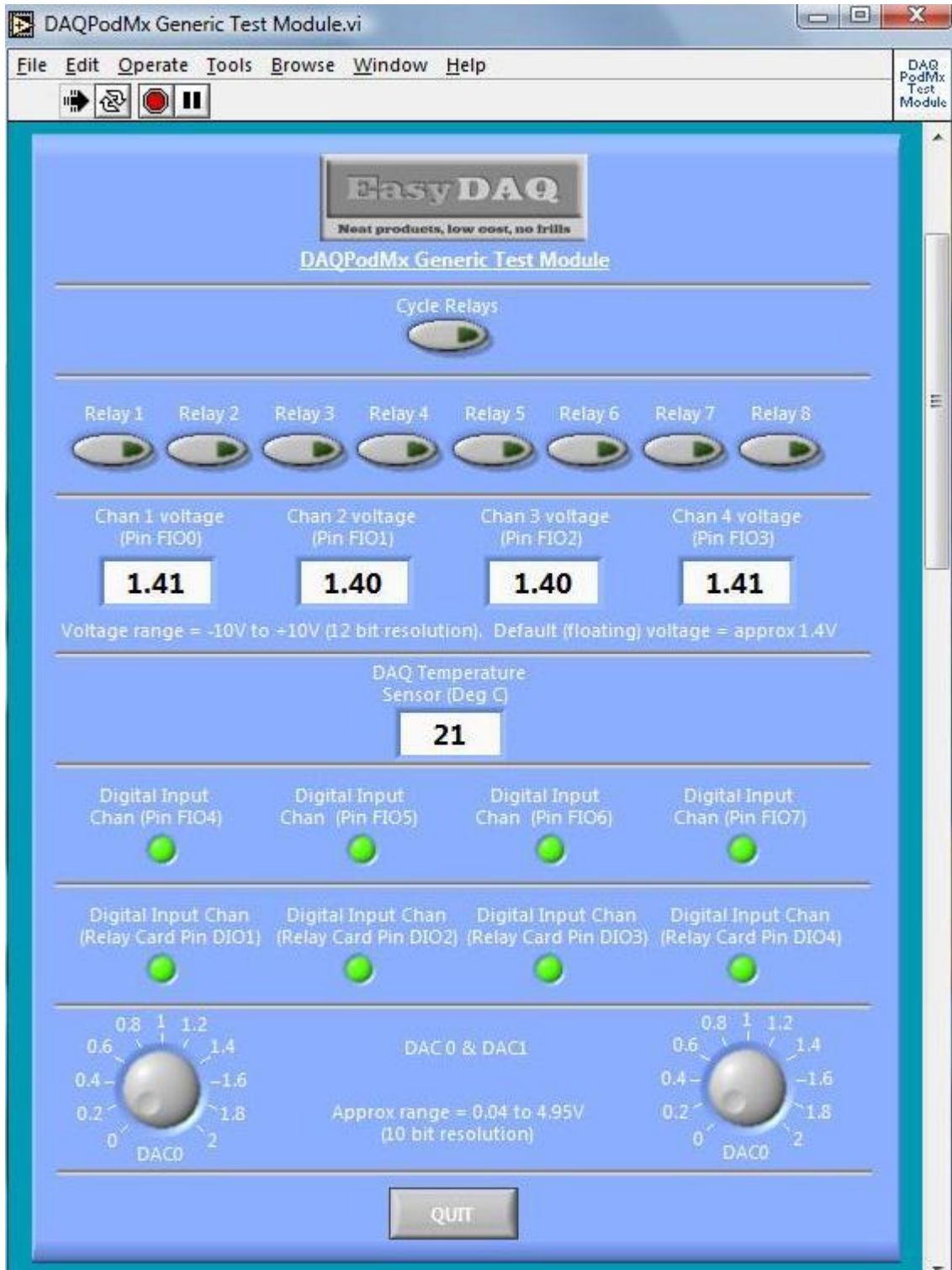
DAQPodMx2 (Face view)

Product Datasheet 39

Relay card uses USBDAQU3-HV signals EIO0 to EIO7 connected via the 15W D Type connector/ribbon cable assy



DAQPodMx – screw terminal block signal connections & connector pinouts (Face view)



DAQPodMx – Generic test module (screenshot)

LabView 7.1 executable and LLB files available for download