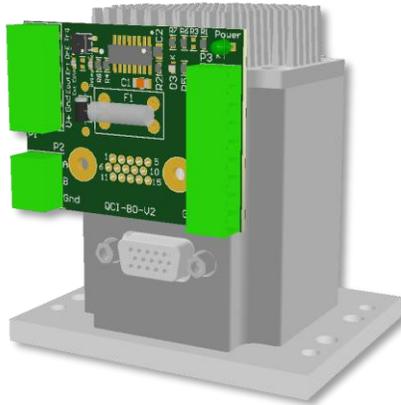


## QCI-BO-V2 SilverNugget N2-xX Breakout External Dr. Ena Control



QCI-N2-IX with QCI-BO-V2

### Product Overview

The QCI-BO-V2 is designed for QCI's SilverNugget N2 X-series servo controller/drivers to provide an output signal to control an external servo controller's drive enable signal. The breakout board plugs directly into the SilverNugget's 15-pin SilverLode Multiple Interface (SMI) port. The SMI port includes RS-485 communication signals, 7 LVTTL I/O, and input power. Three plug terminals are included to secure wiring.

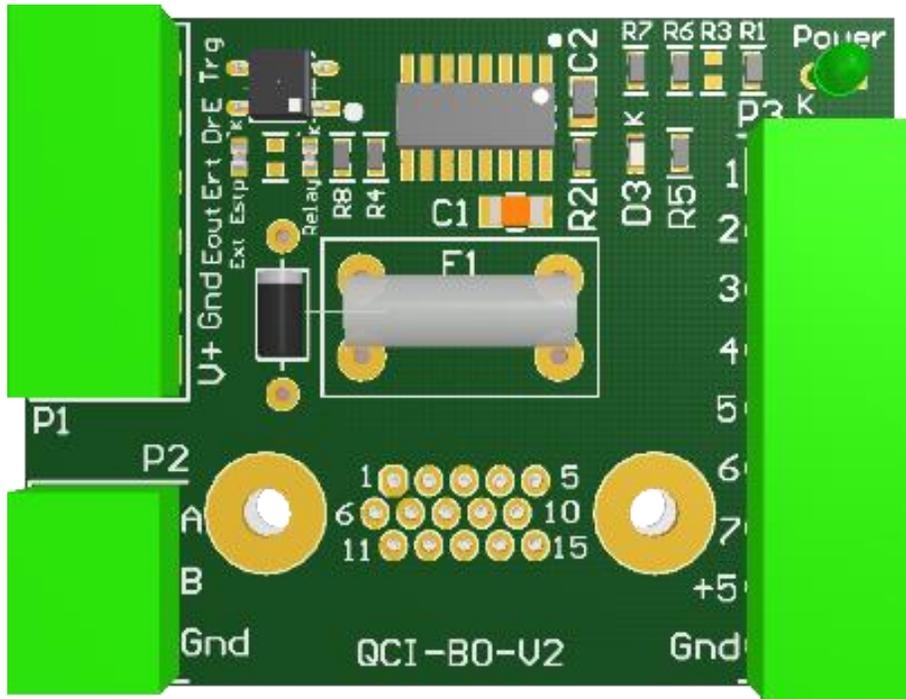
### Product Features

An E-Stop switch is wired across the *E-Stop Output* and *E-Stop Return* terminals. The breakout board routes the input power supply voltage to the *E-Stop Output* terminal. While the E-Stop switch is not depressed, the *E-Stop Return* is as the same input power supply voltage. The *E-Stop Return* voltage is connected to a normally-open solid state relay (SSR). The SSR is enabled by having the N2 controller/driver continuously pulse I/O#3 within a 40msec window. With the SSR enabled AND E-Stop not depressed, the *Drive Enable Output* terminal is at the same input power supply voltage, enabling the external servo controller's drive enable signal. If the E-Stop switch is depressed OR I/O#3 stops pulsing, the *Drive Enable Output* terminal is open, disabling the external servo controller's drive enable signal.

The QCI-BO-V2 breakout board is also designed to interface with QCI's [QCI-BCB-04 24-Bit ADC Bridge Converter](#) to monitors an external transducer. For example, in an application, a program can be configured to continuously pulse the SilverNugget N2 servo controller's IO#3 as long as the transducer's readings are valid or within an acceptable range.

Three LEDs are included with the breakout board. One green through-hole **Power** LED and two red surface mount LEDs labeled **Ext Estp** and **Relay**. The green **Power** LED lights up when the SilverNugget outputs +5v. The red **Relay** LED lights up when I/O#3 is pulsed and stays on if I/O#3 is continuously pulsed. The red **Ext Estp** LED lights up when the E-Stop switch is not depressed AND I/O#3 is pulsed.

Connector Descriptions



QCI-BO-V2 – Top View

