



C1G - PARALLEL PORT INTERFACE CARD (For Geckos) Rev 3.1

Overview

This card has been designed to provide a flexible interface for CNC projects using parallel port control software. Proven implementation of buffering and optoisolation circuits provides for a quick and reliable solution. This board is offered for users that do not need optoisolation for the output signals that go to the drivers, because they are using drivers that already have optoisolated inputs, such as the GeckoDrive family of products.

Features

- ***Partially optoisolated***

The card isolates connections to protect your computer from short-circuit. An optoisolator is an integrated circuit that transmits the signal through an encapsulated LED and phototransistor. When the signal is on, the LED lights up, the phototransistor captures it and relays the signal. In that way, the computer's electronics are completely isolated from the cnc circuitry. The signals are transmitted through light and not through physical connections. In this way, a power surge has no way of reaching the computer. Only outputs 2-9 are not optoisolated. Input pin15 and output pin 16 have high speed optoisolators. These can be used to receive and send optoisolated step or frequency signals. A typical use for this would be for connecting an input from an index pulse that would read the rotation of the spindle. A typical step signal would be the frequency to run a safety charge pump, a PWM signal, or a the step signal for running the C3 – Index Pulse Card. No optoisolation is provided for grounds.

- ***Buffered Outputs.***

All inputs and outputs are buffered through the use of high speed and high power buffers. Each pins deliver 24 milliamps.

- ***Output pins 1,2,3,4,5,6,7,8,9,14,16,17.***

- ***Input pins 10,11,12,13,15.***

- ***Status LEDs on all inputs and output connections.***

No more guessing. You can SEE all your signals. Save valuable time and brainpower for cncing.

- ***Input and output pins with close by ground or +5vdc connections.***

Input and output pins have close by ground or +5vdc terminals to make your wiring easy.

- ***Easy installation of an On/Off switch. You can control the card externally.***

An On/Off switch or a Safety Charge Pump can easily be installed to enable or disable the card. CNC could be dangerous machines and, remember, safety comes first. This card is provided with an extra pin (EN) that allows you to control the card externally by enabling or disabling outputs externally. The card must have +5vdc supplied in the EN pin to enable outputs.

- ***External Enable Pin (EN).***

The board has a pin that allows you enable/disable all the outputs at once. The board requires +5vdc in the EN pin. If it is not present, it will send all the outputs to ground immediately. This terminal can be used to enable and disable the system manually, or an external Safety Charge Pump or other external device can also be used.

- ***All TTL +5VDC or +3.3VDC Signals.***

Works with newer computers and laptops that have low voltage parallel ports.

- ***All inputs are outputs are tied to pull-down resistors.***

Pins are never in the air open to noise. If you leave a pin in the air you will get a LOW or 0. If you input a ground you will get a LOW and a +3.3 or+ 5 vdc signal will deliver a HI.

- ***Works directly with popular CNC hardware and software.***

That goes for GeckoDrive, DeskCNC or Rutex and parallel port control software such as mach2, Linux EMC, TurboCNC, CNCPlayer, CNCZeus and other/ (Not all have been tested).

- ***Screw-On connections for all terminals.***

You only have to screw-on the wires to make all your connections.

Installation

Requirements:

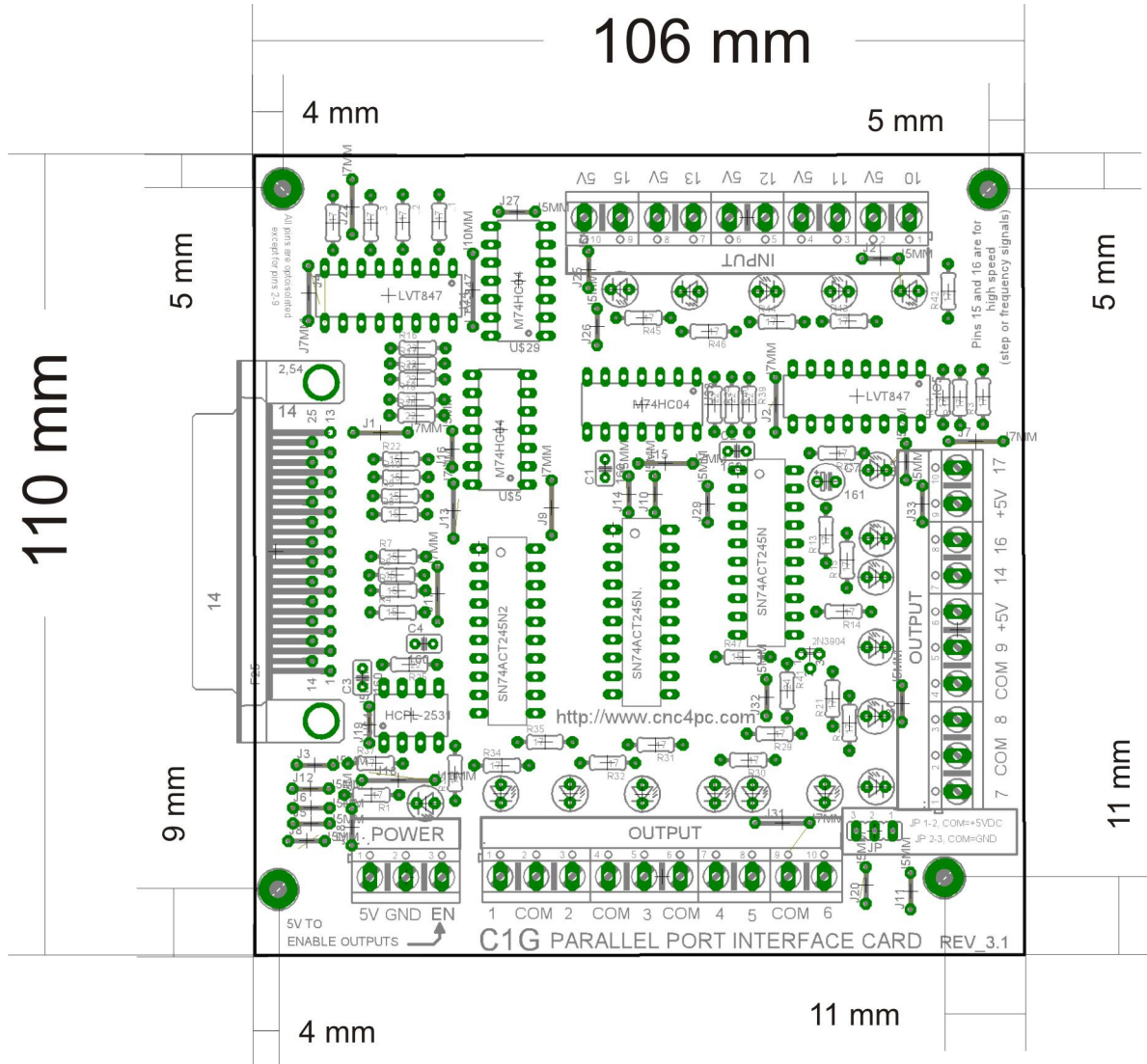
A 5VDC, 1 amp power supply is required for operation.

Wiring:

Check the sample installation below (Coming soon).

1. Connect +5vdc@ to power the board.
2. Provide +5 to enable pin next to the power connection.
3. You can connect the parallel port cable and run the control software. You should be able to see the status of each pin.

Dimensions:



Disclaimer:

Use caution. CNC machines are dangerous machines. DUNCAN USA, LLC or Arturo Duncan are not liable for any accidents resulting from the improper use of these devices.