Pixel Power Injection Board v.1a

This passive device is used to easily inject DC power into a string or strand of LED pixels. It supports both 3-wire(asynchronous) type pixels such as WS2811, WS2812, etc. And 4-wire(synchronous) type pixels such as WS2801, LPD8806, APA102. There are two methods of connecting them to a power supply, screw down terminals for stripped wires, or a the standard 5.5mm x 2.1mm barrel jack. The screw down terminals support up to 15 amps input, and the barrel receptacle supports up to 5 amp input. The device runs on a wide voltage range of 3.3v to 24v.
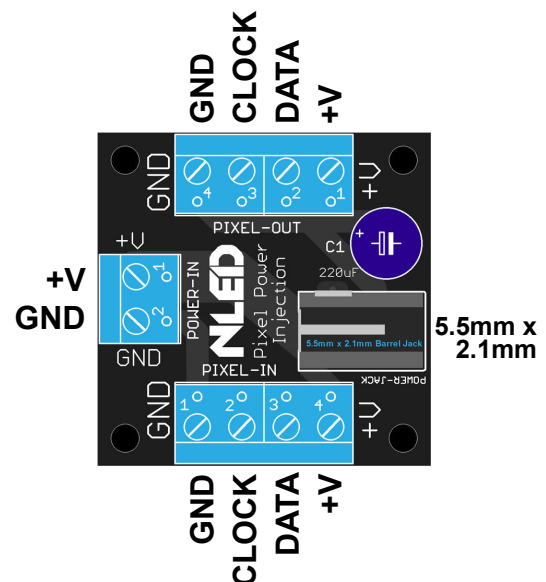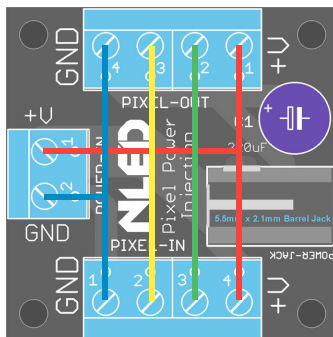
Features:

- Supports all pixel chipsets. WS2801, WS2811, WS2812, APA102, APA104, LPD6803, LPD8806, etc.
- Easy to install and work with.
- Small form factor.
- Supports up to 24 volts.
- Allows up to 15 amps of power to be injected into the strand of pixels.
- Onboard tank capacitor for power smoothing and support over distance.
- Standard 5.5mm x 2.1mm barrel plug style power supplies can be used.
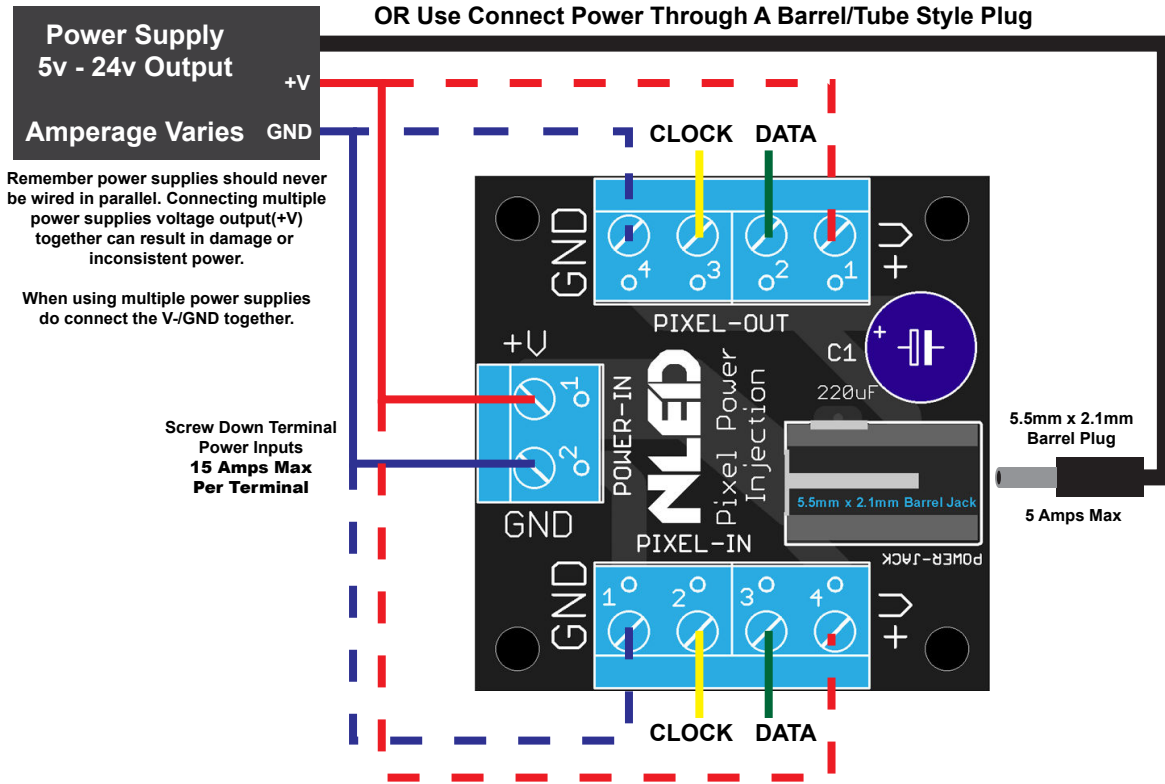
Specification:

Input Voltage(+V)	3.3v - 24v
Barrel Receptacle	5.5mm x 2.1mm
Barrel Receptacle Amperage	5 Amps
Screw Down Terminals	5.08(0.2") spacing
Screw Down Terminal Amperage	15 Amps
Overall Dimensions	1.5" x 1.5 x 0.5"

Equivelant Connections:

Device Pinout:

Power Connection

OR Use Connect Power Through A Barrel/Tube Style Plug

Power Supply 5v - 24v Output   +V

Amperage Varies   GND

Remember power supplies should never be wired in parallel. Connecting multiple power supplies voltage output(+V) together can result in damage or inconsistent power.

When using multiple power supplies do connect the V-/GND together.

Screw Down Terminal Power Inputs
15 Amps Max Per Terminal

CLOCK   DATA

GND   o4   o3   o2   o1   +

PIXEL-OUT

+V   o1   POWER-IN

o2

GND   PIXEL-IN

C1   220uF

NLED   Pixel Power Injection

5.5mm x 2.1mm Barrel Jack

5.5mm x 2.1mm Barrel Plug

5 Amps Max

POWER-JACK

GND   1o   2o   3o   4o   +

CLOCK   DATA

Common Usage

PSU#1
Power Supply 5v - 24v Output   +V
GND   **Amperage Varies**

PSU#2
Power Supply 5v - 24v Output   +V
GND   **Amperage Varies**

PSU#3
Power Supply 5v - 24v Output   +V
GND   **Amperage Varies**

+5vZ
DAT
CLK
GND
Pixel Controller

GND   GND   +V   +V

POWER-IN   NLED   Pixel Power Injection   PIXEL-OUT

+V   +V

+V
DAT
CLK
GND

GND   GND

POWER-IN   NLED   Pixel Power Injection

+V   +V

+V
DAT
CLK
GND

NOTE: THE +V IS NOT CONNECTED

GND   GND

NLED   Pixel Power Injection

+V   +V

+V
DAT
CLK
GND

NOTE: THE +V IS NOT CONNECTED

More Pixels