NotaBotYet

Axia GPIO Breakout with Relay
Part # A15-R01-2 (Rev 2 Board)

Axia GPIO xNode

NotBotYet GPIO Relay Board for Axia

Ground Switched via Relay "K1" on Board

ON AIR

GND
+12V

12V On Air Light Power Supply

LED "ON AIR" Sign
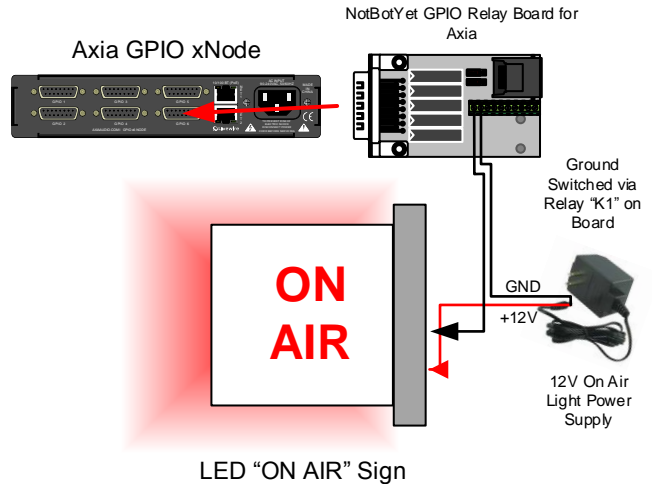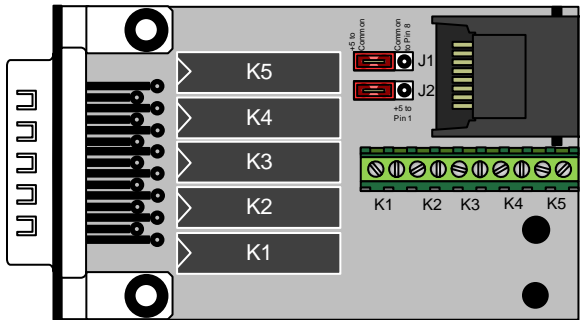
Installation Example

Purpose: The *Axia GPIO Breakout with Relay* was designed to provide an easy breakout for the five open collector inputs and outputs of a standard Axia GPIO port. The outputs of the Axia GPIO node are only designed to support a maximum current of 20 milliamps. This is typically just enough current to control only one typical LED. The onboard relays will allow these five outputs to control external devices requiring more current... up to 500 milliamps. This is more than enough to control various multi-LED tally lights on microphone booms, modern low voltage LED "ON AIR" lights, or any other device requiring isolated dry-contact switching up to 500 milliamps. The 5 relays are open collector Form A type and the output connections are all isolated from each other to allow each output to switch different voltage levels or signals.

Inputs: Inputs are available on a convenient RJ-45 connector allowing the use of standard Category 5/6 wiring to transport GPIO control within your plant.

Output Options: This board is populated with a screw terminal block on the output. All 5 relay outputs may be wired to this block using 18-30 AWG wire. This same PCB layout is also used for an RJ-45 output configuration therefore the two mounting holes for the unpopulated RJ45 connector can easily accommodate a small zip tie through the board for strain relieve.

Jumpers: Jumpers on this board only control the input configuration since the only available outputs are dry contact closures.

Jumper J1 allows the user to tie +5v to the common input on the 15 Pin D-Sub connector (a standard configuration for Axia input signaling requiring each designated input to only require a closure to ground to activate and is compatible with nearly all open collector outputs from various devices. Alternatively, this jumper could tie the common input on the GPIO port directly to Pin 8 on the RJ45, thereby allowing the user to use their own voltage reference for input signals; however the reference voltages must follow Axia specifications or serious damage could be done to the Axia GPIO port.

Jumper J2 will allow the user to pass the +5 volts available on the Axia to Pin 1 of the RJ-45. Because this +5v signal may be vulnerable to damage if shorted, the standard configuration is to not pass this +5 out the connector unless there is some compelling Installation need to do so.

RJ45 Input Pinout:
Pin Number / EIA/TIA 568B Wire Color
1 GND Org/W
2 In 1 Org
3 In 2 Grn/W
4 In 3 Blu
5 In 4 Blu/W
6 In 5 Grn
7 In Com Brn/W (Jumper Dependent)
8 +5V Brn (Jumper Dependent)

Output Pinout (TB Strip):
Terminal Number
1 K1
2 K1
3 K2
4 K3
5 K3
6 K2
7 K4
8 K4
9 K5
10 K5

Find more details and example uses at www.notabotyet.com