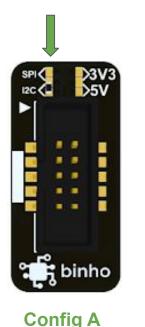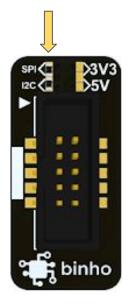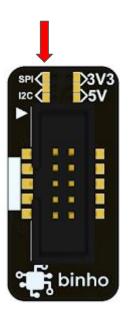# Protocol Configuration

binho

In order to match competitive product pinouts for both I^{2}C and SPI bus compatibility, the connection to the IO2 pin (which can be I^{2}C SCL or SPI MISO) of Binho Multi-Protocol USB Host Adapter must be routed to the desired pin on the female header. This configuration is achieve by shorting copper pads on the top layer either with a 0 Ohm 0402 resistor or with a solder bridge. Note that it may be acceptable to short both bridges at the same time, depending on the usage/routing of the signals on DUT.

Config A **Config B** **Config C** **Config D**

Config A: IO2 pin is bridged to pin 1 on female header. Configured for I^{2}C Protocol usage.

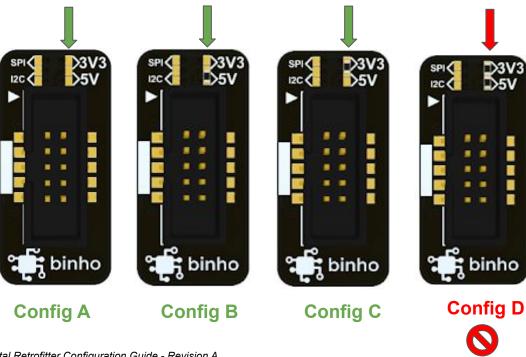**Config B:** IO2 pin is bridged to pin 5 on female header. Configured for SPI Protocol usage.

Config C: IO2 pin is bridged to both pin 1 and pin 5 on female header. This may be acceptable depending on the routing of the signals on the DUT.

Config D: IO2 pin is not connected to any pins on the female header. Neither I^{2}C or SPI protocols can be used.

Power Configuration

binho

The Binho Multi-Protocol USB Host Adapter is able to supply both 3V3 and 5V (V_{USB}) power rails, however competitive products offer only one rail voltage. As such, this board was designed such that it can be configured to provide either 3V3 or 5V to the power rail pins. This configuration is achieve by shorting copper pads on the top layer either with a 0 Ohm 0402 resistor or with a solder bridge. Note that these solder bridges are exclusive, such that only one bridge can be in place at any given time.

Config A   **Config B**   **Config C**   **Config D**

Config A: Neither 3V3 nor 5V rails are connected to pins 4 and 6 of the female header. This is suitable for DUTs which are self-powered.

Config B: The 5V rail is connected to pins 4 and 6 of the female header. This is provides a 5V power source to the DUT.

Config C: The 3V3 rail is connected to pins 4 and 6 of the female header. This provides a 3V3 power source to the DUT.

Config D: The 3V3 and 5V rails are shorted together. This can cause damage to the Binho Multi-Protocol USB Host Adapter as well as the DUT. **Be careful to avoid this situation!**