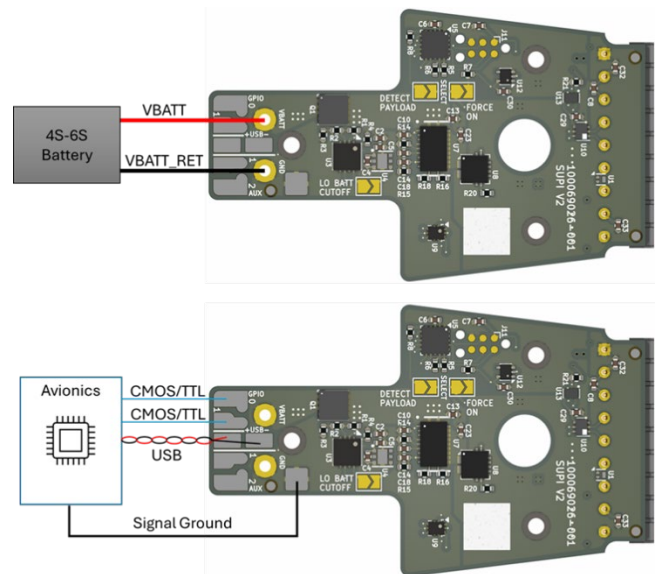# Small Universal Payload Interface (sUPI) Platform Side Brief

The sUPI Payload interface provides an interchangeable interface to connect payloads to UxS platforms such as drones. The interface is a subset of the Picatinny Common Lethality Interface Kit (CLIK) Design Standard. The interface supports a detect mechanism where the payload signals are controlled by the drones' interface board. The payload interface board provides power to the payload and connectivity for USB and GPIOs passed through the physical / electrical interface.

Electrical Interface for Platform

The sUPI platform side electronics board has solder pads for connecting wires to platform avionics. Connections should be made with 18-22AWG wire for power (VBATT, VBATT_RET) and 24-30AWG for signals as indicated in the wiring diagram. The Platform will need to provide the following to the sUPI interface board:

VBATT – Platform Battery Voltage Range 13 to 25.2 vDC
GPIO – Typically PWM Voltage Range ±5 vDC
USB – USB Voltage Range 0 to 3.3vDC

Mechanical Interface for Platform

The sUPI Platform Side is intended to be mounted to a platform via 3x M3x0.5 thread, 8mm long black-oxide stainless steel phillips flat head screws (e.g. McMaster PN 91698A304). The mounting hole pattern is shown in the figure. Platforms should be modified in one of the following ways to install a sUPI Platform Side interface:

- Drill and tap 3x holes into the platform as shown in Figure 5 in the desired location for mounting the sUPI Platform Side
- Create a custom adapter that includes the sUPI platform side hole pattern and enables mounting to an existing mounting interface on a platform