

LAM2 JTAG Connection

For Cheetah 4/5

HW Setup

- Setup will require:
 - Digilent HS1 JTAG dongle
 - 1x6 male to male 2.54mm pitch header
 - 26-30 AWG wire (30 AWG would be easier)
 - Windows PC

HW Setup – Creation of Dongle Adapter

- With your wire, cut/strip 6 wires of 4-inch length
- Connect each wire to its own pin
- Once complete, it is helpful to cover in hot glue to help with strain relief
- See Fig.1 to the right for completed cable

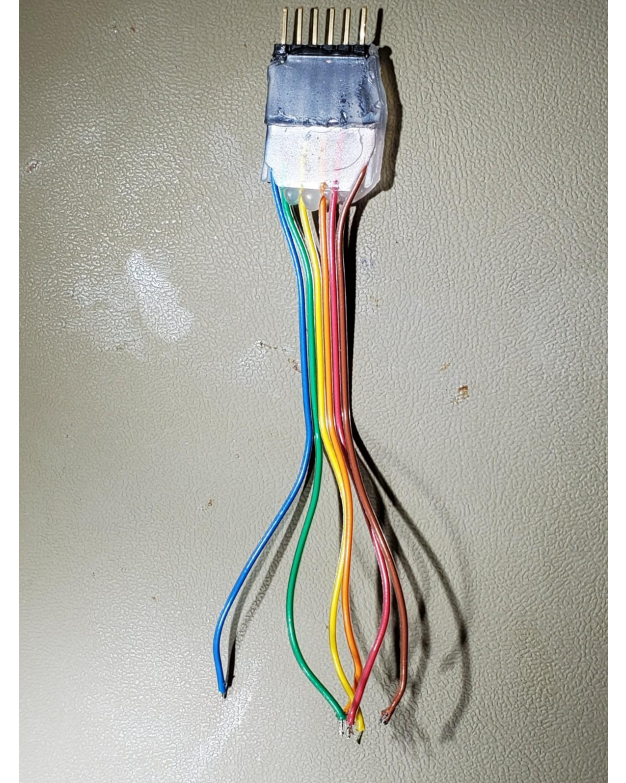


Fig.1 – Completed Cable

HW Setup – Cable Connection to Board

- Remove the back of the control box and you will see the back of the lower PCB, shown in Fig.2
- In Fig.2 there are two solder locations:
 - TP60-63 and VCC are located to the right and indicated with red marker (please only view the Test pads as there is also more rework done in similar location)
 - GND is to the left of the MCU programming port in red. It is the GND of a Cap

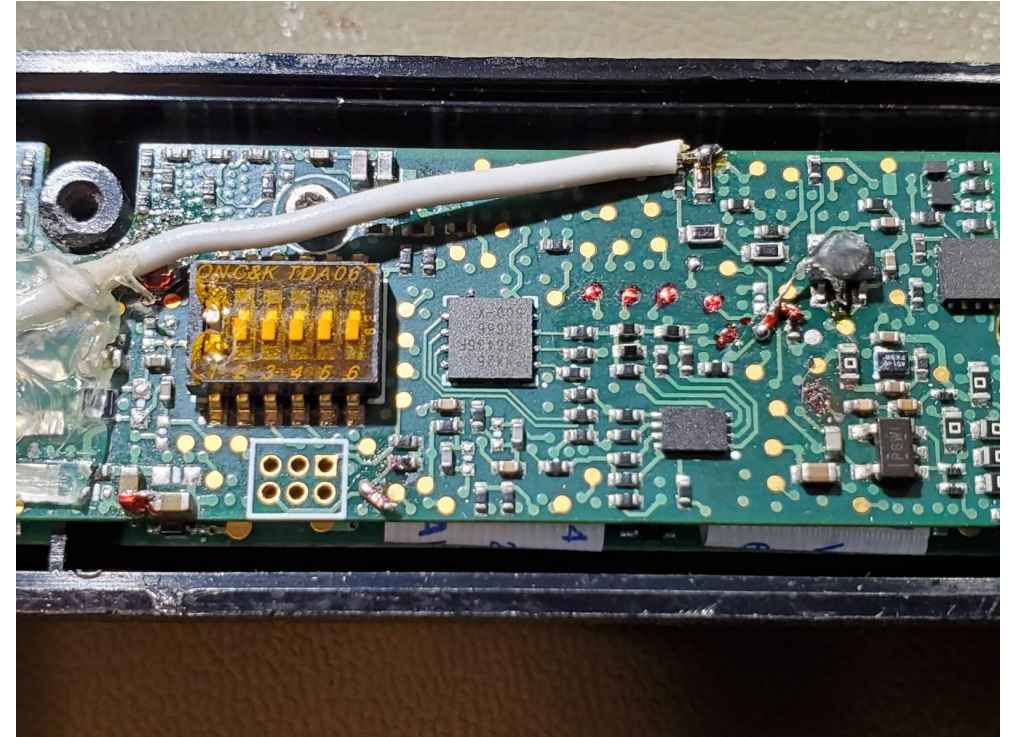


Fig.2 – Back of Lower PCB

HW Setup – Cable Connection to Board

- Cad view of solder points:

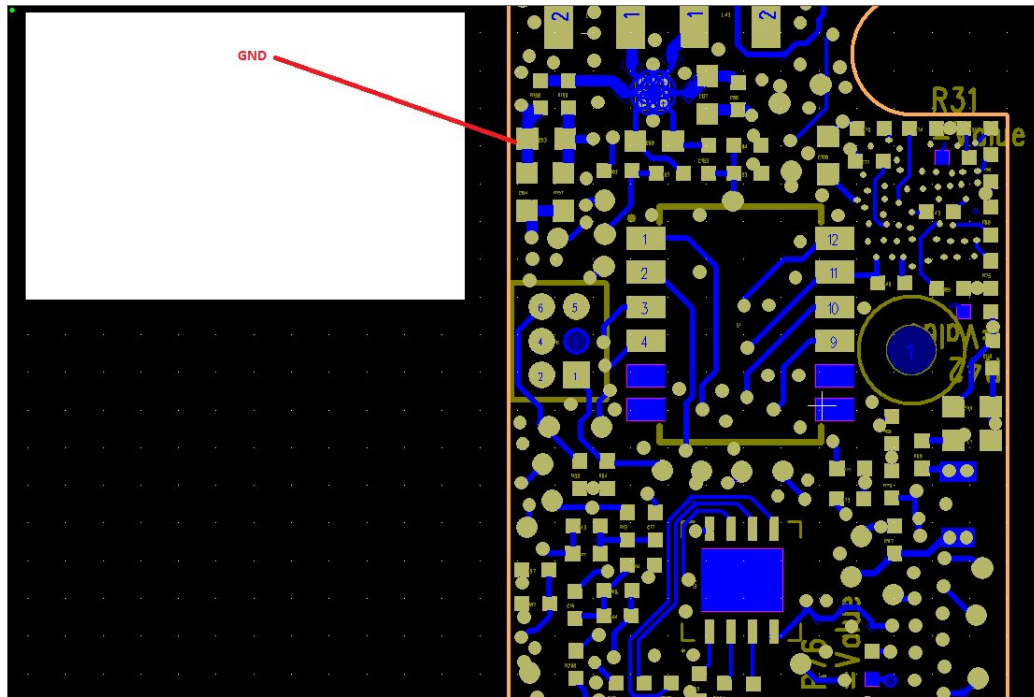


Fig.3 – GND solder location

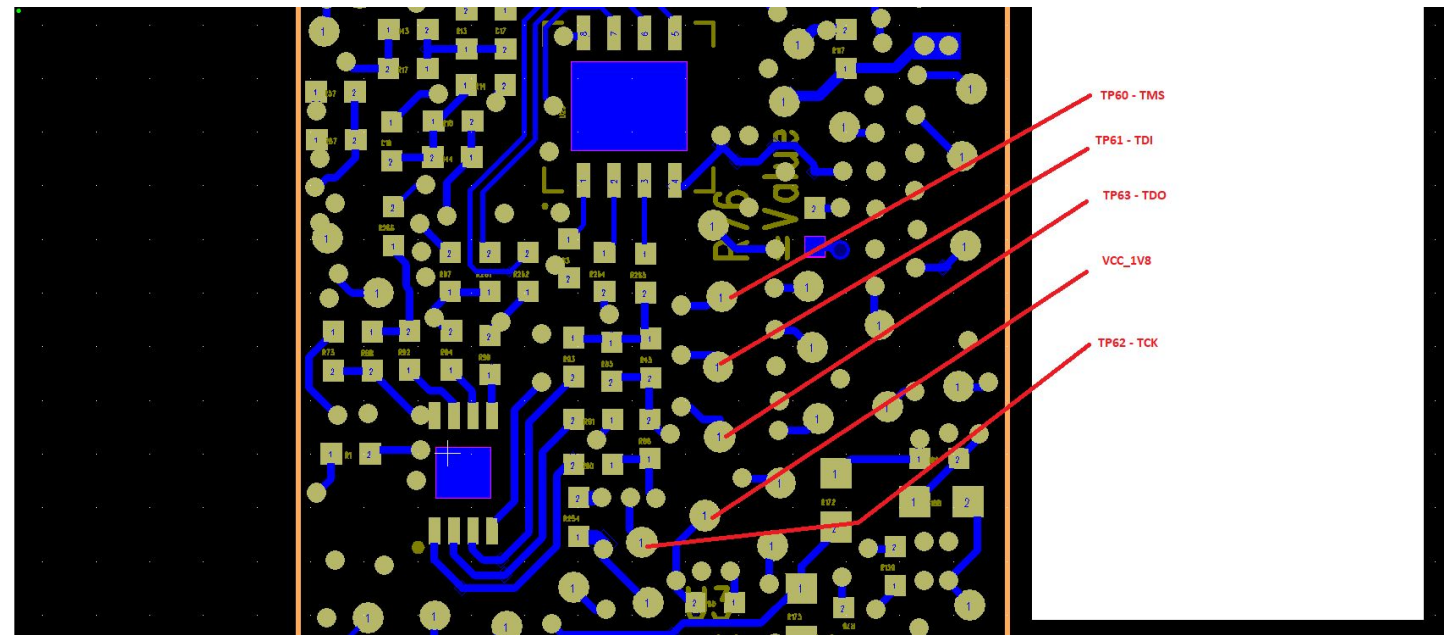


Fig.4 – TP60-63 & VCC solder location

HW Setup - Pinout

- Pinout and picture of completed soldering

JTAG Signal	JTAG Header Pin	Wirecolor	Lower Board Wire Solder Location	Cable Color
TMS		1	TP60	Blue
TDI		2	TP61	Green
TDO		3	TP63	Yellow
TCK		4	TP62	Orange
GND		5	GND	Red
VDD		6	VCC_1V8	Brown

Table 1 - Pinout

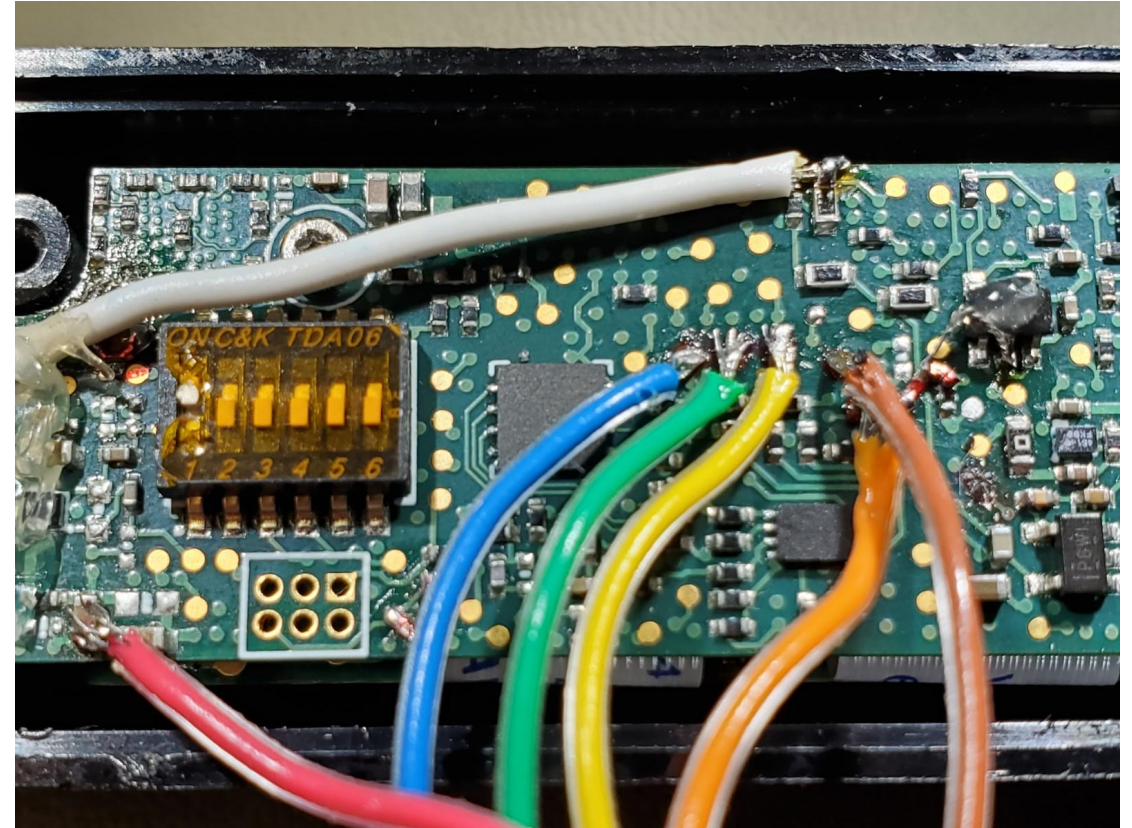


Fig.5 – Connector soldered

HW Setup - Complete

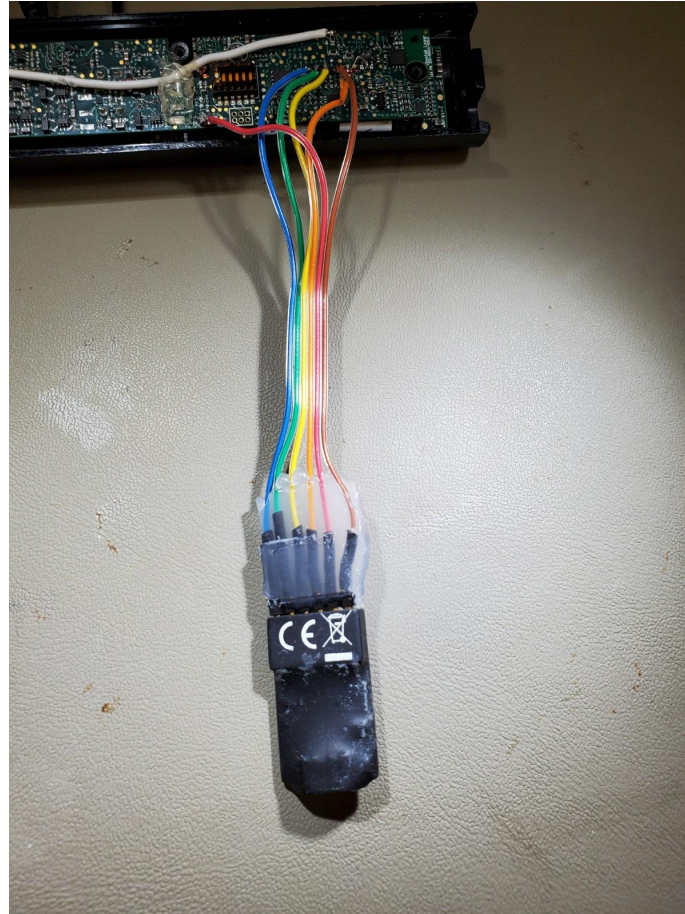


Fig.6 - Completion

FW Setup

- Must be performed on Windows PC
- Download and Install digilent.adept.system_v2.10.2.exe
- Once installed, restart PC
- Open Digilent Adept
- Will see similar image to Fig.7

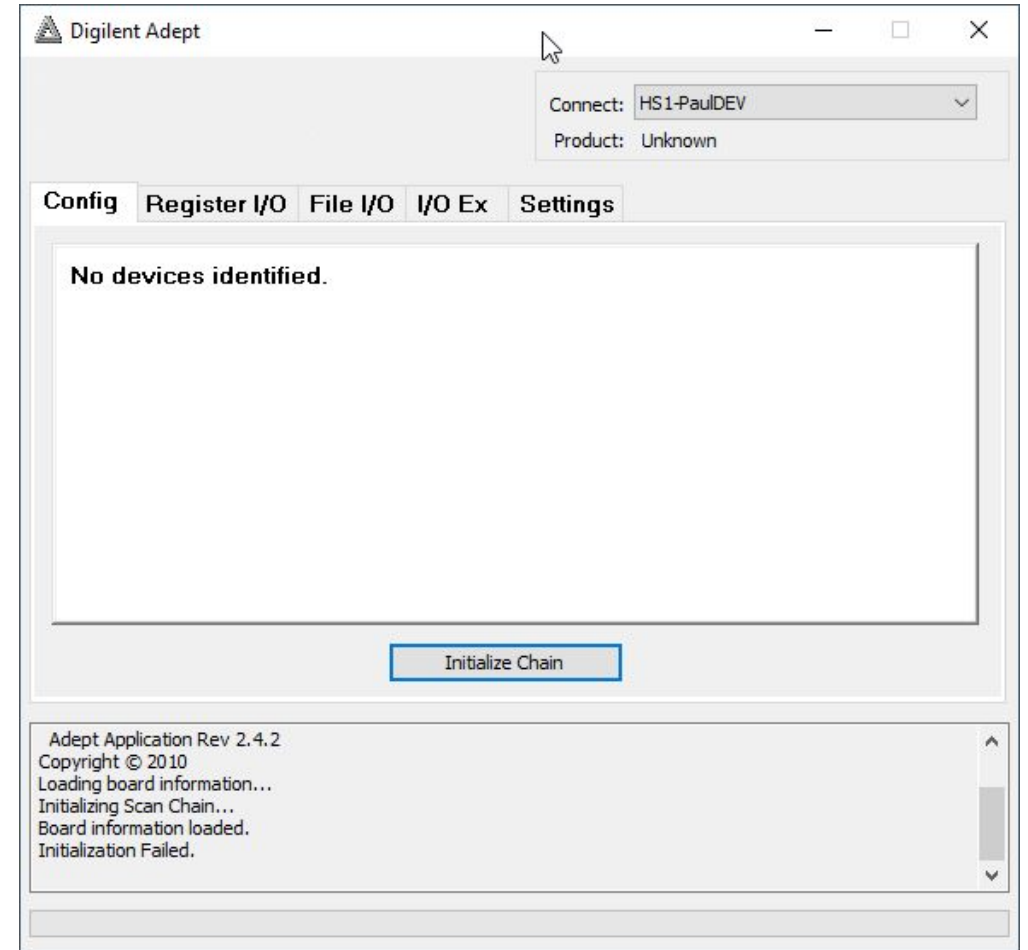


Fig.7 – Adept Screen

FW Setup

- Now connect JTAG to PC
- Apply power and Start Headset
- Click the “Initialize Chain” Button in Fig.7
- If successful, will get screen shown in Fig.8
- Close Adept

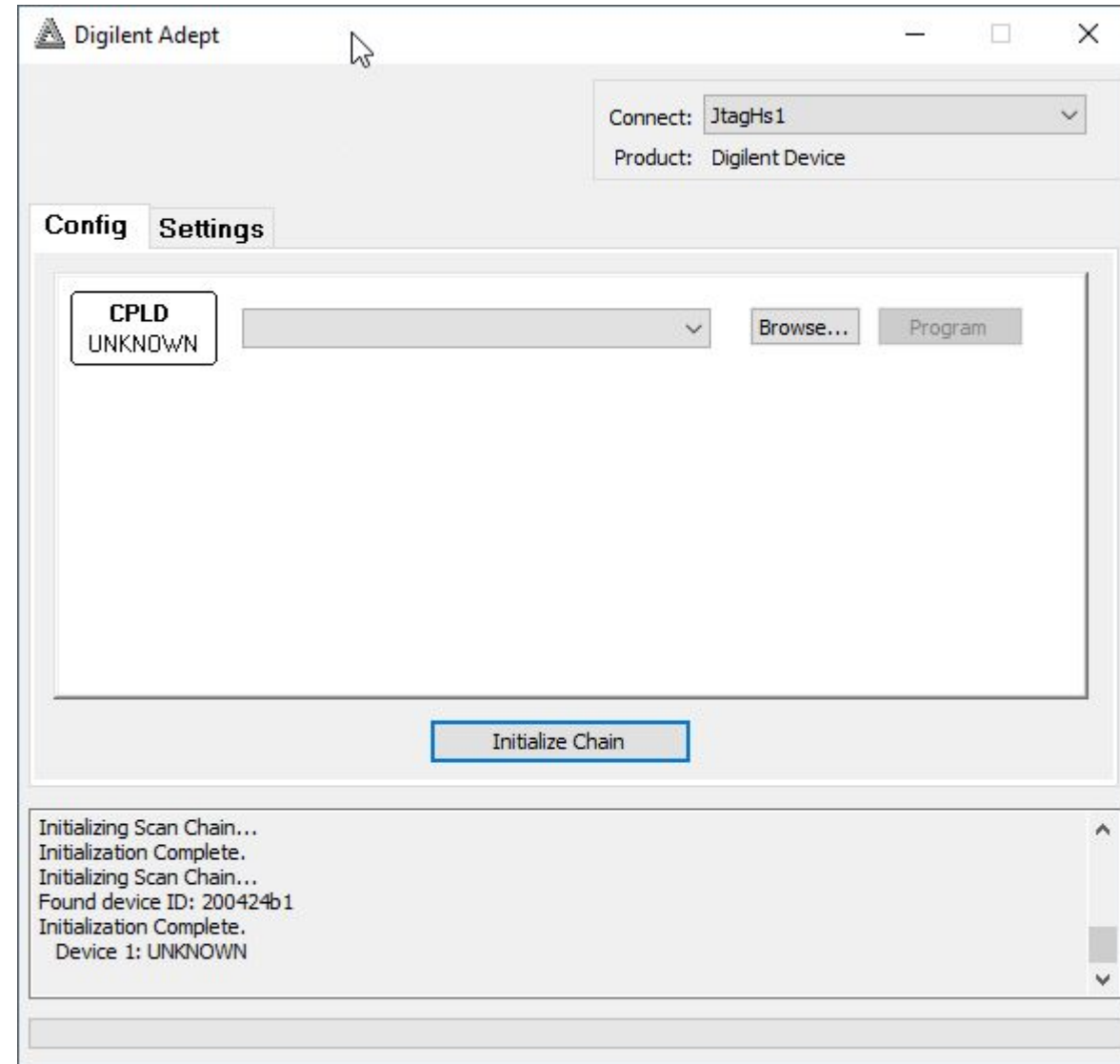


Fig.8 – Connection to MCU successful

FW Setup

- Open Avserve
- Select “Dummy”
- Allow 30 seconds to comply
- Select “JTAG-EX”
- Allow 30 seconds to comply
- Open AVBoot UI
- Jump to BL
- Go back to Avserve and select “Dummy”
- Connect UAC Cable to headset
- Select “USB” in Avserve
- Program LAM2 fw as usual in AVBootUI