PureThermal OpenMV Hardware Errata

Jan 11, 2024 - Version 2

1. Battery Connector Interference

There are components beneath the battery connector which can come in contact with the battery cable end. Removing the cable can take components off the board with it.
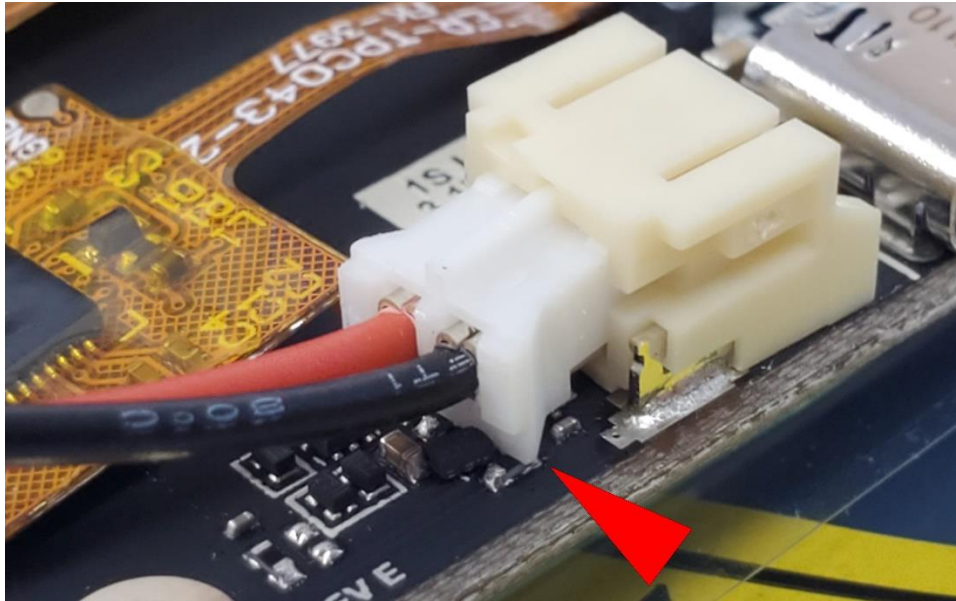

Figure 1: This is damage caused by removing the battery connector without special care to avoid damage.

It is recommended to remove the protruding wedge from the battery cable connector with flush cutters before use. This will prevent risk of damage.
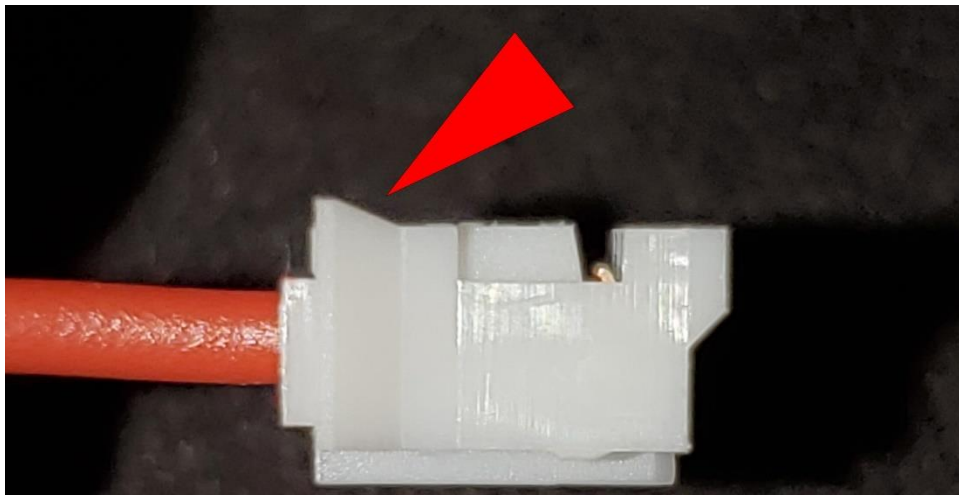

Figure 2: This protruding wedge catches on components and should be removed.

2. Real Time Clock (RTC) Not Incrementing While the Board is Powered Off

The load capacitance on the Y2 crystal is too high. Removing C96 and C97 can restore functionality to the RTC. These capacitors are already removed on most boards.
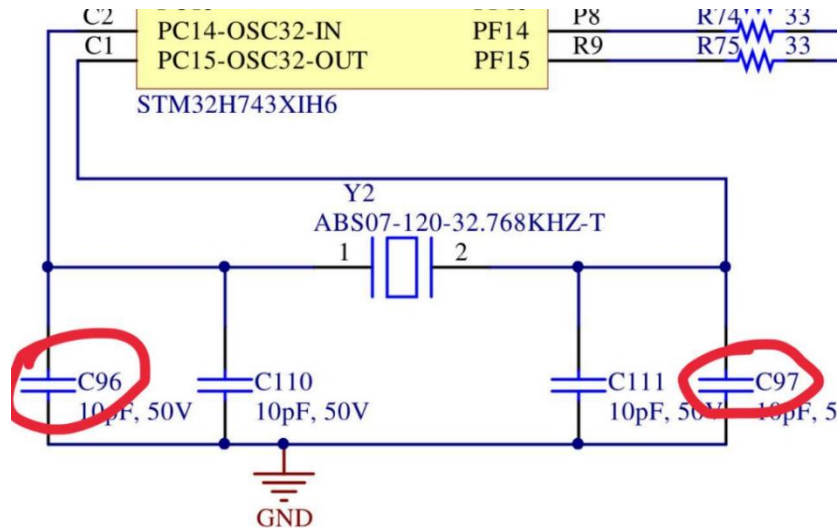

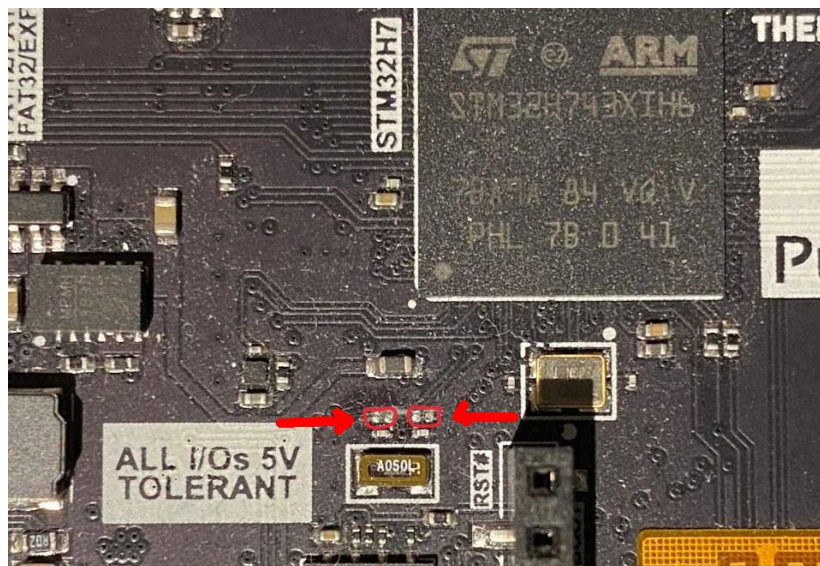*Figure 3: C96 and C97 are circled in this schematic view.*

Figure 4: C96 and C97 are located adjacent to the STM32 package as shown.

For more details, see the following issue threads on GitHub:

- OpenMV Pure Thermal RTC #1536 - https://github.com/openmv/openmv/issues/1536
- PureThermal RTC doesn't increment while board is powered off #1600 - https://github.com/openmv/openmv/issues/1600

3. The charge indicator LED may not turn green when the battery is fully charged.
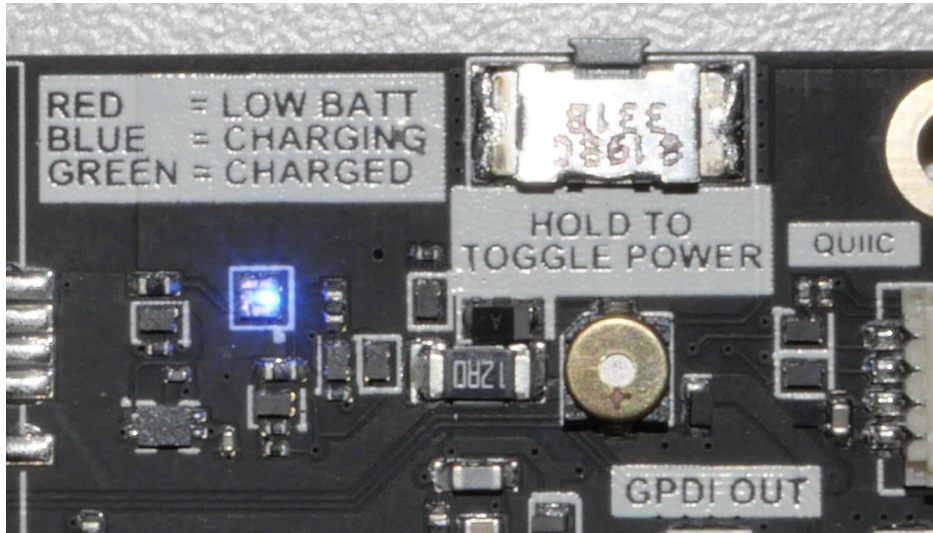

Figure 5: The LED indicates 'charging' even though the battery is fully charged.

The battery charger may stop charging at 4.15V to 4.19V without triggering the green LED.
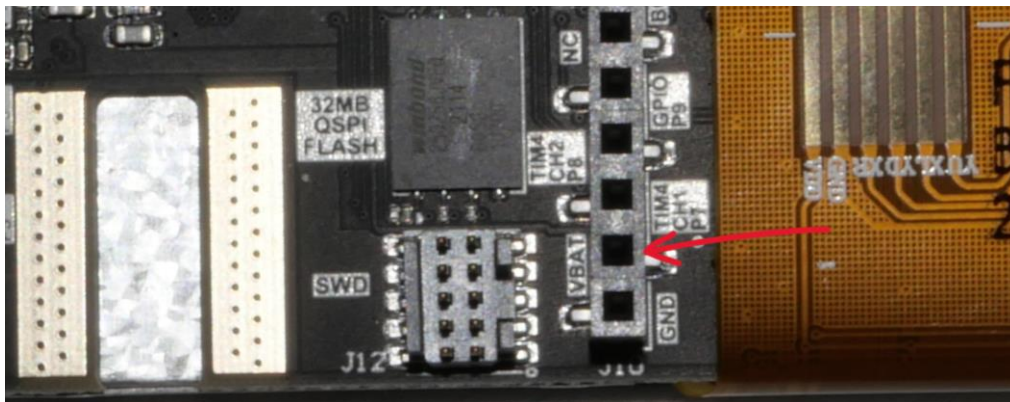
4. VBAT is unconnected on the I/Os.

Figure 6: The silkscreen indicates this pin is VBAT, but this pin has no connection.