Unacuna Project Documents for Transfer

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This document is to support the transfer of technology to Jetta.

1. Schematics

a. Host

b. Cry Detector

c. Front Panel (Control)

d. Power Switch

e. Homing

3. Debug notes

The schematics include large purple rings around the sections that changed during debug and design improvements. Each circle is numbered and described below.

**Host Schematic**

1. R69 changed to a 0-ohm resistor.

2. Removed R50 and R51 pull downs to allow internal pull-ups for mode pins.

3. Remove R3 (0-ohm) and connect.

4. Change R13 and R14 from 4.7 ohm (ref design) to 33 ohms.

5. Remove C11 and C12 (not needed).

6. Removed FB4 to improve USB operation.

7. Changed C6 and C7 values to match crystal.

8. Removed R10 (not needed).

9. Removed R49, R59, R61, R62, R63, R64 mode pins.

10. Removed R26, added R11 to change mode pin polarity.

11. Remove R23 and connect.

12. Remove R70 and connect.

13. Add R3 pull down (SD\_WP).

14. Changed FB9 to lower impedance ferrites – improved performance.

15. Changed FB10 to lower impedance ferrites – improved performance.

16. Removed R71.

17. Removed Temperature Sensor U8 and R47

18. Remove Accelerometer connector CN10 and R72 and SPIO\_CS1.

19. Changed Q6 Vcc connection from 3.3V to VINPUT.

20. Added R10 pulldown to make Q7 behave.

21. Changed R75 to 10k to make Power ON/OF switch work properly.

22. Changed Q1 to P-CH.

23. Changed R45 to 330 ohms (lower current).

24. Removed Hall Effect current sensor and added LM324 opamp.

25. Added 2 more optical isolator sensors (Over Travel) U14 and U15 plus associated passives.

26. Added C98, C101, C103, C100, C102 for robust sensor behavior.

27. SDCard mounted backwards.

28. Remove JP2 – not needed.