A large satellite dish antenna is positioned in a field of tall, golden-brown grass. The dish is white and mounted on a metal structure. The background shows a clear blue sky with a few wispy clouds, and the sun is setting on the horizon, creating a warm, golden glow. The overall scene is a landscape view of a satellite communication site.

Avnet Ultra96-V2
Revision 1 Errata
14 June 2019

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1 Introduction

Thank you for your interest in the Avnet Ultra96-V2 Single-Board Computer. Although Avnet has made every effort to ensure the highest possible quality, these kits and associated software are subject to the limitations described in this errata notification.

Be aware that any of the optional workarounds requiring physical modifications to the board are done at the User's own risk, and Avnet is not liable for poorly performed rework.

2 Identifying Affected Modules

The modules affected by these errata can be identified by the Date Code of the Ultra96-V2 Single-Board Computer. The date code of the Ultra96-V2 Single-Board Computer can be found on the bottom side of the PCB board near the edge on the backside opposite the Wi-Fi module (removing the thermal bracket is NOT necessary).

The datecode is a 4-digit number indicating Year and Week of manufacture, in YYWW format. Therefore, a datecode of 1922 is the 22nd week of 2019, which is the week of May 26th, 2019.

The datecode is found on the 4th line of the sticker on the backside of the board as seen in the following two figures.

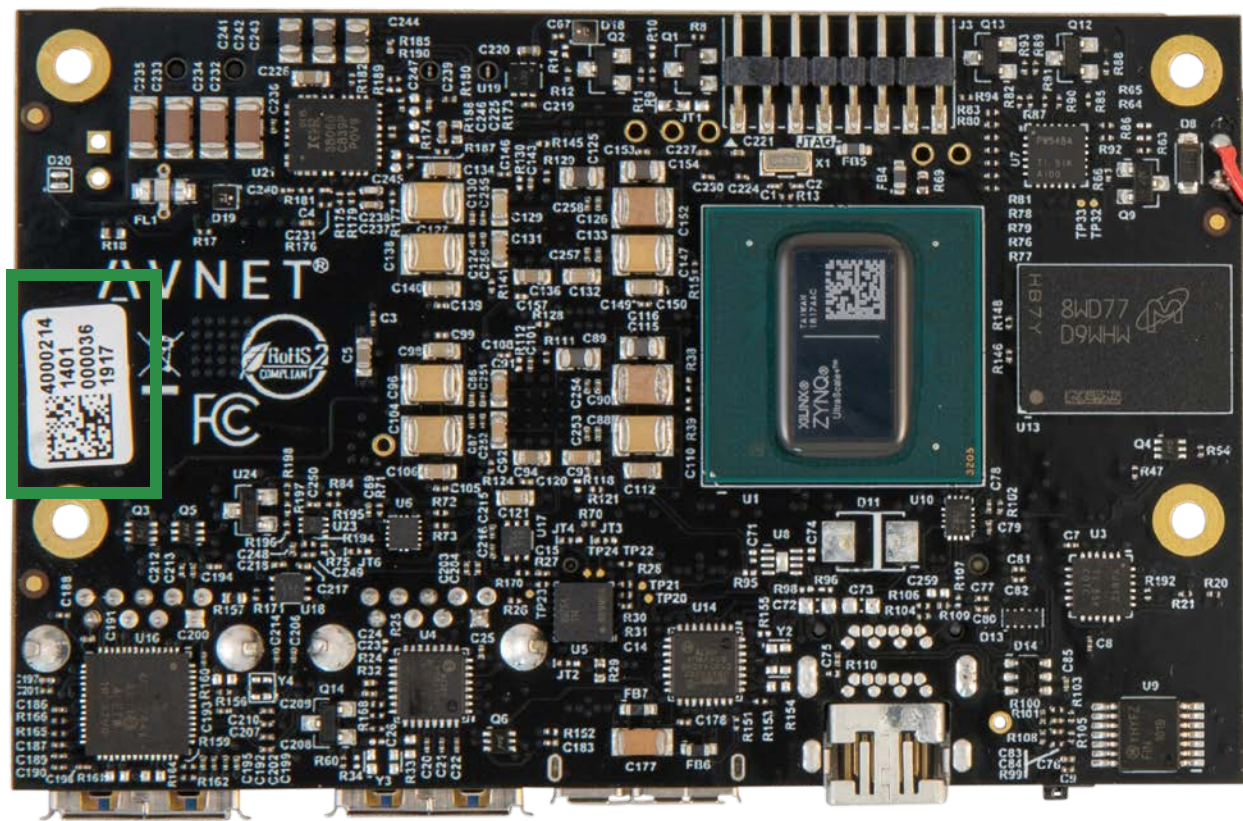


Figure 1 – Ultra96-V2 Backside (Bracket Removed)



Figure 2 – Datecode of 1917 is 17th week of 2019, which is week of April 21st

3 Errata

3.1 Quick-Start Cards States No LED Lit When Powered Off

3.1.1 Applications Affected

Kits whose Ultra96-V2 boards have a datecode of 1927 or earlier include a printed Quick-Start Card with this error.

3.1.2 Description

The printed Quick-Start Card does not properly account for LED D17, which is the 12V VIN LED. Any time a live 12V is plugged into the barrel jack, this LED will light, regardless of the power state of the board. The intention for this LED is to remind users that 12V is active any time that the barrel jack is plugged in. The barrel jack must be unplugged when pods or mezzanines are attached or detached from the Ultra96-V2.

The Quick-Start Card should have identified the LED in Step 5. Step 8 claims after the shutdown sequence that “All the LEDs will turn off.” This is incorrect as D17 will not turn off until the barrel jack is unplugged.

3.1.3 Workaround

An updated digital copy of the Quick-Start Card with these corrections is available at <http://avnet.me/ultra96-v2> → Documentation.

3.1.4 Identifying Repaired or New Boards

New kits will be produced with the updated Quick-Start Card. These will have datecode 1931 or later.

3.2 Over-current Warning for Switcher A on Pmic 0x14

3.2.1 Applications Affected

Ultra96-V2 boards having a datecode of 1927 or earlier will exhibit this behavior.

3.2.2 Description

The Infineon Pmics used on Ultra96-V2 are programmable devices that include voltage value, warning, and fault settings. Reference Designator U12 is an Infineon IRPS5401 with an address setting of 0x14. Switcher A on this device delivers 1.8V to the Ultra96-V2 which is VCC_PSAUX. this can be seen on Sheet 16 of Ultra96-V2 Rev 1 schematics. This rail was designed to deliver a maximum steady-state current of 1.0A.

ROCKY PMIC #2

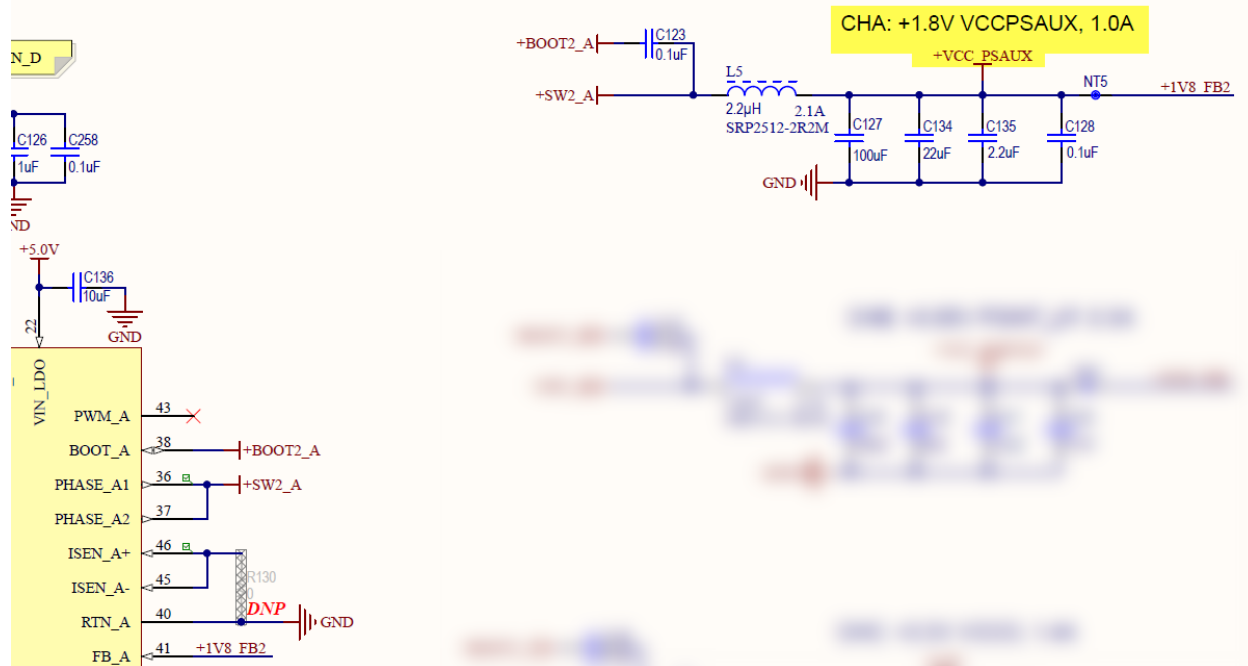


Figure 3 – Ultra96-V2 Schematic Page for Pmic #2, 0x14

For the affected boards, the warning threshold was set too low, such that occasional current spikes will trigger an over-current warning. This is only seen if actively monitoring in the Infineon PowIRCenter software, as shown in the figures below. The warning does NOT affect the proper operation of the board.

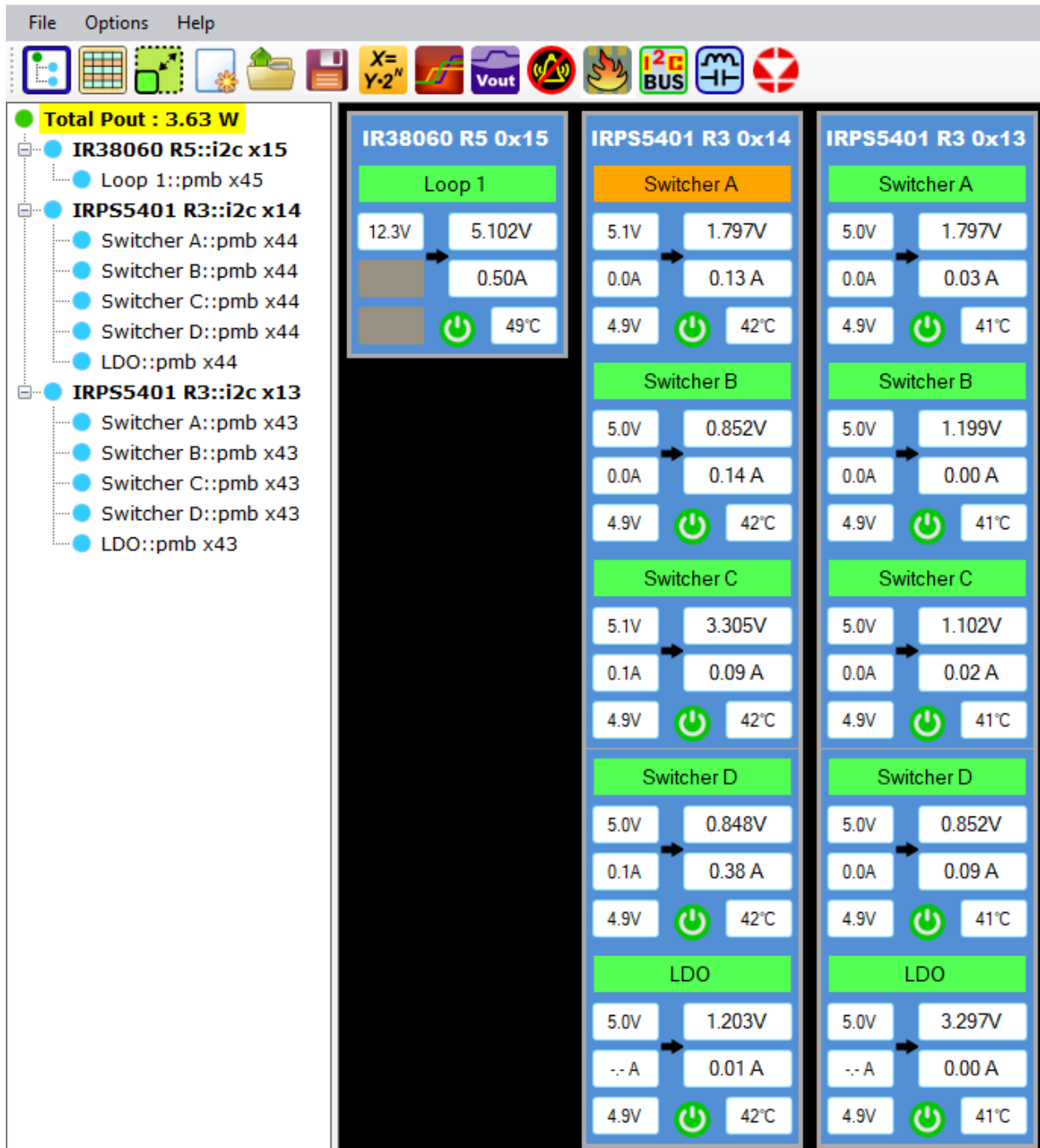


Figure 4 – PowIRCenter Shows Warning on Switcher A of 0x14

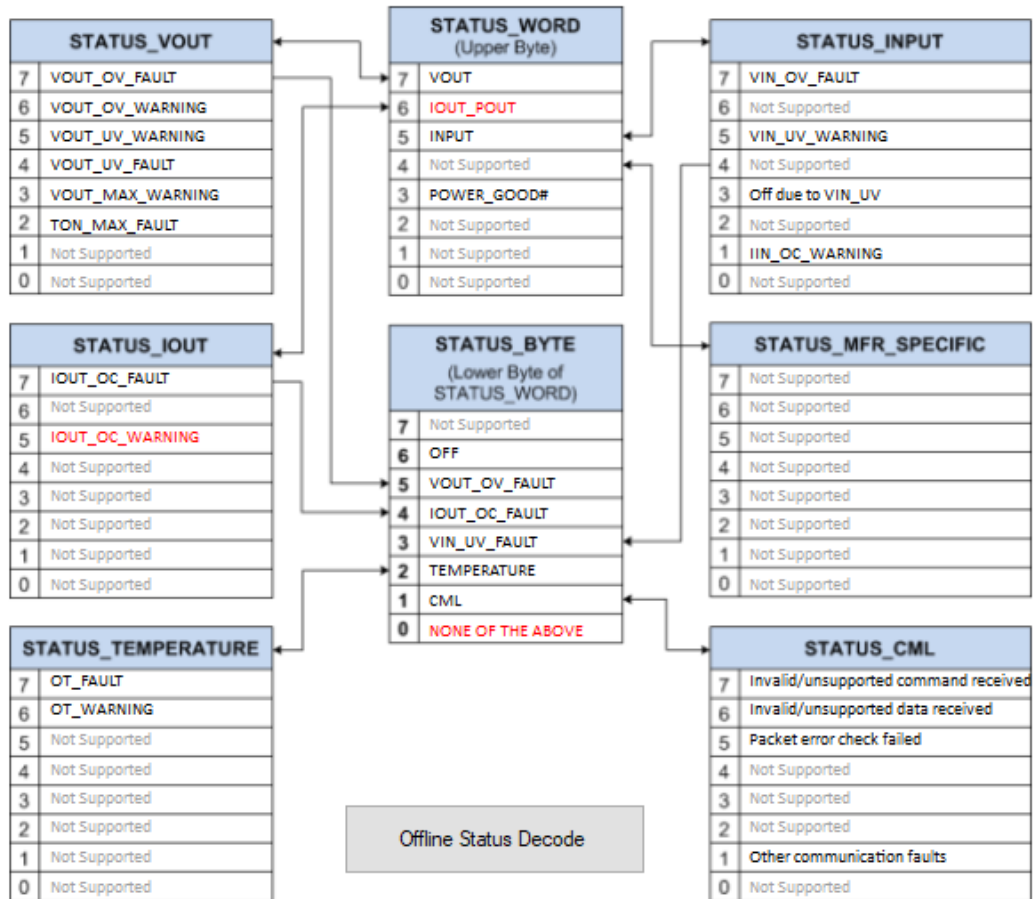


Figure 5 – Detailed Warning Shows IOUT Over-Current Warning

3.2.3 Workaround

It is not necessary to perform a work-around. This warning may be safely ignored. However, the Infineon Pmic warning thresholds may be adjusted to 1.5A to eliminate this warning.

3.2.4 Identifying Repaired or New Boards

The programming files will be adjusted to eliminate the warning on boards with datecode 1931 or later.

3.3 Issues Inserting or Ejecting the microSD Card

3.3.1 Applications Affected

Ultra96-V2 boards have a datecode of 1923 or earlier may exhibit this behavior.

3.3.2 Description

Some of the first 1000 kits may have a microSD card cage where the card insertion and ejection isn't smooth with the included Delkin card. This is NOT due to the Delkin card, which is entirely within specification. This is due to a lack of lubricant inside the sliding mechanism of the cage. All boards are functional and passed our factory functional test. However, if you find your cage starts to malfunction, you may request a free SanDisk microSD card from your Avnet FAE. The SanDisk card is marginally thinner, which is enough to make a difference. You may also request an RMA through your Avnet sales organization within the first 60 days, and we will replace your board.

3.3.3 Workaround

A thinner SanDisk microSD card may alleviate this issue. You may request a free SanDisk microSD card from your Avnet FAE. Alternatively, you may request an RMA to replace your board within 60 days of receiving your board.

3.3.4 Identifying Repaired or New Boards

Avnet does not plan to repair the affected boards. New boards with datecode of 1924 or later should not exhibit this issue.

4 New Erratum

Any new erratum found will be posted to the Ultra96-V2 website forum:

http://avnet.me/Ultra96-V2_Errata

5 Additional Support

For additional support, please review the discussions and post your questions in the Ultra96-V2 Forum:

http://avnet.me/Ultra96_Forum

You may also contact your local Avnet FAE.

6 Revision History

Date	Version	Revision
14 Jun 2018	1.0	Added Items 3.1, 3.2, and 3.3