DCS1.Pilot v1.2
Errata sheet

Revision 1.0 (05/2024)

Important Updates and Corrections

This document contains important updates and corrections for DCS1.Pilot v1.2 board. Please review the following information carefully to ensure the optimal performance and user experience of our product.

Introduction

Dear Customer,

Thank you for choosing our products. In our commitment to delivering excellence, we have identified certain issues that require your attention. This errata sheet outlines these issues along with their respective corrections and solutions. Please take the time to review this document thoroughly.

If you have any questions or need further assistance, do not hesitate to contact our support team.

Sincerely,

Airvolute

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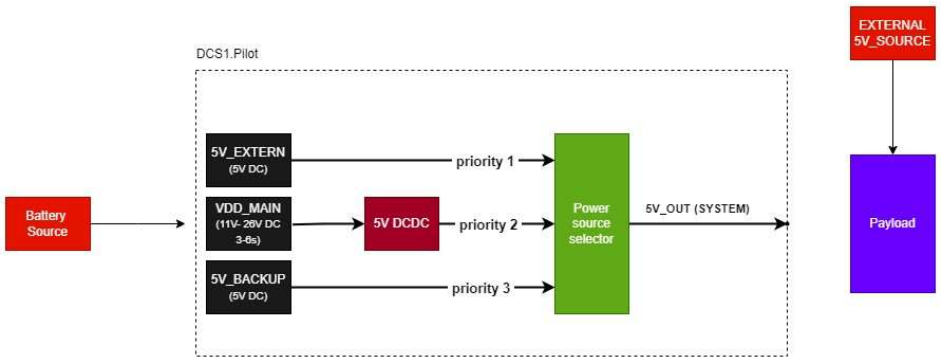
1. Power supply

1.1. Power selector undervoltage lockout.

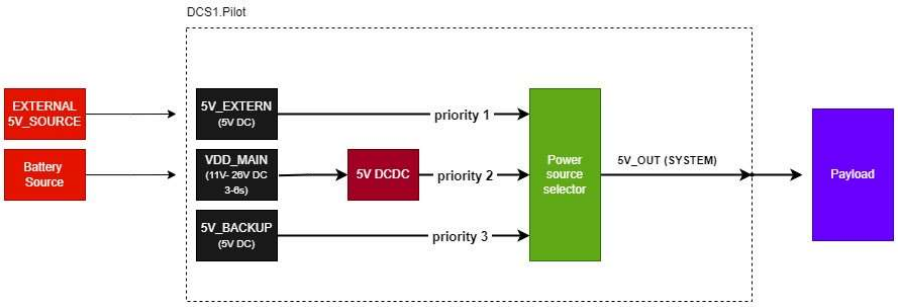
DCS1.Pilot v1.2 includes power selector circuit, which chooses one of three available prioritized sources for 5V line (respectively 5V_EXT, VDD_MAIN,5V_BCKP). The respective source is considered valid if it's voltage is within the range of 4.65V – 5.3V. Basically, if the bare DCS system is used, only VDD_MAIN supply rail is available. If the payload connected to board's 5V has behavior of capacitive load, so it can demand current spikes, voltage of the rail can fall below the undervoltage threshold and power selector disables this line. Following on that event, power selector tries to recover, but if transient current causes the peak again, 5V rail can remain disabled permanently.

Possible solutions:

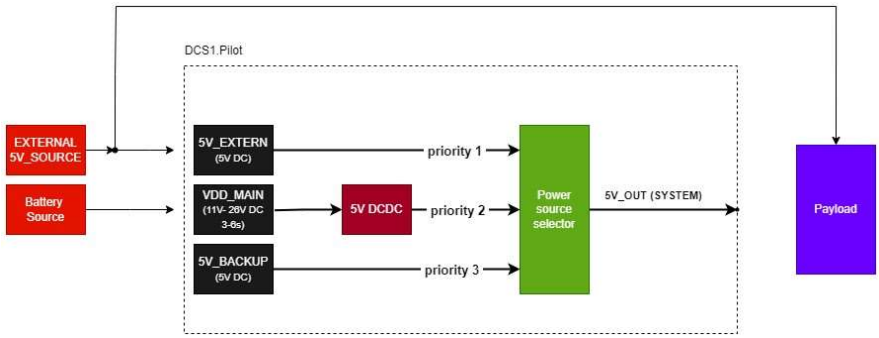
1. Supply the payload and peripherals with significant power consumption from external power source.



2. Use external 5V source connected to 5V_EXTERN (highest priority), which is stiff enough to withstand all possible current spikes of the payload and board together, within valid voltage range. This approach needs to be verified with the specific payload.



3. Combination of both, 1. and 2. – all the payload is supplied externally (Pilot board bypassed) and simultaneously 5V_EXTERN supplied with stiff enough external source (can be the same as for payload).



These observations are also valid for 5V_BCKP supply rail. If you are using this rail as redundant backup supply for system 5V, always verify that source is stiff enough to withstand switch event.