

FPGA Notes

Seems like NASA and other groups have a high interest in FPGAs in space. One big concern seems to be radiation tolerance of FPGAs and you can even get special space grade FPGAs from Xilinx, although they seem to be very expensive. There's also a special type of FPGA called an antifuse FPGA that can be permanently flashed in a way where it won't get corrupted by the radiation errors. Likely we'll want to put just an automotive grade FPGA up and periodically reflash it. This would require some error handling to make sure the flash image isn't corrupted, especially if uploaded, which I would very much like to do.

Use cases

- Flight controller
- Peripheral processing
- Com stream handling (Radio)