Firmware Notes

This page collects some notes about the host-driven RF firmware, running on the EFR32FG23 chip on the board.

- RAIL initialization fails with custom build system
  - This is because a LDMA transfer is set up, but something gets wonky with the initialization and the destination address mode is set to *decrement.*
  - Most likely caused due to an ABI mismatch between the compiled RAIL library, and our code (or some headers?) compiled for the drivers, specifically the LDMA driver; current workaround is to monkeypatch the LDMA driver to never set the direction bits (thus completely ignoring the "broken" transfer struct)
- Temperature sensor driver has cast to double
  - In `TEMPDRV_GetTemp()`, the 0.5 constant needs to have a `f` suffix to make it float, rather than double to compile with the enhanced warnings about upcasts
- Host irq system is busted
  - There should be a separate “irq acknowledge” register, instead of making the interrupt levels be dependent on doing some action
  - Currently there’s a possible race between an irq handler and a packet receive, which wedges irq’s

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