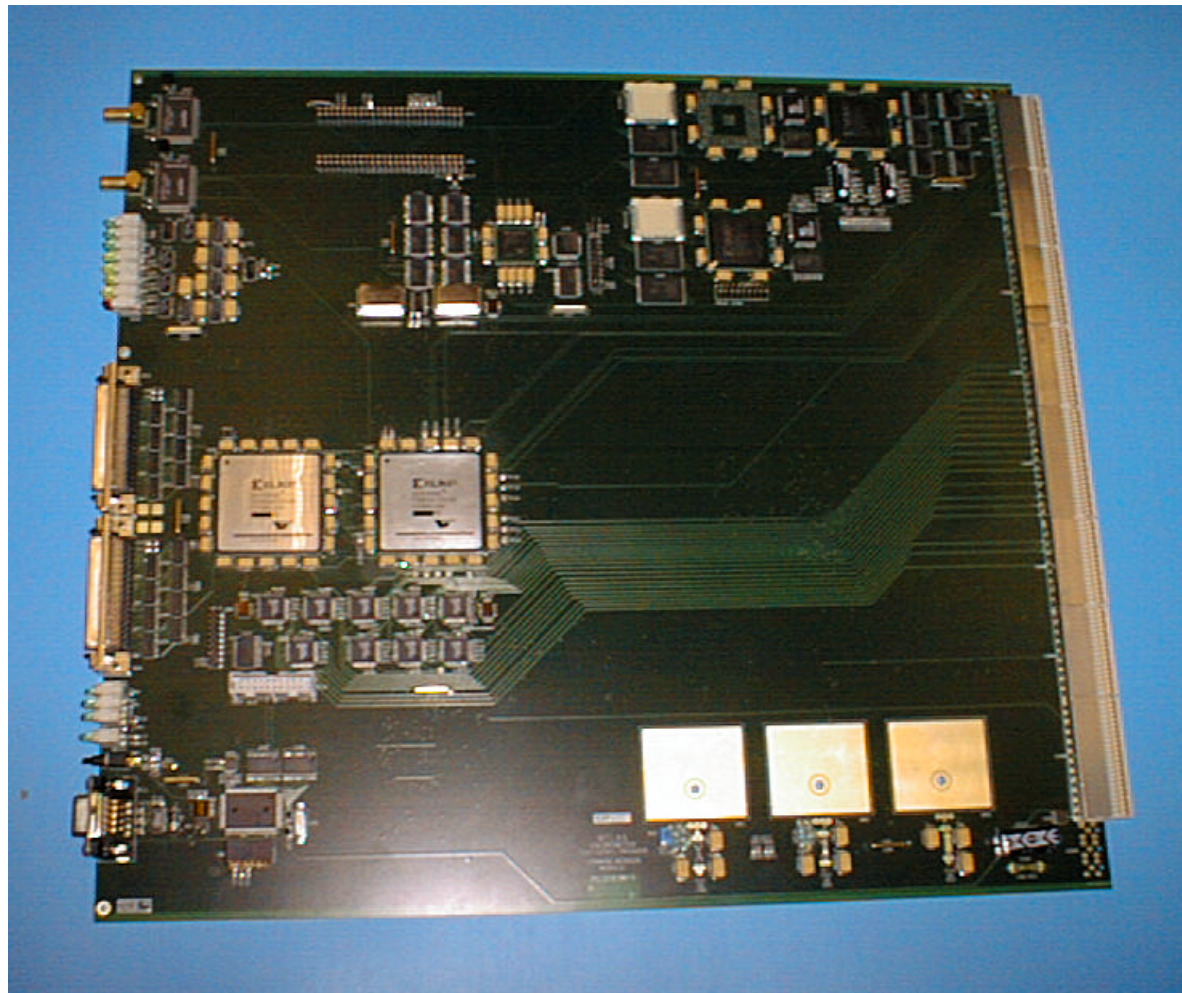


The Common Merger Module: Status Report

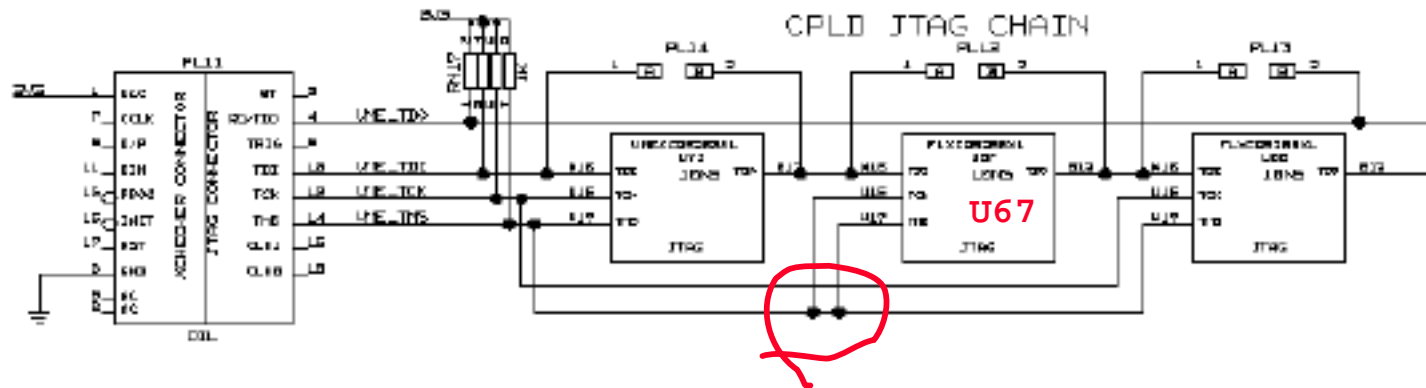
- Photograph
- Hiccup
- Current Status



CMM: The Photograph



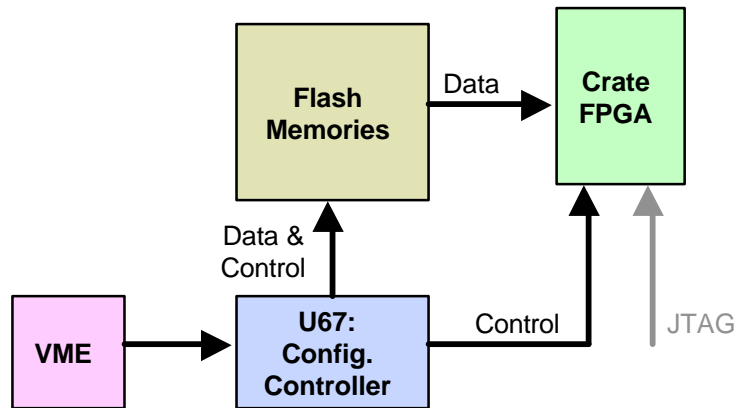
CMM: The JTAG problem



- Error found by Richard Matson whilst preparing for JTAG tests.
- U67 JTAG input TCK (clock) tied to TMS (control) by mistake.
 - ? Cannot drive or load U67 by JTAG.
 - ? U67 will output junk to JTAG chain.
- Two boards being assembled at the time....
- Problem buried beneath BGA....
- Cancelled assembly of one board.
- Other board assembled without U67, so that rest of CPLD JTAG chain to be used.



CMM: The JTAG problem, continued



- U67 is Configuration Controller for Crate FPGA.
- ? current module cannot be made to configure Crate FPGA automatically at power up.
- ? Another design iteration will be necessary.

- Meanwhile, with current module:
 - FPGAs can be configured via FPGA JTAG chain.
 - Cannot test Configuration Controller for Crate FPGA.
 - Can test Configuration Controller for System FPGA, and *everything else*.
- Test as much of current module as possible before proceeding to second design iteration.

What can we learn from this?

- Give schematics to Richard Matson before the design goes out to manufacture.



CMM: Current Status

- **Error in Schematics uncovered during preparation for JTAG tests.**
- **One CMM received from manufacturers**
- **JTAG tests show one signal missing, between Crate and System FPGAs:**
 - easily bypassed using spare track;
 - need to investigate cause.
- **Crate and System FPGAs loaded successfully via JTAG.**
- **VME CPLD loaded successfully via JTAG.**
- **VME read access made successfully to registers in VME CPLD, Crate FPGA and System FPGA.**
- **Some problems with VME write access. Investigating....**

