

Mercury Errata
V2.0
29 April 2009

Mercury Errata #1

Description of Error:

A 220 Ohm resistor is installed at R10 instead of the correct 22 Ohm unit.

Symptoms:

Some JTAG programmers (Terasic Byte Blaster, for example) will not program the serial FLASH memory (U9). The PROM may still be programmed from the FPGA; only programming via the PROM PROG header (J4) is affected.

Corrective Action:

Remove R10. Install a 22 Ohm size 0603 resistor at R10.

Alternate action: Remove R10. Short across the R10 pads with a piece of wire.

Notes:

R10 is a series damping resistor. It is typically not required.

Severity:

This error will not affect receiver operation in any way. It only affects FLASH programming from the PROM PROG (J4) header, and only some JTAG programmers fail to work. If you have problems programming the FLASH with your JTAG programmer, this mod should be done.

Applicability:

This rework only applies to the initial run of TAPR built Mercury boards.

Mercury Errata #2

Description of Improvement:

Remove (short out) a 33 Ohm resistor (Marked "330") at position R37.

Symptoms:

Some of the sensitivity with respect to position of the cards in the ATLAS bus card, particularly those involving the selection of the 10 MHz clock on Mercury as the source, can be improved by eliminating (shorting out) resistor R37.

Corrective Action:

Remove R37. Install a 0 Ohm size 0603 resistor at position R37.

Alternate action: Short across the R37 pads with a piece of wire.

Notes:

R37 is a series damping resistor. It causes problems with some card positions by slowing down the rise and fall time of the 10 MHz clock signal when sourced from Mercury.

Severity:

This problem is less evident with the later releases of software for Mercury, Ozy and Penelope. If you have persistent problems with symptoms such as popping sounds, and intermittent baseline rise, particularly when Mercury is selected as the source of the 10 MHz clock, you should perform this rework.

Applicability:

This rework only applies to the initial run of TAPR built Mercury boards. This resistor position does not exist in Euro-Mercury.