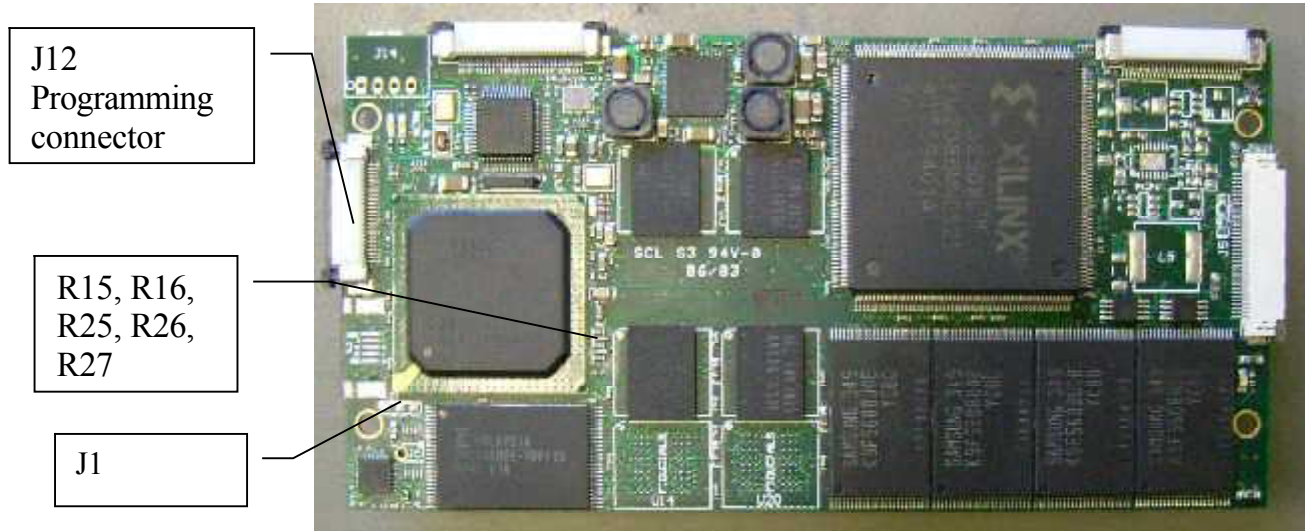


# XJTAG testing of Balloon 3

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## Test procedure

- Connect the XJTAG dongle via the Balloon 3 adapter to J12, the programming connector on the Balloon board. No other connections are required. The contact side of the FFC should be facing you.
- Connect power: 4.0 to 4.5VDC, positive on the red wire, negative on the black wire.
- Run the XJTAG test:  

```
xjdebug -run balloon3.xje
```
- Press 'l' (lowercase letter L) and then return.
- The tests will run and return an overall PASS or FAIL result.

## Notes

### General

From time to time XJTAG will complain that the JTAG chain is broken part way through the tests. If this happens, it's normally because something's upset the CPU power manager and switched off the power. Simply restart the test.

### FPGA version

The XJTAG tests do not currently support the FPGA version of the Balloon 3 board. This is hoped to change shortly.

### **SDRAM tests**

This should find four SDRAM chips. It has a tendency to find more than that, typically 6 chips. This is believed to be due to shorts/opens on R15/16/25/26/27 (see diagram above). If all boards behave that way, please let me know.

### **NOR flash tests**

This will typically report 'A19 is stuck' twice during the test. This is not a fault – it's because J1 allows A19 to be strapped high for certain types of NOR flash chip.

### **NAND flash tests**

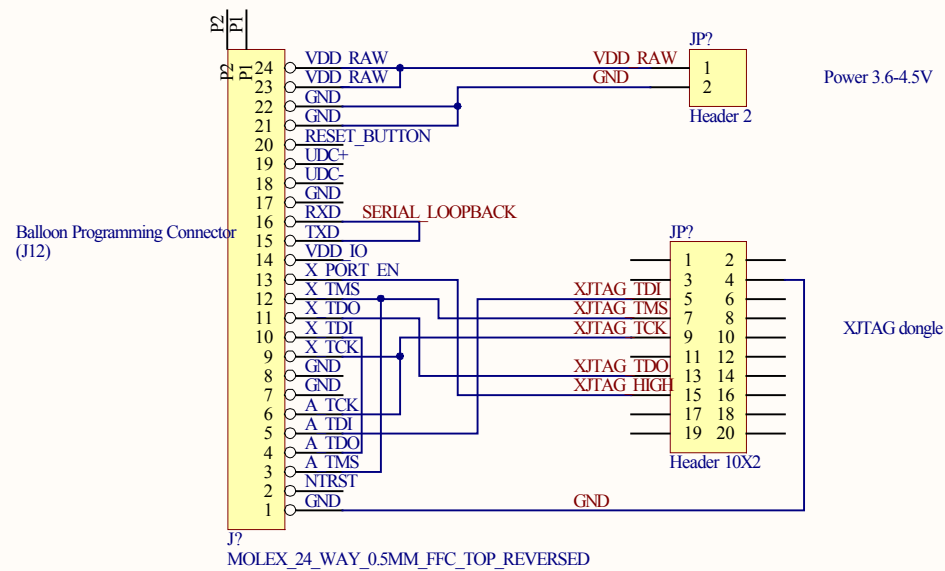
The NAND flash test should count 4 working NAND chips.

### **Serial port tests**

This test only tests one serial port, the console (COM3).

### **USB OTG, CompactFlash, Audio Codec tests**

These tests are not currently usable.



Title		
Balloon 3 to XTAG dongle adapter Chris Jones, Martin-Jones Technology Ltd		
Size	Number	Revision
A4		
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File:	H:\documents\balloon-3-xtag-dongle.SchDocDrawn By:	