Matrix Multimedia ARM Board Test Procedure

User Test procedure for the EB031-00-1 ARM Board with EB034 ARM Daughter board attached

The following instructions show the test procedure for EB031-00-1 E-Block ARM Board.

Pre-requisites

Required items

Items required (Hardware):

- EB031 ARM board
- EB034 ARM daughter board attached to EB031
- USB Cable
- 1-5 LED boards for testing port outputs.

Items required (Software):

- ARM board programmer software:
  - mLoader ARM programmer
  - Matrix ARM board USB Driver

- Items required (Programs):
- Test program (ARM_Test.bin)

Initial Software Set-up.

Run and Install mLoader_Setup.exe which will install mLoader, the Matrix ARM board USB driver, the ARM_Test.bin file, and a copy of this document.

Note: Installing C for ARMs will install all these features as well.

Initial USB Driver installation

When first plugged in the board will be detected by the USB bus and reported as a Matrix board. The Add new hardware wizard will then start asking for the USB drivers for the board.
The Driver files are installed as part of the mLoader install, so you should be able to go through automatically. If not point the driver installer to the Matrix USB_Driver folder installed as part of mLoader_Setup.exe (C:\Program Files\Matrix Multimedia\mLoader\USB Driver by default).

The Test program

1) Run the ARM Test program shortcut from the Matrix Multimedia\mLoader program group.
   The ARM Test program will then appear ready to download the test program.
2) Whilst pressing down the PROG button (PB2) tap the RESET (PB1) button. This will put the ARM board into programming mode
3) The LEDs if attached will alter to signify programming mode.
4) You can then release the PROG button.

5) Once the program is sent press the RESET (PB1) button to leave Programming mode and run the test program.
6) Close the ARM Test program.

ARM Test program details

ARM Test program has two stages which are repeated continuously.

1) LEDs on each port light in alternate pairs creating an 1-0-1-0 to 0-1-0-1 pattern.
   The pattern repeats 5 times
2) The entire port flashes on and off.
   The pattern is repeated 5 times.

Check on each port to see that both the alternating pattern and the flashing pattern are correct. (Excluding B5, D4 and E4-7 – see notes below).

Important Notes:

- Pins B5 and D4 are not used (they are USB pins and using them causes USB issues).
- Port E only uses pins 0-3. Pins 4-7 are analogue only ports which are not used in this test.

Note: The User test requires the ARM board to have the Matrix OS program loaded onto the ARM device.

If the Matrix OS program has not been loaded, or has been overwritten please refer to the *Reflashing the EB185 ARM Board* document available separately.
If the board is listed as a Matrix board in Hardware manager, and when first plugged in, then the Matrix OS is correctly loaded.

Technical support

For Technical support please visit the technical support page and user forums on our web site:
http://www.matrixmultimedia.com