Design Advisory: xCORE-200 eXplorer Kit MAC address programming

Issue Description

Early engineering samples of the xCORE-200 eXplorer Kit board do not have MAC addresses programmed into the on-chip OTP memory. The MAC address is required to ensure correct operation when connected to an Ethernet network.

Impacted hardware

This advisory applies only to boards marked "xCORE-200 DEV BOARD" with a date code of 1505 (see figure 1 as an example). All other boards are unaffected.
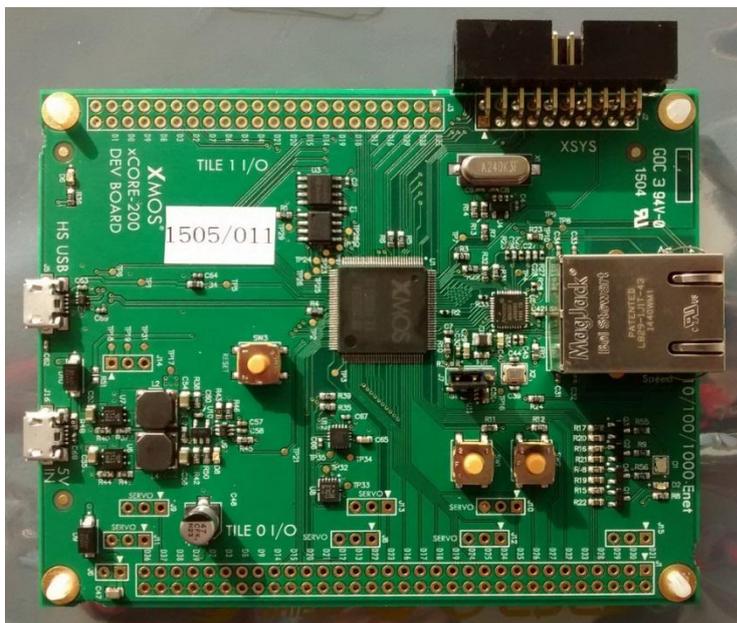

Figure 1: xCORE-200 explorer board affected by this advisory

Recommended actions

A MAC address can be programmed by following the procedure outlined below:

1. Ensure you have at least version 14.0.1 of the XMOS tools installed
2. Power the eXplorer board using the 5V IN micro-USB
3. Connect to the board via the XSYS header and an XTAG adaptor
4. Ensure the board is visible to the tools by executing "`xrun -l`" from the tools command line (see below for expected output)
5. Choose a MAC address in the following range:
    - 00:22:97:80:03:2A ~ 00:22:97:80:03:8D
    - If you have more than one board, ensure they are given different MAC addresses
6. Execute the following command from the tools command line, substituting "nn" for the chosen MAC address:
    - `xburn --target XCORE-200-EXPLORER --mac-address 00:22:97:80:03:nn`

The following would be expected for a successful OTP burn:

```
prompt> xrun -l

Available XMOS Devices
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  ID    Name                    Adapter ID      Devices
  --    ----                    ----------      -------
  0     XMOS XTAG-2             QuAifiLM        O[0]

prompt> xburn --target XCORE-200-EXPLORER --mac-address 00:22:97:80:03:29
This action will write to OTP. Once written the data cannot be modified.
Do you wish to continue (y/n)? y
Burning device...
Device successfully burnt
```

Note that the Adaptor ID reported will be XTAG specific.