The Art of Embedded Systems Development – **made Easy™**

To Our Valued Customers,

This PCN affects our LPC4357 OEM board (product number: EA-OEM-011). This board is also sold as part of the LPC4357 Developer's Kit (product number: EA-OEM-511).

Change 1

The NAND flash (U5) currently mounted on the EA-OEM-011 board is obsolete.
The currently mounted component (Samsung K9F1G08U0D-SIB0) will be replaced by Macronix MX30LF1G08AA-TI.

The new NAND components are very compatible. There is however five major differences that are important to be aware of:

NAND chip	Samsung K9F1G08U0D-SIB0	Macronix MX30LF1G08AA-TI
Status / Differences	Old, now obsolete	New
Random page read operation	35 us (max)	25 us (max)
Page program time	250 us (max)	700 us (max)
Block erase time	2 ms (max)	3 ms (max)
Partial page programming	4 (max)	4 (max)
Read ID operation (command 0x90)	First byte: 0xEC Second byte: 0xF1 Third byte: 0x00 Fourth byte: 0x15 Fifth byte: 0x40	First byte: 0xC2 Second byte: 0xF1 Third byte: 0x80 Fourth byte: 0x1D No fifth byte

Depending on how general and flexible the NAND flash driver you have implemented in your system, these timing and ID changes may, or may not, be handled automatically. The timing changes are typically handled automatically if the ready/busy signal is sampled instead of using fixed delays in the driver code.

Identification

All boards from Embedded Artists have a marking: WO-XXXX-YYWW, where XXXX is the WO-number. YY is the year and WW is the week number when the board was produced.

The first batch of boards that have the new NAND flash is XXXX = 0637. Please note that this batch may have boards with either Samsung or Macronix NAND flash.

Look at the backside of the OEM board to identify which NAND flash that has been mounted.

Figure 1 - Samsung NAND Flash

Figure 2 - Macronix NAND Flash

All boards with WO-number above: XXXX > 0637 will have the new Macronix NAND flash.

Kind Regards,
Embedded Artists AB
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