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

To Our Valued Customers,

This PCN affects our LPC2468-16 OEM board (product number: EA-OEM-001). This board is also sold as part of the LPC2468 Developer's Kit (product number: EA-OEM-101).

The NAND flash (U4) currently mounted on the EA-OEM-001 board is obsolete.
The currently mounted component (Macronix MX30LF1G08AA-TI) will be replaced by Macronix MX30LF1G18AC-TI.

The new NAND component is very compatible. There are however a few major differences that are important to be aware of:

NAND chip	Macronix MX30LF1G08AA-TI	Macronix MX30LF1G18AC-TI
Status / Differences	Old, now obsolete	New
Sequential read	30 ns / byte	20 ns / byte
Page program time	250 us (typ) / 700 us (max)	300 us (typ) / 600 us (max)
Cache read busy time	5 us (max)	3.5 us (typ) / 25 us (max)
Block erase time	2 ms (typ) / 3 ms (max)	1 ms (typ) / 3.5 ms (max)
Endurance (100K cycles)	1-bit ECC per 512+16 bytes required	4-bit ECC per 512+16 bytes required
Read ID operation (command 0x90)	First byte: 0xC2 Second byte: 0xF1 Third byte: 0x80 Fourth byte: 0x1D No fifth byte	First byte: 0xC2 Second byte: 0xF1 Third byte: 0x80 Fourth byte: 0x95 Fifth byte: 0x02

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.

There is a migration document from Macronix that can be accessed here:
http://www.macronix.com/Lists/ApplicationNote/Attachments/1928/
AN-0351V2-MGRT_MX30LF1G08AA_to_MX30LF1G18AC_REV2.pdf

Identification

The new NAND flash will be mounted on boards produced after August 2018. 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 affected boards will have a WO-number above or including: XXXX ≥ 0881

Kind Regards,
Embedded Artists AB
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