

To Our Valued Customers,

This PCN affects our LPC1788 OEM board (product number: EA-OEM-009). This board is also sold as part of the LPC1788 Developer's Kit (product number: EA-OEM-509).

Change 1

The NAND flash (U16) currently mounted on the EA-OEM-009 board is obsolete.

The currently mounted component (Samsung K9F1G08U0D-SIB0) will be replaced by Samsung K9F1G08U0E-SIB0 or Macronix MX30LF1G08AA-TI. **Either one can be mounted, depending on availability.**

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

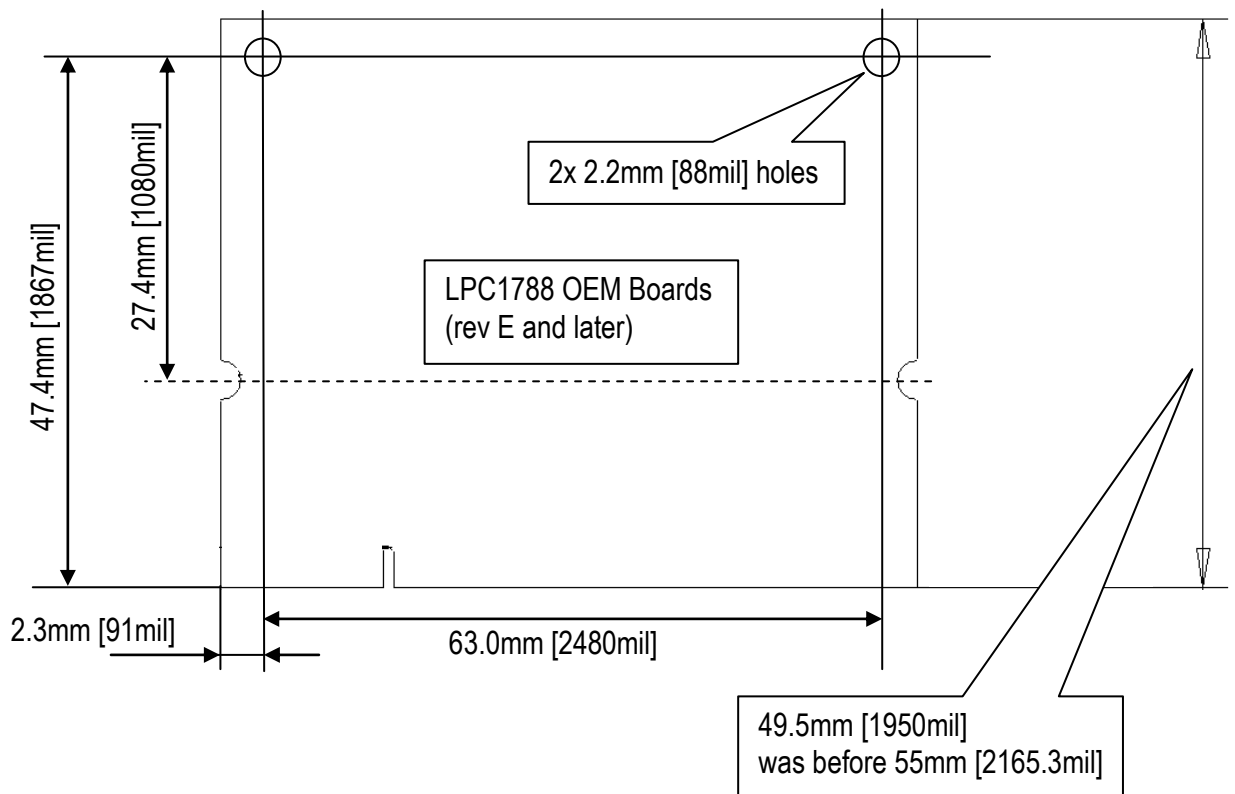
NAND chip	Samsung K9F1G08U0D-SIB0	Samsung K9F1G08U0E-SIB0	Macronix MX30LF1G08AA-TI
Status	Old, now obsolete	New, one of two alternatives	New, one of two alternatives
Differences			
Random page read operation	35 us (max)	40 us (max)	25 us (max)
Page program time	250 us (max)	400 us (max)	700 us (max)
Block erase time	2 ms (max)	4.5 ms (max)	3 ms (max)
Partial page programming	4 (max)	1 (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: 0xEC Second byte: 0xF1 Third byte: 0x00 Fourth byte: 0x95 Fifth byte: 0x41	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.

Partial page programming shall not be used in order to be compliant with the new chip from Samsung.

Change 2

The board measurements have been changed to incorporate mounting holes and be compatible with the measurements of the LPC4088 and LPC4357 OEM boards. Since the new board is smaller (decreased height) it is likely that the change will have no, or very small, effect on existing designs that incorporate the LPC1788 OEM board.



Identification

The new NAND flash will be mounted on boards produced after December 2014. 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 \geq 0596

Kind Regards,
Embedded Artists AB
January 21, 2015