



# DM3730/AM3703 SOM-LV Product Change Notification

## Hardware Documentation

Logic PD // Products  
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## Revision History

| REV | EDITOR  | DESCRIPTION  | APPROVAL    | DATE     |
|-----|---------|--|-------------|----------|
| A   | SO      | -Initial release for PCN 546: Software Changes   | EN, JMC     | 07/11/12 |
| B   | SO, NJK | -Section 1.2: Updated example of sticker on SOM to reflect correct format;<br>-Release for PCN 552: Hardware Changes | NJK, JMC    | 09/14/12 |
| C   | SO      | -Release for PCN 573: Hardware Changes   | JMC         | 05/20/13 |
| D   | JMC     | -Section 1.3: Updated table showing current SOMs in production.<br>-Release PCN 602: Hardware Changes                | JMC, BSB    | 11/13/14 |
| E   | BSB     | -Section 1.3: Updated table showing current SOMs in production.<br>-Release PCN 621: Hardware Changes                | JMC, RS, AF | 10/11/17 |
| F   | JMC     | -Release PCN 625: Hardware Changes   | NK, BSB     | 6/25/19  |

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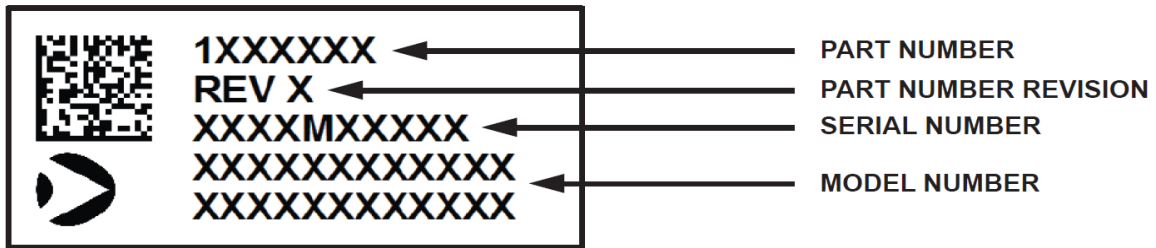
# 1 DM3730/AM3703 SOM-LV PCN Introduction

## 1.1 Purpose of Document

The purpose of this document is to provide a single repository for explaining design changes to a specific product family. The changes described in this document relate to the DM3730/AM3703 SOM-LV product family.

## 1.2 Determining What Build You Have

To determine whether your DM3730/AM3703 SOM-LV is affected by a PCN, locate the sticker on your System on Module (SOM) and compare the model number with the “Affected Models” table for each PCN. In some instances, a PCN may call out the “unique serial number” or “part number” to better identify the affected SOM. The figure below shows the location of each number on the sticker.



**NOTE:** Logic PD’s [WP 293 Model Number Explanation and Decoder](#)<sup>1</sup> goes into detail about these numbers and their relationship to one another.

## 1.3 Current Standard Model in Production

The table below lists the most current revisions of standard DM3730/AM3703 SOM-LVs. It also specifies the PCN that details the changes prompting the model revision.

| Model Number & Rev      | PCN Detailing Revision    |
|-------------------------|---------------------------|
| SOMDM3730-11-1783IFXR-A | PCN 621: Hardware Changes |
| SOMDM3730-11-1783JFIR-A | PCN 621: Hardware Changes |
| SOMDM3730-11-2783IFCR-A | PCN 621: Hardware Changes |

<sup>1</sup> <http://support.logicpd.com/downloads/601/>

## 2 PCN 546: Software Changes

Published: July 2012

PCN Classification:

- A - Recall  
 B - Customer Action Required  
 C - Product Upgrade  
 D - Change of Production Line

### 2.1 Products Affected

This PCN describes software changes that were made to the DM3730/AM3703 SOM-LV. The “New Model Number & Rev” listed below indicate the first SOMs that will be manufactured with the changes described herein.

| Affected Model Number & Rev<br>(Part Number) | New Model Number & Rev<br>(Part Number) |
|--|---|
| SOMAM3703-10-2780HFCR-A<br>(1017378)         | SOMAM3703-10-2780HFCR-B<br>(1022072)    |
| SOMDM3730-10-1782IFXR-A<br>(1017348)         | SOMDM3730-10-1782IFXR-B<br>(1022069)    |
| SOMDM3730-10-1782JFIR-A<br>(1017377)         | SOMDM3730-10-1782JFIR-B<br>(1022070)    |
| SOMDM3730-10-2782IFCR-A<br>(1017318)         | SOMDM3730-10-2782IFCR-B<br>(1022071)    |

### 2.2 Description of Change

#### 2.2.1 LogicLoader Change

The LogicLoader software included on the DM3730/AM3703 SOM-LV has been upgraded to version 2.5.2. This new version of LogicLoader includes the updates noted below.

- Reduces boot time.
- Fixes issue in which writes to the lboot partition following a soft reset corrupt the module and prevent a successful boot.
- Fixes LogicLoader’s failure to boot below -30°C when the power is cycled for less than thirty seconds.

LogicLoader version 2.5.2 is backwards compatible with previous versions of the DM3730/AM3703 SOM-LV.

## 2.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>2</sup>

## 3 PCN 552: Hardware Changes

Published: September 2012

PCN Classification:

- A - Recall  
 B - Customer Action Required  
 C - Product Upgrade  
 D - Change of Production Line

### 3.1 Products Affected

This PCN describes hardware changes that were made to the DM3730/AM3703 SOM-LV. The “New Model Number & Rev” listed below indicate the first SOMs that will be manufactured with the changes described herein.

| Affected Model Number & Rev<br>(Part Number) | New Model Number & Rev<br>(Part Number) |
|--|---|
| SOMDM3730-10-1782IFXR-B<br>(1022069)         | SOMDM3730-10-1782IFXR-C<br>(1022819)    |
| SOMDM3730-10-2782IFCR-B<br>(1022071)         | SOMDM3730-10-2782IFCR-C<br>(1022825)    |

### 3.2 Description of Change

#### 3.2.1 Wireless Module Change

The RF Monolithics WLS1271 wireless module has been replaced with an RF Monolithics WLS1271L module due to part obsolescence. The updated component incorporates changes to the Bluetooth interface; however, the DM3730/AM3703 SOM-LV hardware does not support the Bluetooth interface of the WLS1271L module. There is, therefore, no impact to the SOM. The Wi-Fi portion of the module, the overall performance, and the footprint will remain the same.

No software modifications are required to accommodate this change.

### 3.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>3</sup>

<sup>2</sup> <http://support.logicpd.com/TDGForum.aspx>

<sup>3</sup> <http://support.logicpd.com/TDGForum.aspx>

## 4 PCN 573: Hardware Changes

Published: May 2013

PCN Classification:

- A - Recall  
 B - Customer Action Required  
 C - Product Upgrade  
 D - Change of Production Line

### 4.1 Products Affected

This PCN describes hardware changes that were made to the DM3730/AM3703 SOM-LV. The “New Model Number & Rev” listed below indicate the first SOMs that will be manufactured with the changes described herein.

| Affected Model Number & Rev<br>(Part Number) | New Model Number & Rev<br>(Part Number) |
|--|---|
| SOMAM3703-10-2780HFCR-B<br>(1022072)         | SOMAM3703-10-2780HFCR-C<br>(1023922)    |
| SOMDM3730-10-1782IFXR-C<br>(1022819)         | SOMDM3730-10-1782IFXR-D<br>(1023928)    |
| SOMDM3730-10-1782JFIR-B<br>(1022070)         | SOMDM3730-10-1782JFIR-C<br>(1024038)    |
| SOMDM3730-10-2782IFCR-C<br>(1022825)         | SOMDM3730-10-2782IFCR-D<br>(1023967)    |

### 4.2 Description of Change

#### 4.2.1 NAND Flash (PoP Memory) Change

Micron issued an End of Life (EOL) notice for the Package-on-Package (PoP) memory component MT29C4G48MAZAPAKQ-5IT on the DM3730/AM3703 SOM-LV. A new PoP memory component, MT29C4G48MAZBAAKQ-5IT, is a die shrink update of the previous component and will be used as a replacement.

Logic PD re-qualified the DM3730/AM3703 SOM-LV with the new component and found no software modifications are necessary. Bus timings for the new memory component are also identical to the previous version.

**NOTE:** Logic PD recommends purchasing sample units and testing them with your software and manufacturing flow to verify compatibility with your application.

### 4.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>4</sup>

<sup>4</sup> <http://support.logicpd.com/TDGForum.aspx>

## 5 PCN 602: Hardware Changes

Published: November 2014

PCN Classification:

- A - Recall  
 B - Customer Action Required  
 C - Product Upgrade  
 D - Change of Production Line

### 5.1 Products Affected

This PCN describes hardware changes made to the DM3730/AM3703 SOM-LV. The changes described herein will be manufactured into products with the “New Model Number & Rev” listed below.

| Affected Model Number & Rev<br>(Part Number) | New Model Number & Rev<br>(Part Number) |
|--|---|
| SOMAM3703-10-2780HFCR-C<br>(1023922)         | SOMAM3703-10-2780HFCR-D<br>(1026592)    |
| SOMDM3730-10-1782IFXR-D<br>(1023928)         | SOMDM3730-10-1782IFXR-E<br>(1026593)    |
| SOMDM3730-10-1782JFIR-C<br>(1024038)         | SOMDM3730-10-1782JFIR-D<br>(1026680)    |
| SOMDM3730-10-2782IFCR-D<br>(1023967)         | SOMDM3730-10-2782IFCR-E<br>(1026686)    |

### 5.2 Description of Change

#### 5.2.1 NAND/DDR (PoP Memory) Change

Micron issued an End of Life (EOL) notice for the Package-on-Package (PoP) memory component MT29C4G48MAZBAKQ-5IT on the DM37x SOM-LV. A new PoP memory component, MT29C4G48MAZBBAKB-48IT, is a die shrink update of the previous component and will be used as a replacement.

Logic PD re-qualified the DM37x SOM-LV with the new component and found no software modifications are necessary. Bus timings for the new memory component are compatible with the previous version.

**NOTE:** Logic PD recommends purchasing sample units and testing them with your software and manufacturing flow to verify compatibility in your application.

#### 5.2.2 Inductor Change

Coilcraft has issued a change notice for part LPS3314-102ML (reference designators L1 through L3). This part is being replaced on the DM37x SOM-LV with Coilcraft part LPS3314-102MR. This transition changes the component lead plating from silver-palladium-platinum to tin. All other specifications of this new part remain the same as the previous part.



Logic PD has qualified this new LPS3314-102MR part on the DM37x SOM-LV and found no impact to performance.

### 5.2.3 EEPROM Change

The Atmel AT93C46D EEPROM device (reference designator U11) has been replaced with Microchip 93AA46AT-I.

This EEPROM device is used on the DM37x SOM-LV to store the Ethernet MAC address for the assembly. It is connected directly to the Microchip LAN9221 Ethernet Controller chip (reference designator U30).

Recent review of the Atmel AT93C46D data sheet revealed that the maximum clock frequency is specified as 250 KHz, however the Microchip LAN9221 Ethernet Controller chip has a nominal clock frequency of 893 KHz for this EEPROM interface.

The replacement Microchip 93AA46AT-I device has a maximum clock frequency specification of 1 MHz which better meets the specification of the LAN9221 Ethernet Controller chip

Logic PD has performed qualification testing of the Microchip 93AA46AT-I device to verify operation with the LAN9221 Ethernet Controller chip.

## 5.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>5</sup>

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<sup>5</sup> <http://support.logicpd.com/TDGForum.aspx>

## 6 PCN 621: Hardware Changes

Published: October 2017

PCN Classification:

- A - Recall  
 B - Customer Action Required  
 C - Product Upgrade  
 D - Change of Production Line

### 6.1 Products Affected

This PCN describes hardware changes made to the DM3730/AM3703 SOM-LV. The changes described herein will be manufactured into products with the “New Model Number & Rev” listed below.

| Affected Model Number & Rev<br>(Part Number) | New Model Number & Rev<br>(Part Number) |
|--|---|
| SOMDM3730-10-1782IFXR-E<br>(1026593)         | SOMDM3730-11-1783IFXR-A<br>(1028974)    |
| SOMDM3730-10-1782JFIR-D<br>(1026680)         | SOMDM3730-11-1783JFIR-A<br>(1029000)    |
| SOMDM3730-10-2782IFCR-E<br>(1026686)         | SOMDM3730-11-2783IFCR-A<br>(1029006)    |

### 6.2 Description of Change

#### 6.2.1 NOR Flash Memory Change

The NOR Flash memory component (U7) on this assembly will change from Micron manufacturer part number PC28F640P30BF65A to MT28EW128ABA1LPC-0SIT.

Micron issued an End of Life (EOL) notice for the NOR Flash family (P30) including memory component PC28F640P30BF65A on the DM37x SOM-LV. Micron is focusing their efforts on supporting higher density NOR Flash products. Micron’s recommended replacement is the (MT28EW128ABA1LPC-0SIT).

Logic PD re-qualified the DM37x SOM-LV with the new component and updates to the NOR driver. Software modifications are necessary for the customers. See AN 620 “DM3730-10/OMAP35x-11 to DM3730-11/OMAP35x-12 SOM-LV Migration” for references concerning the required software changes.

**NOTE:** Logic PD recommends purchasing sample units and testing them with your software and manufacturing flow to verify compatibility in your application.

### 6.2.2 Printed Circuit Board Change

The PCB for this assembly is being modified to accommodate the replacement NOR Flash memory. The replacement NOR Flash memory has a different pinout definition versus the original NOR Flash. The new PCB is the same for both the new OMAP35x SOM-LV and DM37x SOM-LV assemblies.

Logic PD has qualified the new LPD#1028966 PCB as part of the DM37x SOM-LV assembly and found no impact to performance.

### 6.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>6</sup>

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<sup>6</sup> <http://support.logicpd.com/TDGForum.aspx>

## 7 PCN 625: Hardware Changes

Published: June 2019

PCN Classification:

- A - Recall
- B - Customer Action Required
- C - Product Upgrade
- D - Change of Production Line

### 7.1 Products Affected

This PCN describes hardware changes made to the DM3730 SOM-LV. The changes described herein will be manufactured into products with the “Affected Model Number & Rev” listed below. **Note:** A new model number was not created as a result of this change. The associated assembly number (1029006) was revised from rev A to rev B.

| Affected Model Number & Rev<br>(Part Number) |
|--|
| SOMDM3730-11-2783IFCR-A<br>(1029006 rev B)   |

### 7.2 Description of Change

#### 7.2.1 Oscillator Y3 Component Change

The oscillator used in location Y3 was changed from Abracon AP3S2-26.000MHZ-ERBT to Abracon ASE3-26.000MHZ-L-R-T. This change was made to address a potential oscillator startup issue identified with the AP3S2 component with date code of February 2018 and later. See errata number E0061 in the [DM3730 – AM3703 SOM-LV Errata](#)<sup>7</sup> document for further information on this issue.

### 7.3 Contact

For further information, please post a question to the Logic PD [Technical Discussion Group \(TDG\) forum](#).<sup>8</sup>

<sup>7</sup> <https://support.logicpd.com/DesktopModules/Bring2mind/DMX/Download.aspx?portalid=0&EntryId=2811>

<sup>8</sup> <http://support.logicpd.com/TDGForum.aspx>