LOGIC PD™

Zoom™ OMAP-L138 eXperimenter Kit
Product Change Notification
Hardware Documentation

Logic PD // Products
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Revision History

REV	EDITOR	DESCRIPTION	APPROVAL	DATE
A	JCA	Initial release	NJK	12/01/10
B	JCA	-Corrected Linux and Windows CE Demo SD Card PNs in PCN 461; -Release PCN 483: Changes for TMDSEXPL138-B	KJH	06/27/11
C	SO	-Throughout: Updated template; updated links for new support site; removed confidentiality statements from copyright boilerplate; -Release PCN 590: Changes for TMDSEXPL138-C	KJH	01/07/14

Table of Contents

1   Introduction

1.1   Document Purpose

The purpose of this document is to provide a single repository that explains changes to the Zoom OMAP-L138 eXperimenter Kit. These changes may include, but are not limited to, adding or removing items from the kit contents, detailing changes to the baseboard included in the kit, and specifying the OMAP-L138 SOM-M1 model revision included in the kit.

1.2   Identifying Your Kit

To identify your kit, locate the sticker on the development kit box. This sticker will show the model number of your development kit.

2 Initial Pre-Production Kit: SDK-XOMAPL138-10-6408R-B

The initial pre-production version of the Zoom OMAP-L138 eXperimenter Kit was released with the following model number:

SDK-XOMAPL138-10-6408R-B

NOTE: This version is considered pre-production (Beta) and should only be used for initial development purposes with the understanding that functional changes will be forthcoming.

2.1 Kit Contents

2.1.1 Included PCB Assemblies

The SDK-XOMAPL138-10-6408R-B revision of the Zoom OMAP-L138 eXperimenter Kit contains the hardware components listed in the following table. The assembly part number or model number helps to identify the specific boards; these numbers are indicated by stickers attached to each PCB.

Item	Assembly PN or Model Number
OMAP-L138 SOM-M1	1014652
Application baseboard	1013527

2.2 Changes from Previous Revision

This was the initial build of the Zoom OMAP-L138 eXperimenter Kit, therefore no changes were made.

3 PCN 461: Changes for TMDSEXPL138-A

This PCN describes changes made to the Zoom OMAP-L138 eXperimenter Kit built with the following model number:

TMDSEXPL138-A

NOTE: This version is considered a generational change for the kit; therefore, it should be assumed that there is no compatibility between the hardware and software components included in this kit version and the previous kit version.

3.1 Kit Contents

3.1.1 Included PCB Assemblies

The TMDSEXPL138-A revision of the Zoom OMAP-L138 eXperimenter Kit contains the hardware components listed in the following table. The assembly part number or model number helps to identify the specific boards; these numbers are indicated by stickers attached to each PCB.

Item	Assembly PN or Model Number
OMAP-L138 SOM-M1	1016841
Application baseboard	1016660
4.3"WQVGA LCD	1012041

3.1.2 Software Contents

The TMDSEXPL138-A revision of the Zoom OMAP-L138 eXperimenter Kit also contains the following software items:

Item	Assembly PN or Version
Linux Kernel 2.6.3x Demo SD Card	1017596
Windows CE 6.0 R3 Demo SD Card	1017190
Code Composer Studio v4.2 DVD	1016807
Code Sourcery DVD	1015386
Ubuntu 10.04 LTS Desktop Edition CD	1016874
180-day evaluation DVD for Windows Embedded CE 6.0 R3	1010095

3.2 Changes from Previous Revision

3.2.1 New Contents

The TMDSEXPL138-A revision of the OMAP-L138 eXperimenter Kit includes a 4.3" WQVGA LCD panel and all of the software contents listed in Section 3.1.2.

3.2.2 OMAP-L138 SOM-M1

The SOM included with the OMAP-L138 eXperimenter Kit was updated to the most recent model number revision. Please see PCN 450 and 451 in the *OMAP-L138 SOM-M1 Product Change Notification*[1] for a detailed list of changes.

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[1] http://support.logicpd.com/DesktopModules/Bring2mind/DMX/Download.aspx?portalid=0&EntryId=751

3.2.3 Application Baseboard

3.2.3.1 Battery Fuel Gauge

The connection of GND_PACK to the battery fuel gauge (U32) was corrected to match the Texas Instruments (TI) BQ27000DRKR datasheet; components C34-C36 and U32.3 now connect to DGND. Previous versions of this circuit may not work correctly. This circuit is not populated by default on the baseboard.

3.2.3.2 LCD PWM Change

The M_LCD_PWM0 signal is now controlled by ECAP2_APWM2 (GP0[7]); this change was implemented by connecting J2.99 and U25.46 to ECAP2_APWM2. Previously, the LCD PWM signal was connected to EPWM1B (GP2[14]), which is the same signal used by the SPI flash chip select. Therefore, any accesses to the flash would cause the PWM to toggle and vice versa. EPWM1B is now available on J3.36. Updated software is required to use ECAP2_APWM2 as the LCD PWM signal; please use the software associated with this kit revision.

3.2.3.3 LDO Control

R216-R221 and Q10-Q11 were added to the LDO circuitry to control the LDOs on the baseboard during the power-up sequence. MSTR_nRST_3.3_1.8 controls the EN pin of the 3.3V and 1.8V LDOs. This change prevents the baseboard power rails from back-powering the SOM. This change is backwards compatible with previous designs.

3.2.3.4 SD Interface Change

U57-U59 and R222-R231 were added to the baseboard to buffer the SD interface. Since the SD0 bus is shared with the EMA bus on the OMAP-L138, a buffer is needed on the SD interface so it will not interfere when talking to NOR flash on the UI board (included with the OMAP-L138 EVM). GP0[11] is used to control the OE signal of the buffer, U57. When GP0[11] is high, the buffer is enabled and the SD card can be accessed, but access to NOR flash is restricted. When GP0[11] is low, the buffer is disabled and the SD card cannot be accessed, but the NOR flash on the UI board can be accessed.

Updated software is required to support control of GP0[11] when accessing SD or NOR interfaces; please use the software associated with this kit revision.

3.2.3.5 Moved Power Switch

The power switch (S4) was moved so it no longer hangs over the board edge. There is no functional change to the baseboard.

4   PCN 483: Changes for TMDSEXPL138-B

This PCN describes changes made to the Zoom OMAP-L138 eXperimenter Kit built with the following model number:

TMDSEXPL138-B

4.1   Kit Contents

4.1.1   Included PCB Assemblies

The TMDSEXPL138-B revision of the Zoom OMAP-L138 eXperimenter Kit contains the hardware components listed in the following table. The assembly part number or model number helps to identify the specific boards; these numbers are indicated by stickers attached to each PCB.

Item	Assembly PN or Model Number
OMAP-L138 SOM-M1	1017861
Application baseboard	1016660
4.3"WQVGA LCD	1012041

4.1.2   Software Contents

The TMDSEXPL138-B revision of the Zoom OMAP-L138 eXperimenter Kit also contains the following software items:

Item	Assembly PN or Version
Linux Kernel 2.6.3x Demo SD Card	1017596
Windows CE 6.0 R3 Demo SD Card	1017190
Code Composer Studio v4.2 DVD	1016807
Code Sourcery DVD	1015386
Ubuntu 10.04 LTS Desktop Edition CD	1016874
180-day evaluation DVD for Windows Embedded CE 6.0 R3	1010095

4.2   Changes from Previous Revision

4.2.1   OMAP-L138 SOM-M1

The SOM included with the OMAP-L138 eXperimenter Kit was updated to the most recent model number revision. Please see PCN 475 in the *OMAP-L138 SOM-M1 Product Change Notification*[2] for a detailed list of changes.

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[2] http://support.logicpd.com/DesktopModules/Bring2mind/DMX/Download.aspx?portalid=0&EntryId=751

5 PCN 590: Changes for TMDSEXPL138-C

This PCN describes changes made to the Zoom OMAP-L138 eXperimenter Kit built with the following model number:

TMDSEXPL138-C

5.1 Kit Contents

5.1.1 Included PCB Assemblies

The TMDSEXPL138-C revision of the Zoom OMAP-L138 eXperimenter Kit contains the hardware components listed in the following table. The assembly part number or model number helps to identify the specific boards; these numbers are indicated by stickers attached to each PCB.

Item	Assembly PN or Model Number
OMAP-L138 SOM-M1	1017861
Application baseboard	1016660
4.3″ WQVGA LCD	1018108

5.1.2 Software Contents

The TMDSEXPL138-C revision of the OMAP-L138 eXperimenter Kit also contains the following software items.

Item	Assembly PN or Version
Linux Kernel 2.6.3x Demo SD Card	1022057
Code Composer Studio v4.2 DVD	1016807
Code Sourcery DVD	1015386
Ubuntu 10.04 LTS Desktop Edition CD	1016874

5.2 Changes from Previous Revision

5.2.1 Software Contents

This revision of the OMAP-L138 eXperimenter Kit contains the updated Linux SD card noted in Section 5.1.2 above. The SD card contains a pre-built binary image that demonstrates a typical software configuration. It should be assumed that previous versions of the Linux pre-built binary image are not compatible with this TMDSEXPL138-C revision.

The Windows CE software included in previous revisions of the development kit is no longer supported and has been removed from the kit contents.

NOTE: Customers are encouraged to check the Logic PD support site[3] for the most up-to-date software releases before beginning new product development.

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[3] http://support.logicpd.com/Home.aspx