

DLP® Products Technical Advisory

1 Resolution for DLP LightCrafter™ Initialization and NAND Failures

Reference Software:

- DLP LightCrafter Firmware and Software Bundle version 2.0.1

Development Kit and Circuit Card assemblies affected:

- DLP LightCrafter Evaluation Module

1.1 Technical Advisory Description – Item 1:

The DLP LightCrafter can experience intermittent initialization failures. Initialization is interrupted at the third splash screen showing a side-view image of the DLP LightCrafter. The root cause of the failure is a race condition between an internal phase-lock loop (PLL) initialization and the NAND DDR initialization.

TI Actions for Item 1:

1. Updated the DLP LightCrafter DM365 software by adding delay to PLL initialization
2. Updated the DLP LightCrafter DM365 software included in the DLP LightCrafter Firmware and Software Bundle version 3.0

1.2 Technical Advisory Description – Item 2:

The DLP LightCrafter can fail to save a Solution after a reset. The root cause of the failure is the NAND flash partitioning. Due to inherent bad blocks within NAND flash, the File System partition can overwrite the Solution partition.

The NAND flash is divided into three partitions:

1. Boot Loader and Kernel
2. File System
3. Solution

TI Actions for Item 2:

1. Updated the DLP LightCrafter DM365 software by adding memory space between each NAND partition
2. Updated the DLP LightCrafter DM365 software included in the DLP LightCrafter Firmware and Software Bundle version 3.0

1.3 Technical Advisory Description – Item 3:

The DLP LightCrafter DM365 processor uses a standard SD card boot and flash utility or tool: http://processors.wiki.ti.com/index.php/SD_card_boot_and_flashing_tool_for_DM355_and_DM365. In the Wiki, note the issues caused by some SDHC cards from which the DM365 fails to boot or hangs at the initialization step.

TI Actions for Item 3:

1. Notified customers on the DLP LightCrafter E2E forum of DM365 Wiki that lists supported and unsupported SD flash cards
2. Included information in the DLP LightCrafter Evaluation Module user's guide, TI literature number [DLPU006](#), about the DM365 Wiki that lists supported and unsupported SD flash cards

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2 Customer Actions Requested

1. TI strongly recommends customers update the DLP LightCrafter with Firmware and Software Bundle version 3.0 or later. Directions for how to make the update are available in the DLP LightCrafter Evaluation Module user's guide, TI literature number [DLPU006](#). The DLP LightCrafter Firmware and Software Bundle version 3.0 also includes an updated GUI with "Sequence Builder" to create multi bit depth and multi color (MBMC) pattern sequences. This feature allows the display of images with different bit depth or colors, or both, in pattern sequence mode.
2. For more information regarding supported and unsupported SD flash cards, refer to TI's DM365 Wiki at <http://processors.wiki.ti.com>.

For additional DLP LightCrafter support, search under DLP & MEMS at: e2e.ti.com.

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