

Release Notes for DLP Cinema® Series-2 Production 3.2 Software 06 – October – 2011

This release package, named Prod3.2.release, can be installed on either a 0.98DC2K system, a 1.2DC2K system, or a 1.38DC4K system. The ICP load / install procedure will detect the type of satellite attached and install the appropriate satellite firmware and sequences automatically. If you have no satellite formatters attached when you install the release package, you may not get the satellite firmware and sequences installed that you intended. If you move an ICP between systems with different satellite hardware types, you must send the Install command again to correctly install the satellite firmware and sequence that match the new configuration. You do not have to reload a package, it is still resident on the ICP, but you will have to reinstall the current package from the slot (either A or B).

If you are upgrading an ICP from Prod2.1 or earlier, the release package named “InstallMeFirst.release” that is included in the ICP Prod3.0 release package **must** be loaded and installed on the ICP, and the ICP must be rebooted, **before** attempting to load the release package named “Prod3.2.release”. The release package “InstallMeFirst.release” contains updated commands and binary files necessary for the ICP to recognize and correctly interpret the release package “Prod3.2.release”. The release package “InstallMeFirst.release” should only take approximately 60 seconds to install once loaded onto the ICP. The release package “Prod3.2.release” can take several minutes to completely install. Please note that the time to install “Prod3.2.release” on a DC4K system will be longer than for a DC2K system as the configuration bitstream for the DC4K satellite FPGA is more than triple the size of the DC2K satellite code.

Please make sure you reset the ICP through the RESETZ signal, or a power cycle after upgrading software. Some applications and software are not complete until the entire ICP is reset.

WARNING: YOU MUST NOT DOWNGRADE AN ICP WITH THE 16MB FLASH TO AN ICP PRODUCTION RELEASE LOWER THAN PRODUCTION 1.4. IF YOU DO, YOU WILL MAKE THE BOARD NON-FUNCTIONAL.

Production release 3.2 represents the ICP software and firmware as defined in TI Document 2509066 Revision R, “Product Specification for DLP Cinema® Series 2” Released in October 2011. It can be identified by the following version information as read back from the ICP.

0.98 DC2K		1.2 DC2K		1.38 DC4K	
Kernel	2.06(10)	Kernel	2.06(10)	Kernel	2.06(10)
ICP Main SW	3.02(340)	ICP Main SW	3.02(340)	ICP Main SW	3.02(340)
ICP Main FW	3.02(87)	ICP Main FW	3.02(87)	ICP Main FW	3.02(87)
Secure Processor	1.06(0)	Secure Processor	1.06(0)	Secure Processor	1.06(0)
FMT Main SW	4.05(160)	FMT Main SW	4.05(160)	FMT Main SW	4.05(160)
FMT Main FW	4.05(129)	FMT Main FW	4.05(129)	FMT Main FW	4.05(129)
FMT Satellite FW	3.00(229)	FMT Satellite FW	4.05(82)	FMT Satellite FW	0.01(160)
FMT Sequence	0.05(39)	FMT Sequence	0.06(49)	FMT Sequence	1.04(0)
FMT DMD File	0.00(13)	FMT DMD File	0.00(13)	FMT DMD File	0.00(13)

ICP Production 3.2 contains the full functionality of DLP Cinema® for the 0.98 DC2K, 1.2 DC2K, and 1.38 DC4K platforms. ICP Production release 3.2 may be used with either ICP hardware version 1.5 with the new GreenLiant disk chip, or ICP hardware version 1.0, with the SanDisk. Successful installation of ICP Production release 3.2 for use on a DC4K projector requires that the ICP board be equipped with the larger FMT flash. The presence of a larger FMT flash can be determined from the current ICP and Enigma Control Program Version 1.01(115). On the “Sys-Config” tab, in the lower left, the ICP Board Type will indicate “(DC4K Ready)” if the proper flash part is installed.

ICP hardware version 1.5 requires a minimum ICP release 3.1 and will be prevented from downgrading to ICP Prod3.0 or lower automatically. ICP hardware version 1.0 boards, can be downgraded to ICP Prod3.0 if desired, but TI does not recommend downgrading ANY ICP below Prod3.0 as Prod3.0 has corrections to prevent corruption of the disk chip included.

ICP Production release 3.2 corrects the problems, adds capabilities, and has the known issues identified below. This is the complete list as it differs from ICP Production release 3.1.

Problem Identified and Corrected:

- 1) Corrected an issue causing the main application to crash when subtitles are disabled during rendering of a subtitle. Found while looping specific portions of the CTP.
- 2) Add a work-around to prevent undesirable data flashing on the screen when enabling 3D while there is no 3D input. This work around only prevents unintended data on screen for a static 2D input.
- 3) Corrected an issue causing the rendering of some characters to be dim or jagged when used multiple times in a string. Found during PlugFest June 2011.
- 4) Corrected scaling and cropping issues on DC4K. Known Issue from ICP Prod3.1.
- 5) Corrected size of rendered subtitles on DC4K with Vsync > 30 Hz. Satellite scaling stretched subtitles in previous releases.
- 6) Corrected an issue causing false "SCC failed" message in the system log.
- 7) Corrected an issue causing a static image to remain on the screen when the input is removed.
- 8) Corrected an issue causing the screen to remain blank after an input is provided. Known Issue from ICP Prod3.1.
- 9) Corrected an issue causing the screen to remain blank when selecting or changing test patterns.
- 10) Corrected several test pattern issues for DC4K.
- 11) Corrected problem selecting 3D Single Flash sequences above certain frequencies.
- 12) Corrected a problem with SCC and E/W flip. In release 3.1 the SCC did not change with E/W flip as it should.
- 13) Corrected an issue where italics text was not being rendered correctly for right-to-left (RTL) text on DC4K when the input frame rate was above 30Hz.
- 14) Modified DC4K sequences to reduce magenta (pink) bands.
- 15) Corrected an issue where subtitle fades did not occur correctly when test patterns were displayed instead of live video.
- 16) Corrected an issue where multiple enable/disable subtitle commands issued while loading very large subtitle files could cause the ICP main application to crash.
- 17) Temporary subtitle files are now deleted from the ICP when subtitles are disabled instead of at the next ICP reset.

New Capabilities:

- 1) Added high frame rate 3D sequences to support 48Hz/eye single and double flash, and 60Hz/eye single flash for both 0.98 DC2K and 1.2 DC2K. DC2K sequences now support 2D up to 120Hz.
- 2) Electronic Convergence Support for all platforms, 0.98 DC2K, 1.2 DC2K, and 1.38 DC4K. See description of Electronic Convergence command (1Dh) in the Product Specification revision Q or later.

- 3) Network Time Protocol (NTP) client support. See description of NTP (63h) in the Product Specification revision Q or later.
- 4) Added command to enable/disable Datapath Signature Test at startup. See description provided in Product Specification revision R.
- 5) New 50% Grey built in test pattern is provided. See description provided in Product Specification revision R.
- 6) Add capability to support 3D subtitles.

Known Issues:

- 1) Using the system reset command to force entire system into boot mode will leave the FMT in main mode instead of boot mode. The FMT is originally forced to boot mode, but the ICP software in boot mode fails the signature test, and resets the FMT which returns it to main mode. This will be addressed in a future release. In the meantime, the system reset command can be sent again to force just the FMT into boot mode if desired.