



Texas Instruments Incorporated

Release Notes for DLP Cinema® Series-2 Production 4.5 Software 15 – June – 2016

This release package, named Prod4.5.release, can be installed on any S2K (0.69 DC2K), 0.98 DC2K, 1.2 DC2K, or 1.38 DC4K DLP Cinema® 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 Prod3.1 or earlier, the release package named “InstallMeFirst4.0.release” **must** be loaded and installed on the ICP, and the ICP must be rebooted, **before** attempting to load the release package named “Prod4.5.release”. The release package “InstallMeFirst4.0.release” contains updated commands and binary files necessary for the ICP to recognize and correctly interpret the release package “Prod4.5.release”. The release package “Prod4.5.release” can take several minutes to completely install. Please note that the time to install “Prod4.5.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.



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Production release 4.5 represents the ICP software and firmware as defined in TI Document 2509066 Revision Y, “Product Specification for DLP Cinema® Series 2” Released in June 2016. It can be identified by the following version information as read back from the ICP.

S2K (0.69)		0.98 DC2K		1.2 DC2K		1.38 DC4K	
Kernel	2.06(10)	Kernel	2.06(10)	Kernel	2.06(10)	Kernel	2.06(10)
ICP Main SW	4.05(454)	ICP Main SW	4.05(454)	ICP Main SW	4.05(454)	ICP Main SW	4.05(454)
ICP Main FW	4.02(93)	ICP Main FW	4.02(93)	ICP Main FW	4.02(93)	ICP Main FW	4.02(93)
Secure Processor	1.06(0)	Secure Processor	1.06(0)	Secure Processor	1.06(0)	Secure Processor	1.06(0)
FMT Main SW	4.05(184)	FMT Main SW	4.05(184)	FMT Main SW	4.05(184)	FMT Main SW	4.05(184)
FMT Main FW	4.05(129)	FMT Main FW	4.05(129)	FMT Main FW	4.05(129)	FMT Main FW	4.05(129)
FMT Satellite FW	1.02(45)	FMT Satellite FW	4.02(233)	FMT Satellite FW	4.05(82)	FMT Satellite FW	3.00(225)
FMT Sequence	1.00(6)	FMT Sequence	1.00(42)	FMT Sequence	1.00(53)	FMT Sequence	2.01(3)
FMT DMD File	0.02(17)	FMT DMD File	0.02(17)	FMT DMD File	0.02(17)	FMT DMD File	0.02(17)

Note: The S2K platform can support pulsed lamps which will require a different FMT Sequence package be loaded after loading the ICP Prod4.5 release package. The FMT Sequence version number shown above for S2K is the DC Non-Pulsed sequence. Pulsed lamp sequences will have version numbers that uniquely identify the lamp type supported by the sequence.

ICP Production 4.5 contains the full functionality of DLP Cinema® for the S2K (0.69 DC2K), 0.98 DC2K, 1.2 DC2K, and 1.38 DC4K platforms. ICP Production release 4.5 may be used with either ICP hardware version 1.5 with the GreenLiant disk chip, or ICP hardware version 1.0, with the SanDisk. Successful installation of ICP Production release 4.5 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. 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.



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ICP Production release 4.5 corrects the problems, adds capabilities, and has the known issues identified below.

Problems Identified and Corrected:

- 1) Changed subtitle boundary checking to handle 100% HPosition correctly.
- 2) Changed subtitle rendering to prevent characters that extend off screen horizontally to not wrap to opposite edge.

New Capabilities:

- 1) Added new Powerdown command (99h) to ICP command set. New command sets DMDs to an approximate 50% grey value. See full description of command in the Series-2 Product Specification.
- 2) Added new CMD3 value for ICP Input Port Timing command (B1h) to enable read back of measured input VSync on the active input port.
- 3) New DMD File format incorporates DMD park parameters, and handles DMDs with new process.
- 4) New satellite firmware for 1.38 DC4K and S2K (0.69) implements new park sequence automatically whenever park command is issued, or power is removed.

Known Issues:

- 1) There is a known issue using electronic convergence with DMDs that have a DDR interface, (the 1.2DC2K and 1.38DC4K DMDs). When electronic convergence is used to move one or more colors in the horizontal direction, the computation for CSC-P7 color correction is incorrect. This could manifest itself as incorrect color particularly noticeable at the edges of objects in the picture.