

Titan Mastering

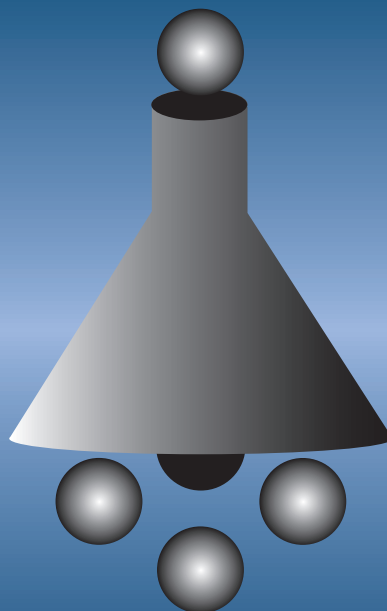


Legendary LBR Control,

Edge-perfect PCS wave shaping,

DiscTag integration,

HCRC verification prior to cutting, and more



MASTERING

Titan Formatters

	Supported Formats	Wave Shaping
B1 Board	Blu-ray, DVD, CD	PCS-2e
Pit O'Resc	Blu-ray, DVD, CD	PCS-3

DCA offers a variety of mastering systems under the Titan name. DCA Titan products are a family of formatters for all major optical disc formats. DCA mastering equipment can be integrated in all current LBR's and most older models.

DCA Titan Mastering system common features:

Standardized User Interface

The Titan products all use the same interface and operation for each format. This simplifies training and helps avoid user error due to unfamiliarity with the application.

Pulse Control System (Wave Shaping)

DCA's PCS (Pulse Control System) module allows facilities to control pit geometry of the glass master at the LBR – essential for mastering high density formats. You can also make duty cycle adjustments on leading and trailing edge timing. Adjustment in pit geometry can also control the width and length of the pits, widening short run length pits or narrowing long run length pits to reduce the probability of cross talk.

DiscTag & HCRC Technology Reduce Errors

All Titan products are **DiscTag Enabled**. The DiscTag is a unique identifier applied in the content. The unique DiscTag can be used to retrieve metadata information and automatically populate the user interface for your operators. The DiscTag metadata can also aggregate reports from each stage of the replication process for later retrieval.

HCRC (Hierarchal CRC) allows for full sector verification prior to the cut without the need for the original content. This can dramatically reduce the network bandwidth needed to verify high density content in your facility, since an HCRC file takes less than 1% of the original content space.

Since HCRC verification occurs in the stream of data to the formatter board, not only does verification occur prior to data being written out, but the verification process doesn't add any additional time.

Network Mastering Capabilities

Titan is designed for networking and can be integrated into a network mastering configuration with a server for loading and storage. Our networking solutions are designed for high speed mastering and eliminate input media failures. This is an especially important factor for high density format's much higher network resource requirements (eg. server storage space & network bandwidth).

Titan can be integrated with DCA's Commander Scheduler & Singulus MSH for automated job control

Copy Protection

Titan supports a wide range of copy protection methods, including AACs, Media Marks, ROM Mark, CSS, CPPM, Ripguard & SafeDisc.

LBR Control

Included with every version of Titan is DCA's legendary LBR control, available for most LBRs, including Singulus (XE or XCE), ODC-Nimbus, Sony PTM, M2 SQM and Legacy Nimbus. You can also run Titan in TTL start or Keyboard start mode for manual operation.

XML Reports

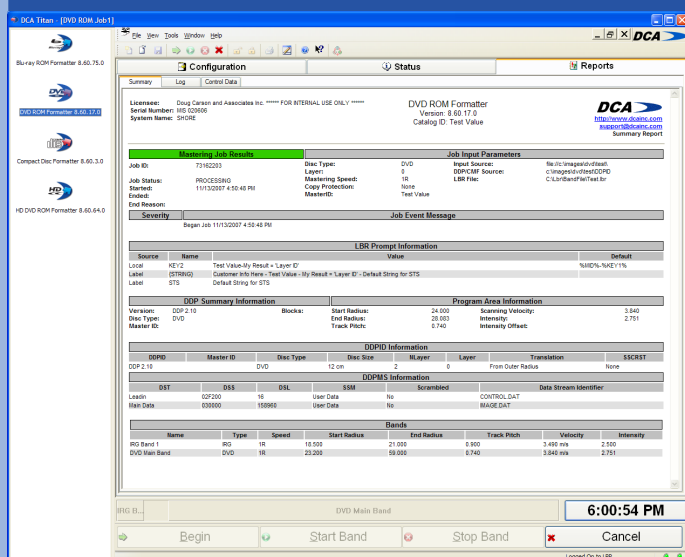
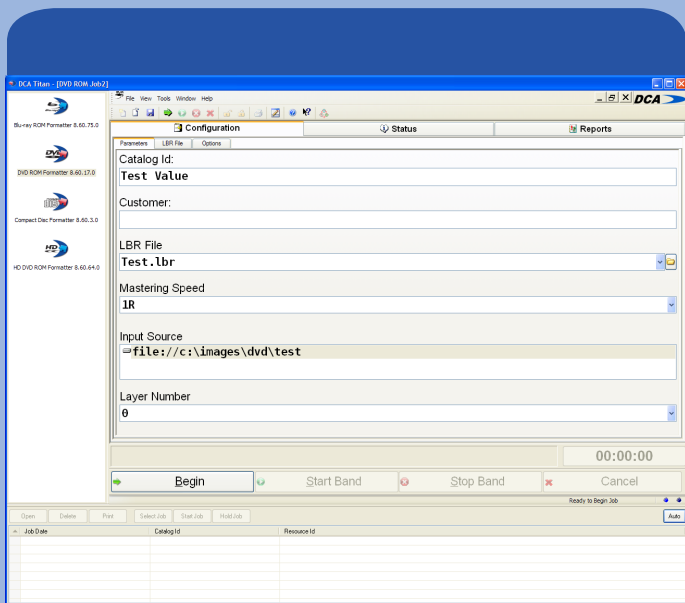
Titan's reports are based upon standard XML & stylesheet presentation, allowing for rich display of all relevant information, including source files, cutting parameters, band information, prompts and job status. Reports can be customized for specific customer needs.

BIB-Based Systems: Standard Features

- Support for DDP/CMF/BDCMF inputs from file or network.
- CD, DVD, Blu-ray and HD DVD capable
- Speeds of up to 125 MHz
- PCS-2e land-pit wave shaping (1/128 T edge adjustment)
- BCA Support for all formats
- Add-ons for copy protections & ROM Mark available (ROM Mark requires separate ROM Mark Inserter)
- Graphics & Lettering Bands with IRG Wizard - DCA's utility for checking and modifying Graphic Band file information within the LBR File. Includes True Type & Barcode Font Support.

Pit O'Resc-Based Systems: Standard Features

- Support for DDP/CMF/BDCMF inputs from file or network.
- Speeds of up to 250 MHz (Blu-ray & HD DVD available at maximum of 2R)
- PCS-3 land-pit wave shaping (ability for castle waveforms)
- BCA Support for all formats
- Add-ons for copy protections, and ROM Mark available (ROM Mark on-board or separate ROM Mark Inserter)
- Graphics & Lettering Bands with IRG Wizard - DCA's utility for checking and modifying Graphic Band file information within the LBR File. Includes True Type & Barcode Font Support.



Finally. A formatter that can help to reduce errors & save money in your plant. With a wide variety of wave shaping & LBR control mechanisms, Titan with standard DiscTag integration can master any format you need.

Titan Configurations

B1B Encoder - All Formats, PCS 2e, 125 MHz max, AACs & ROM Mark

Pit O'Resc Encoder - All Formats, PCS 3, 250 MHz max, AACs & ROM Mark

All Titan configurations include full DiscTag integration, including HCRC verification of the image and copy protection support, including (where applicable) AACs, CSS, CPPM, Ripguard & SafeDisc.

Also Available from DCA Mastering

- * **Recordable Formatters**- available for most recordable formats, including CD-R, DVD-R/RW, DVD+R/RW, DVD-RAM, BD-R/RE, HD DVD-R/RW and HD DVD-RAM.
- * **Genesys Reference Signal Processor**- the standard bearer when it comes to format design tools. Genesys has been used in the development & testing of Blu-ray recordables, HD DVD-ROM, HD DVD recordables, UDO, FVD and HD VMD.
- * **Format Development**- DCA has a large degree of experience in developing formats, both for commercial and research use.
- * **Mastering Servers**- our mastering servers are second to none in speed, reliability and support. We can build to any size need that you have.
- * **Plant Workflow Analysis**- our expert personnel can assist you with analyzing your plant's workflow, network setup & maintenance,
- * **Custom Copy Protection & Anti-Piracy**- DCA can help develop & integrate copy protection for any format out there (including formats still in development) using our flexible CPIF interface, or, if you require, a custom package.



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