# D-Cine Premiere® DP40

## Barco Digital Cinema Projector

Incorporating Texas Instruments state-of-the-art 'Dark Chip' Digital Micromirror device™ - exclusively approved by Hollywood for feature film display, the D-Cine Premiere® DP40 Digital Cinema Projector combines the modular convenience of the reference Kinoton SK25DC lamphouse with Barco's world leading optical expertise to provide a Digital Cinema projector of exceptional performance. Stunning 'Premiere' quality images for the cinema, studio or laboratory without jitter, weave, scratches or flicker. Images that are bright, clear and even - first time, every time... Just as the Cinematographer intended.

**D-Cine Premiere® Digital Head**

- 24p frame per second display for a natural film look.
- Sealed optics and dust proof digital head for consistently clean, bright, high contrast images.
- Active liquid cooling system with auto shutdown protection.
- Single and twin anamorphic lens attachments for quick display format change.
- Optional CLO (Constant Light Output) control.
- Optional fully integrated tamper evident decoding.
- Local and remote (Ethernet) diagnostics.

**Lamp-house**

- Based on the industry reference Kinoton lamp console.
- Meets or exceeds SMPTE screen brightness standards up to 20m (66Ft ) wide.
- Automatic Dowser.
- Local and remote touch screen projector control options.
- Local and remote (Ethernet) diagnostics.

DLP CINEMA® A TEXAS INSTRUMENTS TECHNOLOGY

BARCO innovators in image processing

# Specifications

## Digital Head

**Digital Micromirror Device™**
3 x high resolution SXGA DLP Cinema™ DMD Dark Metal 3 type.

**Housing**
Dust-proof; fitted with a quick-change air inlet filter and incorporating a hermetically sealed optics and DMD assembly.

**Cooling**
Integrated 3 chip active liquid cooling system and heat exchanger.
Temperature alarms indicate out of range operation and/or shutdown lamp power supply.

**Resolution**
1280 x 1024 per Red, Green and Blue channels. Equivalent to 3.9 million pixels.

**Contrast Ratio**
1350:1 (full white / full black).

**Color Processing**
- Bit depth: 45 bit (15 bit per color).
- Color Shades: 35 trillion.
- Color Gamut: 40% better than HDTV (equivalent to film).

**Digital Video Inputs**
- 2 x SMPTE 292M inputs, Selectable individually or as a linked pair.
- Dual port to support future digital cinema formats.
- Single port compatible with the formats listed below.

**Graphics Input**
DFP (Digital Flat Panel) interface, 24 bit RGB, 1280 x 1024, with frequency range 23 - 96 Hz.
DVI standard resolutions (640x480 and 1024x768 and 1280x1024).
Also supports non-standard packaging at 10 or 12 bit per color.

*D-Cine Premiere® input panel.*

| Source Standard | Source Format | Vertical Rate | Scan Type | Display Format |
|---|---|---|---|---|
| SMPTE 274M | 1920 x 1080 | 24 / 23.98 Hz | Progressive | 24/23.97Hz; Progressive |
| | 1920 x 1080 | 25 Hz | Progressive | 25 Hz; Progressive |
| | 1920 x 1080 | 30 / 29.97 Hz | Progressive | 30 / 29.97 Hz; Progressive |
| | 1920 x 1080 | 50 Hz | Interlaced(1) | 25 Hz; Progressive |
| | 1920 x 1080 | 60 / 59.94 Hz | Interlaced(2) | 24 / 23.97 Hz; Progressive |
| SMPTE RP 211(3) | 1920 x 1080 | 24 / 23.98 Hz | Segmented Frame | 24 / 23.97 Hz; Progressive |
| | 1920 x 1080 | 25 Hz | Segmented Frame | 25 Hz; Progressive |
| | 1920 x 1080 | 30 / 29.97 Hz | Segmented Frame | 30 / 29.97 Hz; Progressive |
| SMPTE 295M | 1920 x 1080 | 50 Hz | Interlaced(1) | 25 Hz; Progressive |
| SMPTE 260 | 1920 x 1035 | 60 / 59.94 Hz | Interlaced(2) | 24 / 23.97 Hz; Progressive |
| SMPTE 296M | 1280 x 720 | 60 / 59.94 Hz | Progressive | 60 / 59.94 Hz; Progressive |
| Other | 1280 x 1024 | 48 / 47.95 Hz | Progressive | 48 / 47.95 Hz; Progressive |
| | 1280 x 720 | 72 Hz | Progressive | 72 Hz; Progressive |

Note 1: Requires source to be encoded with 2:2 Pull-Down, and assumes field one (1) dominance
Note 2: Requires source to be encoded with 3:2 Pull-Down, and requires time code information
Note 3: Proposed SMPTE standard

**Control Interface**
RS232/RS422 Serial Communications and 100 T base ethernet connected.
- D-Cine Premiere® RC567 via RS232/422.
- Pc setup via RS232/422 and ethernet.

**Image Control**
Via D-Cine Communicator® control software for projector, lens and source set-up plus display geometry (resizing) and masking (cropping) and color calibration.

**Security**
High security image processing card frame equipped with Dallas key and 6 Pin number code protection system. Optional fully integrated video and audio decoder.

**Power Supply**
Digital head, cooling pump and touch screen; Auto ranging 90-240V.

**Weight**
Digital head and standard single anamorphic lens holder (excluding lens): 52kg / 115lbs.

**Diagnostics**
Digital head temperature / fan speed / status / liquid cooling / electronic power supply.
Display: RC567 touch screen panel or via Ethernet.

## Lenses

**Prime**
All focal lengths covered by a wide range of fixed focal length and zoom lenses. X, Y and Z (focus) adjustment.
Focus range: +/- 10mm from nominal position.
Shift range: 35% of screen height in all directions.

**Anamorphic Lenses**
1.5 (flat) and 1.9 (scope) options X, Y and Z adjustment.

**Lens Mounting**
Single anamorphic lens mount included; Dual lens mount option.

| Dimensions | mm | inch |
|---|---|---|
| D1 | 1360 | 53.5 |
| D2 | 890 | 35 |
| W | 670 | 26.4 |
| H1 | 1549 | 61 |
| H2 | 1216 | 47.9 |

## Lamp house

**Type**
Kinoton, SK25DC console.

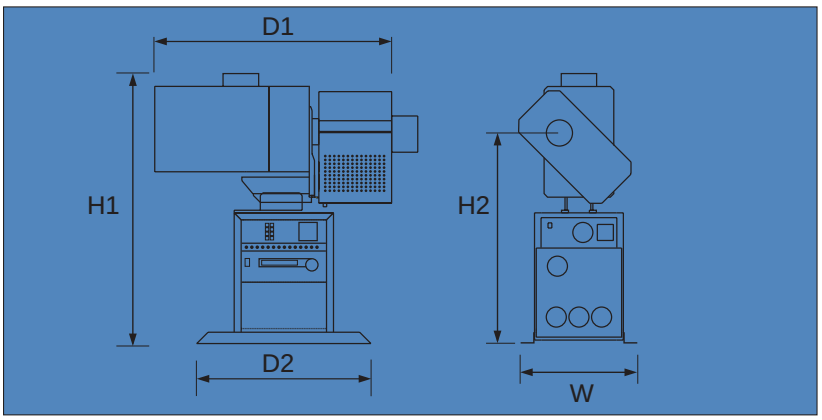
**Illumination**
Optional 2kW, 3kW, 5kW, and 7kW Xenon Arc lamp depending on screen size.

**Reflector**
Standard f2.0 dichroic glass type.

**Power Supply**
Lamp power supply - EUR version IREM 3-7 kW three phase 360-460V 50 Hz.
Lamp power supply - USA version IREM 3-7kW three phase 187-230V 60 Hz.

**Projector control**
4 x LED status indicators: OK / Touch panel ready / Projector head ready and Alarm.
4 push button controls for digital head modes.
4 lamp-house controls, for lamp and dowser.
4 general purpose relays.

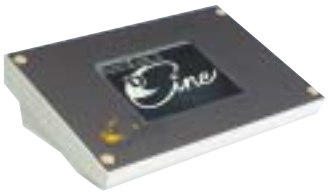
*D-Cine Premiere® head incorporating a secure video card frame and sealed optics.*



# Options

**Digital Head**
- Decoder - Fully integrated, tamper-evident, Qualcomm Image Decoder.
- CLO - Constant Light Output processing.
- Dual Anamorphic Lens fitting – for 1.5x and 1.9x lenses.

**Remote Touch Screen Projector Control**
Highly integrated remote control of the operations of the D-Cine Premiere plus a diagnostics display and automation interface.



**ACSAR Alternative Content Switcher and Router**
A powerful scaler and router, designed to convert any analog or digital signal to the DVI digital input of the D-Cine Premiere® digital head.

# Order information

**Projector**
Digital Head & Single Anamorphic lens holder: R9006060
D-Cine Premiere® Console Kinoton EUR: R9006070
D-Cine Premiere® Console Kinoton USA: R9006079
Cooling pump: R9806120

**Lenses**
Prime lens 2.0 - 3.2:1: R9806270
Prime lens 3.2 - 5.6:1: R9806280
Anamorphic lens 1.5x: R9806140
Anamorphic lens 1.9x: R9806100

Note: Please see separate data sheet for full list of lens, lamp and lamp adaptor order references.

**Factory Fitted Options**
Integrated Qualcomm decoder: ROPT1839
Touch screen control: ROPT1841
Dual Anamorphic lens holder: ROPT1842

**Optional Accessories**
Automation Interface card: R9806050
Table or wall touch screen remote control: R9806222
Constant Light Output s/w key: R9806250

**ACSAR**
ACSAR Central processor: R9806700
RGB, YUV Input module: R9841040
SDI Input module: R9841120
HD-SDI Input module: R9841110
YUV Video, CVBS, S Video Input module: R9841030
DVI Input (Panel Link) module: R9841070

Barco Digital Cinema



DESIGNED UNDER ISO 9001

BARCO Projection Systems is an ISO 9001 registered company.

The information and data given are typical for the equipment described. However any individual item is subject to change without any notice.

**Barco Digital Cinema - Belgium**
Noordlaan 5, 8520 Kuurne
Tel: +32-56-36 84 93 Fax: +32-56- 36 88 62
E-mail: info.bdc.bps@barco.com

**Barco Inc. - USA**
3240 Town Point Drive, Kennesaw, GA 30144
Tel. (770) 218-3200 Fax (770) 218-3250
E-mail: sales.us.bps@barco.com

www.barco.com

BARCO

Ref. no: R599555(9) - February '02 - Printed in Belgium