

BARCOREALITY SIM 6

The most customizable COTS Light Valve Projector

The BARCOREALITY SIM 6, a new member of the highly successful 6000 series, has been created especially for simulation display purposes. The use of proven off-the-shelf technology guarantees an extremely high reliability. The BARCOREALITY SIM 6 is especially designed for Simulation- and Virtual Reality immersive displays where high light output is required for complex configurations. Its compact size makes it easy to implement and its rugged design also makes it the ideal projector for motion base platforms.

The BARCOREALITY SIM 6 can be specifically optimized, using the following available application specific optimizations (ASO)

- WARP 6™ non-linear image mapping using proprietary bicubic interpolation algorithms: enables high-order pre-distortions electronically, without frame delay.
- Transport Delay Reduction (TDR)⁽¹⁾: to ensure minimal propagation delay (<8ms) between the input signal and the projected image
- True Motion Reproduction (TMR): motion artifacts compensation and image enhancement to dramatically minimize smearing inherent to LCD technology
- Color Gamut Matching (CGM): optical components matched for use in multi-channel displays
- Gamut Expansion and Matching (GEM)⁽³⁾: increased addressable gamut and more accurate color matching
- Extended Contrast Ratio (ECR): continuous RS232 controlled diaphragm for optical contrast enhancement
- Optical Soft Edge Matching (OSEM): edge blending for all brightness levels, including black level
- Electronic Soft Edge Matching (ESEM): electronic tool for adjustable edge blending
- Black & White uniformity correction: factory adjustment to ensure excellent color uniformity of the grays, whites and blacks
- Adjustable Scheimpflug correction for tilted projector screen configurations
- Pixel defect selection⁽²⁾: Application specific additional selection of panel quality and pixel defects
- Ruggedized version: optimized for use on motion platforms, designed to take 3g in x, y, z⁽²⁾
- Audio / Video Pack: enables use of analogue and digital video sources.
- SIM Stereo 3D: fully integrated turnkey solution for passive stereo
- Available with a variety of illuminators
- Micro Lens Arrays: increase light collection efficiency from the LCD panel
- Optimized low F# lenses: recommended to increase the light output



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(1) TDR requires installed TMR option

(2) Please contact BARCO for detailed information

(3) Requires color gamut matching

Technical Specifications

LCD Panels

3 active matrix Poly-Silicon LCD panels (1.8" diagonal), with optional Micro Lens Array and a native resolution of 1280 x 1024 pixels (aspect ratio 5:4).

Input Frequencies

Horizontal 15 kHz - 115 kHz
Vertical 25 Hz - 150 Hz
Synchronous rendering of 48 - 61 Hz
Compatible with eye-tracked de-interlacing

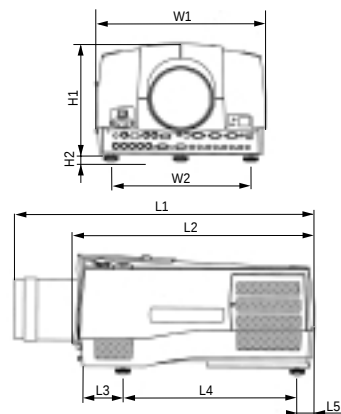
True Color Reproduction TCR

Standard equipped with BARCO's unique True Color Reproduction technology. TCR provides color fidelity and uniformity by intelligent color tracking and gamma correction.

Compatibility

The BARCOREALITY SIM 6 is compatible with:

- Image generators and electronic workstations with a resolution up to 2,000 x 1,280 pixels / 76 Hz
- All computer graphics formats from VGA, S-VGA, XGA to S-XGA
- Most Macintosh computers
- All current video sources (PAL, SECAM, NTSC 3.58, NTSC 4.43) in Composite, S-VHS, Component or RGB formats
- All currently proposed HDTV, extended and improved television standards (Eureka 95, Hi-vision, ACTV, IDTV, EDTV)
- Most sources with a pixel clock up to 200 MHz



Projector⁽⁴⁾

	Light output ANSI lumen
BARCOREALITY SIM 6	1,650
BARCOREALITY SIM 6 Long Life	900
BARCOREALITY SIM 6 High Brightness	2,500
BARCOREALITY SIM 6 High Brightness Micro Lens Array	3,400

Lamp

- BR SIM 6: 400 W metal-halide arc lamp⁽⁵⁾
Typical lifetime: 750 h
- BR SIM 6 HB:
600 W metal-halide arc lamp
Typical lifetime: 1,000 h⁽⁵⁾
- BR SIM 6 LL:
120 W UHP arc lamp
Typical lifetime: 3,000 h⁽⁵⁾

Inputs / Outputs :

Standard

- 1 x input for RGB / RGSB / RGBS / RGBHV (5 x BNC)
- 1 x VGA (D-15 connector)

With Optional Audio / Video Pack:

- Composite Video and S-Video on 5-wire BNC enabled
- 1 x Video (BNC or RCA)
- 1 x S-Video (4-pin mini-DIN)
- 1 x Monitor Output (D15 connector)
- 3 x Stereo Audio Input (2 x RCA)
- 1 x Stereo Audio Output (2 x RCA)

Optional Digital Inputs / Outputs⁽⁶⁾

- 1 x Serial Digital Interface Input
- 1 x Serial Digital Interface Output
- 1 x IEEE 1394 FireWire

Communication

- 2 x D9 connectors for RS232 In / Out
- 1 x D9 connector for Com 800
- 1 x Mouse Out (DIN 13)
- 1 x Mini-jack for Wired Remote Control
- 2 x IR receivers (front + back)

Dimensions	mm	inch
L1*	644	25.35
L2	527	20.76
L3	87	3.4
L4	381	34.2
L5	37	1.5
W1	371	14.6
W2	306	12
H1	245	9.65
H2	12 - 24	0.47 - 0.94

* with QFD (1.4 - 2:1) zoom lens

Shipping Dimensions

L	710	28.0
W	550	21.7
H	470	18.5

Remote Control

RS232 Control
Remote Control Unit

AC Power

Power factor pre-regulated SMPS,
95 - 230 VAC +/-10% / 50-60Hz

Power Consumption

- BR SIM 6: Max. 570 Watts
Power dissipation < 2,000 BTU/h
- BR SIM 6 HB⁽⁶⁾: Max. 900 Watts
Power dissipation < 3,000 BTU/h
- BR SIM 6 LL⁽⁶⁾: Max 300 Watts
Power dissipation < 1,000 BTU/h

Safety Regulations

Compliant with UL1950 and EN60950

Electromagnetic Interference

BARCOREALITY SIM 6 complies with FCC rules & regulations, part 15 Class B and CE EN55022 Class B

Noise Level (0-26°C / 32-79 F)

39 dB(A) at 39.4" / 1m (3.3 ft)
34 dB(A) at 78.8" / 2m (6.6 ft)

Weight

Net: (Body only) 17.7 kg / 39.0 lbs.
Shipping weight: max. 29 kg / 63.9 lbs

Lens Shift

All zoom lenses allow the projector to be installed up to 110% off-axis, without losing any brightness (110 % vertically and 12% horizontally)

Lenses

QFD lenses are recommended for the highest optical efficiency and maximum light output on BARCOREALITY SIM 6 equipped with Micro Lens Arrays. The BARCOREALITY SIM 6 is also compatible with BARCO's existing range of QGD lenses

Order Information

Please contact us for further information.

(4) Using QFD (1.27:1) lens

(5) Please contact BARCO for detailed information

(6) Requires Audio/Video pack

BARCO Projection Systems is an ISO9001 registered company.



The information and data given are typical for the equipment described.

However any individual item is subject to change without any notice.

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