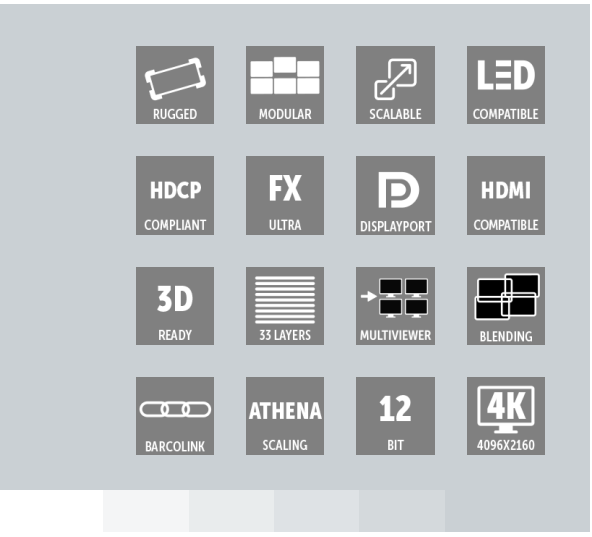
E2

Full-sized Event Master processor



- **Full show control in a single box**
- **Native 4K input and output supported**
- **Intuitive user interface**

Raising the bar for live screen management, the E2 presentation system provides superior image quality, exceptional input and output density, great expandability and durability. Supporting native 4K input and output, it was the first screen management system to manage 4K projector blends with refresh rates up to 60Hz with full 4:4:4 color sampling and 12bit processing . A truly versatile system, it offers eight mixable PGM outputs and four scaled Aux Outputs for full show control with a single box. The E2 can be linked with multiple other E2 chassis to create extremely large pixel processing canvases, to support the largest displays available.

Native 4K input and output

With native 4K@60p input and output, the E2 provides impressive pixel processing power. Whether native or scaled inputs, single cable 4K60p, two connectors or four, this HDCPcompliant system manages it all. With up to 32 inputs and 16 outputs, the E2 system offers full screen control. The E2 can support 32 HD pips or 8 4K pips. The layers can be configured to support a mixture of HD and 4K resolutions maximizing your system flexibility. Thanks to its linkable chassis, it can easily expand beyond the capabilities of a single box without the need for additional external processing and matrix routing to distribute the signals. Currently the linking in E2 supports up to eight processors for a total of 32 4K program outputs, with the possibility of more in the future.

Simple servicing and control

The E2 comes with a straightforward cross-platform user interface that provides touchscreen ergonomics. As the presets are stored on the chassis it enables easy control via third-party systems. Multiple users can control the system

simultaneously, and the API allows third-party developers to create custom control programs and interfaces. Thanks to its modular design, users can simply add a new input or output card to support future signal interfaces. This modularity also ensures great serviceability, as users can easily swap a specific input or output card in the case of damage, without needing to ship or replace the entire box.

Designed for life on the road

Designed for the live event industry, the rugged E2 features a steel chassis that's able to withstand the challenging conditions of life on the road. What's more, it offers screen control in a compact form factor of only four rack units, which makes it easy to ship and install. And thanks to its modular cards and dual redundant power supplies, the E2 is extremely reliable and easy to service in the field.

Layers, layers, layers

The E2 offers an extremely flexible layer management system. The E2 starts with a pixel perfect, full resolution, unscaled background layer that is the same resolution as the screen destination. As an unscaled mixing background layer it does not use any of the valuable scaling layers. With up to 32 layers available in HD, the E2 can customize the layer configuration to meet the needs of your application. The layers provide either pip or key effects, and can be configured for HD, Dual Link (2560x1600 or 3840x1200 max), or 4K resolutions. Each destination gets dedicated layers, so you know exactly how many resources are available. The layers can also be configured as single layers with cut transitions, or two of the scalers can be combined to create a mixing layer. Each destination can support a combination of mixers, single layers, pips, keys, and various sizes of layers, all to create a single composited image on the screen.

Inputs

8x Input card slots supporting up to 4K resolution per slot.
Each card slot accommodates either 4x HD inputs, 2x 2,560 x 1,600 inputs, or 1x 4K input.

HDMI/DisplayPort input card

- 2x HDMI 1.4 connectors
- 2x DisplayPort 1.1 connectors
- 4x BNC connectors supporting 3G SDI
- 2x BNC connector (Input and loop output)
- Supports Black burst and trilevel analog signals

Outputs

4x Output Card slots for PGM screens and Auxes that support up to 4K resolution per slot. MVR is supported by the last slot to the right.

HDMI output card

- 4x HDMI 1.4
- 4x BNC connectors supporting 3G SDI

Rental configuration will include:

- 14 Outputs via 4 Output cards

  Up to 3 x 4K Outputs - each Output card supports up to 4K@60 out

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  4 x SD/HD/3G SDI

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  8 x HDMI 1.4 (297 Mpix/sec max)

- 8 x HDMI 1.4 (297 Mpix/sec max)
  2 x HDMI 1.4 for Multiviewer (297 Mpix/sec max)

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- Outputs configurable as single screens or tiled/blended widescreens. Outputs can also be configured as Scaled Auxiliary outputs.

User interface

- GUI based configuration and control application

- Cross platform (Mac/Windows)

Processing and latency

12 bits/color
36 bits/pixel
1 frame processing latency for progressive genlock sources

PIP layers (per chassis)

- 2K mode: 16 seamless mixable PiPs or key overlays

- DL mode: 8 seamless mixable PiPs or key overlays

- 4K mode: 4 seamless mixable PiPs or key overlays

Background mixer

- Any live input type can be a background source

- Matte color generator

- Still store as background

Destinations (single chassis)

Program screens

- 4K Output

  2x single screens

- 2x single screens
  1x blended (2 outputs)

- 1x blended (2 outputs)

- Dual Link output

  4x single screens

- 4x single screens
  2x blended

- 2x blended

- HD (2K) Output

  8x single screens

- 8x single screens
  4x 2 output blended (2 output per blend) up to 1x 8 output blended

- 4x 2 output blended (2 output per blend) up to 1x 8 output blended

More than eight outputs can be assigned to a screen destination, provided they are positioned inside the processing canvas.

Auxilliary Outputs

User definable from 4 x 2,048 x 1,200@60 to 1 x 4K@60 per output card

4K output

- 1x Scaled Aux output

- 2x Scaled Aux output

HD (2K) output

- 4x Scaled Aux output

MVR supports 2x HD outputs displaying all inputs and outputs available to the chassis.

Still stores

User-assigned still stores

- Live capture

- Import and export via PNG file

Presets

1,000 user definable presets

Expandability

8x E2 chassis per system

4K output

- Up to 32 4K outputs

Dual Link output

- Up to 64 DL outputs

HD (2K) output

- Up to 128 HD outputs

Up to 48 HD inputs can be shared globally in a system linked for input expansion. Processors also have access to their local sources.

Chassis

4RU
Dual Redundant PSU
Modular field swappable processing and I/O cards
Variable flow cooling
Rugged steel chassis

PRODUCT SPECIFICATIONS	E2
Model	NGS-4U
Live effects canvas	Up to 20 Megapixels PVW/PGM 40 Megapixels PGM only 80 Megapixels @30p and PGM only
Video inputs	32 inputs via 8 input cards (Event Master series cards) ▪ Up to 8 x 4K inputs - each input card supports up to 4K@60p ▪ 12 x SD/HD/3G SDI ▪ 10 x HDMI 1.4a (297 Mpix/sec max) ▪ 10 x DisplayPort 1.1 (330 Mpix/sec max)
Video outputs	14 outputs via 4 output cards (Event Master series cards) ▪ Up to 3 x 4K outputs - each output card supports up to 4K@60 p ▪ 4 x SD/HD/3G SDI ▪ 8 x HDMI 1.4a (297 Mpix/sec max) ▪ 2 x HDMI 1.4a for Multiviewer (297 Mpix/sec max)
Genlock	Analog reference input/loop on BNC connectors; bi-level and blackburst at SD and tri-level at HD S3D Sync: 4x input Din connector, 2x output Din connector
Program output	Up to 16 program outputs configurable as single screens or tiled/blended widescreens (preview and Multi-Viewer not available in all configurations) -Configurable for up to 16X 2048X1200@60 or up to 4 x 4096x2400@60 -Independent edge blending/feathering control for all four sides
Scaled Aux outputs	User definable for up to 16 x 2048x1200@60 or up to 4 x 4K@60 All outputs can be defined as Aux destinations for a total of 16 Aux outputs Output color correction (preview and Multi-Viewer not available in all configurations)
Mixers	User definable for up to 16 x 2048x1200@60 or up to 4 x 4K@60 All outputs can be defined as Aux destinations for a total of 16 Aux outputs Output color correction (preview and Multi-Viewer not available in all configurations)
Still stores	Up to 100 HD or 25 UHD, depending on the import file size.
Layer effects	▪ Borders (hard, soft, halo) and drop shadows ▪ Color effects ▪ Strobe, H&V flip ▪ Luma, chroma and Cut/Fill keys (not all modes support keying) ▪ PIP moves via Keyframes
Multiviewer	▪ Flexible user-definable layouts ▪ Monitor all Inputs and Outputs, including Preview and Aux ▪ Two outputs ▪ Dedicated hardware same as E2 Event Master Processors
Expandability	▪ Easily expandable for larger display applications via proprietary links ▪ Link units to increase available Inputs and Outputs for larger tiled/blended widescreen applications ▪ Expansion via simple linking - up to 8 chassis ▪ E2 ships with the ability to link 8 chassis for expansion.
HDCP	HDCP compliance determined by installed cards.

PRODUCT SPECIFICATIONS	E2
Control	▪ Event Master screen management software for PC or MAC ▪ Event Master controllers ▪ WebUI ▪ Ethernet RJ-45, 1000/100/10 Mbps autosense
Serviceability	▪ Field-Serviceable I/O and processing cards (not hot-swappable) ▪ Hot-swappable dual-redundant power supplies
Noise Level	Max 52.9 dB avg. Fans at 100%. Fan speed is software-managed based on operating temperature. Reference ISO 7779
Dimensions	▪ Height: 17.8 cm (7.0 in) - 4 RU rackmount ▪ Width: 43.2 cm (17 in) without chassis handles, 48.3 cm (19 in) with chassis handles attached ▪ Depth: 56.9 cm (22.4 in) from front panel to rear panel, 62.2 cm (24.5 in) overall
Weight	31 kg / 68 lbs
Power	▪ Input power: 100-240 VAC 50/60Hz 826W ▪ Ships with dual-redundant, hot-swappable power supplies
Warranty	3 years parts and labor
Environmental temperature	0-40° C / 32-104 F
Environmental humidity	0-95% non-condensing

Last updated: 08 Jan 2020

Technical specifications are subject to change without prior notice. Please check www.barco.com for the latest information.