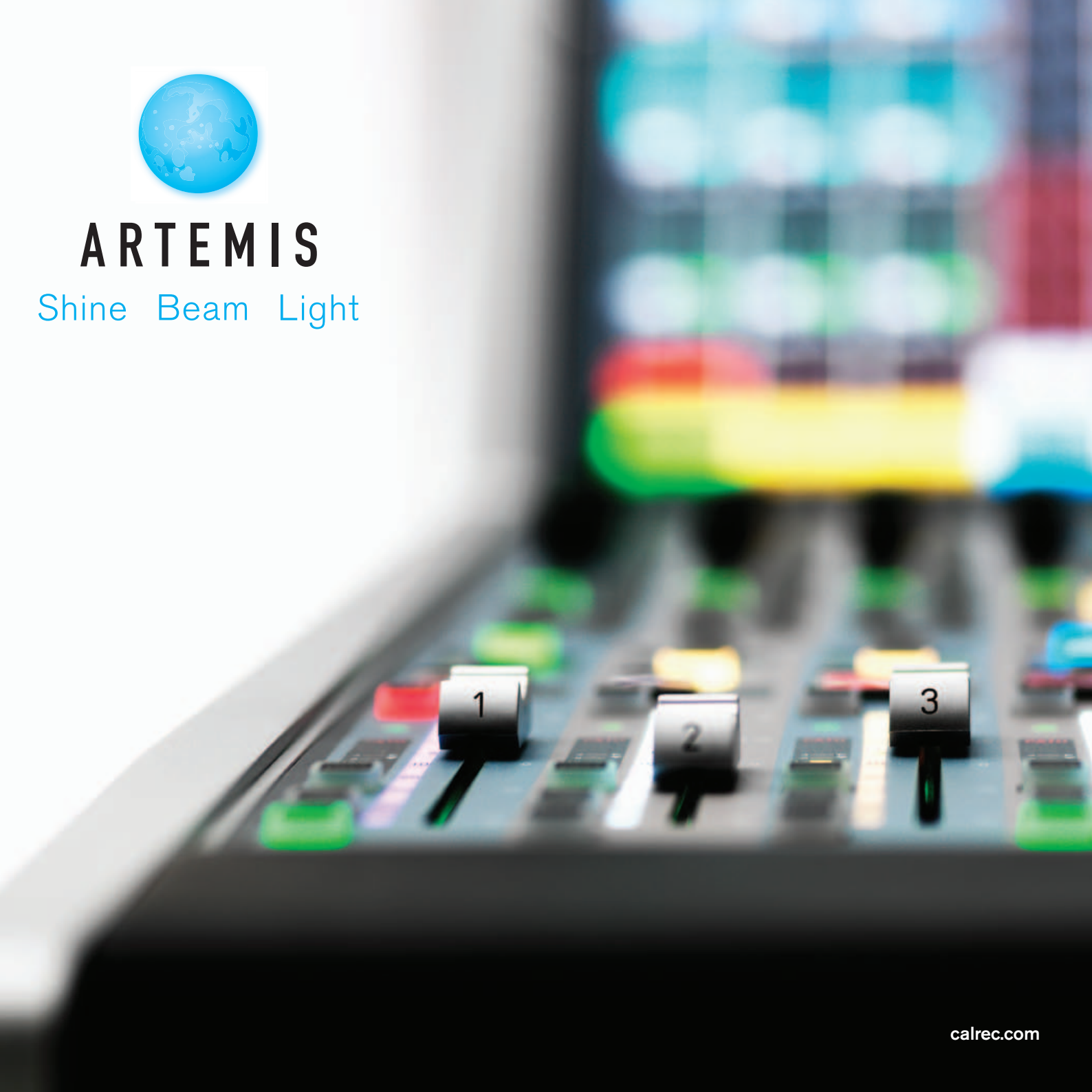
ARTEMIS
Shine Beam Light
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calrec.com

HD audio for broadcast demands cutting-edge technology

Calrec's Artemis console is based on the award-winning Apollo platform and utilizes the same core technologies such as Bluefin2 and Hydra2.

Throughout Calrec's history, its team of innovators has consistently provided superior products which have allowed forward-thinking broadcasters to remain one step ahead.

Calrec introduced the world's first true stereo broadcast console and the first point-source surround microphone in the 1970s, anticipating the growth of multi-channel broadcast audio.

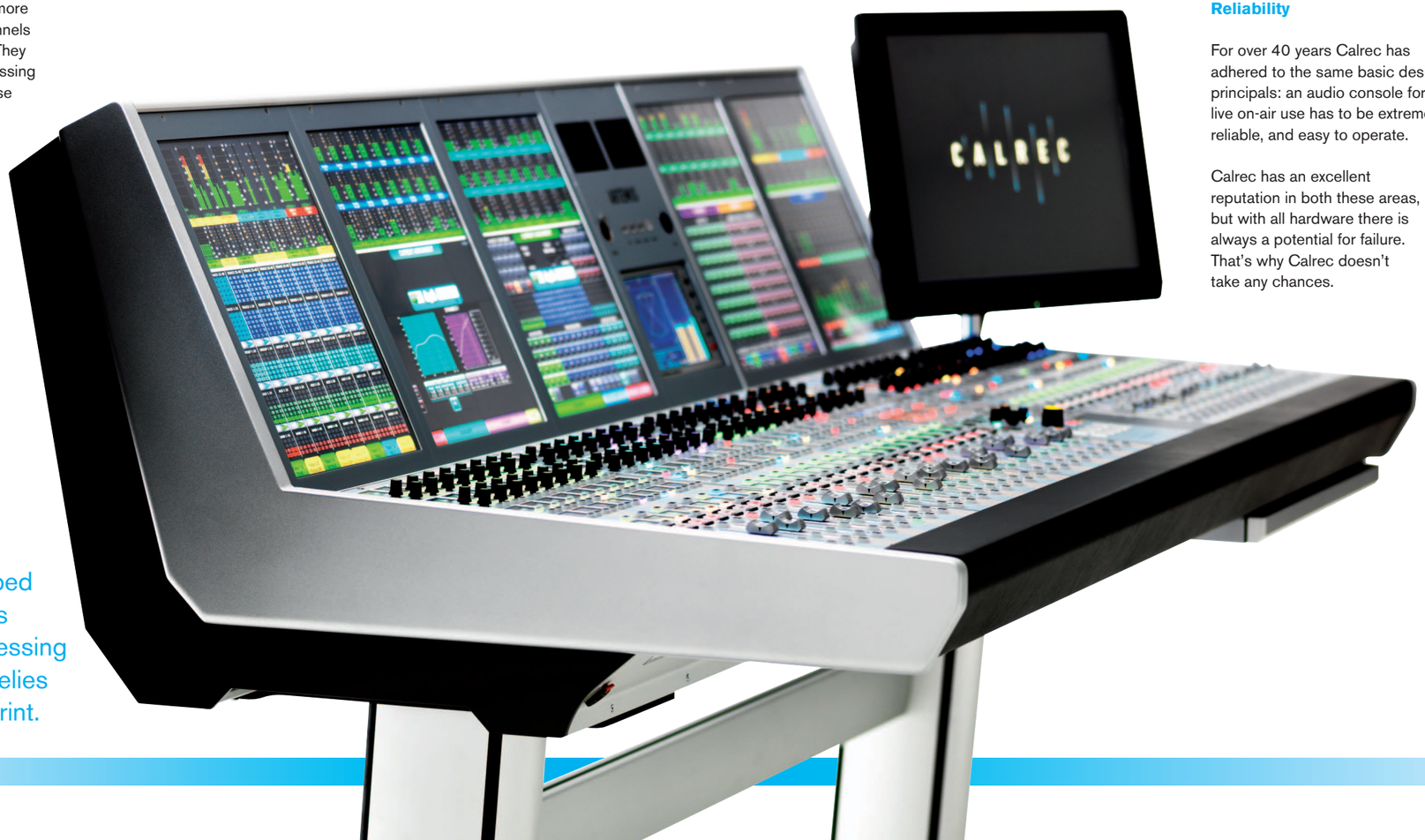
Calrec produced the world's first digitally controlled analog broadcast console in the early 1980s, predicting the separation of control surfaces from networked processing hardware.

In 2007 Calrec launched Bluefin, the first DSP processing engine based on FPGA (Field Programmable Gate Array) technology, which enabled broadcast consoles to work efficiently with true discrete-channel 5.1 surround.

Today, broadcasters need more and more digital audio channels at ever-higher resolutions. They need more and more processing power to handle the increase and more assignable, more ergonomic control surfaces to deal with the increased workload that HD broadcasting demands.

Naturally, Calrec already has the answer. Scalable, compact and available in different pack sizes to meet your precise needs, Artemis continues the tradition.

Artemis is equipped with an enormous routing and processing capacity which belies its mid-size footprint.



Reliability

For over 40 years Calrec has adhered to the same basic design principals: an audio console for live on-air use has to be extremely reliable, and easy to operate.

Calrec has an excellent reputation in both these areas, but with all hardware there is always a potential for failure. That's why Calrec doesn't take any chances.

Calrec provides redundant hardware for ALL critical systems, and takeover is automatic and seamless. These elements are hot-pluggable for easy replacement.

Calrec hot spares mirror what the on-line component is doing and in the rare event of a hardware failure, they automatically take over with no disruption to the audio. This intelligent system covers DSP modules, control processor modules, router modules and all PSUs.

With Calrec, you can be confident that you are always in control.

Artemis also introduces several substantial technological advancements. Immediately apparent is a flexible new control surface, incorporating color, touch and tactile controls.

Hydra2 is Calrec's plug and play audio routing system, based on Artemis's integral 8192^2 router. Bluefin2 ensures Calrec consoles are the most powerful broadcast console available – twice as powerful as its closest competitor.

Artemis works the way you want to

A variety of operating modes and ways to display information ensure that every operator feels at home.

Not only is the result practically elegant, offering the same sense of assurance associated with one-knob per function control, but it's also visually striking. Form and function, seamlessly matched.

The surface incorporates over 25 years of refinement of Calrec's assignable console designs. The intuitive control surface design provide extremely clear visual feedback and rotary controls and buttons change color to reflect the type of control they are assigned to. The console also uses color to denote mono, stereo or 5.1 channel inputs, or whether a fader is assigned to mains or groups.

Using these technologies, Artemis provides instant visual feedback about control assignments and the soft nature of the panels allows the operator to reconfigure them to reflect a variety of operating setups.

In Assign Mode, panels replicate a classic Calrec assignable console. In Wilds Mode each vertical channel strip is assigned to represent a single channel.

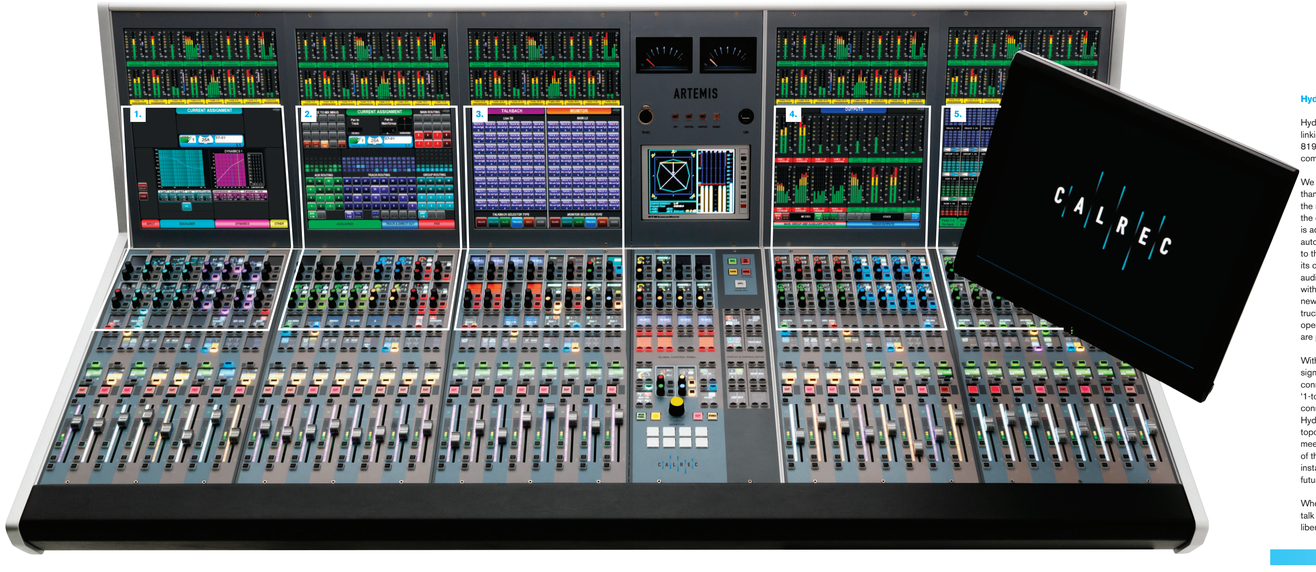
1. Inp/EQ-Dyn Panel
This panel layout contains controls relevant to Input, EQ, Dynamics processing for the currently assigned path.

2. Send-Routes Panel
This contains controls for routing the currently assigned path to auxes, tracks, groups, mains, direct outputs and mix minus busses. Also provides pan controls and allows interrogation and reverse routing of busses.

3. Monitor Panel
Monitor Mode provides additional functionality to the dedicated monitor panel. This could include the configuration of monitor pre-selectors or the setup of talkback groups. It also allows multiple operators access to their own set of monitoring controls.

4. Output Panel
Outputs Mode provides controls for manipulating output paths such as mains, tracks, auxes and groups. Control cells provide functionality, while the TFT screen provides comprehensive metering information.

5. Wilds Panel
Wilds Mode arranges the panels into vertical strips, providing quick access to wild controls for each fader.



Whatever the developing requirements of HD broadcast, Calrec's Bluefin2 processing engine will keep you on the air and sounding great.

Hydra2

Hydra2 is the Artemis's backbone, linking the control surface to an 8192² router and on to more complex networks if required.

We call this a network rather than routing matrix to reflect the sophisticated nature of the control software. Hydra2 is adaptive and intelligent, automatically recognizing changes to the network and updating all its clients. This means that the audio network can be reorganized with no manual intervention; new resources – even remote trucks – are available to console operators just seconds after they are plugged in.

With up to 512 bi-directional signals per copper or fiber connection, Hydra2 offers true '1-to-N' routing with about half the connection latency of the original Hydra network. In fact, a network's topology may be designed to meet the specific requirements of the broadcast facility, cutting installation costs and ensuring future flexibility.

When all elements on the network talk to each other, it can be very liberating.

Hydra2 allows the construction of complex routing networks for broadcast production while keeping it simple – with control software which transparently organises all routing, Hydra2 is extremely user friendly.

Bluefin2

Bluefin was the world's first implementation of Field Programmable Gate Array (FPGA) technology for full DSP processing, and changed the game for DSP provision. Bluefin provided enough processing on one DSP card to power an entire mixing console running surround-sound productions.

Bluefin2 is the next generation and has been designed for surround operation from the outset. It gives Artemis up to 680 channel processing paths for the biggest 5.1 projects and is the DSP powerhouse for the next generation of Calrec consoles.

As you would expect from Calrec, all these features are available irrespective of the processing load on other channels, as channel resources are not shared across the console as a whole.

And of course, system resilience is always reinforced with a second Bluefin2 card in each 8U Artemis Shine and Beam rack – it's like having another console as a hot spare.

Artemis Light squeezes 240 channels into a very compact 4U rack, with the same renowned Calrec reliability and redundancy – the same, just smaller.

Whatever the developing requirements of HD broadcast, Calrec's Bluefin2 processing engine will keep you on the air and sounding great.

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CALREC

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Shine

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Artemis specifications & benefits

Channel Facilities	**Artemis Shine**	**Artemis Beam**	**Artemis Light**
Channel Processing Paths	680	340	240
Main Outputs	Up to 16 from M/G pool of 128	Up to 16 from M/G pool of 128	Up to 16 from M/G pool of 72
Groups	Up to 48 from M/G pool of 128	Up to 48 from M/G pool of 128	Up to 48 from M/G pool of 72
Track Busses	Up to 64	Up to 64	Up to 48
Aux Busses	Up to 32	Up to 32	Up to 24
AFL Systems	3	3	3
PFL Systems	3	3	3
Inserts	Pool of 256	Pool of 256	Pool of 128
Chan/Grp Direct/Mix Minus Outputs	Up to 4 per path from pool of 512	Up to 4 per path from pool of 512	Up to 4 per path from pool of 256
Input Delay	256 legs of 2.73s	128 legs of 2.73s	128 legs of 2.73s
Output Delay	256 legs of 2.73s	128 legs of 2.73s	128 legs of 2.73s
Buss Path Delay	2.73s per path	2.73s per path	2.73s per path
Track Sends/Chan or Grp	4	4	4
EQ 1-4	4 band Para	4 band Para	4 band Para
EQ 5-6	2 band Para	2 band Para	2 band Para
SC EQ	2 band Para	2 band Para	2 band Para
Dyn 1	Comp/Lim and Exp/Gate	Comp/Lim and Exp/Gate	Comp/Lim and Exp/Gate
Dyn 2	Comp/Lim	Comp/Lim	Comp/Lim
Inserts/Channel	1	1	1
Max Faders	72	64	56
Layers	12 Dual Layers	12 Dual Layers	12 Dual Layers
Router Ports	16/32	16/32	8

Networking

Integral 8192² router
All I/O provided over Hydra2 network via a range of Hydra2 I/O boxes
Cat5e or fiber connectivity

Resilience

Highly resilient – all modules are hot-pluggable with automatic redundant PSU, DSP, Control processor, Router module, I/O Expansion module
Independent DSP operation ensures audio continuity in the event of a PC or control reset
Low power consumption and heat generation