



Allen & Heath dLive C Class Digital Mixers

By George Petersen

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Unveiled at the 2017 Winter NAMM show was a line of Allen & Heath compact dLive “C” Class digital mixers, with new control surfaces and MixRacks that open up its dLive platform to a wide spectrum of AV, installation and live event roles.

The range includes the first 19-inch rack-mountable dLive surface — the ultra-compact C1500 — along with the C2500 and twin screen C3500. The series also includes three new MixRacks — CDM64 (64-in x 32-out), CDM48 (48x24) and CDM32 (32x16). All are founded on XCVI, the same 96 kHz FPGA core that drives A&H’s flagship dLive S Class mixers, while also sharing its DEEP processing architecture, allowing high-performance compressors and processing emulations to be embedded directly within the inputs and mix channels. The new boards also provide for “surfaceless” mixing, using a MixRack with a laptop or tablet for control.

The MixRacks have a maximum capacity for 128 inputs with full processing and 16 dedicated stereo FX returns, plus a fully configurable 64 mix bus architecture, with full processing on all mix channels. Each surface and rack has a 128 channel I/O port, supported by a wide array of networking cards, including Dante, Waves, MADI, fibreACE optical and more. dLive C Class is also compatible with S Class hardware and the ME personal mixing system and supported by a full ecosystem of apps, Director software and accessories.

Inside the C Class

The C Class is 100 percent dLive. C Class uses the exact same FPGA processor as the S-Class and it runs the identical software. The only thing that’s scaled down is the hardware. A C Class rig can still do 160 sources to mix, with 64 buses and 16 stereo effects returns at 96 kHz. The one difference is that both the new MixRack and control surface hardware is pared down to meet a price point that’s about 30 percent lower.

The intent of this new series is that it offers all the mix horsepower for users who need to do high channel-count shows but don’t have a huge budget. Yet other than the pricing, there’s nothing “budget” about the C Class, which features all-steel construction, with the same high-quality touch screens, faders and encoders used throughout — but simply fewer of them than the S-Class.

Certainly, there are distinct differences between the C Class and the S Class. One difference is that the S Class has dual, redundant hot-swappable power supplies; the C-Class has single, fixed power supplies in both the surface and the rack. Although C Class may not be the first choice for a major broadcast event, it’s well-suited for budget-driven productions, smaller regional production companies, and some of the smaller-to-medium sized houses of worship and other installs where redundancy is not essential while price point — and the ability to have as many as 128 mic preamps — is important.

Also, an S Class console has five 128-channel card slots, while the C Class system has two and eliminating three of those slots represented additional cost savings. Available cards include Waves, MADI, Dante, EtherSound and GigaACE platforms. And the dLive and C Class share the same latency — 0.68 milliseconds.

For even faster response, the onboard DEEP (Digital Effects Emulations Plug-ins) DSP suite provides emulation plug-ins with zero latency, as they are integrated into the firmware. So for example, if desired, you can run dual-stage tube emulation preamp software on every input without affecting latency.

Ease of Use

The C Class surfaces employ dLive’s Harmony UI, offering gesture touch control via 12-inch screens allied to color-mapped rotary encoders and a total of 19 user-assignable SoftKeys. The result is immediate, creative tactile control over processing functions, working in harmony with the visual feedback displayed on the screen. The high-grip rotary knobs offer precision control and feature RGB illumination, with colors mapped to functions for instant visual orientation.

Like the S Class consoles, all C Class systems are supported by a full ecosystem of remote Wi-Fi control apps — for iOS devices — as well as dLive Director, the multi-platform (Mac/PC) editor and control software for any dLive console). Taking this a step farther, due to dLive’s design architecture, “surfaceless” mixing is possible, using a MixRack with a laptop or tablet for control.

Off to the Future

Both S Class and C Class are based on the exact same FPGA chip and firmware, and as with the S Class, the feature set will continue to be expanded. For example, version 1.4, which debuted at NAMM, adds the option to display a third, independent view on an external monitor, and it brought 64 instances of Allen & Heath’s Dyn8 advanced dynamic processing plug-in providing four bands of dynamic EQ and four bands of multiband compression, along with DCA spills and a quick Virtual Soundcheck mode.

There are also new additions to the array of DEEP embedded plug-ins, comprising the Peak Compressor/Limiter 76 emulation of a classic compressor, plus the Multi-Stage Ducking Processor — all in a free upgrade. There will be more to come — the chip is nowhere near its max math capability. And the party is just getting started. Allen & Heath recently announced AES67 networking support (via its M-Dante card), and at Prolight+Sound 2017 in Frankfurt, showed digital interface options for dLive (including C Class) with superMADI and a range of AES 3 I/O cards.

Pricing for a complete C Class system (C1500 and a CDM32) begins about \$15,000 and a 64-channel C3500/CDM64 rig is approximately \$21,500. For more information, visit dlive.allen-heath.com. **A&H**



C Class C3500 surface and CDM64 MixRack



The C1500 control surface is rack mountable.



All C Class controllers share similar local rear panel I/O.

At a Glance

High Performance/Affordable Pricing

The new, compact C Class digital mixers open Allen & Heath’s flagship dLive platform to a wide spectrum of AV, install and live event applications.



The CDM48 MixRack

Allen & Heath C Class Digital Mixing System

STATS	
Controllers	C1500 (12 faders in 6 layers); C2500 (20 faders, 6 layers); C3500 (24 faders, 6 layers)
Max Sample Rate	96 kHz
Expansion Slots	2
Local I/O	(6) XLR mic/line in, (6) XLR line outs; AES3 and USB I/O
Remote I/O	CDM64 (64-in x 32-out); CDM48 (48x24); CDM32 (32x16)
Pricing	C Class systems begin about \$15,000 (C1500 and a CDM32); a 64-channel C3500/CDM64 rig is approximately \$21,500
Manufacturer	Allen & Heath
More Info	dlive.allen-heath.com