

**YOU ASKED FOR
AN ALTERNATIVE**



**INTRODUCING
CRYSTAL CORE
TECHNOLOGY**

**The Media Platform
for the 21st Century**



FAIRLIGHT CC-1 Media Technology Platform for the 21st Century

Despite the explosive demand for larger systems, better quality and lower cost, the professional audio industry is still struggling with two-decade-old DSP technology. **UNTIL NOW.....**

Groundbreaking application of FPGA technology obsoleting DSP and Host based processing systems.

Today Fairlight announces a breakthrough – a new stream of audio and video products built around its CC-1 (Crystal Core Technology). This fresh paradigm processes data in a massive Field Programmable Gate Array (**FPGA**), architected into a purpose-built media processing chip with staggering power and unrivalled performance. A single CC-1 card delivers more audio processing capabilities with much lower latency than systems deploying up to **64** of the industry's most powerful floating point DSP chips. With its inherent ultra-low latency and blinding speed, this new feature rich technology platform is set to completely revolutionize the professional audio industry.

Fairlight's CC-1 is a modern, media-optimized FPGA architecture. It aggregates IP cores resulting from 20+ man-years of Fairlight R&D, drawn from over 150+ man-years of experience as a digital audio pioneer. The result is a system with fast and precise tactile response, immense processing power, and sparkling audio quality when compared to any other available system. It delivers an immediate step change in performance, and forms the development platform for an entire suite of new and futuristic creative applications.

DREAM II (Digital Recording Editing And Mixing) supporting expansion, diversity and emerging standards.

Fairlight is introducing the CC-1 card with a PC host as the revolutionary **new** processing engine behind its DREAM II Family, which includes the popular SatelliteAV, Station, Constellation-XT, HD Factory and Anthem products. With the new SX-20 and SX-48 remote I/O boxes, Fairlight offers a wide choice of affordable high quality audio converters to compliment each DREAM II system. DREAM II products deliver up to 230 audio channels. Every channel is equipped with eight bands of parametric EQ, three stages of dynamics processing, floating insert point with return, 12 Auxiliary sends, comprehensive monitoring facilities and access to 72 user definable mix busses. In addition there is an option for an onboard Video track in Standard and or High Definition.....all this from a **single** CC-1 card.

Guaranteed Performance delivering a "NEW digital standard"

Remember your last analog system? and how **ALL** the controls actually worked? Manufacturers of digital systems, have for years been struggling to replicate true analog performance, instead they have managed to create a false virtue out of "flexibility" and "assignability". The frustration really begins when you suddenly run out of resources, and then "flexibility" changes to "agonizing choices over what to leave out". Time to shell out a few thousand more on yet another DSP card.

Fairlight has a new approach – **guaranteed performance**. Every channel **ALWAYS** has a complete set of available processing, parameters just like analog systems. Better yet, with 36-bit mixing and amazing 72-bit EQ, it actually sounds better than any other available technology.

WHY EVEN CONSIDER buying yet another expensive DSP card to squeeze more out of your old system when you can get guaranteed power with lower latency and full processing on every channel from Fairlight's new breakthrough platform. Take away the guess work. Relax in the knowledge that you will never again have to calculate your system's resources. Let the system work for you instead of the other way round.

What can be achieved with just ONE CC-1 card ?

- 230 Super Hi Resolution Audio Channels
- 8 fully parametric bands of EQ on **EVERY** channel
- 3 Stages of Dynamics on **EVERY** channel
- 72 User definable mix busses from Mono to 7.1
- 64 channel audio bridge for 3rd Party plug-ins
- Up to 220 physical I/Os per CC-1 card, Analog, Digital or MADI
- Integrated Video track in SD or HD format

Truly Open Platform

CC-1 goes even further with an integrated 192 track disk recorder and an SD/HD Video track integrated seamlessly into the recording and editing process. All tracks are on-line simultaneously for comprehensive waveform editing using the Binnacle system pioneered by Fairlight. File formats include support for OMF, BWAV, WAV, MP3, SD2, MXF, AIFF, AVI, XML, Fairlight MT and Quicktime to name a few, and with a fully integrated file transfer utility for AAF, Wiretap, Vegas Video, Open TL, AES3 I, PT5.0, DAR, DSPMedia, Bitmaps, Cineon and DPX Image Sequences, CC-1 is a truly open platform.

CC-1's mixing environment makes full use of the hardware power by allowing users to set up multiple busses of any format up to 7.1. These can be used for multi-stem work, for creating simultaneous reduction mixes in different formats, or both. The automation system, apart from controlling every single parameter on the DREAM console (over 70,000 of them) also uniquely allows fader levels to be offset between different mix formats.

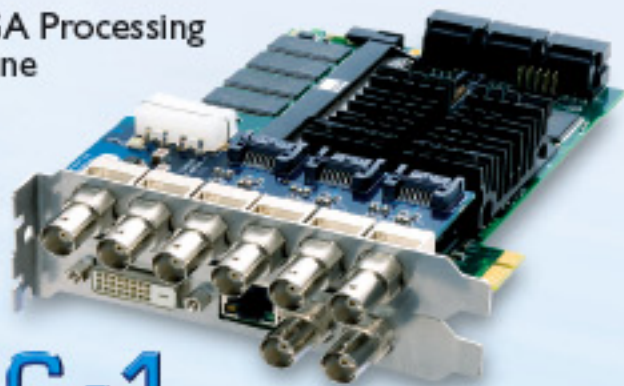
Making sense of this complexity in the monitor speakers is simple work with an integrated monitor matrix. It allows instant choice of a multitude of monitoring sources and destination speaker sets, in any format from mono to 7.1.



DREAM II Engine Components

FPGA Processing Engine

CC-1



Fairlight's Revolutionary Crystal Core Engine is a PCIe card that is installed in any compliant host PC operating Windows XP. The CC-1 Engine forms the basis of a variety of powerful systems, from simple low-cost recording/editing platforms to massive large format consoles with integrated Hi Definition video. Since CC-1 runs on a standard Windows PC, the system plugs seamlessly into virtually any existing IT infrastructure. However, no other PC hosted system provides the power and dedicated performance of the CC-1 engine. CC-1's architecture allows multiple engines to be linked to form massive systems, providing a level of scalability that far exceeds any other competing system.

Sync and I/O Toolkit

SX-20



Fairlight's SX-20 is a versatile "Sync I/O Toolbox", and is a required component of any base CC-1 system. The SX-20 includes two Mic/Instrument preamps plus two additional balanced analog inputs, twelve balanced analog outputs, four digital inputs and eight digital outputs. In addition, SX-20 includes powerful simultaneous independent multi-machine 9-pin control, with Fairlight's industry leading precision and accuracy. If that isn't enough, SX-20 provides for Sync at any frame rate including HD Trilevel sync, Video Sync, Wordclock, AES and LTC. The unit also generates LTC at any standard rate. When combined with CC-1, SX-20 provides all the capabilities required for a wide variety of audio production and post production tasks.

Modular High Density Remote I/O

SX-48



Fairlight's SX-48 Signal Exchange extends the CC-1 platform with flexible and cost-effective I/O. Up to FOUR SX-48 units can be connected to a single CC-1 card via MADI providing up to 192 channels of discrete I/O per engine. SX-48 is designed to accommodate all standard sampling frequencies from 44.1 kHz to 192 kHz. Fairlight's renowned I/O can be installed in eight channel modular blocks, allowing numerous combinations of up to six cards of analog and/or digital I/O to be mixed together in each SX-48 unit or added later if required. SX-48 locks to external Sync at any frame rate and accepts HD Trilevel sync, Video Sync, Wordclock or AES as references. Fairlight's Total Studio Connectivity Protocol (TSCP) allows intelligent management of all SX-48 I/O resources on the TSCP network.

A single CC-1 card delivers all the processing power required to deliver a complete family of fully featured large format mixing products. With 230 fully featured channels a multi format sub bus system with fold up and fold down, comprehensive monitor matrix and total automation of over 70,000 parameters, CC-1 is the power source for a complete new family of DREAM II products.

Dynamic Resolution Optimization (DRO)

As always, new technologies present new opportunities. Fairlight has used the programming flexibility of CC-1's FPGA chip to run different processes at different bit depths. This is called Dynamic Resolution Optimization (DRO).

Older DSP-based systems perform all processes end to end at a single resolution even if some processes would sound better with more resolution, or just as good with less. In Fairlight's Crystal Core system, each process is tailored exactly to its needs. With DRO, EQ processing can be performed at 72-bit floating point precision, creating the headroom needed for digital sound to finally achieve the quality missed from analog days. Mixing is performed with 36-bit floating point precision, giving a quality higher than any other system currently in the market. At the same time, metering functions warrant only 16-bit fixed point resolution, leaving more processing power available for other channels to use.

Dynamic Resolution Optimization (DRO) allows Fairlight engineers to choose the best processing for each system task. This not only ensures unsurpassed audio quality, but exponentially increases efficiency, providing greater performance at a lower cost.

Fairlight's award winning Anthem Console



CC-1 CRYSTAL CORE

Introducing the world's first FPGA-based audio acceleration platform

Over 200 channels, each with Mastering-Quality EQ and Dynamics

Automation of over 70,000 parameters including plug-ins

Less than 0.5mS latency with full processing

Lightning fast tactile response

Integrated 192 track disk recorder/editor

HD and SD video track with editing capabilities

Wide choice of I/Os in analog, digital and MADI

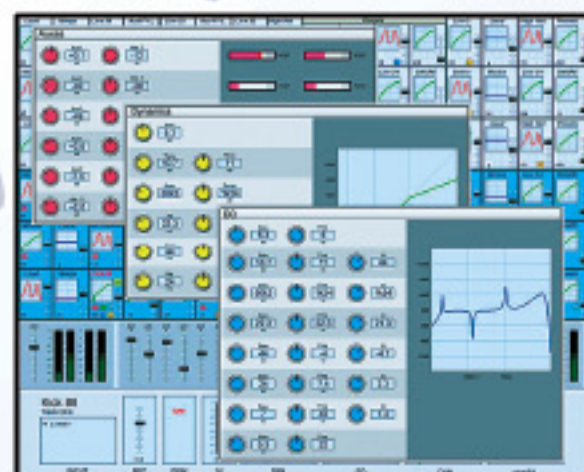
Hardware accelerated VST and Rewire support

Comprehensive Multi-format mixing capabilities

Comprehensive integrated monitoring matrix

Full support for collaborative workflow tools

Wide choice of tactile controllers



THE BREAKTHROUGH YOU'VE BEEN WAITING FOR...

DREAM II powered by CC-1: Go on - put your head above the crowd

If you are fed up with continuously upgrading your system to achieve the results you need, then move over to Fairlight because we've invented and delivered the alternative.

CC-1 delivers the step change in audio performance that you have been waiting for. With more channels, lower latency and guaranteed processing on every channel, CC-1 supersedes and out performs the entire stack of DSP cards that you have jammed in almost every available slot inside your computer frame.

One CC-1 card delivers more power than eight HD Accel™ cards. Not only that; CC-1 cards can be aggregated to form a potentially limitless processing engine. Imagine the future possibilities of that!

Utilizing 21st Century FPGA technology, CC-1 puts the power back in your hands freeing you from the limiting factors of those ubiquitous DSP and uninspired host based systems. Be better, and be more than ready for emerging standards including three dimensional audio, DXD audio formats and more.

In short, CC-1 has arrived in the world of multi-media creation delivering more power and more performance – and there's no going back!

So, if you're fed up of your current system delivering just a 'drop in the ocean' then move up to FPGA technology and discover how Fairlight's new CC-1 gives you the ocean - in a drop.

Call your local Fairlight representative NOW to see first hand what CC-1 can deliver

Ask for a demonstration and ask to register to WIN a new CC-1 engine



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