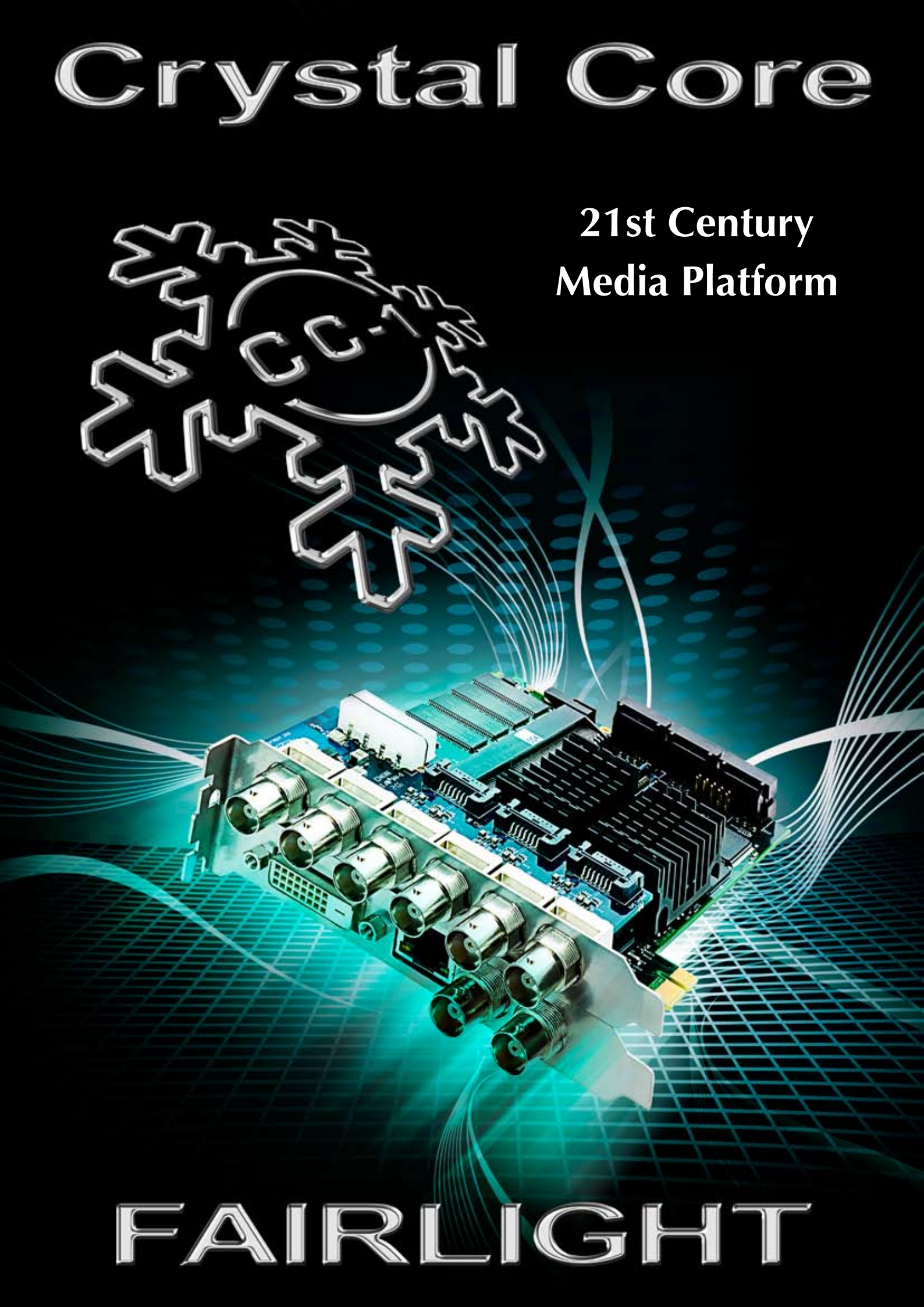
Crystal Core

21st Century Media Platform



FAIRLIGHT

CRYSTAL CORE TECHNOLOGY PLATFORM

Groundbreaking application of FPGA technology

Fairlight has delivered 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 **sixty four** of the industry's most powerful floating point DSP chips. The result is a system with fast and precise tactile response, immense processing power, and sparkling audio quality when compared to any other system. It delivers an immediate step change in performance, and becomes the engine for an entire suite of new and futuristic creative applications.

Digital Recording Editing And Mixing supporting expansion, diversity and emerging standards.

Fairlight has introduced the CC-1 card with a PC host as the revolutionary ***new*** processing engine behind its audio mixers and workstations which include the popular Xynergi MPC, Constellation, and Anthem products. With the SX-20 and SX-48 remote I/O boxes, Fairlight offers a wide choice of affordable high quality audio convertors to compliment each system.

Guaranteed Performance delivering a "NEW digital standard"

Remember your last analogue system? and how ALL the controls actually worked? Manufacturers of digital systems, have for years been struggling to replicate true analogue 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 "agonising 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 analogue systems. Better yet, with 36-bit floating point mixing and amazing 72-bit EQ, processing 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 PlugIns

Integrated Video track in SD or HD format

Up to 220 physical I/Os per CC-1 card, Analogue, Digital or MADI

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, AES31, PT5.0, DAR, DSP Media, Bitmaps, Cineon and DPX Image Sequences, CC-1 is a truly open platform.

Green Computing Technology

Compare the Crystal Core to the DSP rack it replaces:

- Size — reduced from the size of a dishwasher to a module that fits in your pocket
- Power (and Heat) — reduced from 600 watts to 12 watts
- 98% - reduction in heat
- Performance — more features, more channels, less latency, higher resolution
- Cost — slashed
- Reliability — component count reduced by >99%, combined with reduced heat, results in dramatically improved reliability.

CRYSTAL CORE 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 analogue inputs, twelve balanced analogue 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 44.1kHz 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 analogue 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 audio products.

Fairlight's award winning Anthem Console

Dynamic Resolution Optimisation (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 Optimisation (DRO).

Older DSP-based systems perform all processes end to end at a single resolution even if some processes will sound better with more resolution, whilst others require 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 analogue days. Mixing is performed with 36-bit floating point precision, delivering a better audio quality 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 Optimisation (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.

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 have 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 an entire stack of DSP cards.
By utilising 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 turning back!
So, if you are let down by 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.

THE BREAKTHROUGH YOU'VE BEEN WAITING FOR...

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 PlugIns
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 analogue, 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

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

www.fairlightau.com