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## Euphonix S5 Fusion

*New Multi-Tool For An HD World*

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# EUPHONIX S5 FUSION

## DIGITAL CONSOLE AND CONTROLLER

**NAB sees the launch of a new multi-tasking board from Euphonix, aimed at the brave new world of HD. SIMON TILLBROOK previews this new 'friend of DAWs'**

The world of broadcasting is changing, and changing at some rate. We are used to change in this industry. Constantly looking for more in every area: more tracks, more processing power, more control. It goes on and on, and what do you want all of this for? The answer is always the same... less.

Digital broadcast and High Definition has arrived, and the public seems to have bought into it in a big way. With commitment in the UK to be broadcasting digitally by 2012 and shutting down analogue transmission, resistance, as they say, is futile.

Last year in the US 30 million HD ready systems were sold, with a further 16 million predicted for this year.

Most of the major broadcast networks are already broadcasting much of their content in HD, both in terms of image and sound.

That's a great deal of investment being made in a high definition future – and all those producing content for it are having to put themselves in a position to keep pace.

High definition sound for movies, particularly in the form of 5.1, has developed enormously over a fairly short period of time. The sound experience now has far more recognition and understanding. A great soundtrack can really push the visual experience to another level.

Euphonix has established itself well in film studios. The Euphonix System 5 digital film console, launched back at the AES in 1999 has found a place for itself at the high end

of film mixing at places like Pinewood-Shepperton and Todd-AO in Los Angeles. This year's Oscar-winning mix for Dreamgirls was done on a Euphonix System 5-F at Todd-AO. All this experience has gone a long way to allowing Euphonix develop sound mixing systems for an HDTV future.

At this year's NAB in Las Vegas Euphonix is showing what it feels will represent the best and most cost-effective solution for those involved in producing sound for HDTV content – the Euphonix S5 Fusion. The knowledge that Euphonix has gained through the rest of the product line has led them to this point as VP of Marketing for Euphonix Andrew Wild explains: "We have a big film console with the System 5 where you can have two operators, thousands of channels, and a huge monitor matrix that we are selling to the big film studios, and it is proving very successful.

"We also have the 5-MC, which has all the same channel

### THE REVIEWER

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strips as the System 5 Film Console, but has the MC controller in the middle, which is a DAW controller similar in principle to Digidesign's ICON, but with the ability to control any software application. There is no DSP; the 5-MC is just a controller.

"The Euphonix S5 Fusion is effectively a film mixing console with DSP control like the System 5 Film Console, along with the DAW control of the 5-MC in a single package."

When looking through the specification you can see the fusion of elements from the Euphonix line, and subsequently see the S5 Fusion sitting very comfortably in the Euphonix range.

### System Overview

The control surface of the S5 Fusion comes in a standard configuration, with some provision for expansion. The channel strip layout is identical to the System 5 Film Console apart from the new charcoal-grey finish: you get three Euphonix 408 modules. These are blocks of eight-channel strips with multi-format touch-sensitive faders and eight touch-sensitive rotary controls. These knobs can be used for a wide variety of tasks, including internal DSP channel adjustments and control of parameters of external DAW systems.

On top of each bank of eight strips is a high-res TFT showing track information, routing assignments, and metering in a many formats.

A single 401 master module sits alongside a blank module with a screen for displaying the Euphonix eMix automation information, file management, and Euphonix Patchnet software.

This blank module also houses the twin motor joysticks. Frame and channel expansion of the S5 Fusion is limited to an additional 408 eight-channel module with TFT.

The Euphonix DF66 DSP SuperCore comes with one card fitted. This gives 38 channels, 12 mix busses, 4 aux busses, 4 group busses and 6 bus processors. It is possible to add a further two cards to the SuperCore to significantly increase these figures.

DSP channels each supply EQ, dynamics processing, delay, and full surround panning in a number of formats you can configure with the mix, group, and aux busses.

I/O is in the form of four MADI ins and three outs, plus one MADI out to eight analogue and 16 AES/EBU outputs. You can use other manufacturers' I/O that supports Core Audio or ASIO.

Both analogue and digital monitor speaker feeds are available from the new digital surround monitor matrix.

### EuCon Ho!

The system feature that links the Euphonix range and is fundamental to what makes it so attractive is explained by Wild: "What makes S5 Fusion unique is the ability to bring in DSP channels and tracks from several different workstations all on the same control surface. You can save layouts and simply hit one button to see all your DSP channels, Logic Pro, Pro Tools, or mix and match them as you wish."

This is all achieved with the EuCon control protocol, implemented through a high-resolution Ethernet line. Wild: "You can bring up your DAW channels and control and write automation from

the faders and knobs for levels, pans, tweak plugins all from the surface.

"Metering data, EQ, dynamics, plug-in data are all accessing the system at once. With the need for this type and amount of data, that is why a high-resolution Ethernet was the best solution. This is something we have done a lot of work on."

A number of third party companies have written the EuCon protocol into their systems for greater integration into products like the S5 Fusion, but EuCON also integrates with other protocols such as HUI and Mackie Control, transporting the control and display data over Ethernet.

"Nuendo, Piramix and Logic Pro are all totally integrated as they use the EuCon protocol 100 percent, so they look as if they are part of the S5 Fusion system," explains Wild. "If you are dealing with other DAW systems like Digital Performer or Pro Tools then we use the HUI or Mackie control protocol all over the same high-resolution, high-speed Ethernet. With some trickery at our end with the console, it looks and feels like you are controlling Euphonix DSP"

So you end up with the feel of a large system, potentially made up from numerous DAW sources. Wild: "No one else allows you to have this level of control and integrate multiple workstations on a single surface other than Euphonix."

### Scores On the DAWs

Not only does this open up S5 Fusion to a large user base, it is also a very cost-effective solution when it comes to track count, Wild explains: "By having DAWs on the back end it makes it a lot cheaper; you can add hundreds of tracks for the



► cost of a couple of PCs or Macs with your chosen software system," and that is certainly a factor for many of the S5 Fusion's potential customers.

EuCon is not simply limited to the control of DAW systems. "EuCon extends beyond workstation control," continues Wild. "We have been speaking to many manufacturers including Digital Audio Denmark, whose AX24 converter system fully integrates the EuCon protocol, so you can have full remote access for your I/O... and we are looking at applications in other areas."

**Target Markets**

It is the development of HDTV that has driven Euphonix to produce the S5 Fusion as we have previously touched on, and Wild confirms: "Networks broadcast every evening in 5.1 and HD here in the US, so they've all had to go through big changes with equipment. New cameras, routers, switchers – and they have similar problems they need to fix on the audio side.

"Everything needs to be in 5.1, because even if they are not originally transmitting 5.1, down the road it is still required for consumer release or future broadcast elsewhere."

5.1 brings with it more channels, and more demand on signal routes. "Many of the big sporting events and larger broadcasts like the Oscars and the Grammys go out with large track counts. Where previously you only had two channels coming in from an outside feed, you now have the possibility of six for a 5.1 feed, so suddenly the console that has 56 inputs is not going to be able to handle the barrage of tracks coming in."

As well as broadcasters needing to revamp their sound mixing facilities, other smaller production and post houses have applications where the S5 Fusion may be the perfect cost-effective option. Wild explains: "Many of the ads and TV spots are also HD and 5.1, pre mixing DAW elements to a 5.1 stem or combining a number of DAW stems in a more elaborate pre mix using the DSP channels."



Many have been able to produce content in stereo at a quality point that was acceptable for a very long time indeed, but with new requirements and demands in this HD world console systems that have served for such a long period of time are now struggling.

"Some of the more simple shows can be mixed on our 5-MC or an ICON, but with anything slightly more complex the limited bus and monitoring structure may not be able to cope. You are mixing as you would for a film, but with considerably less budget," says Wild. "You don't necessarily have hundreds of tracks, but enough where a keyboard and mouse will not give enough control. Some do not need that many DSP channels, so it is more about controlling the DAW. S5 Fusion is a single package system that can comfortably switch between all these different scenarios, and not to forget that you can mix a full movie with the S5 Fusion."

There lies another strong application for the S5 Fusion. Film production in countries such as China, India and plenty across Europe will see the

S5 Fusion as a powerful well specified and very competitively priced solution to their needs.

It is easy to see the Euphonix S5 Fusion finding homes in facilities where older console or controller systems such as Euphonix CS, Digidesign ProControl or early SSL analogue consoles are no longer able to cope.

**Conclusion**

Euphonix has identified a changing area of this industry and using their experience and success from other products in their range has created a very attractive package in the S5 Fusion.

The EuCon protocol already puts the S5 Fusion in a unique position, but future possibilities of its use, and other manufacturers implementing EuCon into their units and systems, makes for some intriguing visions of how the system could expand.

With no one else currently able to integrate multiple DAW systems and DSP control on a single control surface, I am sure the AES this May will be a very busy time on the Euphonix stand. **FAW**



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**INFORMATION**

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