

The striking Powersoft X Series

Amplifying the future

In 1995, Powersoft predicted the future by introducing switch-mode power supplies to pro audio. Now it is looking forwards again with the X Series

‘WE HAVE WORKED AS HARD AS possible to prepare for the future. Nobody knows what it will bring but we want to be prepared for it.’

So speaks Claudio Lastrucci, R&D director and co-founder of Powersoft – a company that knows a thing or two about predicting what is yet to come. Back in 1995, the Italian manufacturer signposted exactly what the future would bring when it implemented switch-mode power amplification within the professional audio industry for the first time. That particular innovation sparked a revolution which prevails to this day. Meanwhile, Powersoft has firmly established itself as one of world’s most respected audio brands.

Indeed, the company has been so successful that it would be forgiven for simply enjoying its position while continuing to refine the already formidable technology it has pioneered in the intervening years. But neither Mr Lastrucci nor his colleagues are the kind of people to become complacent.

That much is obvious when the R&D director steps up to a mixing console within the demonstration hall at Powersoft headquarters, and gleefully pushes the faders all the way up in order to illustrate how powerful his company’s new flagship live sound amplifier really is. Named the X8, the 2U muscle-machine – and there is only one in the rack – barely notices the wall of two-way speakers and breeze-block subs that it uses to batter everyone in the room. By the end of the demonstration, all of those gathered in the room are left reeling from the experience. All, that is, except Mr



The Powersoft team

Lastrucci himself, who just grins.

But he has good reason to feel cheerful. The eight-channel X8 is one of two models within the company’s new flagship X Series – a 1U four channel version named the X4 has also been developed. As you read this article, they will likely already have been unveiled during a special presentation at Frankfurt Pro Light & Sound 2014. But just a handful of weeks before that moment, Mr Lastrucci is meeting with *Pro Audio Middle East* to explain what happened three years ago when he and his colleagues once again asked themselves a key question: what does the industry need from a power amplifier, not now, but for the next 10 years?

The answer, says Mr Lastrucci, is ‘more than an amplifier, for sure’.

Indeed, the X Series represents much more than just another range



A central on-off button is flanked by LED push buttons representing each channel

of amps. Inside the frankly beautiful casing of both models is a line-up of technology and features that are capable of forming the backbone of Powersoft’s approach to the next decade of professional audio. Moreover, the concept behind the series has the potential to change Powersoft itself.

What the X Series is not, however, is a replacement for the K Series. ‘The K Series is still very successful

and we will of course continue to manufacture those models and support them,’ explains Mr Lastrucci. ‘But it has been in production for eight years now. Over the course of those years we have gathered information on what would make a premium product for the future.’

That information has suggested an industry which is ‘moving towards multi-channel applications where you have more specific processing per channel. A product that lives for the next 10 years will need to meet those challenges’. The X Series does that and more.

In fact, it might be more appropriate to describe the X4 and X8 not as amplifiers at all, but as platforms. ‘The idea was that you can do almost whatever you want with them – they’re flexible,’ agrees Mr Lastrucci. A big part of the reason is the deep processing power they both contain.

Within each X Series model is an ARM Cortex A-8 processor plus a TI C6000 DSP. ‘The DSP takes care of all the processing and the supervision of the machine in terms of power, voltage, temperature, fans, mains voltage and mains measurement – all these things,’ furthers Mr Lastrucci, adding that the 1.25GHz, dual core processor ‘takes care of communication to the outside world, manages the network cards and the local interface’. If that doesn’t sound like much work for such a powerful processor, then that’s the point.

‘Most of the X Series power will not be utilised yet. For current requirements the models are already equipped with plenty of power just with the DSP,’ reasons the R&D

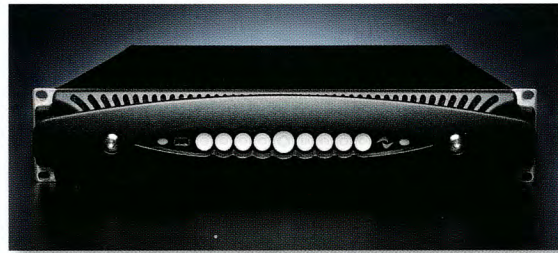
director. 'Huge FIRs, huge delays, thousands of filters, any kind of limiting - the X Series is already equipped with more than enough conventional DSP for that. The dual-core processor is there to plan for features that are not yet required, but will be in the future.' Nevertheless, the specification list is already impressive with Powersoft promising 'delay up to 4s in input processing and 200ms for time alignment, gain and polarity adjustment, crossover, peak limiters, TruePower limiters and Active Damping Control'.

Nor is the processing power the only stand-out feature. The X8 and X4 both boast a new three phase power supply with worldwide AC acceptance. In fact, adds Mr Lastrucci, 'it will even work in DC - it's a very extreme range of operation'. It is described as suitable for single phase, bi-phase or three phase operation from 85V AC up to 440V AC with automatic selection and no need for load balancing. 'You just plug the three phases into the amp and it will balance them by itself. You don't even need a distributor box in the rack. It's very difficult to make mistakes, and you can still use it in single phase - it depends on how you wire the mains connector.' Also on-board, in true Powersoft style, is power factor correction (PFC) and Smart Rails

Management (SRM) to protect the integrity of the signal.

The move towards fresh ideas for the X Series carries into its front panel, which has been created to be minimalist yet functional. The traditional display has been jettisoned in favour of a central on/off button flanked on either side by a bank of RGB LED push-buttons, each of which represents one of the four or eight channels, offering control over basic functions such as muting, protection, limiting and more.

Full control, meanwhile, is gained via Wi-Fi broadcast from the machine itself to connect to the user's iOS or Android portable devices, while the set-up parameters



The eight-channel, 2U X8

have been integrated into Armonía Pro Audio Suite (the software for control and monitoring of the full range of Powersoft's products). 'We thought why make something that's really easy to operate even from a far distance,' says the R&D director.

'Nowadays everybody has an interface device - it's a telephone or tablet.' He adds: 'We have been testing it at a distance of up to 50m or 60m, and if you have very polluted Wi-Fi you can still connect

platform will be ported into the installation range of products later in 2014.

'It's obvious from the specification,' agrees Mr Lastrucci. 'Once you have a matrix of inputs that you can mix



The rear of the X4

to the device with a wire via the USB port on the front.' That same USB port can also be used for firmware upgrades.

Yet for all this, the true potential of the X Series arguably lies within its flexibility. That deep reserve of processing power is available for use via a matrix of fully routable and mixable I/O comprising native AES3, two redundant Dante streams and analogue inputs, totalling four selectable sources per channel. Users can also assign a bus priority to each input, thereby guarding against faults.

The implication is that while the X8 and X4 are intended for the live sound market, the power of that matrix could equally lend itself towards much bigger signal processing and management applications. It is very telling that the same control and processing

up as you want, you can address channels independently and mix channels and schedule how to feed the channels to the outputs, monitor the outputs and swap the channel against predefined scheduling that's on the core.'

The effect of this on Powersoft as a company could be dramatic - just as dramatic, in fact, as the introduction of switch-mode technology in 1995. 'I think it moves us further towards integration - real integration,' reflects the R&D director. 'An amplifier manufacturer today cannot only be a power producer - there is so much that can be packaged into the same machine. There is power of course but also processing, a measurement system and a distribution system as well.' Powersoft is looking to the future, and the future is looking good.

www.powersoft-audio.com

Classified

Used Live Sound Equipment Specialist

www.bobkelly.co.uk



Worldwide Livesound Brokers

TiMax TRACKER
3D location tracking for live voice and effects automation
www.outboard.co.uk

Pro-Audio Job Opportunities

Contact us to discuss **Your** future.

Interfacio is a specialist recruitment and search firm operating in the main market sectors of the audio technology business; We work closely with client companies in Asia, the USA, Europe and the UAE/GCC to identify and recruit new sales, marketing and technical talent.

Regional Sales Manager - Sound Reinforcement/Instalaaed Sound; Asia	USD 60-90k
Application and Sales Engineer - Pro Audio; Asia (Flexible, HK/Singapore)	USD 50-75k
Technical Sales - Broadcast Audio/Live Sound; GCC/Dubai	USD 45-60k

Interested? Visit the website or contact us to discuss your situation and goals in confidence.

At interfacio, we make sure the face fits. Perfectly.

interfacio
global media technology recruitment

Experienced audio industry professionals helping to develop careers and finding the right faces for the job.
web : www.interfacio.com
email : applications@interfacio.com
telephone : UK +44 (0) 20 8986 5002 USA 1-800-578-0144
los angeles new york toronto london sydney singapore hong kong

Find us on Facebook.com/pages/interfacio or follow us @interfacio

ProAudio-Central.com

For all of the latest breaking news stories from across the region and around the world updated every day
www.proaudio-central.com

Or sign up for our weekly email newsletters