

Creamware XTC

With the XTC you can now add DSP driven effects and soft synths to any VST-based system. Glenn Bell plugs himself in.

Last issue, Brad Watts reviewed TC Works' Powercore DSP card. Elsewhere in this issue he's also taking a look at the Universal Audio DSP card. Both cards add additional horsepower to your computer-based setup by taking the DSP-hungry task of effects processing from your host CPU and giving the job to the DSPs on the card. Great idea, and an idea that really opens up loads more creative options to the average Midi+Audio sequencing system. The truth is, Creamware have been

doing this for years! Creamware's Pulsar PCI card, for example, sports six SHARC DSP chips which relieves the workload from the CPU. Well, Creamware have realised what's the flavour of the month, so they've removed the I/O from their Pulsar II card and called it the XTC. Plug the XTC into a spare PCI slot next to your existing soundcard and you've got a computer-based system that for all intents and purposes is exactly the same as what you had before – only with a whole new 'cupboard' full of XTC-driven effects and synths.

SHARCs With Teeth

The six SHARC DSP chips on board have an enormous amount of processing power. But to take advantage of your extra grunt you need plug-ins that are coded to work on the XTC board. Don't fret, because Creamware supply a whole swag of bundled software. There's some great effects (about 30 different types), some very good software synths, a drum machine and a sampler. Third party plug-ins also abound for this platform (have a look at the Creamware website for a list of third party developers). The product is only available for the PC although Mac drivers are promised.

Installation was reasonably painless, aided by a generic manual that covers a number of Creamware cards. To assist with installation on the PC, Creamware has provided an auto-sensing .inf file that will install the required drivers. XTC requires a free PCI slot and, since you need a I/O card, there goes two PCI slots and another good reason to get an AGP video card. Further-

more, if you've got the extra PCI slot real estate you can cascade multiple XTC (or other compatible Creamware) cards.

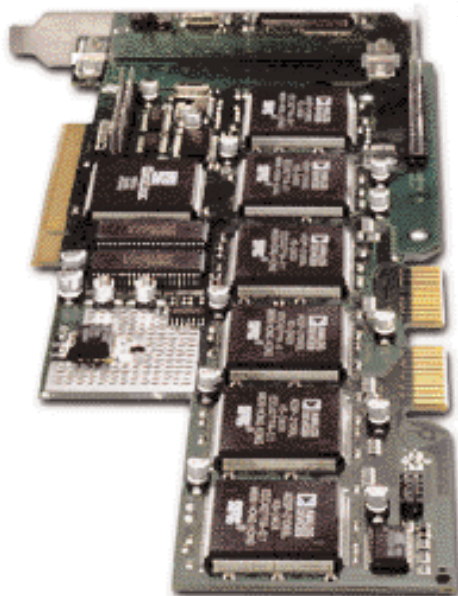
Software

Although you need to use plug-ins designed for use on the XTC, all of the software features of the XTC package are configured to work within the VST architecture (so your software has to support VST plug-ins). Specifically the documentation refers to Cubase, Logic and Nuendo – but others should work. I was unsuccessful in getting the XTC working through the VST to DirectX plug-in, so I gather that it has to be native VST support. In practice the XTC is 'invisible', apart from the designated effects being located in a Pulsar XTC section on the effect and instrument pick lists – operationally you don't know its there.

Creamware's software devices have historically only been enjoyed by those with Creamware I/O DSP hardware. So Creamware plug-ins may not have the same cache as the likes of TC Works or Waves, but I can assure you these plug-ins are of extremely high quality and have a level of functionality that most current VST plug-ins could only dream of without taking all the CPU. The list of effect types (which includes reverbs, gates, flangers and many more) is very impressive and is really just about everything you need. On the synth side of things, there are nine VST instruments. The synths are also very good, and someone at Creamware obviously has a sense of humour with one dubbed 'U know 007' which is a virtual Roland Juno 106. The sampler is another amazing piece of work – it's very comprehensive and uses host computer RAM, so you can grab those big samples. Samples can be Wav, AIFF and Akai format among others and Creamware even includes a sample CD.

Latent Heat

Well, the card certainly does what its is supposed to. The host computer's CPU utilisation was next to nothing when using the plug-ins. Where I had completely maxed out my computer's CPU with normal VST effects, using 'equivalent' XTC effects removed all of the computer CPU overhead – the same story on the VST instrument side of things. In the documentation there is a lot of talk about latency issues, but they indicate that these are resolved with version 3.01 of the drivers (which I used for the review). I had nothing but joy with the card's performance, so I feel confident that these issues have been resolved. Logic Audio seems to be the most affected by initial latency problems but,



again, I didn't encounter any.

Each repeat of an effect or synth is treated as a separate plug-in to load into the DSP and will take separate resources, this is so that you can individually control each version's parameters independently. Also another interesting feature is the ability to string up to six effect together into one XTC multieffect – thus eliminating five round trips of messages between the software and the card.

Limitations

When it comes to having the grunt to run loads of effects, you might think the XTC will solve all your problems. While it will go a long way to doing this it does have limitations. The main one involves the inherent limitations of the PCI bus, which the card uses to communicate with the application (eg. Cubase). The PCI has a finite bandwidth that puts a cap on the number of plug-ins running at once. I found this to be around 15 to 20 depending on the effects and synths that you choose. The manual has some helpful hints on how to improve this, which in some ways leaves you thinking two things: don't use a PCI graphics card and go out and buy some more RAM (a minimum of 192MB is recommended). The second main limitation is the processing capacity of the SHARC DSPs themselves – there's a generous amount of power on offer but certainly not infinite.

Pure XTC?

That said, the limitations are still pretty generous. After all, most people using XTC would group effects and still use favourite CPU-based software effects in conjunction

with the XTC effects. The supplied effects and soft synths themselves are of an extremely high quality and have an incredible depth to their functionality. The XTC package retails for \$2,495. Which for many small studio owners is a good deal of money, but the plug-ins alone make this package a very attractive proposition.

And this is an important point, because we could argue until we're blue in the face about the relative processing power of the XTC versus the Powercore versus the Universal Audio DSP card, and the relative merits of SHARC chips versus Motorola chips etc; but, peculiarly, it looks like the battle of the DSP cards is now coming down to a matter of how desirable you find the bundled plug-ins.

Possibly Universal Audio and TC Works probably do have the edge in the high-end reverb front, but the Creamware bundles offers excellent soft synths (which isn't an option in the competition) and the range of effects is quite exceptional – the bundle is a lot larger and more varied than the competition. All up, a serious alternative.



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