iZ ADA
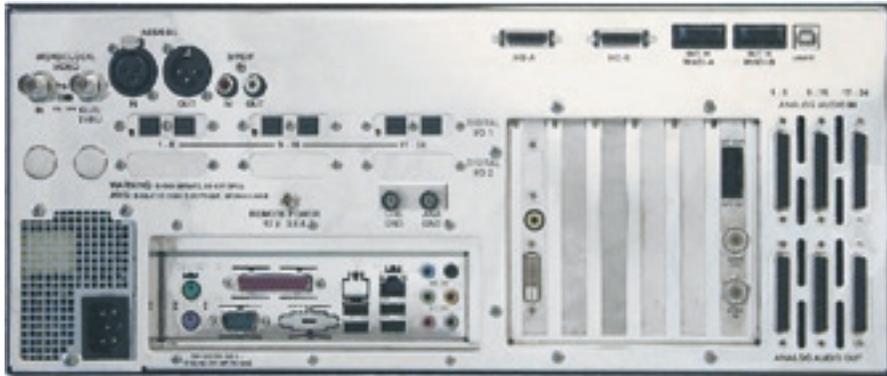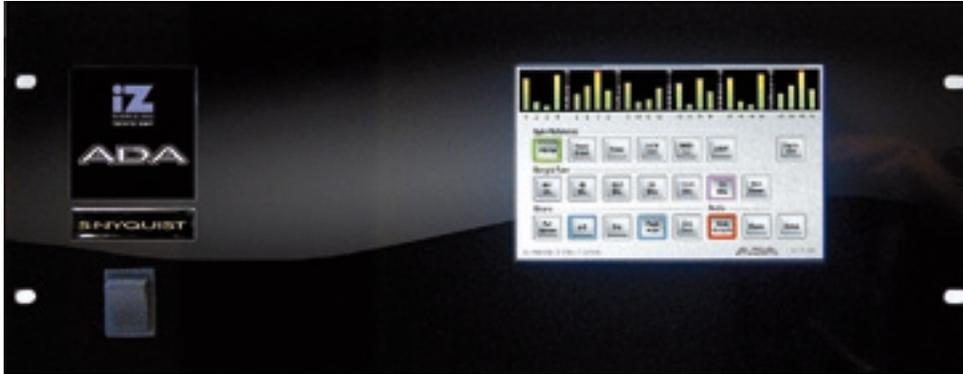
A crucial part of the tapeless revolution, RADAR developed a reputation for reliability, performance and sound. JON THORNTON plays with a box that allows you to apply that sound to any DAW.

Based in Vancouver Canada, iZ has a longer history in the field of digital recording than many might realise. Initially known as Creation Technologies, it was formed in 1991 to develop 'visionary audio products'. Perhaps its best-known product was the original RADAR hard disk recorder, launched in 1994. The original RADAR and its successor, the RADAR II, were badged and distributed internationally by the Otari corporation leading many people to (wrongly) surmise that the product had been developed by Otari. During this time, Creation Technologies formed a new company — iZ Technology Corporation — and after a five-year partnership with Otari repatriated the RADAR brand and technology and started shipping its own, further improved version, the iZ RADAR 24, in 2000.

Since then, there have been a significant number of enhancements to the RADAR hardware and software with new hardware variants (RADAR V) and a range of A-D and D-A conversion options for the systems.

You have to remember that during this period, the world of tapeless recording was undergoing some seismic shifts. The computer based DAW was still in its very early stages, and many transitional products emerged that sought to bridge the gap between digital tape-based multitracks and the DAW as we know it today. Against this backdrop, RADAR systems have always exhibited three key advantages over the competition — most of which have now fallen by the wayside. The first was ease of use — if you could use a tape machine you could use a RADAR. 24-track punch-ins? No problem. Latency-free monitoring? Sure. The second is first-rate reliability and technical support. As something of a late adopter of RADAR, I remember being hugely impressed when I found an esoteric bug caused by mounting the record drive on

a Mac and then back on RADAR. Emailing the debug log to Vancouver resulted in an interim OS fix being delivered to my InBox within 24 hours — now that's what I call customer service.

And finally, and perhaps most importantly, there was the sound. It's a widely held opinion that the A-D and D-A conversion used in RADAR systems is some of the best in the business, attributable largely to the unwillingness of iZ chairman and CEO Barry Henderson to cut corners in this important area to reduce costs.

Yet despite all of this, as fully fledged DAWs have matured and proliferated, it's clear that RADAR is fundamentally a recording system rather than a DAW. Yes, you can edit with it but it doesn't have the point-and-click simplicity or sophisticated editing modes of something like Pro Tools let alone the in-the-box mixing and processing capabilities of such systems. And while you can employ workflows that use RADAR for tracking, and then fly files into a DAW for editing and back again for mixing, this all takes valuable time. So it's unsurprising that an increasingly common sight in studios was to see a RADAR hooked up to a DAW via digital I-O — effectively relegating it to acting as an A-D/D-A convertor.

This state of affairs obviously didn't escape the attention of the folks at iZ, who recognised the opportunity to leverage the experience in building and developing A-D and D-A convertors to address a new market. The result is the ADA. Housed in a 4u, the family resemblance to the RADAR CPU is evident although thankfully the chassis is nowhere near as deep as a RADAR. The front panel is an exercise in minimalism, finished in glossy black, and simply has a momentary action push switch for power, and a 7-inch TFT touchscreen that provides all status

indications and user interaction with the unit. Like the RADAR, ADA is effectively built around a ruggedised PC, and is designed from the ground up to be modular, which is evident when you inspect the rear panel.

The only standard-fit item is a MADI interface, with input and output on both coaxial and optical connectors. Indeed, it soon becomes clear that this MADI interface is really the native I-O of the unit — at least on the digital side of things. Analogue to digital and digital to analogue conversion is taken care of by option cards, each of which gives you 8 channels of analogue input and output on DB25 connectors. There are three flavours of A-D/D-A card on offer — Classic, Nyquist and Super Nyquist. The Classic offers sample rates of between 44.1kHz and 48kHz, the Nyquist extends this to 96kHz, while the Super Nyquist goes the whole hog up to 192kHz.

Having chosen your analogue I-O flavours and channel counts, iZ will make your ADA to order although reconfiguration at a later date is a relatively straightforward affair. And for Logic, Nuendo or other native DAW users, the simplest way to hook the ADA up is via MADI with a suitable MADI interface card in the host computer. Other (extra cost) alternatives include a 24-channel ADAT digital I-O card although this is limited to 48kHz operation. And for Pro Tools HD users there is a PTHD interface option. Although this option, when installed, appears on the back panel, it seems to be effectively a standalone format conversion device. To use it, you need to connect the ADA's own MADI I-O to the card using optical interconnects, and then connect the interface card to the HD core card using a DigiLink connector. Reading through the section of the ADA manual that dealt with setting up Pro Tools to work with the ADA using this option brought about a strange feeling of *déjà vu* — confirmed when I checked the manual for SSL's Delta-Link MADI to HD interface — the sections are pretty much word for word, which leads me to think that there's some sort of cross-licensing deal going on here.

What this means is that the ADA suffers the same problem as SSL's box, namely that understanding what is going on in the Pro Tools interface and Word clock dialogues is pretty confusing. The ADA presents itself in the same way as Delta-Link — as two Digidesign 192 interfaces. Whatever the inputs and outputs are set to in the Hardware Setup dialog (a combination of analogue and digital inputs and outputs — as per the 192 specification) is completely arbitrary — the 16 inputs and outputs of the first 192 and the first 8 inputs and outputs of the second 192 are in fact the 24 channels of the ADA unit. Once you understand this, this isn't a huge problem, as you can re-label the physical inputs correctly in I-O setup.

A bigger issue is that the process cards in a Pro Tools HD system are designed to work as clock slaves. Connecting them to the MADI interface effectively makes a single device that acts as a clock slave, so the MADI unit requires a valid clock to work with. The ADA can provide this, either by using its own internal clock, or an external reference provided as Word clock or embedded clock from an AES or SPDIF signal. But because there is no longer any control signal between the Pro Tools software and the interface, as there is when using a Digidesign unit, you have to manually check that the sample rate of the reference clock and the Pro Tools session are the same — and there's no visual confirmation on either unit if it isn't.

That said, once you understand these issues, working with the ADA is straightforward. The review unit shipped with 24 channels of Super-Nyquist A-D/D-A cards, the ADAT interface option and the PTHD option. Powering the unit up brings up a boot

screen on the TFT touchscreen, and after a short boot process the system is ready to roll. All setup is done via the front panel touchscreen, which has a number of menu levels. The home screen is where the majority of business is undertaken, as it's here where you select the ADA's sync reference source and sample rate. Also on this screen is a button showing the currently selected digital I-O format. Pressing this jumps to the relevant section of the Setup menu and allows any installed digital I-O card to be selected — for the purposes of the review this was set to PT HD via MADI.

The top third of the home screen shows 24 signal level meters — from the home screen these can be set to either show A-D (input) or D-A (output) – a further button on the home screen allows a full meter view to be displayed showing both inputs and outputs. Just how these meters relate their full scale indication to analogue signal level is configurable via the setup button — this also brings into play a number of other menus that allow some detailed configuration of digital I-O formats, sync reference settings, and whether or not the Word clock output on the rear of the unit acts as a thru or an output.

Finally, a routing button on the home screen allows the physical analogue inputs and outputs to be mapped to any of the digital I-O channels in any order, although I suspect most people will simply go with the default 1:1 configuration.

For the test, the ADA was hooked up to a Pro Tools HD rig, together with a Digidesign 192 as a comparison. Signals were then recorded simultaneously through both interfaces to separate tracks, and then output to both interfaces for comparison purposes. This threw up an interesting issue straight away, as even though the 192 was clocked externally from ADA's internal sync reference, audio recorded simultaneously through both interfaces wasn't synchronous in Pro Tools. Despite

trying a number of clocking options, with ADA as both clock master and clock slave, this wouldn't go away — which I put down to some inherent latency in the MADI to HD conversion process. Not a problem if the ADA is your only interface, but potentially problematic if you were hoping to run a mixed economy of convertors.

This didn't get in the way of doing a straight A/B comparison though, which showed some marked differences in the sound. The ADA sounded very definitely warmer than the 192. There was something about the mid range in particular being slightly less forward, although with plenty of LF guts and high-end sparkle. Playing around with track mappings and playback settings seemed to indicate that this was mostly attributable to the D-A process — recordings made via the 192 also seemed to exhibit this characteristic when played back through the ADA.

Flipping things around, and playing back recordings made by both A-D stages through the 192 also showed some differences, but these were not quite as marked. Here the ADA seems just that touch smoother at the extremes of the frequency response with a little more clarity in the very bottom octave and some better apparent detail in the very high frequencies. Switching between all possible permutations of A-D

and D-A gave some mixed responses from the small panel of listeners I managed to assemble. The majority preferred the sound of the ADA's A-D stage compared with the 192, while the jury was fairly evenly split on the sound of the D-A stage and this tended to be based on source type, as the 192 sounds that little bit more 'in your face' than the ADA.

In summary, if you like the sound of the RADAR convertors you'll love the ADA, although this comes at a price. Depending on the number of channels, type of ADA cards and digital I-O options, the unit can quite easily head north of UK£10k, which opens up a variety of other possibilities from some well established competitors. In its favour, though, are its compactness (one rackmount device rather than several), and the provision of MADI as standard, which might make a whole bunch of sense for native DAW users. Add to this a very clear and intuitive interface on the box itself, and it has to be in contention with the very best out there. ■

PROS	Great sounding A-D and D-A convertors; good user interface with touchscreen; MADI as standard; highly configurable; should interface to most DAWs without a problem
CONS	PTHD interfacing a little clunky from the Pro Tools end; lack of clarity re sample rate and clock source when working with PTHD; some issues with MADI/HD conversion delay may make using ADA with other convertors slightly problematic.

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