

Accessorize me! DACs

Looking to give your system a quick digital leg up? **Ed Selley** auditions four compact DAC dynamos that can do just that

ON-DEMAND STREAMING HAS changed the whole nature of our media consumption in the last decade or so. And in addition to the huge swathes of new on-demand video content (even if much of it is just old 1990s sitcoms...) streaming audio services have come to dominate the manner in which we listen to music too.

They are great for choice (typically offering millions of tracks) but can place some strains on your AV system. Numerous AV receivers integrate Spotify Connect, and some offer other services too, but accessing many of the bells and whistles of the lossless/hi-res platforms can't be done via the embedded apps. A quick and easy way to address this is

by adding an external DAC (digital-to-analogue converter) to your system. These can act as a conduit to a streaming service on an external source, such as a PC or Mac, and disgorge the available content in higher resolutions than many native apps can offer.

'Streaming audio platforms such as Tidal are great for choice but can put a strain on your system'

Furthermore, getting the full benefit of the Tidal Hi-Fi service, with its MQA-format 'Masters' tracks, can be a headscratcher through an AVR, but three of the quartet reviewed here are MQA compatible.

Should I stay or should I go?

To audition these DACs, each has been used connected to a Windows PC and an Android smartphone, with the Tidal and Qobuz streaming platforms. Two of them – AudioQuest's Dragonfly Cobalt and Zorloo's Ztella – are designed to be able to do this on the move too, but can they match the performance of the larger, domestic designs from Pro-Ject and iFi Audio?

WWW.AUDIOQUEST.COM//£270

AudioQuest Dragonfly Cobalt

AudioQuest's range-topper wants to sweeten your sound wherever you go

IT'S NOT QUITE the smallest DAC here, but AudioQuest's Dragonfly Cobalt – the most recent addition to its USB stable – is still commendably tiny. The flagship of the range – and the most expensive model on test – it's a single-input design with a USB-A source connection and 3.5mm analogue stereo output. Squeezed into its tiny chassis is an ESS Sabre ES9038Q2M DAC chip with slow-roll off filter, and bespoke clock and noise suppression technology.

Unusually, the Cobalt only accepts frequencies up to 24-bit/96kHz, which makes it the odd one out in this company. Yet this limitation is because it doesn't need a USB driver to work with a PC, handy if you want to partner it with a work computer that The Boss says you can't install drivers on. And it's MQA compatible, to work optimally with Tidal, and will



HOME CINEMA Choice HIGHLY RECOMMENDED

The Dragonfly logo lights up in different colours to signify sample rate

'unfold' the incoming MQA signal to the sample rate of the master, even if that's above 96kHz.

While the Cobalt is small it is also finished beautifully and well designed with a view to being used at home and on the move. It will simply attach to mobile phones via a relevant adaptor (AudioQuest bundles a USB-C one).

This DAC instantly worked with my Windows PC and Tidal app, and did a fine job with a

24-bit/96kHz MQA version of Norah Jones' *How I Weep*. Her vocals were rich and clear, while the piano accompaniment was sonorous and believable. There was a commendable level of space and three-dimensionality to the presentation as well. A more boisterous track – *The River* by Aurora – revealed a good bass extension with plenty of detail and texture to it, which helped give the performance bite and attack.

This diddy DAC also worked well connected to my Android phone via the adaptor, sounding largely indistinguishable from the PC. The 2.1V output also had no trouble driving headphones.

Relatively pricey for a single-input DAC, but slick-sounding and very talented.

HCC VERDICT ★★★★★
AudioQuest Dragonfly Cobalt
→ £270 → www.audioquest.com

iFi Zen DAC

DAC/headphone amp with pre-amp functionality at a bargain price. So what's the catch?

AT £130, THIS is the second most affordable DAC in our roundup, which isn't something you'd expect when looking at the design and specification. Built around a Burr Brown DAC, the Zen is, again, a single-input design but one that has a rather impressive collection of bonus talents. The USB input (which also serves to power it) will handle 32-bit/384kHz PCM with MQA and DSD compatibility, and it can be used as a preamp too via a volume control that can be switched in and out of the circuit. The DAC outputs via a phono pair or a single 4.4mm balanced connection.

Impressively, you can also use the Zen as a headphone amp – dedicated 6.35mm and (balanced) 4.4mm connections are fitted on the front panel. A switchable gain system called Power Match is designed to match the



HOME CINEMA Choice BEST BUY

The Zen has twin headphone outs

supporting instruments barely less so. This was mirrored by the Aurora piece, which was genuinely joyous to listen to – spacious, largescale and rich in resolution.

It is possible to use the Zen with a 'phone and the power consumption is sufficiently low that it can be powered that way too. Performance via headphones is as impressive as the RCA output, making the Zen DAC a fine all-rounder – although the form factor clearly makes it more suited to desktop use.

Characteristics of your headphones. All this functionality comes wrapped in casework that is smarter than many rivals. With iFi's Windows USB driver installed, sonically the Zen DAC kept landing the punches. It delivered my Norah Jones track with a vibrancy that just wasn't as pronounced with the other DACs. More than any model on test, it created the sense that you are listening to the performance rather than a recording. This is largely down to the tonality on offer. Jones sounded unambiguously real and her

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HCC VERDICT ★★★★★
iFi Zen DAC
→ £130 → ifi-audio.com

WWW.PROJECT-AUDIO.COM/£220

Pro-Ject DAC Box S2+

This multi-source machine ditches portability in favour of flexibility

PRO-JECT'S DAC BOX S2+ stands out from the crowd not just in terms of form factor (as the name suggests, it's quite boxy) but in functionality. As well as its USB input, it has optical and coaxial digital audio connections. It also has the widest sample rate handling in this test, with 32-bit/768kHz possible via the USB input, and 24-bit/192kHz via optical/coax. And its internal ESS9038K2M DAC has four adjustable filters, plus one developed by Pro-Ject.

There's no headphone socket here, only a pair of phono outputs, and – unlike its rivals – it runs off an external power supply. There's no MQA support either, which might be a blow for Tidal users.

The 10cm-wide chassis feels very well made, and is available in black and silver.

The DAC Box S2+ didn't have the same punch and energy as the iFi Zen DAC, but had a dimensionality and detail to its delivery of Norah Jones' *How I Weep* that was impressive

Choose from five digital filters

for a fairly affordable design. It didn't sound as dynamic as the MQA DACs (the track was unfolded by the Tidal desktop app), but its performance with Qobuz's 24-bit/96kHz FLAC version was lovely. With Aurora's *The River*, what the DAC Box S2+ lacked in full-on aggression it gained in space and fluency.

As for the filter options, selectable by the front panel, I didn't find any made a night and day difference but the Pro-Ject one was, by a small margin, my favourite.

You can, of course, connect your smartphone to the Pro-Ject DAC Box S2+



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via adapter cable, and those digital audio inputs will be useful for people with other multiple stereo sources.

Overall, a flexible and fine performer.

HCC VERDICT ★★★★★
Pro-Ject DAC Box S2+
→ £220 → www.project-audio.com

Zorloo Ztella

Affordable MQA DAC for mobile music lovers

EVEN IN AN industry replete with odd-sounding brand and product names, Zorloo Ztella takes some getting used to. Thankfully, this extremely compact 'dongle'-style DAC, available as a direct purchase from the Hong Kong company's website, doesn't. For many this is as plug-and-play as it will get.

The Ztella fits an ESS Sabre DAC into a tiny metal chassis with a cable running out of the bottom terminating in a 3.5mm socket. Its primary purpose is as a mobile DAC for headphone/smartphone use, and it has the advantage of connecting directly to an Android device via its USB-C connection (it can also be bought with a bundled Apple-friendly Lightning adapter for an extra \$10). In terms of format handling, the Zorloo stands comparison to the other DACs in this four-way test. It can handle PCM to 24-bit/384kHz, plus DSD, and the version tested here is MQA compatible – a tiny status



LED informs you of the incoming sample rate or MQA signal.

As you might expect, a DAC which is 75 per cent cable is never going to be the most visually dynamic-looking device around, but it's well put together and incredibly easy to stow about your person when you aren't using it. Just don't machine wash it.

Using the Zorloo in a full-size system looks a bit odd but works fine, although even with levels extremely carefully matched with the other DACs, it felt a little more lightweight in

The Ztella supports up to 24-bit/384kHz PCM

how it presented music. Norah Jones herself sounded clear and distinct but the supporting piano wasn't as big or confident. Tonality remains entirely convincing, however, and the MQA unpack is performed well. Aurora's *The River* also lacked a little heft but the Zorloo countered by sounding refined without losing its liveliness.

And as a device to use with an Android 'phone this is top of our DAC class, sounding much more confident via earphones (and able to pass in-line play/pause commands too). So if your priority is a DAC for mobile use with a bit of home listening on the side, the Ztella looks like a bargain ■

HCC VERDICT



Zorloo Ztella

→ \$99 → www.zorloo.com

Final standings

GIVEN THAT NONE of these DACs can be considered ruinously expensive, the levels of performance they offer are deeply impressive. If you have an affordable AV receiver, it is highly likely that any of these devices will offer a step up in terms of stereo performance, and facilitate easy hi-res streaming.

Of the portable DACs, AudioQuest's Dragonfly Cobalt is the better choice for users connected to both an AV rig and a mobile player, as it's a superior performer regardless of what it's hooked up to. Zorloo's diminutive Ztella, on the other hand, is fantastic value for money if you mainly want a mobile solution, and could be just what your smartphone and headphones have been crying out for.

The two larger DACs are a little different. Pro-Ject's DAC Box S2+ is the most flexible model here, both in terms of format handling (except MQA) and setup potential. If you have more than one digital stereo source and no desire to bundle a DAC in your pocket it makes a lot of sense.



But it's iFi Audio's smart-looking Zen DAC that is the star of the show. For £130, this is an outstanding accessory that delivers a level of performance well beyond what you might reasonably expect at the price, and while only supporting a single input,

its feature set – including digital filter selection and balanced/unbalanced headphone output – still feels comprehensive. If you want to bring a little stereo joy to your cinema system, this is where you should start looking ■