

dCS Network Bridge Review



By The Computer Audiophile

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Who : dCS aka data Conversion Systems from Cambridge in the United Kingdom. Creators of British designed, manufactured and assembled digital audio products. Think the Rolls Royce of HiFi build quality combined with McLaren performance.

What : The Network Bridge. A digital to digital converter with Ethernet input and digital audio output. The Network Bridge feature set includes Roon Ready support, UPnP / DLNA rendering, AirPlay, Tidal, Spotify, bit perfect output or down sampled output to match a DAC, MQA core decoding, and support of PCM up through 24/384 and DSD up through DSD128.

dCS also provides its own iOS app for control and configuration of the Network Bridge. The app supports music stored on a network, locally attached hard drive, or streaming via Tidal and Spotify. People who don't want the complexity of a third party application or who like simple interfaces for just listening to music, will be very pleased with the dCS iOS app.

I like what dCS has done with the app in that it's very simple and straight forward. Users who want more features can easily add a Roon or DLNA server and fire up another app.

When : Released in 2017 with an initial set of features that has been upgraded over time via firmware.

Why : The Network Bridge is a product many manufacturers wish they'd have built. The Bridge not only breathes life into legacy DACs from dCS and others, but it also enhances the features and sonic quality of many current DACs. Many legacy DACs feature S/PDIF or AES inputs that support various sample rates but don't have other digital inputs that enable network streaming or remote control or any of the other aforementioned features. Attaching the Network Bridge to these DACs essentially creates a new digital system very close to what's currently available. For example, there are sonic qualities to the older dCS Scarlatti DACs that I just love. Whether this is me being nostalgic or not is beside the point

that the Network Bridge can turn a Scarlatti into a product that wasn't even conceived when it was released in 2007.

Enhancing new DACs with a Network Bridge is another huge benefit. Let's face it, many DACs aren't cheap. Nobody likes to put one on the shelf and buy a new one because of missing features. Adding a Network Bridge to a DAC immediately enables all of the above features. For example, adding the Bridge to an upgraded Berkeley Audio Design DAC not only enhances its feature set greatly but also provides a core decoded MQA stream for the DAC to render. Don't care about more features? No problem. Adding the Network Bridge to a Schiit Yggdrasil and connecting it via AES can improve the sound quality greatly.

One huge benefit to many music lovers on the Roon bandwagon is the fact that the Bridge turns almost any DAC into a Roon endpoint. If the DAC can connect to the Bridge, Roon will be able to send it audio. Technically the Bridge is the Roon ready endpoint, but when viewed as a system of Bridge + DAC, the difference is neither here nor there.



Listening

The dCS Network Bridge is all about listening to music through whatever DAC one has in the system. My main system for this review consisted of Ethernet into the Network bridge, AES into the Berkeley Audio Design Alpha DAC RS2 MQA, Balanced XLR into Constellation Audio Inspiration monoblocks, into TAD CR1 loudspeakers. I used many different sources of music including JRiver for UPnP/DLNA, Roon, dCS iOS app, Tidal, Spotify, AirPlay from iPhone 8, and a local solid state USB drive attached to the Bridge.

Here are my listening impressions of the Network Bridge

Chet Baker's album by the simple name Chet is an all time favorite of mine, especially the unobtainable Analogue Productions remaster. I recently stumbled upon an album with many of the same tracks called The Complete Legendary Sessions, with Chet Baker and Bill Evans. This album also sounds wonderful, with nearly zero dynamic range compression (DR 16) and a touch less tape noise in the background. Sure Chet and Bill are the headliners, but Pepper Adams steals the show on his baritone saxophone.

Listening to track one, Alone Together, through the dCS Network Bridge / Berkeley Audio Design combination, Chet's opening trumpet intro sounded fantastic. The best piece of this from a geeky audio perspective was the bleed-through that could be heard as Chet's trumpet emanated from the left channel but trailed off in both the left and right channels. There is a delicacy to the decay of the trumpet in the right channel that enables the listener to draw a complete diagram of the recording space in one's head. At 1:19 when Pepper

Adams eases his baritone sax into the track and quickly ramps it up, is when this track absolutely pulled me in emotionally. I was no longer judging or reviewing an audio component. I was placed center-stage between Chet on the left and Pepper on the right, with both bleeding into the center of the soundstage. The dCS Network Bridge really delivered a pristine audio signal to the Alpha DAC RS2 MQA, enabling me to immerse myself in both the old school recording techniques that allowed instruments to bleed into both channels, but more importantly into the feelings and fascination this track evoked.

Giving the Network bridge a chance to show its stuff in another way, I played the 2012 Mobile Fidelity remaster of Bob Dylan's *The Freewheelin' Bob Dylan*. This album was stored as DSD files on a 1TB bus powered solid state drive connected directly to the back of the Network Bridge.

Two things to note about this configuration.

1. Berkeley DACs don't support DSD. Fortunately the Network Bridge has a powerful FPGA that performs an integer down sample to 24 bit / 176.4 kHz PCM for output to the Berkeley over AES. Connected to legacy dCS DACs this feature can be used to convert DXD or DSD128 to 24 bit and either 192, 176.4, 96, or 88.2 kHz, over single or dual wire connections. DSD64 is accepted into any legacy dCS DAC and won't need conversion. This down sampling could take place in a number of third party software applications, but not everyone uses a third party app with quality DSP and some people want to use the dCS iOS app without relying on another company for features, support, and in some cases increased complexity. This brings me to number 2.

2. The Network Bridge USB input worked very well with a connected a hard drive. If I didn't have several terabytes of music, I would definitely store all my music on an SSD connected to the Network Bridge. The dCS iOS app offers the basics without any complexity. Navigating the USB drive is as simple as tapping the USB drive from the home screen and browsing the folders on the drive. It's really a no nonsense, get down to listening style of playback. I should also mention that the only network requirement for playing music this way is a stable network at any speed. The Network Bridge only receives commands via the network rather than audio files traversing the network. Adding Tidal is a different story, but not relevant to this method of playback.

Back to *The Freewheelin' Bob Dylan*. As soon as I pressed play on *Girl From the North Country*, I was immediately pleased with the expansive soundstage. Dylan's nasally voice was crisp, clear and appropriately large right between my TAD CR1 loudspeakers. Listening closer to Dylan's vocal in the opening verse, I heard his breath on the microphone for the first time that I can remember. I'm sure it has always been on the recording, but I'd never noticed it previous to using the Network Bridge with the Alpha DAC RS2 MQA. In addition to Dylan's vocal, two other aspects of this track are worth noting. The texture and depth of his acoustic guitar from start to finish are excellent. The guitar strings strummed or individually plucked in many cases had a depth or air around them giving away clues to the recording environment and instrument selection. All these seemingly separate sonic pieces came together incredibly well through this dCS / Berkeley combo, into a singular expansive soundstage. Well done Dcs.

The last aspect I must mention is the obnoxious level of Dylan's harmonica at the end of the track. Certainly not the fault of dCS for reproducing exactly what's on the recording, but in this case reproducing exactly what's on the recording resulted in a painful listening

experience. I now understand why people use volume leveling, although it would be sacrilegious for such a transparent product like the Network Bridge to offer it as a feature.

What good would a HiFi review be without mentioning MQA? Only kidding. I bring up the topic as MQA is a feature of both the Berkeley DAC and dCS Network Bridge, but in ways that both need each other in my system. Berkeley DACs only do the final rendering stage of the MQA process, while the Network Bridge handles the more resource intensive initial decoding of the process. Some call what the Bridge does the first unfold of the MQA origami. Keep in mind that the Bridge will handle the MQA decoding for output to a non-MQA DAC as well.

Streaming the MQA version of the title track to Nina Simone's album I Put a Spell on You via Tidal, I immediately notice two things. The letters MQA were present on the Berkeley's front panel and the MQA version of the track was substantially louder than the non-MQA version. I have no idea if these two versions originate from the same master, but they sounded very different. In the interest of getting this review done I only conducted a cursory investigation into the level differences heard as this isn't a referendum on MQA. It's a review of the dCS Network Bridge, a product that supports MQA decoding for audio delivery to a DAC that may or may not be an MQA renderer.

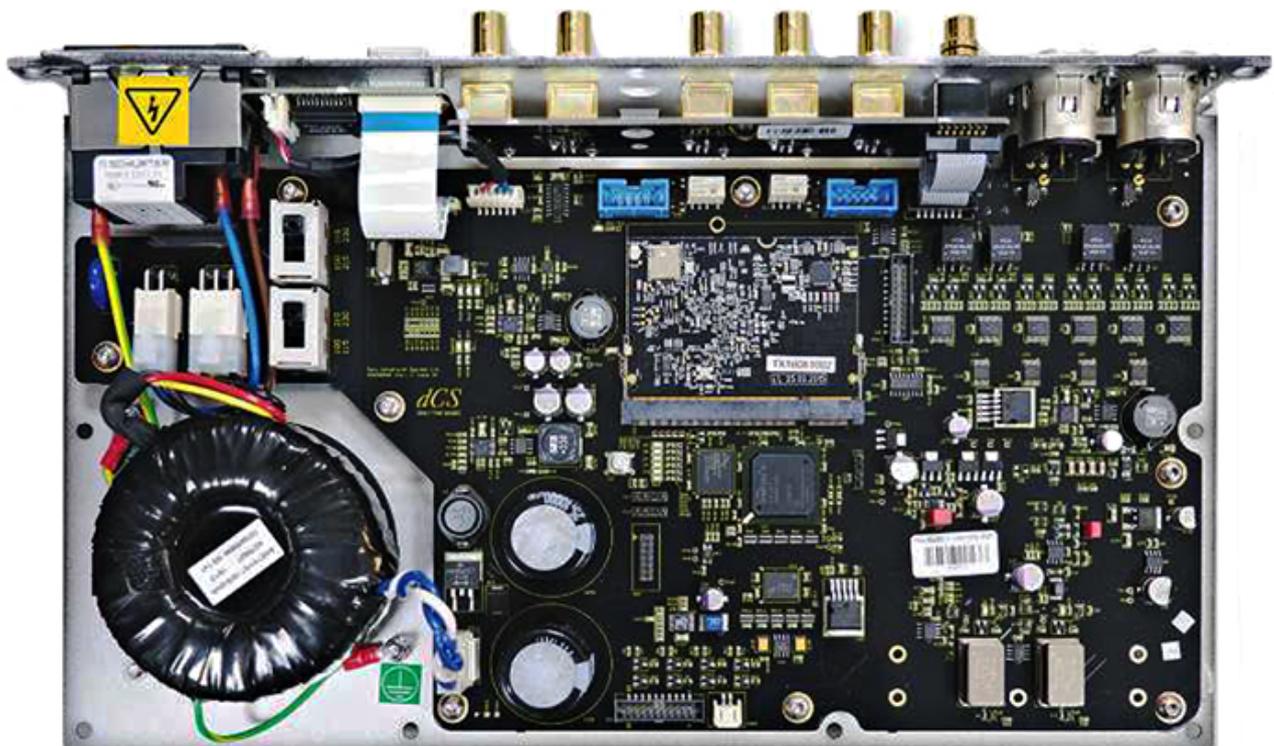
The MQA version of the title track sounded a bit synthetic through the dCS / Berkeley combination. Nina's vocal was incredibly centered. Perhaps a touch small or over focused for lack of a better description.

I played the non-MQA version of the album from Tidal and increased the volume in an attempt to match the levels of the two versions. The sound seemed like it was uncompressed or unzipped to use a more computer related term. I don't mean uncompressed in the technical sense of file compression or dynamic range compression. Rather I mean it more like a flower blooming with petals expanding from the center on all sides. The horn in the left channel was now very pleasant, with a smoothness but also appropriate decay that didn't memorialize the sound. This smoothness wasn't like a vacuum tube type of sound, but rather a rightness. The instruments sounded more like the real instruments I'm used to hearing during my trillion hours of listening to music as a career. Only joking about the trillion hours, but as serious as a heart attack about the terrific sound I heard through the dCS Network Bridge playing Nina Simone's I Put a Spell on You.

Again, this isn't a referendum on MQA. My comparisons were very unscientific, but gave me some information for a subsequent article that may be helpful to readers comparing MQA to standard PCM. Fortunately the Bridge enables the listener to decode the MQA material available to compare with standard PCM and make individual determinations per track, album, or even DAC.

I listened through the dCS Network Bridge connected to many DACs over the last several weeks. Of note was the absolutely stellar performance I was able to pull out of the Schiit Yggdrasil via its AES input being fed by the Bridge. Does it make sense to spend \$4,750 on the Network Bridge to driver audio to a \$2,399 DAC? It's obviously a question that can only be answered by each individual, but given the performance improvement I heard, I believe it's well worth the cost. Plus, the Yggdrasil is in the same boat as the Berkeley with respect to not playing native DSD content. The Network Bridge converts DSD to PCM on the fly in its FPGA for input in to the Yggy. No hiccups and a performance boost worthy of a DAC much more expensive than the sum of the two component's parts.

Because I used the Berkeley DAC for the majority of my listening through the Network Bridge, I had to test the HDCD encoded albums from Keith Johnson and Reference Recordings. Britten's *The Young Person's Guide to the Orchestra* performed by Michael Stern's Kansas City Symphony, is a nice piece of music that's excellently recorded. This "track" has a dynamic range value of 25! It isn't for the car or an environment that isn't extremely quiet. The bombastic beginning of this 24/176.4 track (HDCD indicator illuminated on the DAC), had fantastic transients through the dCS Network Bridge. This may be the result of the dCS proprietary architecture that's used in Vivaldi, Rossini and yes the Network Bridge to minimize jitter. Nothing rounds the edges of transients and memorializes events quite like too much jitter. Fortunately there wasn't a hint of either sonic issue through the Bridge. Continuing down the winding road of the 17 minute track, I heard very exquisite and very soft flutes floating in space, yet placed just left of center in the soundstage. Whether the track called for reproduction of gigantic transients and loud horns and drums or tiny little flutes or a soft wave of strings, the dCS Network Bridge delivered a transparent stream of audio to the DAC.



Conclusion

The dCS Network Bridge is a terrific product for both its *raison d'être* and the bottom line of superb sound quality. Rather than obsoleting several generations of high performing legacy dCS DACs, the company created a product that bridged the gap between old and new. Thus, the Network Bridge. In addition to dCS owners, enthusiasts with countless numbers of legacy DACs from different manufacturers will also benefit from the Bridge. The Network Bridge breathes new life into new products as well. Connecting it to DACs from Berkeley Audio Design and Schiit Audio, among many others, accomplishes what these manufacturers don't on their own. That is provide a network interface, UPnP/DLNA, AirPlay, Spotify, Tidal, USB storage, DSD/DXD down sampling, MQA decoding, and more for delivery into the DAC.

The dCS Network Bridge is second to none with respect to the sound quality of products that I've heard in this category. From the smooth trumpet of Chet Baker and the lush baritone sax of Pepper Adams to the most dynamic symphonic recordings of Keith

Johnson, the dCS Network Bridge delivers the music in all its glory. It was just as easy for me to get emotionally sucked into Nina Simone's 1965 album I Put a Spell On You as it was for me to get lost in Pearl Jam live from Fenway park at 24 bit / 96 kHz. Recording artists in a single room may be a vestige of the past, but the technique can produce sonic treasures of a bygone era. Through the dCS Network Bridge I heard amazing yet subtle decay from one channel to another as the sound of instruments bled into other microphones.

Listening through the Network Bridge for three straight hours over the weekend was a special treat that doesn't happen often and helped solidify the Bridge's standing at the top of the digital converter mountain. Experiences like this are what our wonderful hobby is all about. Getting closer to the music. CA Approved and C.A.S.H. Listed.

