

DETAILS

PRODUCT
Quad Artera Solus
ORIGIN
UK/China
TYPE
One-box system
WEIGHT
11.8kg
DIMENSIONS
(WxHxD)
320 x 105 x 320mm
FEATURES
• Quoted power output: 2x 75W RMS (8ohm)
• Slot-loading CD transport
• aptX Bluetooth streaming
• Digital inputs: 2x coaxial; 2x optical; 1x USB-A; 1x USB-B
• Digital outputs: 1x coaxial; 1x optical
• Analogue inputs: 2x RCA; 2x balanced XLR
DISTRIBUTOR
IAG Ltd
TELEPHONE
01480 447700
WEBSITE
quad-hifi.co.uk



The One Show

David Vivian likes the idea of a just-add-speakers system so long as it has CD playback and sounds divine. Could this be the one?

Q uad's compact and dapper Artera family of solid state components – so far the Play (a combined CD transport, DAC and preamp) and the Stereo (a power amp using Quad's famous Current Dumping topology) – has managed to be both high functioning and lifestyle literate, which is trickier than it might seem. But not quite as tricky as folding all of the above (plus streaming) into a single Artera chassis retaining the same pert proportions.

Actually, there are two parts to this. Part one is what we have here, the £1,500 Solus equipped with aptX Bluetooth providing basic streaming to sit alongside its CD transport, DAC and amplification (not Current Dumping in this case – see Q&A). It will be joined in the autumn by a

premium version that will add app-controlled wi-fi network streaming to its repertoire and is expected to cost around £2,000. To some extent, this seems the wrong way round but it's something of an industry-given that implementing

Even by Quad's high standards, the Artera Solus is unfeasibly talented

wi-fi streaming in a one-box product isn't the work of an afternoon.

Quad freely admits that designing the Artera Solus proved to be a great test of ingenuity for its engineers. "It was a real challenge to make the individual parts – the CD transport,

the DAC, the digital streaming, the analogue preamp and power amp – perform to the level of a full separates system in keeping with Quad's high standards... Placement of components has been especially critical, together with careful routing of the four-layer printed circuit board, use of balanced circuitry to minimise interference and extensive power supply isolation," said Jan Ertner, who led the development team.

Encouragingly for Quad, this initial edition of the Artera Solus looks so own-able you might not want to wait, especially as it will be possible to retro fit full-fat network capability once the second one-box Artera model goes on sale.

Components promoted as fine examples of industrial design can often seem astringently stark and cold ▶

CONNECTIONS



- 1 USB-B port
- 2 Line-level RCA analogue inputs
- 3 Balanced XLR analogue outputs
- 4 Optical and coaxial digital inputs
- 5 Optical and coaxial digital outputs

IN SIGHT



- 1 Bluetooth aptX daughter PCB
- 2 Dual-mono 2x 75W Class AB power amplifiers
- 3 S/PDIF inputs
- 4 300VA toroidal transformer
- 5 Power supply
- 6 Slot-loading CD mechanism

and the Solus certainly flirts with the idea (especially if you forego the contrasting silver fascia in favour of chassis-matching black). But it also imbues a clean, sharp and chunky form factor with just enough character to charm rather than chill. It was no accident. Quad enlisted the help of Rodney Mead, the man responsible for the styling of many classic Quad products in the seventies, eighties and nineties, to brainstorm design concepts.

The structure is weighty and feels reassuringly rugged – exactly as intended for resisting resonance and vibration. Face-on, the main features are the loading slot for CDs and, to its left, a circular OLED display that doubles as a touch-sensitive pad for activating play/pause and scrolling through the input options. That's about it save for a 6.35mm headphone jack (fed from a dedicated headphone amp circuit), standby button and an impressively large remote with annoyingly small buttons and labels.

Heart of the matter

The heart of the Artera Solus is the ESS ES9018 32-bit, eight-channel hybrid multi-bit Delta-Sigma DAC. It provides support for PCM data up to 32-bit/384kHz and DSD64/128/256. Connectivity is comprehensive, with doubled up optical, coaxial digital inputs plus another two RCA phono line-level analogue ins and a single USB-B for linking a PC or laptop. A USB-A port is on hand for firmware updates. Outputs comprise balanced XLR or RCA pre-outs for harnessing a more muscular power amp (most obviously the Current Dumping

Artera Stereo), and a choice of coaxial or optical connections should you want to use an external DAC.

If so, it would need to be pretty special. The on-board ESS chip is about as sophisticated as they come and Quad's implementation offers a choice of four filter settings: Fast, Smooth, Narrow and Wide, with Fast being the default setting by dint of its optimum transient performance, though filter allocation descriptions can be a little arbitrary so it's worth experimenting. The slot-loading CD transport mechanism and attendant electronics play their part in allowing

It will be possible to retro fit network capability when the update is released

the DAC to do its best work, buffering the data from the disc before feeding it asynchronously (minimising jitter in the process) to the DAC board.

Given a higher price ceiling, greater casework space and an ideal world, Quad would probably have liked to use its Current Dumping tech for the power amp section of the Artera Solus. That wasn't to be, but the company's engineers certainly don't seem to have stinted on an alternative. To be expected, the Artera Solus' pre and power amp sections are minimalist in design and use high-quality components linked by short, direct signal paths. Volume is digitally controlled in the analogue domain, outputting directly to the dual-mono Class AB power amp

section. But if the claimed 75W per channel into 8ohm looks a little modest on paper, it's backed up by a generous 15A of maximum current. Quad avows that awkward speaker loads simply aren't a problem and that the Solus even drives its own demanding electrostatic speakers without breaking sweat.

Sound quality

Aiming to deliver a Quad-level audiophile message to a broad audience that goes all the way from hardcore to Habitat, the Artera Solus spends time both substituting for the Cambridge Audio CXC CD transport (HFC 401), Chord Hugo 2 DAC (HFC 428) and ATC CA-2/P1 pre-power amp combo (HFC 387) in my reference system, driving a pair of Audiovector QR 1 standmounts (HFC 418) on a sturdy sixties Danish coffee table in my bedroom – a task most recently undertaken by KEF's LS50 Wireless system (HFC 433). A FiiO X3 Mk 2 DAP is also on hand to inject a little hi-res file goodness to the respective DACs in both setups.

I feel compelled to cut to the chase. Even by Quad's consistently high standards, the Artera Solus is almost unfeasibly talented. Responsible for a spell of open-mouthed amazement, it gives my reference system a very hard time indeed and goes on to produce the best sound I've yet heard in my bedroom, edging out the KEF LS50 Wireless in all respects bar broad dispersion stereo and out-and-out loudness. To put that in perspective, the £1,500 Artera Solus costs £350 less than my reference system's Chord DAC. And even when teamed with the classy Audiovector standmounts, the £2,250 total outlay is only £250 more than the active KEFs, for which you'd have to buy a transport if you wanted to be able to play CDs.

For the reference system acid test, Dynaudio's cracking £2,500 Special Forty standmount (see p54) serves both sets of electronics. It's an easy enough speaker to drive and one with great bass that really comes alive with a quality front end.

The opening scribbles on my notepad for the Artera Solus read thus: immediacy and presence, weight and body, scale and authority. And this after long-term familiarity with a system toting a state-of-the-art DAC and a famously fast and grippy power amp with twice the Artera's power. Moreover, and spookily apt given the lyric of the first CD into the slot, the Quad's portrayal of Bruno Mars' terrifically bouncy *Finesse* really

CURRENT ACCOUNT

The Artera Solus' discrete power amplifier circuits' output stage utilises a CFB (Complementary Feedback) topology in combination with conventional emitter follower circuitry. Quad claims CFB offers superior linearity and ensures excellent thermal stability, as the idle current is kept independent of the temperature of the output transistors. Using an emitter follower in combination with CFB efficiently increases the current ability of the amplifier without compromising the advantages of the CFB circuit. Having the emitter follower

deliver additional current only when needed allows for a simpler current-limiting arrangement, which can be voltage independent. Current limiting is under microprocessor control and programmed in order to allow the amplifier to supply high currents (+/- 15A) into complex loads, surpassing amplifiers that are bigger and more powerful on paper.

A 300VA toroidal transformer supplies the two mono amplifiers using separate secondary windings, followed by 2x 15,000µF reservoir capacity per channel (60,000µF in total).

is "dripping in finesse", pulling off the hardest trick of successfully separating the high-energy impetus of the track with its ballooning bass and staccato drum pattern from the fine inner detail and complex, layered textures. Returning to the reference system the sense of discrimination is subtly stronger, the drum strikes fractionally crisper and there's a little more air and dimensionality to the soundstage. But power and bass quality seem no different and, tonally, the Quad sounds slightly sweeter and warmer.

With the slow-burning beauty of the *adagio* movement from Rachmaninov's *Symphony No.2 in E minor* (on Decca, with Vladimir Ashkenazy conducting the Concertgebouw Orchestra), the Artera's richer balance really pays off, giving the opening section's gently sighing violins and melody-weaving clarinet a delicacy and depth that leaves the reference seeming slightly analytical – certainly less swoony and romantic, despite its greater acuity and resolution. It's much the same story with hi-res files. Barb Jungr's 24/96 FLAC recording of Bruce Springsteen's *Long Walk Home* sounds fluent and full bodied with a warm, natural balance, although not quite able to match the reference system's forensic levels of resolution, alacrity,

and finely graded dynamic shading. As for Bluetooth streaming, it's about as good as it gets: listenable and stable, but altogether softer and less dynamic than playing a CD or listening to a hi-res file.

Conclusion

It may lack wi-fi streaming for the moment, but in all other respects, the Artera Solus is a tremendous one-box system and an absolute steal given the price. It not only looks and feels far more expensive than it is, it sounds it too and so deserves a fine pair of speakers to show what it's really capable of ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Compact design; build quality; rich and powerful sound

VALUE FOR MONEY ★★★★★ **DISLIKE:** No wi-fi streaming... yet

BUILD QUALITY ★★★★★ **WESAY:** Quite simply one of the most desirable one-box systems we've encountered

FEATURES ★★★★★

OVERALL ★★★★★

HOW IT COMPARES

The hi-fi firmament isn't exactly short of just-add-speakers and just-add-source do-it-all systems right now. To such notables as Musical Fidelity, KEF, Arcam, T+A, Naim and Simaudio Moon, we can now add Quad and – to be honest – if design, build, sound quality and value for money are high on your list of priorities, the Artera Solus knocks it straight out of the park.

I thought it would be a long time before anything of a similar price sounded more couth, immersive and engaging than KEF's brilliant active LS50 Wireless system (HFC 433), but the Solus/Audiovector combo is – how does Bruno put it? – simply dripping in finesse.

Q&A

Jan Ertner
Electronics designer, Quad



DV: With wi-fi streaming so popular, why is it absent here?

JE: The Solus was conceived as a dual-level product to allow customers to choose the version that suits them best. Not everybody wants or needs app-controlled wi-fi network streaming, so we've developed one version that delivers this regular functionality with aptX Bluetooth for simple wireless connectivity and a second premium version that adds wi-fi streaming. This way consumers pay only for the facilities they want and have the ability to upgrade later.

When will this be available and can you give us an idea of price?

The wi-fi streaming board is still under development. We want to deliver the class-leading network streaming performance that Quad owners deserve, incorporating technologies that will be supported for years to come. It'll be available this autumn, although we can't be more specific at this time.

How bespoke is the CD transport?

The slot-loading mechanism was carefully selected and implemented, and the way it interacts with the DAC section is critical. We wanted a solution that facilitated a sleek-looking front panel design, quick and easy loading and accurate retrieval of audio data. The audio data interface between the CD drive and the DAC is asynchronous – the DAC circuitry, with its own low-jitter reference clock, re-samples the data from the CD and thereby eliminates jitter from the drive.

Why doesn't the power amp section use Current Dumping topology?

The simple answer is there isn't room. The amp inside the Solus is a dual-mono design, with separate power supplies for the left and right channels on either side of the enclosure to avoid hum and noise affecting the interface between the pre and power amplifiers. The output stage combines a Complementary Feedback (CFB) topology with conventional emitter follower circuitry to ensure great linearity and idle current stability, while increasing the current ability of the amplifier.