Lumin X1 Streamer/DAC/Preamp

Outstanding!

Steven Stone

If you do an Internet search for Lumin, "Lumin Music" will pop up. Its website headline reads, "The Audiophile Network Player Family," which pretty much sums up what Lumin does—all Lumin's product offerings are network-aware audio devices, with the exception of its AMP, which is a power amplifier. This review will focus on Lumin's alpha offering, the X1. Priced at $13,990, the X1 is Lumin's fully featured flagship that serves as a streamer, digital audio converter, and digital preamplifier with its own dedicated smartphone app (and Roon compatibility). Let's find out if the X1 is the right ship to steam (or stream) into your port.

Technical Tour

The X1 will support PCM formats up to 768/32 and DSD to 512 (with upsampling options for both PCM and DSD files). It also supports all the standard formats including FLAC, ALAC, WAV, DSD, DSF, AIFF, and MP3, and will unpack and decode MQA. Streaming protocols supported include Tidal and Tidal Hi-Fi, Roon, Spotify Connect, Qobuz, Apple AirPlay, and TuneIn Internet radio. DLNA and UPnP compliance are also standard. Multi-room multi-play will be available by firmware update.

The heart of the X1 consists of dual ES9038Pro Sabre DAC chips, which have the capability of 140dB dynamic range and are configured to operate in a dual-mono fully balanced mode. The DAC's clocks are controlled by a new Femto clock system that uses FPGAs. The X1's analog output utilizes dual Lundahl LL7401 output transformers.

The X1's power supply (AC to DC) is housed in a separate chassis and connected via a DC umbilical cord. The solid-billet CNC case design contains separate digital and analog circuitry with a special low-noise regulator that can be used with the X1 or as an upgrade to the Lumin S1, A1, or T1 units.

As you would expect, the Lumin X1 has provisions for updating its firmware as needed and it has its own dedicated and fully featured control application that can run on either an iPhone or iPad that supports iOS 8.0 and later or Android devices that run 4.0 or later. More about the app's features later.

The Lumin X1 has multiple input options. Foremost is the special optical network connection that employs a junction box with a dual optical cable connection followed by a standard wired Ethernet network connection. The Lumin X1 has a digital USB input. The USB port is bi-directional—USB-in for HDD playback, and USB-out for native DSD512 and 768/32. You can attach a single-partition FAT 32 formatted hard drive, which can be employed as a music source in lieu of a NAS drive, if you wish. The X1's outputs include both balanced and single-ended analog as well as a BNC-type SPDIF digital.

Unlike some streaming devices, the Lumin X1 does not have any internal hard drives for file storage. While for some potential users this could be seen as a disadvantage, not having internal hard drives ensures that the X1 will never need to be opened up to have a drive replaced. And for those audiophiles who already employ a NAS drive, or connect a USB drive to the X1, an internal drive would be redundant.

Setup and Ergonomics

One look at the front panel of the Lumin X1 should have you searching for a remote, any remote, since it has no controls whatsoever. Instead there's a central recess in the front panel for the 1" by 3¼" blue monochrome display. For me the display's primary function was to assure me that the X1 was on. For all operations I depended on Lumin or Roon apps.

To operate the X1 you must utilize a smartphone or tablet. So, a new user's first task will be downloading the Lumin application from the Internet store of his choice, either Google's Play Store or Apple's App Store. I put the app on two devices—an iPhone SE and a Sony Experia tablet. On both platforms the Lumin app downloaded and worked without any issues.

Once you have a control app you can attach the X1 to your network. I used the Lumin optical network connection, which, due to its optical

Specs & Pricing

Type: Ethernet-connected streamer/DAC/preamplifier
Formats supported: DSD lossless: DSF (DSD), DIFF (DSD), DoP (DSD); PCM; **lossless:** FLAC, Apple lossless (ALAC), WAV, AIFF compressed (lossy); audio: MP3, AAC (in M4A container)
Outputs: Balanced analog, single-ended analog, SPDIF, BNC
Drive capacity: No internal drives
Streaming services: UPnP AV protocol with audio streaming extension (OpenHome), Roon Ready, Spotify Connect, Apple AirPlay, Gapless Playback, On-Device Playlist. Tidal, Tidal High Res, TuneIn, Qobuz, and MQA supported.
Dimensions: 350mm x 60mm x 345mm (chassis); 106mm x 60mm x 334mm (PSU)
Weight: 8kg (chassis); 4kg (PSU)
Price: $13,990

Manufacturer Information
luminmusic.com

SOURCE SYSTEMS, LTD. (U.S. Distributor)
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cable, is galvanically isolated from the rest of the network. For the first month of operation I used the X1 connected via its balanced analog and SPDIF digital outputs to a Mytek Manhattan II, which served as an analog preamplifier and/or DAC. After that I connected the X1 directly via its balanced outputs to the Pass X150.8 that was powering a pair of Spatial X2 loudspeakers, with its unbalanced outputs attached to a pair of JL Audio Fathom f112 subwoofers.

The X1's physical design is not your standard black box but has a slightly curved front baffle with a top surface that extends well over the back panel. The back panel is recessed more than 2½", which might not be an issue with a taller unit, but the X1 is so svelte that there isn't much room left above or below the XLR connections, making disconnecting them (you have to push in that little tab on XLRs) a challenging proposition for humans with normal-sized hands. Other than some new indentations on my fingers from the Lumin's top edge, installation was pain-free.

The Lumin X1 has quite a few user-adjustable options, including the ability to have its output at a fixed gain level or to engage the unit's volume control. I tried the Lumin both ways. With the X1 connected to the Manhattan II's balanced analog inputs, I used the fixed volume setting. When the Lumin was connected directly to the Pass amplifier, which has 26dB of gain, I found I rarely went above 60 on the X1's 0–to–100 volume scale. I had plenty of gain left in reserve, so even some of my recordings that had been purposely made at lower-than-standard levels could be boosted to more than satisfying volume levels. The upsampling features proved useful on streaming sources and Internet radio broadcasts.

I employed two means of controlling the X1—its own dedicated app and Roon's app. Since I've been using Roon for some time on a variety of devices, it had "home field advantage," in that I'm quite familiar and comfortable using it. The Lumin app is very good, but it is not Roon. I would put the Lumin app on a par with Audrivana+ or Aurender's dedicated apps. I would definitely recommend using the Lumin app on a tablet or pad rather than on a smartphone to control the X1—my iPhone SE did not have sufficient display area; with the Sony Experia's 8½" by 5½" display, however, the Lumin app was a pleasure to use. I could not only access anything I wanted on my NAS drive, but Tidal and Qobuz favorites were also at the tips of my fingers.

Sound

The world of high-performance audio has progressed to the point where "flagship" product reviews are problematical because of the elevated expectations of manufacturers and PR folk. If a review of a flagship is not a slack-jawed gobsmacked rave, the appraisal is almost considered to be a pan. Anyone who's been longtime *Absolute Sound* reader knows that I have not, in recent memory anyway, raved uncontrollably about any audio product. I just don't work that way.

When I compared the Lumin X1's sonic capabilities with my current references, which include the Mytek Manhattan II and the Aurender ACS10, I found it delivered an equally accurate portrayal of the sonic event. Since there was no way to do direct, real-time, matched-output-level, A/B comparisons between the Lumin and my reference DAC and DAC/pre, definitive direct comparisons were impossible. But I will state, confidently, that the Lumin was a fine performer that did not display, to me, any discernable sonic flaws. On my own recordings every instrument and vocalist was in the right spot, and the three-dimensional portrayal of depth was precise with extremely convincing layering of dimensional cues. As with my other reference digital sources the size of the soundstage varied depending on the recording. With my mono Charlie Christian tracks the image was no wider than a quarter, while with a Michael Morgan recording of Holst's "Uranus" the image width and depth were almost cosmic in scope.

Low-level detail through the Lumin X1 was also as good as I've heard from any digital source, any time, any place. I have a recording I made at the Rockygrass academy a couple years back of Bryan Sutton and Chris Eldridge playing guitar duets in a "duet workshop." The location was outdoors under a large tent, with the St. Vrain river running by about twenty-five yards away on the right and in the distance on the left, during the opening chatter, the sound of a hammer striking some wooden parts at the mandolin-making workshop about seventy-five

yards away. Through the Lumin X1 all these spatial cues were easy to hear, as were the subtle differences between Sutton's pre-war Martin D-28 and Eldridge's late-forties Martin D-18. [*Steven Stone is an authority on vintage guitars and mandolins. —RH*]

Bass extension through the X1 extended down to as low as the program material could go. I was impressed by the system's ability to retain not only proper pitch but also the texture of the bass. Especially on pop tracks that incorporate synth as well as electric bass, it was easy to tell which part was which. Bass dynamics were also exemplary with no sense of constriction or any homogenization of the dynamic energy.

Moving up the frequency spectrum, the midrange characteristics of the Lumin X1 were clean and distinctly unromantic with no lower midrange bloom or overhang. But just because the Lumin doesn't add midrange romance doesn't mean it's cold, hard, or mechanical. On the contrary, midrange texture and balance through the X1 were virtually grainless and extremely even in dynamic and harmonic weight and emphasis from the upper frequencies down through the lower midrange.

I'm an old guy, and getting sort of proud of that fact, and my hearing has been truncated to a top end extension of only 13kHz by years of being on earth. But as with many humans whose upper-frequency sensitivity has been limited, my sensitivity below my cut-off point has increased so that I am even more aware of ragged or peaky upper frequency response than my younger self might have been. The X1's upper frequency rendition was so smooth that some would call it "musical." And while I can't comment on the unit's "air" above 13k, up to that point I found that the X1 did a superb job of not altering the inter-relationships of the upper frequencies found on my reference recordings.

Summary

After spending time with the X1, I understand why Lumin is proud of its flagship. It does everything you would expect from a premium audiophile product—it looks cool, operates flawlessly, accepts firmware updates, and has its own app. It also performs as well sonically as any streamer/DAC/preamplifier I've had in my clutches.

Not only is the X1 a first-class component, but the support behind the Lumin is also as stellar as the unit itself. Source Systems, Lumin's U.S. distributor, is well-versed on the unit's operation and responded promptly to my technical questions.

Sure, you have a multiplicity of streamers, streamer/DACs, and streamer/DAC/preamplifiers to choose from these days, and, alas, the Lumin X1 is only one of them (to steal an ancient audiophile cliché). But it's an outstanding one that gets everything right and does it all with style. **tas**