



## What Sets Lumin Apart from The Competition?

- Lumin keeps all storage outside the box to reduce any and all potential noise and/or electromagnetic interference to the analog and digital boards, and to improve system reliability (even from SSD drives).
- Lumin is a commercial grade streamer (Pixel Magic Systems Ltd, broadcast receiver high resolution audio video designs and engineering heritage). <http://www.pixelmagic.com/>
- For A1, T1, U1 and S1, Lumin keeps all power outside the box using AC to DC conversion through dual mono linear mode power supplies. The quietest and cleanest of all methods.
- Lumin architecture includes high end dual mono DACs and HDMI and SPDIF outputs for use with external DACs. [HDMI also passes multi-channel audio to M/C DACs like exaSound].
- In S1, Lumin engineered a dual mono configuration which aligns 16 mono DACs for each channel, feeding a dual mono Lundahl output stage. Highly “precise analog flavor & detail” results.
- The Lumin application is a 100% custom application for iPhone, iPad and Android tablets.
- Upsampling options for PCM audio up to 24/192 and DXD, integrated Internet radio, Tidal integration, Qobuz integration, Lumin streaming integration, DSD to PCM, PCM to DSD, native DXD playback, variable bit rates: native, 16, 24. Inverse polarity option, etc.
- Product of the Year and #1 ratings from multiple global publications in Asia, Europe and the USA.
- Dual mono Lundahl output stage coupling in T1, A1 and S1.
- Custom Linux OS version plus expanded memory buffer and custom FPGA.
- Used in commercial broadcast high res. radio transmissions as a source device.
- Virtually unlimited storage via L1 and multiple L1s, USB drives, Ethernet (network) connected drives, etc.
- Lumin supplies OEM streamer/player software application for major Japanese consumer electronics companies. No other manufacturer has achieved this status as of July, 2016

## Seven Warnings about solid state drives (SSDs):

1. **No Warning of Failure** - When SSDs do crash, there don't tend to be any warnings. Utilities, such as SMART (requires a PC on your network), which work with Hard Disk Drives to warn you of an upcoming hardware failure, don't work with SSDs.
2. **Not Always Recoverable** - If the SSD does crash, and you don't have a backup, it is less likely to be recoverable when compared to a standard hard disk drive. Therefore, it is always recommended to have some sort of back-up system in place, whether it's a third party back-up system, network drives, USB drives or a RAID Array. This reduces the odds of ever needing to recover your data in the first place.
3. **May cause** a limited amount of electromagnetic interference if not properly isolated from an analog and/or digital streamer boards.
4. **Save Large Data Files on a HDD** - If you save a lot of large files (such as audio, photo, and video files), it is more cost effective to use a Hard Disk Drive to store your data files. While SSD prices have decreased, HDD prices are still almost 10 times cheaper for the same size disk drive.
5. **Set up Temporary Files to Write to HDD** - If possible, set up your PC to write temporary files to a Hard Disk Drive instead of to your Solid State Drive as SSDs have write limits. An SSD can slow down or even fail if files are written to it too many times. These write limits, however, are quite large. With typical usage, this would not be a major concern.
6. **Don't keep your SSD full** - SSD performance drops significantly when it is too full.
7. **Recommended for Use with Trim and Windows 7 and Beyond** - Use the Trim utility to keep deleted files from cluttering your SSD. Older SSD Drives may not include the Trim utility with them and only the Windows 7 and beyond support this utility. You will want to check your PC/Server to make sure that your system is not set up to automatically defragment your SSD drive.
8. **Beware Do Not Defragment** - Do not use the Defragment utility on your SSD drive. Defragment is designed to be used with Hard Disk Drives, not SSDs. The defragment utility writes lots of small operations to your hard drive, therefore slowing down your SSD drive.

**Learn more about Trim:**

[Lifehacker Article on Trim](#)

[Microsoft Article on Trim](#)