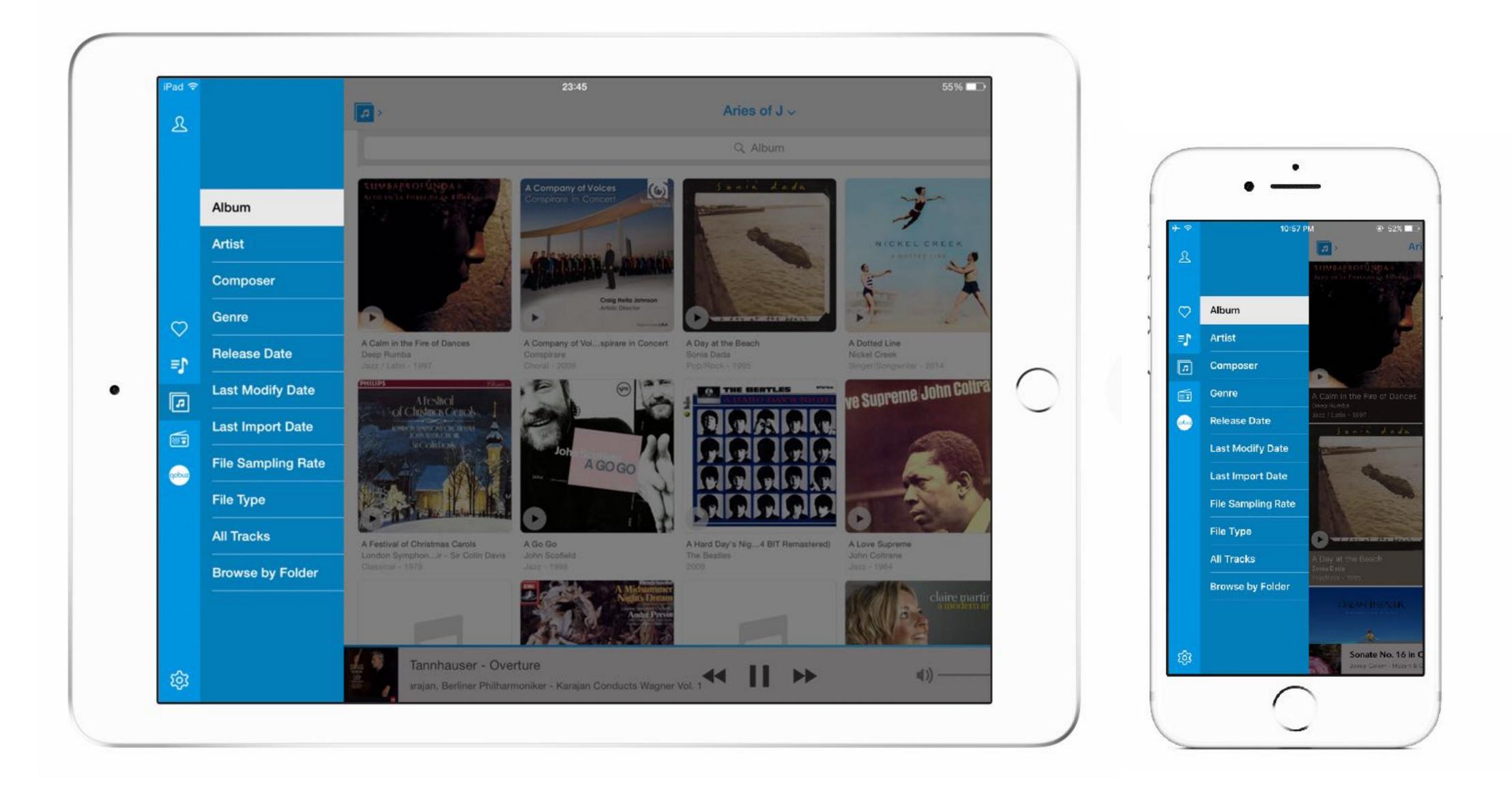
# AURALi(

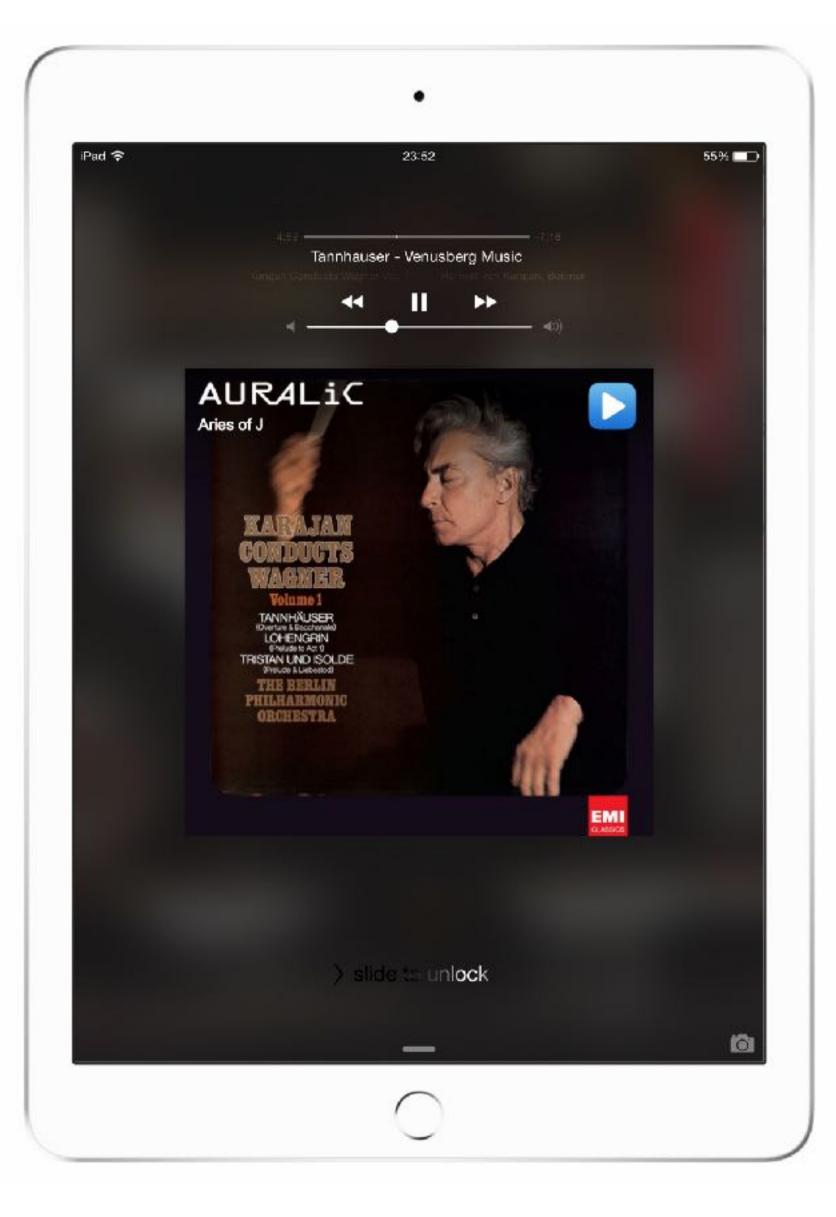
#### G Series World Premiere 2017 High End Munich



# New iPad Lightning DS

### iOS Lock Screen Control





"What's striking is that compared to last time (Aries w/ 3.3 firmware), Aries delivered more micro details AND more smoothness at the same time. The sound did not come across as being smeared, in fact quite the opposite. Realism was stepped up another notch and we did not get the impression of the sound being overly dynamic, just more engaging and pleasurable to listen to. We believe the improvements are largely attributed to the memory-based playback. Having owned the Aries Femto for well over a year, it was quite shocking to hear extent of SQ improvement with just a firmware update. We have to give the folks at Auralic a big nod, for their amazing combination of great engineering and excellent ears."

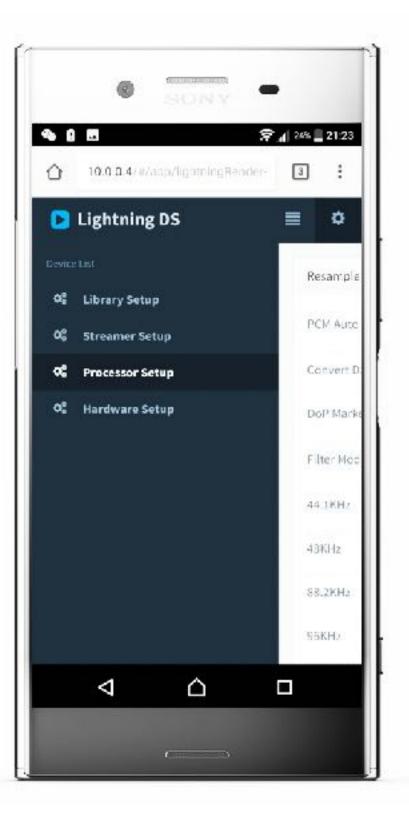


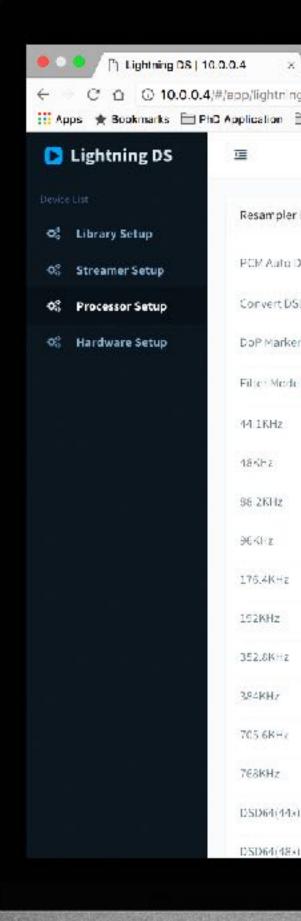
From "scan80269" on Computer audiophile Community





### Browser Control Interface





#### X

C △ © 10.0.0.4/#/app/lightningRender-bc-34-00-a0-04-de/WebProcessorConfig? Ian=en

👖 Apps ★ Bookmarks 🗎 PhD Application 🗎 Hang Dut 🗎 Vehicle 🗎 NEU 🗎 Shopping 🗎 career 🗎 Social 🗎 technology search 🗎 Beauty Q Quora - Your Best S... 🗎 音乐视频 🛗 艺术生活 🗎 术语 🗎 浅海

第1位用户

☆ ⊙ ⊗ :

English -

mpler Configuration	
Auto Detect 🕕	
ert DSD to FCM ()	
Harker (j)	GxDG/FA <del>+</del>
Media (i)	Drec Stat
Hz	-352 8BHz <del>-</del>
z	381KHz <del>+</del>
14z	352.8K01z <del>+</del>
Z .	334/01z <del>+</del>
K∺z	176.4KHz +
Hz	192KHz +
K∺z	352.8KHz +
Hz	384EHz <del>+</del>
Кн <sub>ζ</sub>	352 8KHz +
Hz	384KHz <del>+</del>
4(44.)	DSD64(*4x) DnP≠
4(48*)	DSD64(48x) DaP +

#### Resampler Configuration

PCM Auto-Detect: Your streaming device will detect the maximum sampling rate supported by a USB-connected DAC and adjust accordingly.

Convert DSD to PCM: Your streaming device will convert DSD signals to PCM. Use this option for external DACs that do not support the DSD format. (Due to technical limitations, only DSD54 music can be converted to PCM.)

Filter Mode. The resampler has four built-in filter modes, each employing five digital filters optimized for corresponding sampling rates. Developed using a combination of objective data models and subjective testing, these modes optimize sonic quality for varying music types and formats: Precise: A traditional filter design using a single filter algorithm for all sampling rates. Precise mode provides the most exacting sonic representation of source material. Dynamic: With the same pass-band and stop-band performance as Precise mode, but providing less group delay. Oynamic mode is the ideal balance between measurable precision and subjective quality. Balance: Balance mode is designed to achieve minimum pre-echo and ringing effects. Slow roll-off filters show moderate pass-band and stop-band performance; however group delay is minimized. Smooth Smooth mode scored highest on subjective listening tests during development. All filters in this mode are minimum phase type, which means there is no pretecho at all. Smooth mode filters are designed with very smallgroup delay to eliminate ringing as well.

**DOP Marker**. Chooses between DSD-over-PCM markers. (Early versions of DoP enabled the use of 0xAA, while most devices now accept 0x03/FA.)

MacBook Pro





- Allows complex signal processing
- Resampler
- Other functions to come
- Setup through browser interface

# Processing Engine

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10.	0.0.4/#/app/lightning	Render-I	
<mark>&gt;</mark> Ligl	htning DS	≡ \$	
Resamp	ler Configuration		
PCM Aut	o Detect 🚺	$\bigcirc$	
Convert	DSD to PCM 🕕	$\bigcirc$	
DoP Mar	ker 🚺	0x05/FA 🗸	
Filter Mo	ode	Precise 🗸	
44.1KHz		352.8KHz <del>-</del>	
48KHz		384KHz <del>-</del>	
88.2KHz		352.8KHz <del>-</del>	
96KHz		384KHz 👻	
	•		



### New Products in 2016

#### **ALTAIR** Streaming DAC

#### **POLARIS** Streaming Amplifier







# Where is AURALiC going?



# Industrial Design Evolution







### 2012: VEGA

First DSD128 capable DAC In the Industry

#### 2014: ARIES

First Wireless Streaming Bridge In the Industry

## Technology Breakthrough









# Ultra High-Res: DSD256/DSD512

Low-Res: Online streaming



### Industrial Design - Evolution

**Ultra High-Res** - Bring full potential



Technology - Breakthrough

Low-Res - Subjective optimization





#### **ARIES G2** Streaming Transporter



#### **SIRIUS G2** Upsampling Processor

### Hello, G Series



#### **LEO G2** Reference Master Clock



#### **VEGA G2** Streaming DAC





## Definition of "G"

# G: Grade, multi-grades in the future G2: Highest positioning of the line, period. Fusion of the existing product line



# Design Evolution - Unity Chassis





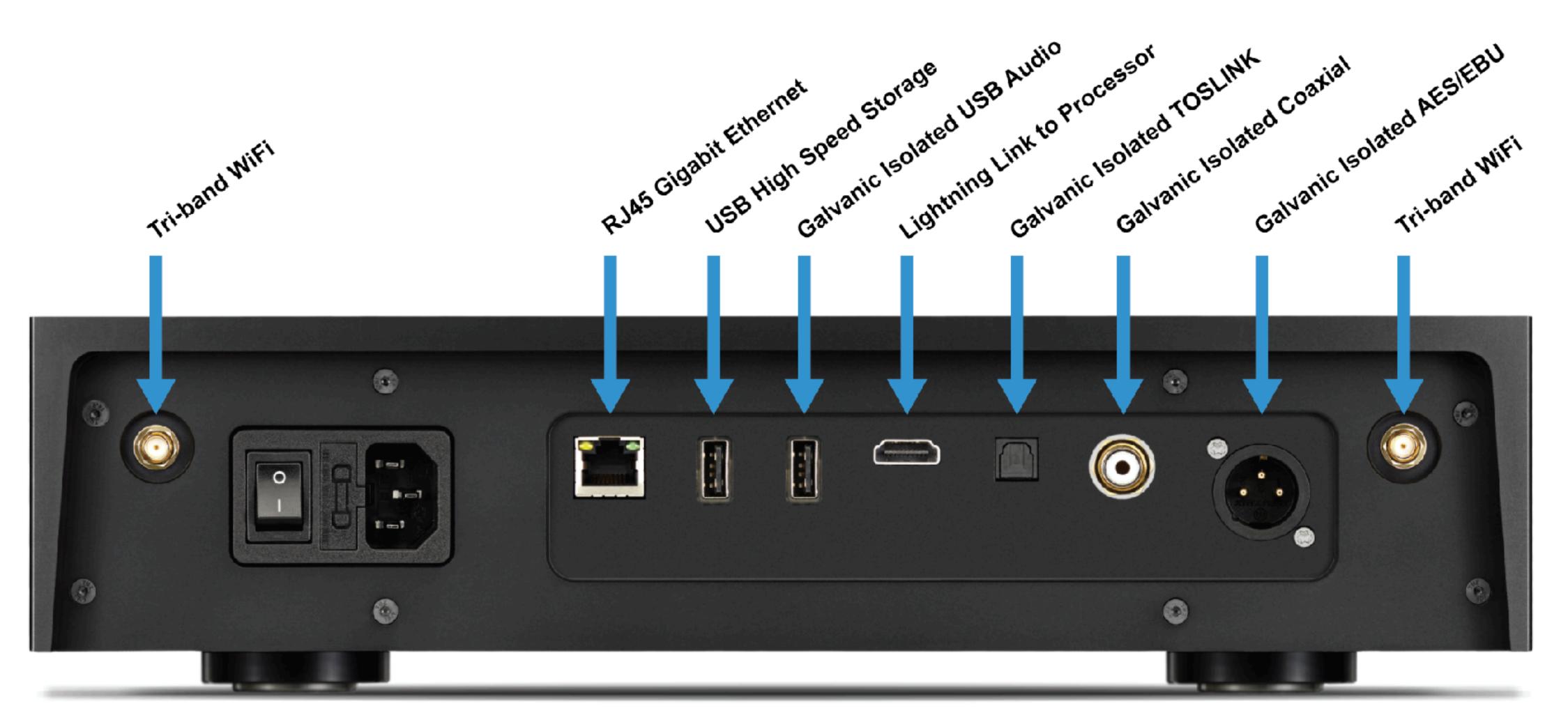


### Meet ARIES G2





## Meet ARIES G2







#### Audio + Control Interface

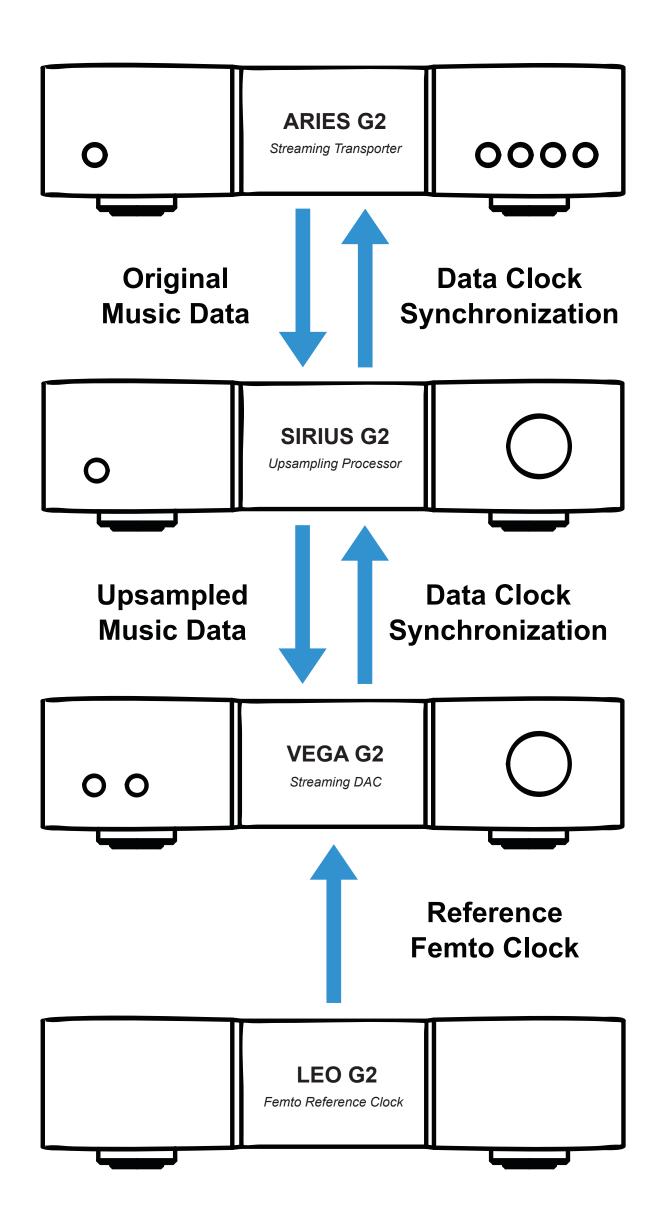
# Introducing Lightning Link

#### Bi-directional 18Gbps coupling

#### Jitter-free Operation of All Devices

#### System Control Message





- DAC is the source of clock to driver other devices in the system.
- DAC use lock clock, no jitter from source or during transmission.
- 18Gbps bandwidth, very low jitter and timing error.
- True Jitter-Free Operation.

## ARIES G2 New Features

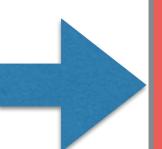
- Tesla G2 Platform
- Lightning Link
- Dual Femto Clocks
- Dual Linear Purer-Power Supply

- Dual Galvanic Isolations
- Unity Chassis
- Smart-IR Remote Control
- Optional Internal Storage



#### **Purer-Power #1**

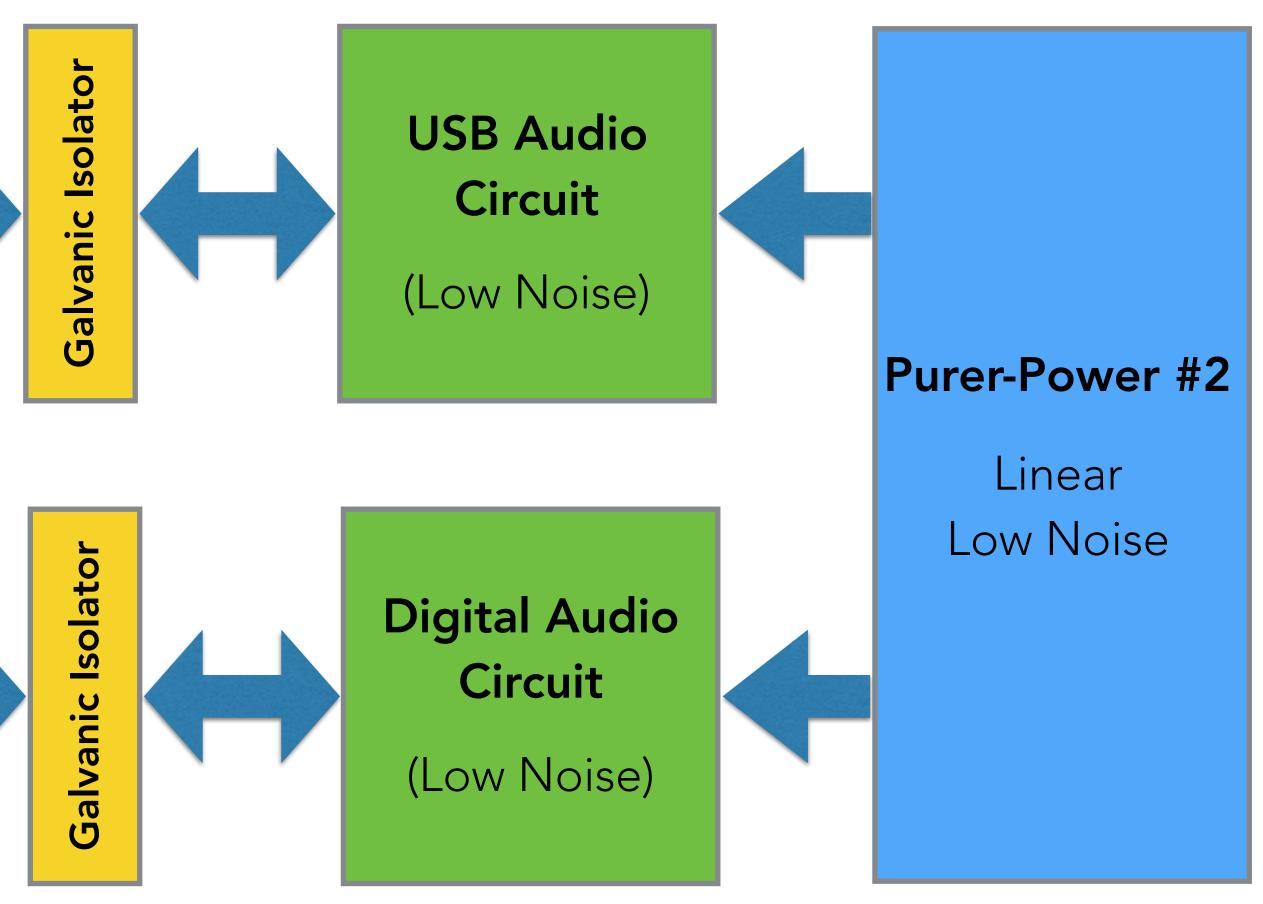
Linear Low Noise



#### Processor Circuit

(Noisy)

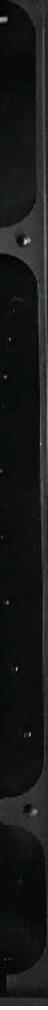
# Isolations of ARIES G2



## Inside ARIES G2

- Dual Transformer
- Dual Linear Purer-Power
- Galvanic Isolation
- Optional Internal Storage





## Smart-IR Remote Control



#### You don't need another one from AURALiC!

#### Too much remote control?



	ARIES	ARIES G2
Processor Frequency	25,000MIPS	37,500MIPS (50% faster)
System Memory	1GB	2GB
Data Storage	4GB	8GB
Format Support	Up to DSD256	Up to DSD512
Lightning Link		Yes
Galvanic Isolation		Yes
Purer-Power	via External PSU	Built-in, Dual Channel
<b>Optional Internal Storage</b>	/	Yes
Display	Single Color	True Color
Smart-IR Remote Control	/	Yes
EMI Noise Shielding		Yes
Weight Balance Optimization		Yes

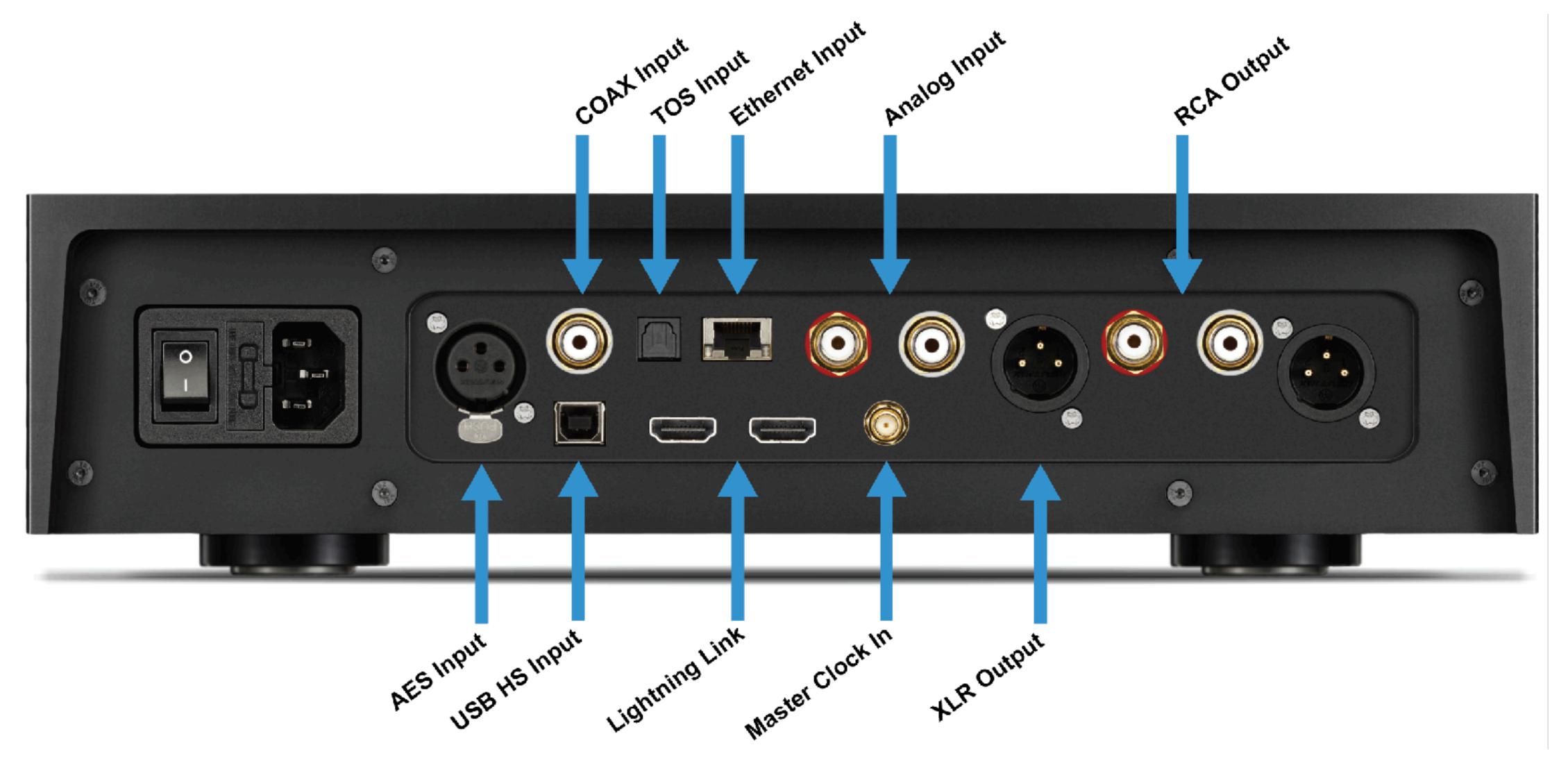




## VEGA G2



### VEGA G2





## VEGA G2 New Features

- Lightning Streaming
- Dual 72 Femto Clocks
- Jitter-Free Operation
- AURALIC Tesla Platform
- Digital Audio Galvanic Isolation

- Full Passive Volume Control
- ORFEO Class-A Output Module
- Dual Low Noise Linear Purer-Power
- Unity Chassis
- 2nd Generation Flexible Filter Mode

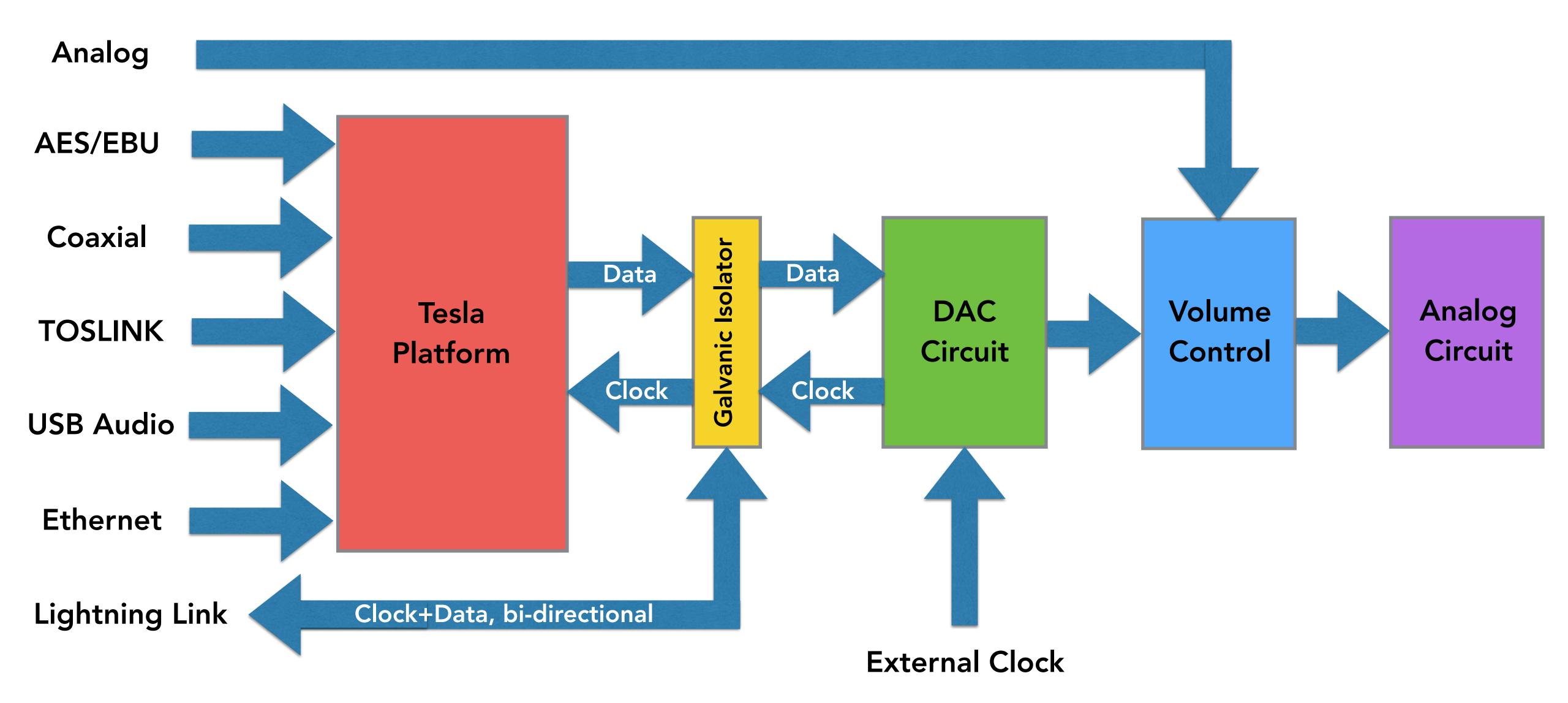




- DAC is the clock master and feed to all other circuits.
- No PLL, no lock to input signal, input signal jitter is not important.
- Galvanic Isolator to eliminate digital input noise.
- Sound quality not affected by input completely if no data error.







## VEGA G2 Signal Flowchart

# Challenge of Volume Control

- Digital Control OK but not good for low volume
- Analog Control: Best approach but can be expensive to do it right
- Hybrid Control (AURALiC Polaris): Cost effective, good at low volume



- Full analog volume control, digitally controlled from 0dB to -128dB with 0.5dB step.
- R-2R resistor ladder attenuator network, extremely low noise.
- Control by eight coil-latch type of relays.
- The coil-latch relay is like e-reader display, it only consumes power when switch its status.
- Using coil-latch type of relay means zero power consumption, avoid EMI noise generated by relay coil.

## Fully Passive Volume Control



	VEGA	VEGA G2
Streaming Inputs	/	Yes
Lightning Link	/	Yes
Format Support	Up to DSD256	Up to DSD512
Processing Speed	1,000MIPS	25,000MIPS
Femto Clock	Single 82 Femto-second	Dual 72 Femto-second
<b>Operation Mode</b>	Slave (DPLL)	Master (Jitter-Free Operation)
Flexible Filter Mode	1st Generation	2nd Generation
Galvanic Isolation		Yes
Volume Control	Digital	Full Analog & Passive
Analog Input	/	Yes (No gain, full analog)
Linear Power Supply	Single	Dual
Display	Single Color	True Color
Smart-IR Remote Control		Yes
EMI Noise Shielding	/	Yes
Weight Balance Optimization	/	Yes
Firmware User Upgradable		Yes

# SIRIUS G2



#### Very high quality DSD upsampling

- Other signal processing and reclocking
- Lightning Link for G2 product or standalone







- **Extremely Low Jitter Mater Clock**
- **Extremely Low close-in Phase Noise** 
  - Boost sound quality of VEGA G2





# • **ARIES G2** - September 2017 - \$3899/€4199/£3899 • SIRIUS G2 - End of 2017 - Price TBD

• LEO G2 - End of 2017 - Price TBD

• **VEGA G2** - September 2017 - \$5600/€6299/£5499



