

La Scala MKII Optologic DAC

the new standard reference in a class by itself

Key features

- High performance proprietary FPGA-based digital decoding without digital filter
- Galvanic and magnetic isolations between the FPGA and the four branches of the R2R ladder converter
- Custom designed discrete circuit with high-speed optocouplers for Galvanic and magnetic isolation between Digital stage and Analog DAC ground
- Jitter free digital interface AQLink PRO (I2S protocol), uncompromising digital connection to La Diva cd transport
- Zero S/PDIF jitter design, digital receiver stage PLL (phase locked loop) technology
- High-performance AQ Discrete Regulator (MOSFET, J-FET, BJT) for analog and digital DAC's power supply
- Valve-Mosfet direct coupling analog stage in pure class-A without negative feedback
- MOSFET Virtual battery circuit for analog anode supply
- Soft-start power up for extended tube life
- MODULAR DESIGN with upgradeable multi board platform
- 2 separate low noise power transformers, one for the analog and one for the digital section
- Transformer-based true balanced audio output stage
- Regulated DC filament supplies with soft start for tubes
- Fully discrete analog stage
- Proprietary USB Firmware / driver :
Apple MAC OS - Linux OS : USB asynchronous native support, no need to install drivers software
- Fully upgradeable high-speed USB Audio Class 2 module, PCM 44.1kHz to 384kHz PCM up to 24 bits, DSD64 / DSD128, operates with computers running OSX 10.7 and above, WINDOWS 10, 7, 8, XP with ASIO bit perfect
- Digital phase selector on front panel
- High-quality parts selected for sound quality:
 - 105° long life capacitors
 - low noise Metal Foil ultra-precision resistors
 - double metallized film pulse capacitor
 - ultra-fast diodes
 - halogen free cables
- Aluminium anti-resonant cabinet with Nextel
- Designed and handmade in Italy

Performance characteristics

Digital to analog conversion type	Proprietary Optologic DAC Pure R2R ladder - FPGA (Field Programmable Gate Arrays) based without digital filter
Supported Native Sample Rates	AQLink / I2S serial bus - USB PC Audio : 44.1kHz to 384kHz PCM up to 24 bits DSD64, DSD128 Supports DSD via DoP on all inputs
DAC architecture	Multibit sign magnitude R2R ladder (upgradeable)
Asynchronous USB (High Speed)	USB Audio Class 2 with Type B connector
Digital Receiver AQLink (I2S bus)	PLL (phase locked loop) technology 128 or 256 FS selectable LVCMOS level
Oversampling factor	1x
Analog Conversion method	Pure R2R ladder - FPGA (Field Programmable Gate Arrays) based digital decoding without digital filter

Digital inputs	<ul style="list-style-type: none"> - RJ45 AQLink (I2S serial bus) - PCM 24 bit / 384kHz – DSD64, DSD128 via DoP - BNC coax (S/PDIF) 75 ohm - PCM 24 bit / 192kHz – DSD64 via DoP - RCA coax (S/PDIF) 75 ohm - PCM 24 bit / 192kHz – DSD64 via DoP - AES/EBU balanced 110 ohm - PCM 24 bit / 192kHz – DSD64 via DoP - USB port - PCM 24 bit / 384kHz – DSD64, DSD128 via DoP <p>Options on request:</p> <ul style="list-style-type: none"> - AT&T (ST Fiber) - PCM 24 bit / 192kHz – DSD64 via DoP - Optical TOSLINK - PCM 24 bit / 96kHz – DSD64 via DoP <p>(Options fitted at the place of the RJ45 AQLink - I2S serial bus)</p>
Analogue Outputs	<p>UNBAL 2 RCA Output 2.2 V RMS</p> <p>BALANCED (passive transformer's symmetrical) 2 XLR Output : 2.2V RMS</p>
Output Impedance	100 Ω RCA - 600 Ω XLR
Load Impedance	10 k Ω (min.) RCA - 600 Ω XLR
Frequency Response	20Hz to 22kHz +0.5dB/-0.5dB
THD + N	<0.1% 1KHz -20dB
Front Panel	Power, input selector, Phase Invert switch
Power Consumption	100-115V / 220-240V; 50 or 60Hz - 88VA
Dimensions	(W x D x H) 450 x 370 x 100 mm
Weight	9 kg
Front finish	Satin Alu Silver or Satin Black
Case finish	Grey Nextel powder coated

Handcrafted in Italy

aqua
acoustic quality

AQ TECHNOLOGIES S.r.l.
Registered Office : Via Luciano Manara, 17 - 20122 Milano
Operation Office : Via Adobati, 23 - 24022 Alzano Lombardo (BG)
Italy
info@aquahifi.com
www.aquahifi.com