# C1

Digital to Analog Controller
Product Brief

Designed for the true music lover, the C1 's apparent simplicity hides highly sophisticated technological solutions with the single goal of recreating the full musical experience. This emotion can only be achieved when both level *and* time information are properly reconstructed from the digital data. And this is what the C1 is all about...

The C1 is based on a fully modular, future-proof architecture. Inputs boards (up to 3) include standard digital inputs complemented by the proprietary CH-Link interface. The CH-Link interface allows for synchronized transfer of High Definition audio content and control over a single connection and is the optimal link between the C1 and the matching D1 CD/SACD front-end. Standard digital inputs accept S/PDIF, TOSLINK and AES-EBU signals up to 24bits/192kHz whereas the CH-Link interface supports up to 32bits/768kHz and native DSD. Audio data on CH-Link is cyphered when protected content is transmitted. The converter stage is a linearized R2R stage operating at 705.6/768kHz with four converters in parallel per channel fed by a fully programmable 4.8GFLOPS DPS engine implementing the proprietary CH-HiD processing for up-sampling, DSD to PCM conversion and resolution enhancement. Each converter is individually factory calibrated and this fully automated process can be repeated to maintain optimal operation over time. The digital to analog converter boards are full dual mono with one board per channel. Analog outputs include single-ended 75 Ohm RCA, balanced XLR and 50 Ohm darT BNC connectors. The analog stage is a full discrete design optimized for ultra-low noise and transient response. Digital volume control and optional analog inputs enable the use of the C1 as a full featured preamplifier. Extreme care has also been given to the timing of the audio conversion. The clocking section of the C1 is based on two ultra low jitter digitally controlled VCXOs. It supports word-clock slave synchronization over the CH Link interface. The C1 also supports an optional synchronization board to be used with external clock generators/slaves and CH sources.

A reference grade linear power supply (with <1W power consumption in Standby), sophisticated mechanical chassis design and full USB based firmware update also contribute the C1 's uniqueness... for now and for any future format!
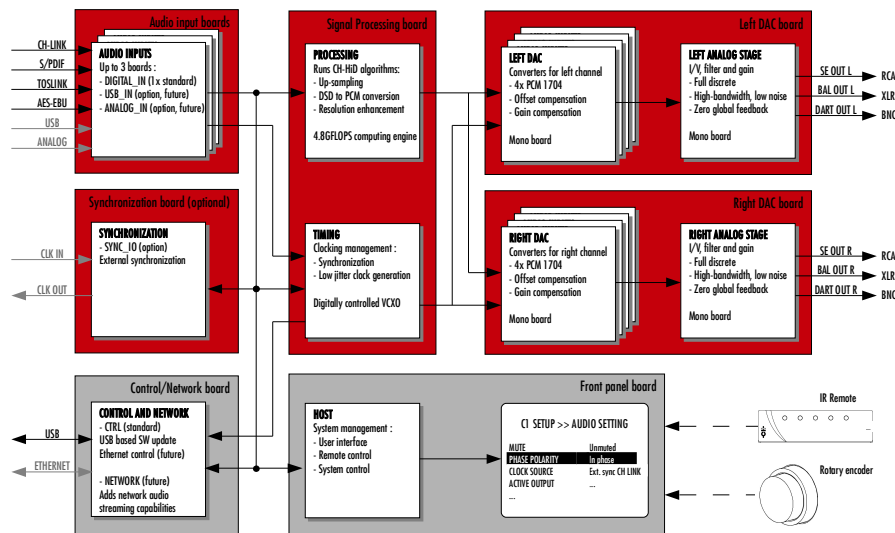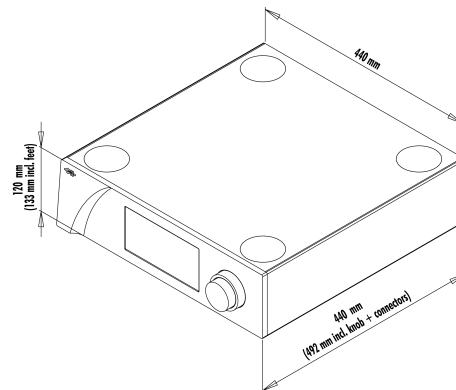
Specifications

Digital Audio inputs (DIGITAL_IN board, one board delivered as standard)	
Standard digital inputs	1x RCA (S/PDIF), 1x TOSLINK, 1x AES-EBU. Support up to 24bits/192kHz
Advanced digital input	1x CH-Link. Supports up to 32bits/768kHz and native DSD
Synchronization	Digitally controlled VCXO based synchronization on all inputs
Optional boards (Up to three audio input boards and one SYNC_IO board. NETWORK board replaces CTRL board)	
SYNC_IO	Master/slave external synchronization board (BNC connectors)
NETWORK (future release)	Network audio streaming board (clock master, up to 24/192). Replaces CTRL board.
USB_IN	Digital input board for USB audio streaming (asynchronous mode, up to 24/192)
ANALOG_IN (future release)	Analog input board with both balanced and single-ended inputs.
Conversion	
Conversion type	Linearized R2R, 4x PCM1704 per channel, 705.6/768kHz, factory calibrated
DSP Processing	CH-HiD synchronous up-sampler, DSD to PCM and resolution enhancer
Analog output stage	Ultra low noise, high slew rate, zero global feedback, full discrete dual mono design
Analog Audio outputs	
Single-ended, Balanced and darT outputs	2x RCA (L/R - 75 Ohm SE), 2x XLR (L/R - BAL), 2x BNC (L/R - 50 Ohm darT)
THD+N (1kHz, 20Hz-20kHz)	Less than 0.001%
SNR	Better than 120dB
General	
Display	480 x 272 24bits RGB AMOLED
Power supply	Selectable 100V, 115V or 230V AC, 47Hz to 63Hz, <1W in Standby
Dimensions	440mm x 440mm x 120mm, 20kg
Software update / Control (CTRL board)	USB port for software update / Ethernet based system control (future release)

Specifications subject to change without notice. Illustrations are informative only.