

# Questyle

Audio Engineering



CMA Twelve  
CMA Twelve Master

New Flagship DAC / Headphone Amp

[www.questyle.com](http://www.questyle.com)



2006 - 2018

Marking the 12th Anniversary since  
Current Mode Amplification Technology was invented

CMA Twelve, the new flagship DAC / Headphone Amp from Questyle inherits their classic desktop design format and outperforms its peers once again. It marks the anniversary of Questyle's revolutionary Current Mode Amplification technology, invented 12 years ago.

2006

Current Mode Amplification technology was invented by Wang Fengshuo (Jason Wang), Questyle Audio founder, in his university lab.

2012

CMA800, the first Current Mode Amplifier was released.



2015

QP1R, the first Current Mode Lossless Portable DAP was released.



2016

Golden Reference System, matched with Focal Utopia headphones, was released.



2018

CMA Twelve, the new flagship DAC / Headphone Amp, was released to mark the 12th year since Current Mode Amplification technology was invented.



# Design

## Distinctive Questyle design

Only when you see it will you truly understand the exquisite finish and design detail achieved between Questyle and their manufacturing partner, Foxconn, setting new benchmarks in technological standards. The chassis of the CMA Twelve has very high efficiency for heat dissipation, which ensures it will work with absolute stability in pure Class A, keeping the temperature at 45 degrees.



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The elegant lines and laser etched text for status and volume echo the professional “genes” of the Questyle family.

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Serious thought for every detail is revealed with the amber glow of each LED indicator against the black or gold, sandblasted chassis.

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## Resonance Control

Mechanical vibration will affect audio signal processing and the resulting sound. To avoid resonance, the CMA Twelve chassis is formed from 10mm-thick aircraft-grade Aluminum 6063, with high precision machining techniques of  $\pm 0.02\text{mm}$ .

Heat Level

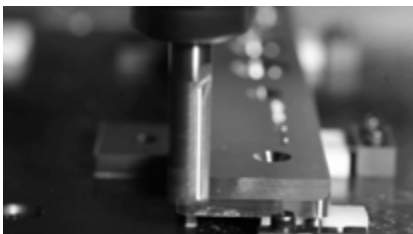
45 °C

Chassis Thickness

10 mm

Machining Precision

$\pm 0.02$  mm



# Technology



Current Mode  
Amplification

## Current Mode Amplification

Global PCT Patent No.: US 9,614,483 B2

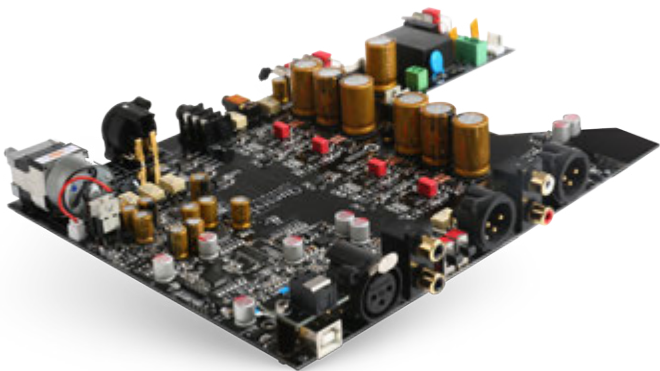
Questyle's patented Current Mode Amplification technology is set apart from other technologies adopted in traditional amplifiers. It will provide users with an experience of being there and listening to the original sound.



BIAS Control

## Pure Class A BIAS Control

Questyle's pure Class A BIAS Control system can perfectly drive headphones or speakers of different specifications and easily bring their full abilities to fruition.



# DSD

Direct Stream Digital

## True Direct Stream Digital

China Intellectual Property Office Patent No.:201520211941.X

PCM384 | DSD256 | 32Bit



Nichicon FW capacitors



WIMA capacitors



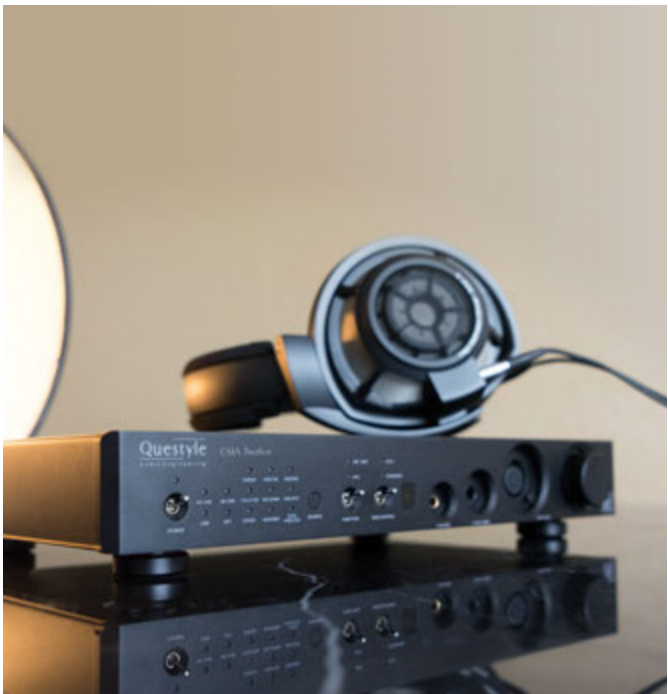
DALE military resistors

# System

## Giving Full Performance to Your Headphones

CMA Twelve is designed with four groups of Current Mode amplifiers, exhibiting forceful driving power and an ultra-low distortion level of a mere 0.0005%. Plus the high-performance BIAS Control System, CMA Twelve will give full performance to your headphone or speaker systems and bring you an exceptional listening experience.

THD+N		
4 Groups	0.0005 %	4.4 mm
Current Mode Amplifiers	Ultra-low Distortion	Balanced Headphone Jack



Balanced headphones with a 4.4mm connector are a rising trend with many headphone manufactures including Sennheiser, Audio Technica and Sony, launching products with 4.4mm-connections. CMA Twelve is Questyle's first device to feature the 4.4mm jack and Questyle is committed to support this growing trend.

## Serve as A Digital Monitor in Studios

In addition to SPDIF and Optical inputs, the CMA Twelve supports a professional AES input and XLR output. Live recordings can be monitored in real time via the 6.35mm headphone output. Output level matching is user switchable between Studio and Standard mode. In the Studio mode, the power level will increase from 14dBu up to 20dBu instantly, matching it with studio-level professional equipment.



## Bringing Out The Sound Quality of Streaming

Digital audio signals from your PC, music server, CD or Blu-ray can be sent to the CMA Twelve via AES, SPDIF, Optical or USB. The core patented technologies of Current Mode Amplification, True DSD and 3x Clock Asynchronous Transmission allow the CMA Twelve to offer outstanding performance from its DAC and pre-amplifier. The specially designed ADJ/FIX switch is used to match with power amplifiers and active speakers.



## CMA Twelve & CMA Twelve MASTER

There are two versions of CMA Twelve, the first is the CMA Twelve Standard, the other being the CMA Twelve Master. The CMA Twelve Master has a “MASTER” laser etching, and features a ROGERS Ceramic PCB to ensure the ultimate performance for sound quality and in specifications. The finish of both the CMA Twelve Standard and CMA Twelve Master are available in your choice of Golden or Black.



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### DAC+Headphone Amplifier Section

- **Outputs:** 4.4 mm balanced headphone jack/  
4PIN XLR balanced headphone jack / 6.35mm headphone jack
- **Max Output Power(Po):**  
247mW@300Ω; 900mW@32Ω (6.35mm headphone jack)  
825mW@300Ω; 2W@32Ω (balanced headphone jack)
- **THD+N:** 0.00070% @Po=100mW, 300Ω   0.00167% @Po=50mW, 32Ω
- **Frequency Response:** DC-20kHz (+0, -0.4dB) @0dBFS, 24Bit, 192kHz  
DC-80kHz (+0, -3dB) @0dBFS, 24Bit, 92kHz
- **SNR:** 112dB, non-weighting

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### DAC+Pre-Amp Output Section

- **UCB Type B Input:**  
Support 44.1kHz-384kHz/16Bit-32Bit PCM and DSD Native DSD64, DSD128, DSD256, as well as DSD64, DSD128, DSD256 of DoP format  
(Note: support Win XP, Vista, Win7, Win8, Win10 and Mac OS)
- **Digital Input & Output:**  
SPDIF input and output, Optical input, AES/EBU input  
Support 44.1kHz-192kHz/16Bit-24Bit PCM
- **Pre-Amp & DAC Section:**  
Balanced XLR x1 pair, unbalanced RCA x1 pair  
STANDARD 14dBu: XLR: 5.084V   RCA: 2.549V  
STUDIO 20dBu: XLR: 8.887V   RCA: 4.475V  
THD+N@STUDIO 20dBu: XLR: minimum at 0.00085%  
RCA: minimum at 0.00115%  
XLR:>112dB   SNR: RCA:>109dB (non-weighting)  
(Note: FIX/ADJ: Fixed Output Mode or Adjustable Output Mode of the pre-amp.)

# Questyle

Audio Engineering



胡润百富  
HURUN RESEARCH

Questyle Audio is one of the top 50 competitive enterprises in Shenzhen

Questyle Audio redefines high-end audio as being professional and convenient.

Questyle Audio products include: Lossless Portable Digital Audio Players (DAPs), Desktop Headphone Systems, Wireless Audio Systems, etc. Questyle Audio, a National High-tech Enterprise, is honored as one of the top 50 competitive enterprises in Shenzhen by Hurun Research Institute.

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