C 389 HYBRIDDIGITAL™ DAC AMPLIFIER

Preliminary

Introducing the C 389 HybridDigital DAC Amplifier

Building on five decades of innovation in amplifier design, NAD's C 389 HybridDigital DAC amplifier offers audiophile-class performance, flexible connectivity options, class-leading upgradability, and unmatched value. The C 389 employs NAD's proven HybridDigital UcD amplifier design and the same ESS Sabre DAC used in NAD's acclaimed M33 BluOS streaming amplifier.

With a full suite of digital and analogue inputs, including an ultra-low-noise phono stage and HDMI eARC interface, the C 389 can accommodate all your source components. In addition to two sets of speaker outputs, it has two subwoofer outputs, a preamp outputs, and a dedicated headphone amp. The C389 incorporates MDC2, the latest iteration of NAD's Modular Design Construction technology, so owners can add exciting features like BluOS multi-room streaming and Dirac Live room correction.

Power to Spare

From input to output, every aspect of the C 389 has been engineered to deliver thrilling dynamics and transparent, detailed sound. The digital section is built around the same 32-bit/384kHz ESS Technology Sabre DAC chip used in NAD's award-winning Masters M33 amplifier. Renowned for its near-zero levels of clock jitter, exceptionally wide dynamic range, and ultra-low noise and distortion, the ESS Sabre 9028 DAC enables the C 389 to deliver astonishing clarity and near-holographic imaging on all sources.

For the output stage, the C 389 uses a customized version of NAD's HybridDigital UcD design, with multiple UcD amplifier modules in balanced bridged configuration and an innovative switch-mode power

FEATURES & DETAILS

- Customized HybridDigital UcD amplifier in fully balanced bridged configuration
- Continuous Power: 130 Watts per channel into 8/4 ohms
- Instantaneous Power: 210 W into 8 Ω, 300 W into 4 Ω, 350 W into 2 Ω* Watts per channel
- Vanishingly low harmonic and intermodulation distortion
- Dual MDC2 ports for expanded functionality
- Optional MDC2 BluOS-D module adds BluOS Hi-Res multi-room music streaming and Dirac Live room correction
- Jitter-free 32-bit/384kHz ESS Sabre 9028 DAC
- Ultra-low-noise MM phono stage with infrasonic filtering circuitry
- Two optical, two coaxial digital inputs
- HDMI-eARC input
- Two pairs of line-level analogue inputs with ultra-low-noise buffer amplifiers
- Two sets of speaker outputs
- Two-way Qualcomm aptX HD Bluetooth
- Dual subwoofer outputs
- Dedicated headphone amplifier
- CI-Friendly - IR remote, 12V Trigger in/out, IR in/out, RS-232 Serial port
- Seamless integrations with smarthome control systems such as Control4, Crestron, RTI, URC, Push, Lutron, iPort, and Elan

supply that can provide ample reserves of current on demand. This enables it to produce real-life listening levels with any loudspeaker load. The C 389 can deliver 130 Watts per channel continuously, with virtually unmeasurable distortion and noise throughout the audioband, and up to 350W* Watts per channel of instantaneous power, for effortless reproduction of musical transients.

Future Forward

With its two MDC2 expansion slots, the C 389 can adapt to technical advances and evolving user needs. Introduced in 2006, NAD's Modular Design Construction future-proofing technology lets owners of MDC-capable components add new capabilities by inserting an expansion module into an MDC slot on the rear panel. Starting in 2021, MDC2 is an all-new design that allows two-way communications between the expansion module and host component. NAD's first MDC2 module is the MDC2 BluOS-D, which features BluOS high-res multi-room streaming and Dirac Live room correction.

The MDC2 BluOS-D connects to your home network via Wi-Fi or wired Ethernet. With MDC2 BluOS-D installed, the C 389 can be part of a whole-home music system with as many as 64 zones. Listeners can play music from their favorite streaming services, or from their personal music libraries, under control of the BluOS app, which is available for Android, iOS, macOS, and Windows. The BluOS Controller app has integrated support for more than 20 services, including several that offer lossless and high-res audio, such as Amazon Music HD, Deezer, Idagio, Qobuz and Tidal. Like all BluOS-enabled components, the MDC2 BluOS-D has MQA decoding and rendering capability, for high-res streaming from Tidal. It also supports Apple AirPlay 2, Spotify Connect and Tidal Connect, as well as Amazon Alexa, and Google Assistant voice control.

Dirac Live room correction compensates for acoustic problems like standing waves and room reflections. Connect the supplied microphone to the optional MDC BluOS-D's USB port, and then run the free Dirac Live* app on a smart device or personal computer. Dirac Live will play test tones through your speakers, analyze the results, then transfer compensation filters to the MDC BluOS-D. The results are transformative: you'll enjoy deeper, more textured bass; more precise imaging; and improved timbral accuracy. Thanks to MDC2's two-way architecture, the MDC2 BluOS-D delivers these benefits on all sources connected to the C 389.

*Limited version up to 500Hz. Upgrade to full version at dirac.com for US$ 99

Plug and Play

The C 389 has all the inputs you need to accommodate your audio source components. These include two optical and two coaxial digital inputs and two sets of RCA line-level analogue inputs. The analogue inputs have ultra-low-noise buffer amplifiers for greater sonic purity.

Vinyl fans will appreciate the C 389's precise MM phono stage, which provides accurate RIAA equalization, high overload margins, and extremely low noise. The phono section incorporates an innovative circuit that suppresses the infrasonic noise that is always present during vinyl playback, without affecting bass performance.

For movies and television, the C 389 has an HDMI eARC input so that listeners can play TV audio from through their high-fidelity speakers while controlling volume with the TV's remote. With its two subwoofer outputs, the C 389 can serve as the hub of a 2.1- or 2.2-channel system for music and movie playback. With the MDC2 BluOS-D installed, users can set crossover frequency with the BluOS app, for a seamless blend between the subwoofers and main speakers.

The C 389's dedicated headphone amplifier has low output impedance and very high voltage output capability, so that it can be used with demanding headphones, including low- and high-impedance studio headphones. The C 389 also features two-way wireless Bluetooth, with support for Qualcomm's aptX-HD codec, for 24-bit streaming from your smartphone or tablet, and wireless playback through Bluetooth headphones and speakers.

A New Classic

For over 50 years, the NAD brand has been synonymous with performance and value. The C 389 HybridDigital DAC Amplifier solidifies this reputation even further. With its precise volume control, ultra-low-noise circuitry, and cutting-edge amplifier design, the C 389 will deliver thrilling dynamics and exquisite detail from all your musical sources. With NAD's next-generation MDC2 future-proofing technology, C 389 owners can add exciting capabilities like multi-room music streaming and automatic room correction. The NAD C 389 can serve as the cornerstone of a high-performance audio system now, and for decades to come.

Specifications C 389

All specs are measured according to IHF 202 CEA 490-AR-2008 standard. THD is measured using AP AUX 0025 passive filter and AES 17 active filter.

PREAMPLIFIER SECTION

LINE INPUT, PRE-OUT (ANALOG BYPASS ON)

THD (20Hz - 20kHz)	<0.002 % at 2 V out
Signal-to-Noise Ratio	>106dB (IHF; A-weighted, ref. 500 mV out, unity gain)
Channel separation	>100dB (1 kHz); >90 dB (10 kHz)
Input Impedance (R and C)	56 kohms + 100 pF
Maximum input signal	>4.6 Vrms (ref. 0.1 % THD)
Output impedance	Source Z + 320 ohms
Input sensitivity	65mV (ref. 500 mV out, Volume maximum)
Frequency response	±0.3 dB (20 Hz – 20 kHz)
Maximum voltage output -IHF load	>>5 V (ref. 0.1 % THD)

PHONO INPUT, PRE-OUT (ANALOG BYPASS ON)

THD (20Hz - 20kHz)	<0.01% at 2 V out
Signal-to-Noise Ratio	>84dB (200 ohms source; A-weighted, ref. 500 mV out)
Input sensitivity	46 kohms/100 pF
Frequency response	±0.3 dB (20 Hz – 20 kHz)
Maximum input signal at 1kHz	>80 mVrms (ref. 0.1 % THD)

LINE INPUT, HEADPHONE OUT (ANALOG BYPASS ON)

THD (20Hz - 20kHz)	<0.005% at 1V out
Signal-to-Noise Ratio	>107 dB (32 ohms loads; A-WTD, ref. 1V out, unity gain
Frequency response	±0.3 dB (20 Hz – 20 kHz)
Channel separation	>62 dB at 1kHz
Output impedance	2.2 Ohms

LINE IN, SPEAKER OUT (ANALOG BYPASS ON)

Continuous output power into 8 ohms and 4 ohms	2 x 130W
THD (20 Hz – 20 kHz)	<0.02% (250 mW to 130 W, 8 ohms and 4 ohms)
Signal-to-Noise Ratio	>95 dB (A-weighted, 500 mV input, ref. 1 W out in 8 ohms)
Clipping power	150W
IHF dynamic power	210W into 8 ohms
	300W into 4 ohms
	350W into 2 ohms
Peak output current	>26A (in 1 ohm, 1ms)
Damping factor	>150 (ref. 8 ohms, 20Hz to 6.5kHz)
Frequency response	±0.3 dB (20 Hz – 20 kHz)
Channel separation	>90dB (1 kHz)
	>75dB (10 kHz)
Input sensitivity (for 130 W in 8 ohms)	Line In: 201 mV, Digital In: 10.25% FS

GENERAL SPECIFICATIONS

Supports bit rate/sample rate	up to 32 bit/384 kHz
Frequency band	2.402GHz- 2.480GHz
Maximum transmit power (dBm)	7 dBm ± 2 dBm

DIMENSIONS AND WEIGHT

Gross dimensions (W x H x D)	435 x 100 x 390mm (17.1 x 3.9 x 15.4“)
Net Weight	8.7kg (19.1lb)
Shipping weight	~11kg (24.2lb)

* Gross dimensions include feet, extended buttons and rear panel terminals. ** Non-metric measurements are approximate. NAD Electronics will not assume any liability for errors being made by retailers, custom installers, cabinet makers, or other end users based on information contained in this document. Note: Installers should allow a minimum clearance of 55mm for wire/cable management.