M51 Direct Digital DAC



The M51 Direct Digital™ DAC uses the same high precision digital processing as our groundbreaking M2 Direct Digital™ Amplifier, but in a new format that easily interfaces with high performance analogue components, including our M3 Dual Mono Integrated Amplifier. Part of NAD's Masters Digital Suite, the M51 features extremely low noise, low distortion, wide dynamic range, superb linearity and extremely low digital jitter. The M51 accepts PCM data rates up to 24 bit 192 kHz making it perfect for listening to increasingly popular high resolution downloads.

HDMI <0.5W STANDBY

Features

> Digital Innovation

NAD's exclusive Direct Digital™ technology was first introduced in our groundbreaking M2 Direct Digital™ Amplifier. The M51 is the first standalone DAC to exploit the extreme precision and speed that only Direct Digital™ technology can offer. Instead of using the Direct Digital™ processor to drive the high power output stage of a power amplifier, the M51 employs a line level analogue output that will perfectly interface with any analogue system.

> The Advantage of Direct Digital™

NAD's unique technology uses a very powerful processing engine that operates at much higher speed and with much greater accuracy than typical D-to-A converters. Running at 108MHz, the M51 resamples the incoming PCM (pulse code modulated) signal and converts it to PWM (pulse width modulation) with a sampling rate of 844kHz. Operating in a differential mode with double precision the M51 has state-of-the-art specifications for low noise and freedom from distortion. Digital jitter at the output, both uncorrelated and correlated, is vanishingly low even if the incoming signal is corrupted.

> Next Generation Connectivity

While the M51 includes the industry standard SPDIF inputs, including AES/EBU, Optical and Coaxial. The M51 also includes the latest USB technology fully supporting 192kHz sample rates, allowing direct connection of a PC or Mac. HDMI provides an encrypted HD Audio connection in PCM's native I2S format up to 24 bit 192kHz.

> Home Theatre 2.0

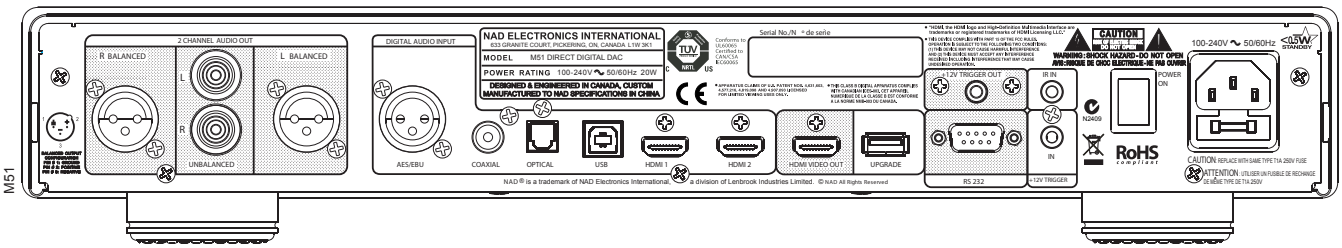
The M51 offers two HDMI inputs and one output with video pass through. This opens up the possibility of using the M51 Direct Digital™ DAC as the heart of a Home Cinema 2.0 system using the linear PCM soundtrack from Blu-ray or DVD to make a compelling 2-channel high definition theatre presentation. Many symphony orchestras and some specialty music labels are also releasing HD recordings on Blu-ray.

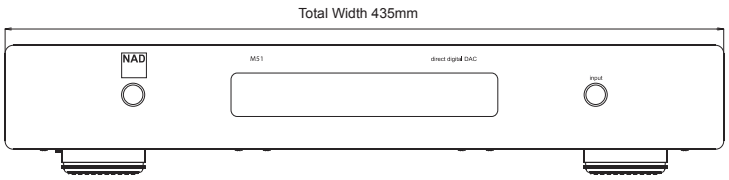
> Pure Performance

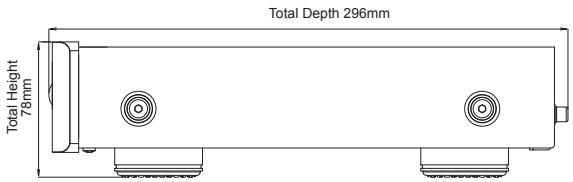
The incredible precision of the M51's processing engine gives music a vibrancy and transient accuracy that must be heard to be appreciated. A pure Class A analogue stage with very low output impedance provides the perfect interface to your favourite amplifier. A patented real-time digital error correction circuit corrects for any nonlinearities in the output buffer and digital reconstruction filter. Both balanced and single-ended outputs are available.

> More Than Just a DAC

M51 is a fully functional digital preamp with six digital inputs and one of the world's best volume controls. As a 'preamp' it is totally noise and distortion free because all switching and volume control is done in the digital domain. Whether you want to get into Computer Audio, Home Cinema 2.0 or just want to upgrade your CD Player, the M51 Direct Digital™ DAC will get the best possible performance from every digital format. All this innovation, performance and flexibility comes with legendary NAD sound quality and affordability.







Specifications

		M51
Rated Distortion (THD+N with AES 17 filter)		<0.0005% (0dBFS)
IMD Distortion		0.0001%
Signal/Noise Ratio		<-125dB (ref. 0dBFS 2V out)
Channel Separation		>-115dB (ref. 0dBFS Volume -1dB)
Sample Rate		32kHz to 192kHz (USB and digital S/PDIF)
Frequency Response		±0.5dB (ref. 20Hz - 22kHz sample rate)
Output Level		2V (ref. input 0dBFS)
INPUT		
XLR - AES/EBU		
SPDIF	Coaxial x 1 Optical x 1	
HDMI x 2 (stereo only)		
USB Class 2 Audio: asynchronous 24/192 support		
IR In		
Trigger In		12V ±20%
OUTPUT		
HDMI Video Out (3D video pass through)		
Analogue	Unbalanced Balanced	47 ohms 110 ohms
Trigger Out		12V ±20%
GENERAL		
AC Supply		100-240V AC ~ 50/60Hz
Standby Power		<0.5W
Idle Power		16W
Unit Dimension (WxHxD) - Gross*		435 x 78 x 296mm 17 1/8 x 3 1/8 x 11 11/16 inches**
Net Weight		5.8kg (12.8lb)
Shipping Weight		9.8kg (21.6lb)
Finish		Masters Silver or Black

* 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.

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