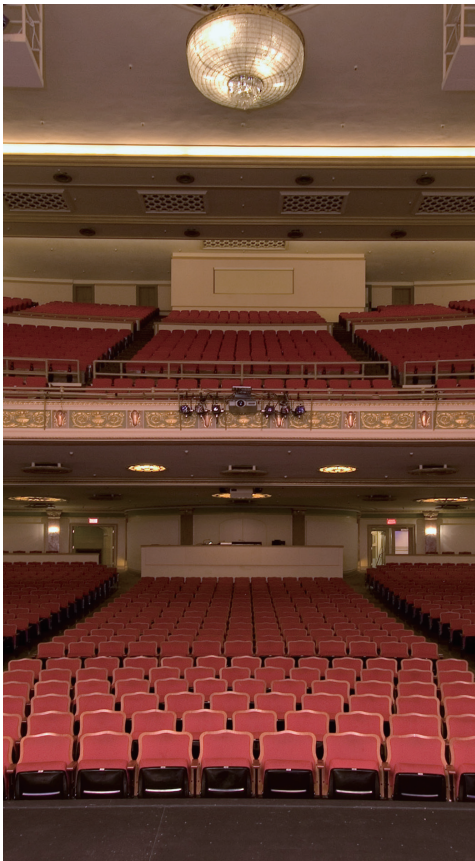




Dante™ Network Class D Professional Audio Amplifier

D-3000





❖ SUMMARY

The D-3000 is a high power professional amplifier specially designed for the sound re-enforcement market also referred to as SR, which incorporates a DSP, Digital Signal Processor and Audinate's Dante™ digital audio network. Dante delivers low latency, robust synchronization, I/O scalability, and installation simplicity via standard IT technology. The superior efficiency of a Class-D amplifier means a higher power output that is also more compact than an analog amplifier.

❖ OVERVIEW

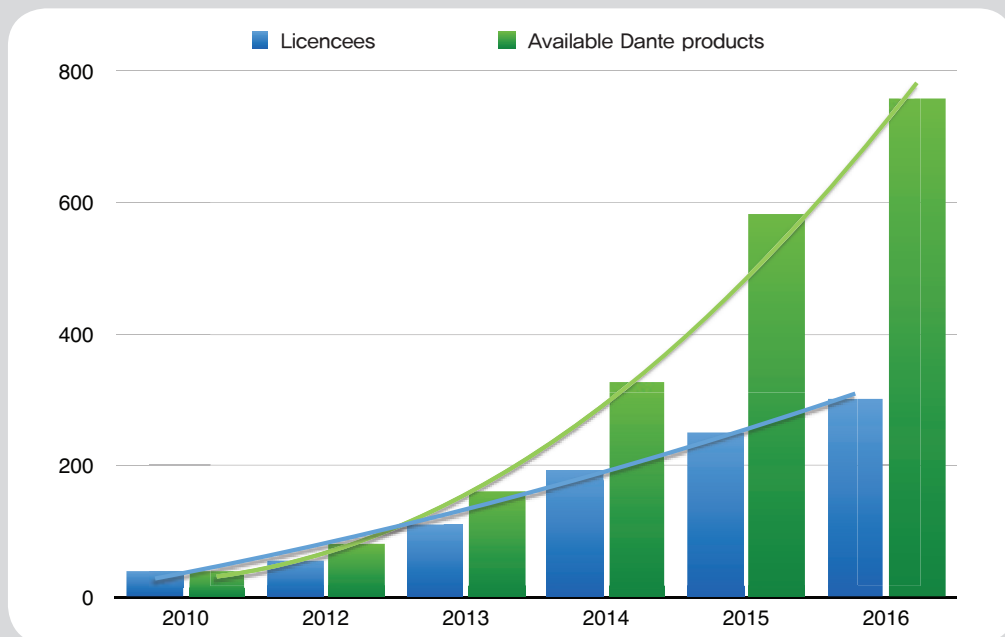
The D-3000 is a high power professional amplifier specially designed for the sound re-enforcement market also referred to as SR, which incorporates a DSP, Digital Signal Processor and Audinate's Dante™ digital audio network. Dante delivers low latency, robust synchronization, I/O scalability, and installation simplicity via standard IT technology. The D-3000 will deliver up to 3000 watts of power per channel down to 2 ohm loads. Housed in two RU compact frameworks, the D-3000 Class D amplifier offers high power with reduced size and weight. The combination Class D topology amplification circuitry combined with SMPS (Switch Mode Power Supplies) creates a high efficiency amplifier that offers reduced power consumption and low heat dissipation. The D-3000 is ideal for applications where high power and efficiency is required. This may include House of worship, arenas, stadiums, concert venues, touring or any other large-scale facilities.

•• DANTE Digital Network Audio Technology

Audinate's Dante™ is a modern high performance digital media transport system that runs over standard IP networks. Dante exceeds all other systems in speed, channel count, ease of use, flexibility, and scalability.

Dante offers a no hassle, self-configuring, true plug, and play digital audio networking experience. It is the solution for transporting low latency uncompressed audio over standard IP ethernet networks with sample accurate synchronization, automatic device and channel discovery, and easy to use signal routing.

Dante™ is built on IT standards, and is a complete media networking solution. Dante delivers a low-latency, tightly synchronized, sample-accurate playback, which also simplifies installation and configuration of A/V networks. It is ideal for applications where high power and large quantity of long-line speaker installation is required. As a result, Dante has become the leading solution for a variety of professional applications as it demystifies audio networking.



•• DANTE Audio Network

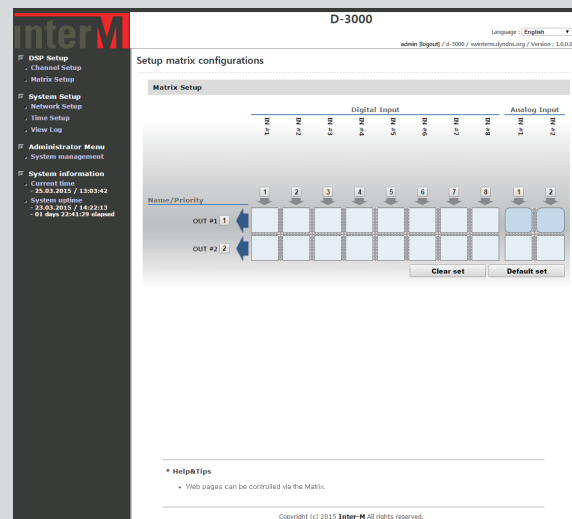
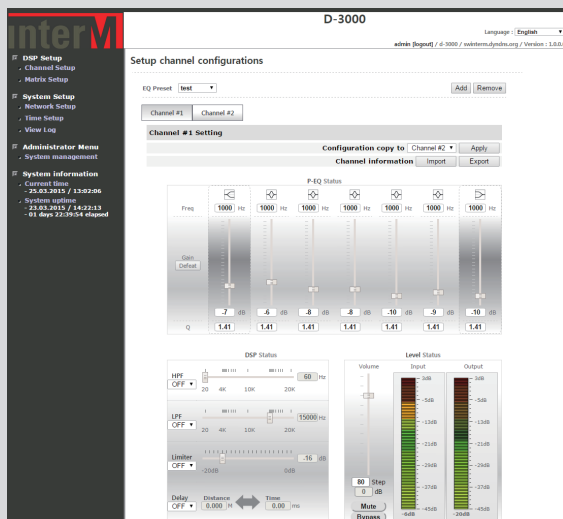
Audinate's Dante is an uncompressed, multi-channel digital media networking technology, with near-zero latency (maximum delay time: under 1ms) and synchronization. Dante is currently the most advanced and most widely used network audio technology. It transmits 48kHz, 24bit high quality digital audio in real time through standard TCP/IP network protocol.

•• Brand Interoperability

Based on industry standards, Audinate's Dante is an uncompressed, multi-channel digital media networking technology, with near-zero latency and synchronization. Dante is the preferred audio networking solution that has been adopted by more pro-audio AV manufacturers than any other networking technology. Interoperability is a reality today, therefore, the Inter-M D-3000 series is compatible with hundreds of other Dante-enabled products available from the world's leading manufacturers. This enables consumers to mix devices from multiple manufacturers.

•• DSP Digital Signal Processing

The D-3000 series comes with a real-time digital signal processor and signal processing functions that include EQ, dynamics, and delay. Most importantly, there is no need for separate external processors. Some of the available DSP features include: 5 band Parametric, variable Q Equalizers (P-EQ), High Pass and Low Pass Filters, Limiter and Delay, and Input and Gain Control. DSP and channel mapping functions for D-3000 series amplifier are configurable by an HTML 5 web-browser interface.



● Shelving EQ

Shelving filters are used to reduce or increase signals above or below a set frequency. Shelving filters are used as common tone controls (bass and treble) found in most audio equipment. These implement a first order response and provide an adjustable boost or cut to frequencies above or lower than a certain point.

● P-EQ (PARAMETRIC EQ)

Parametric equalizers are multi-band variable equalizers, which allow the user to control the three primary parameters: amplitude (GAIN), center frequency (Freq) and bandwidth (Q). The amplitude of each band can be controlled, the center frequency can be shifted, and bandwidth ("Q") can be widened or narrowed. Parametric equalizers are capable of making much more precise adjustments to sound than other equalizers commonly used.

● HPF (High Pass Filter)

A high-pass filter is a filter that passes higher frequencies well but attenuates lower frequency components. The adjustable range is from 20Hz ~ 20kHz, with a fixed slope of -18db/octave. High pass filters are useful for removing unwanted signal below a set frequency.

● LPF (Low Pass Filter)

A low-pass filter passes low-frequency components of signals while attenuating higher frequencies. The adjustable range is from 20Hz ~ 20kHz, with a fixed slope of -18db/octave. Low pass filters are useful for removing unwanted signal above a set frequency.

● Limiter

A limiter allows signals below a specified input signal level (Threshold) to pass unaffected while attenuating the peaks of stronger signals that exceed this threshold. The, Limiting is a form of dynamic range compression.

● Delay

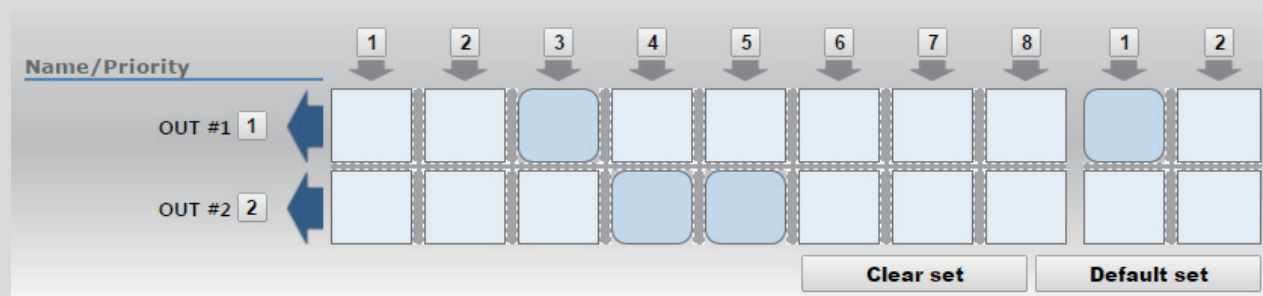
The delay circuit digitally records an input signal to an audio storage medium, and then plays it back after a period. This is used to synchronise in time multiple speakers in a room with respect to a listening point such as to minimize multipath reverberant sound. This technique distribute the sound evenly and ensure high quality sound for the entire audience giving the listener the impression of a single sound source. The delay in the D-3000 can compensate for distances of up to 17.0meters or 50ms.

• LEVEL

The amplifier input level or volume control can be remotely controlled or pre-set via the web-browser control panel. This feature can be bypassed for full volume or muted.

• Input Mapping

The mapping control allows the matrixing of 8 digital inputs with the 2 local analogue inputs.



• Web-Browser Control Panel

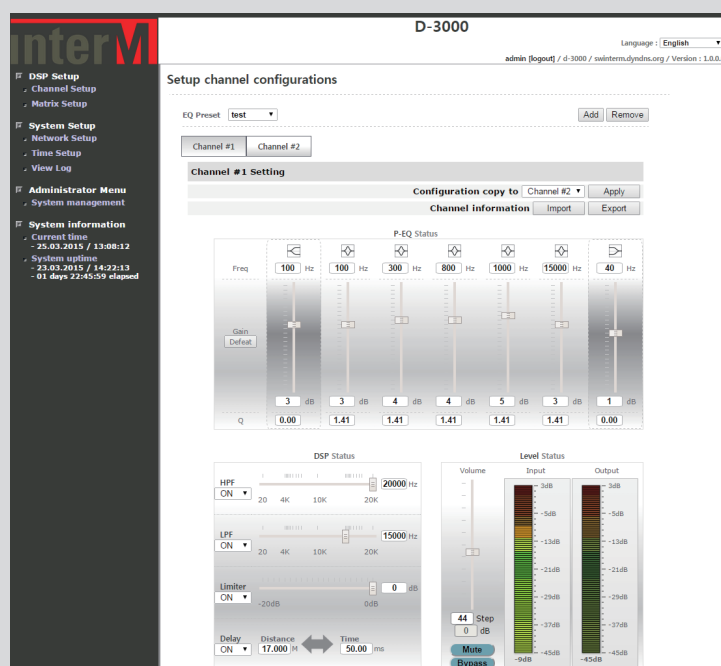
The Web-Browser control panel is a web-based interface (control panel) that is used to interact directly with the Amplifier for making configuration changes and for requesting information from the player.

The Web-Browser control panel runs directly on port 80 of the amplifiers internal web server and can be accessed from any browser including web-enabled devices like tablets and smart phones.

Opening a browser and typing the following address will access the Web-Browser control panel interface:

http://device_ip_address, where the default IP address is <http://192.168.1.xx>

The web-browser interface will allow you to setup and configure the Network Settings, Security, Date/Time, 31 band variable Q Graphic Equalizer, High Pass and Low Pass Filters, Limiter and Delay, Input and Gain Control, Firmware Update, Maintenance, and Log Files. Through the web-browser interface, consumers can easily select the desired channel to broadcast.



●● CLASS D

Class D audio amplifiers offer greater power efficiency over traditional amplifiers. Among their advantages includes their reduced physical size and lower heat dissipation. They offer less than 1% THD (Total Harmonic Distortion), with an increased signal to noise ratio to 90db, and a widened frequency response from 30Hz ~ 20 KHz.

Class D audio amplifiers offer greater than 90% power efficiency over traditional amplifiers and SMPS provides high efficiency and low weight. The DPA series is fully equipped with a protection circuit against short circuit, overload, power, and DC output.

●● Same Powerful Output from a More Compact Amplifier

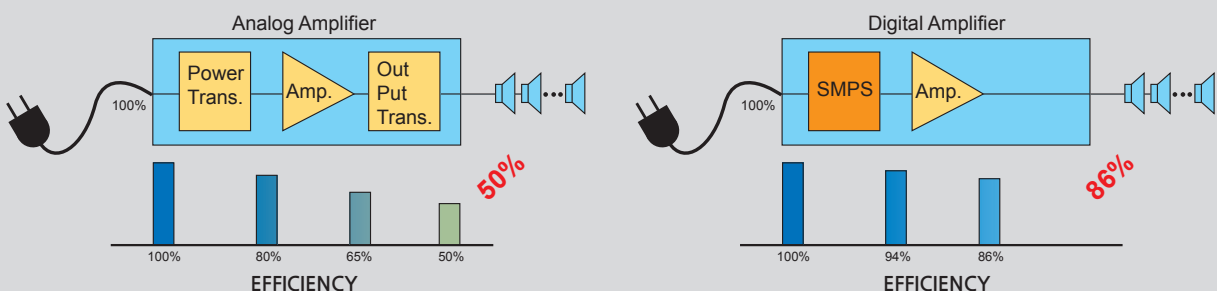
The superior efficiency of a Class-D amplifier means higher power output that is also more compact than an analog amplifier. Only 2 rack units in size, the DPA Class D audio amplifier with ECO Digital design offers greater than 90% power efficiency and lower heat dissipation over traditional analog amplifiers with lower efficiency and greater noise.

●● Efficiently Compact and Lots of Power

Class-D amplifiers overcome the inefficiencies of traditional Class-A or AB amplifiers. The Inter-M D-3000 Class-D amplifier transform very little power into heat, therefore, a higher percentage of the power supply is transformed into the load. This results in a very compact amplifier, which needs less input power to produce very high output power.

●● Why Use Class D-Amplifiers?

Class-D amplifiers deliver more output watts to input AC power than conventional analogue amplifiers. This is because the Class-D amplifier's PWM (Pulse Width Modulator) modulates the original audio input signal with a triangulated signal wave, which has a much higher fixed frequency. The result is a digital signal that contains both the input signal and a band of frequency components around the modulation frequency. A LPF (Low Pass Filter) then filters out the high frequency pulses, and the resulting amplified output signal is then sent to the speakers.



●● SMPS Provides High Efficiency and Low Weight

Among SMPS advantages is their reduced physical size and lower heat dissipation. SMPS offer power efficiency and reduced power consumption over traditional amplifiers.

•• High Performance

The D-3000 series amplifier offers superior incomparable performance and hi-definition sound with better S/N and THD than any other Class D power amplifier on the market.

	Rated Output	Signal to Noise Ratio (S/N)	Total Harmonic Distortion (THD)	Power consumption (1/8)
Inter-M D-3000	3000W	103dB	Less than 0.02%	130W

•• THD : Total Harmonic Distortion

The lower THD means that the equipment produces a more accurate reproduction by reducing harmonics added by electronics and audio media.

•• S/N : Signal to Noise Ratio

The S/N ratio is a measurement that compares the level of a desired signal to the level of background noise. It is defined as the ratio of signal power to the noise power. The higher the ratio indicates more signal than noise.

•• Analogue Program Input

Two analogue audio program inputs are available on the amplifier. This inputs can be used to direct back-up program signal or local signals. They are switched or mixed using the

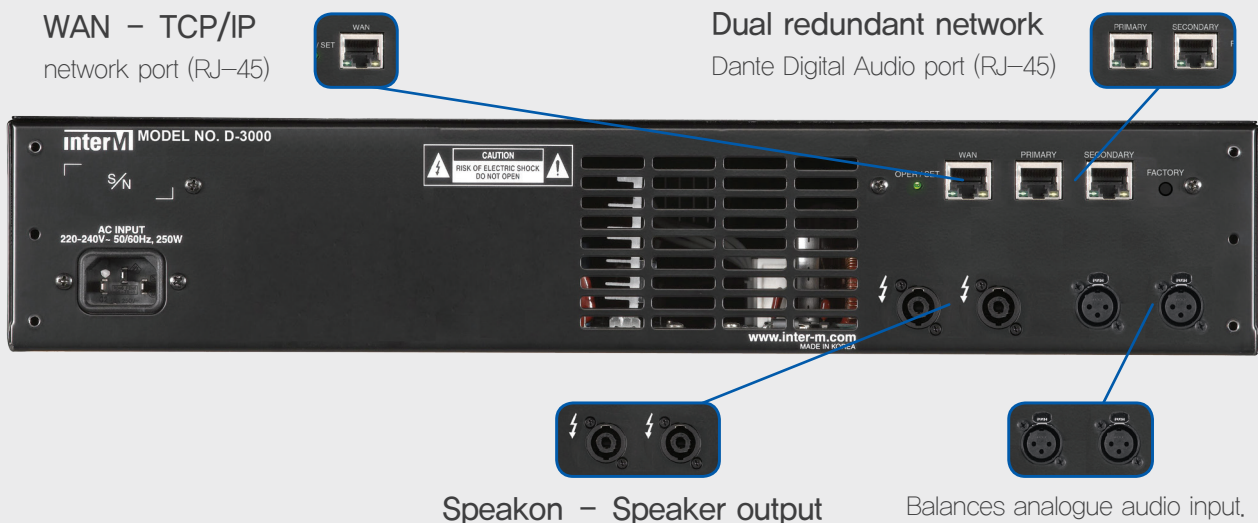
•• LED Display

Amplifier status monitoring is easy with a LED display (Power on, Standby, Signal/-30dB, -10dB, Clip, fault, AC, DC).



❖ FEATURE

- DANTE Digital Network Audio
- High Power CLASS-D Amplifier
- Compact 2U rack size
- Compact and lightweight form factor
- High efficiency SMPS (Switching-Mode Power Supply)
- Web browser control panel
- 5 band variable Q Equalizer (PEQ)
- High Pass, & Low Pass Filters
- Shelving EQ
- Limiter and Delay
- Input and Gain Control
- Balanced input XLR connection
- Low power consumption, low heat dissipation and light weight
- THD less than 0.02%
- S/N, greater than 103dB
- Protection circuitry (over heat, over current, speaker short, DC protection)
- LED status indicator (-30dB, -10dB signal level, signal clip, protection, AC, DC, Standby, power)



❖ SPECIFICATION

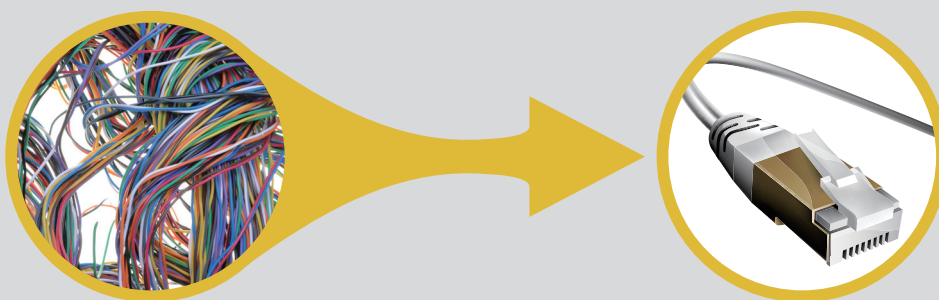
	D-3000		
Output Power	8Ω	4Ω	2Ω
	600w x 2ch	1200w x 2ch	1500w x 2ch
Input Sensitivity	1V/10kΩ		
T.H.D (AES17)	Less than 0.02%		
Signal to Noise (20kHz LPF)	103dB		
Frequency Response (1W, ±3dB)	20Hz~20kHz		
Operating temperature	-10℃ ~ 40℃		
Operating Power	AC 220-240V 50/60Hz		
Power consumption (1/8 Power)	250W		
Weight (SET)	8.1kg		
Dimensions (SET)	482(W) x 88(H) x 450(D)mm		

❖ APPLICATION

D-3000 Amplifiers are ideal for multi-zone applications where high power and large quantity of long-line speaker installation is required that may include: airports, arenas, shopping malls, transportation stadiums, or any other large scale facilities.



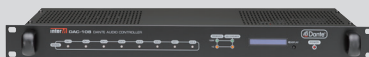
With its Dante Network Digital Audio Interface, the D-3000 series amplifiers are ideal for applications where amplifiers must be distributed in large areas. A simple network connection delivers interference free audio anywhere a TCP/IP LAN is available. D-3000 amplifiers utilizes DANTE digital network that is standard and used by many world leading manufactures. Furthermore, the inter-brand operability is as simple as connecting an RJ-45 UTP network cable.



❖ RELATED PRODUCTS



• DAC-288



• DAC-108



• DASR-288

NOTE

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※ Design and specification are subject to be changed for the improvement of product quality without pre notice.

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