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DESCRIPTION

DAP1616 DAN represents an Dante-enabled Digital Signal Processor (DSP) technology that revolutionizes audio management in conference and professional sound systems. This solution facilitates high quality audio routing, mixing, and processing over a network, ensuring crystal-clear sound reproduction in a variety of settings. By harnessing the power of Dante (Digital Audio Network Through Ethernet), it allows for flexible audio distribution with minimal latency, making it an ideal choice for modern conferencing and professional audio applications.

Offerings in the Dante DSP lineup. These matrix audio processors provide either 16 or 16 inputs and outputs, allowing users to tailor their audio setup to specific needs. Their advanced design ensures seamless integration into conference systems, enhancing communication and collaboration through superior audio quality.

FEATURES

- **Comprehensive Input/Output Configuration**

  Supports both line level and mic level connections for versatile audio integration, allowing users to connect a variety of audio sources easily.

- **Dante Network Audio**

  Optional support for Dante network audio ensures seamless audio distribution across multiple devices and locations, enhancing overall system flexibility.

- **Phantom Power Support 48V**

  Each input channel supports 48V phantom power, enabling the use of professional condenser microphones for high-quality sound capture.

- **Standard USB Audio**

  Offers 2x2 USB audio connectivity for easy integration with computers and devices, making setup straightforward for various applications.

- **USB-Free Driver Connection**

  Connects without the need for USB drivers, supporting TCP/IP for network control, USB wired control for reliable connections, and Android app Tcon for wireless control, offering flexibility in how users manage their audio systems.

- **Mixing Capabilities**

  The system supports auto mixing and matrix mixing functions, allowing for versatile audio routing and management in complex setups, ensuring optimal audio distribution.

- **AEC, ANC, AGC**

  Equipped with Acoustic Echo Control (AEC), it eliminates echoes for crystal-clear communication during video conferencing. Integrated Active Noise Control (ANC) and Automatic Gain Control (AGC) enhance audio quality by reducing noise and stabilizing sound levels.

- **Camera Tracking Control**

  Supports camera tracking control, compatible with most camera control protocols.

- **Versatile Control Connections**

  The device supports various control connections, including USB, TCP/IP, RS232, RS485, and GPIO for external control.

- **User-Friendly Interface**

  Nice GUI for Windows 7/8/10/11 and an Android app for network control.

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TECHNICAL SPECIFICATIONS

Model	DAP1616 DAN

INTEGRATED DSP

Signal Processor/CPU	ADI SHARC 21489 + ARM quad-core processor
Delay	43ms
Audio Latency	1.05 ms (analog in to analog out)
A/D and D/A Converters	24-bit
Sample Rate	48 kHz

ANALOG AUDIO INPUTS

Input Channels	16 balanced, mic/line level
Connectors, Input	3.81 mm detachable Euroblock, 6-pin
Input Impedance	12 kΩ @ 1 kHz (with or without phantom power active)
Maximum Input Level	+24 dBu
Equivalent Input Noise	-118 dB at 44 dB gain setting
Phantom Power	+48VDC, 6.5mA, for each channel

ANALOG AUDIO OUTPUTS

Output Channels	16 balanced, line level
Connectors	<150ms
Output Impedance	200 Ω
Maximum Output Level	+24 dBu

AUDIO PERFORMANCE SPECIFICATIONS

Frequency Response	20 Hz to 20 kHz ±0.5 dB
THD+N	0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input
Channel Separation (Crosstalk)	< -105 dB at +4 dBu 1 kHz input signal
Dynamic Range	> 115 dB, A-weighted 20 Hz – 20 kHz, analog input to analog output

AUDIO OVER IP

Dante	64 × 64, primary/secondary

DIGITAL AUDIO PORTS

AmpLink (output only)	8 low latency (< 21µs), 48 kHz. Requires shielded Cat 5/6
USB Device	Type A-B, free driver
USB Host	Type A. For future us

CONTROL INPUTS

Inputs (Control)	16 analog or digital inputs, 2 kΩ internal pull-up resistor to 5 V
Analog Input Voltage Range	0 V to 3.3 V (maximum 5 V)
Digital Input Voltage Range	0 V to 3.3 V (threshold voltage = 1.6 V)

CONTROL OUTPUTS

Outputs (Control)	16 digital outputs, 3.81 mm detachable Euroblock, 6-pin
Output Voltage	High: 8 V (open circuit), 2.5 V @ 10 mA Low: < 1 V @ 100 mA, push-pull

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INDICATORS AND CONTROLS

Display	OLED
LED Status Indicators	Power/Status
Audio Signal Indication	On Display

ELECTRICAL SPECIFICATIONS

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Mains Voltage	85 VAC-264 VAC 50/60 Hz
AC Power Consumption	35 W typical at 40 °C (104 °F) ambient
Mains Connector	IEC 60320-C14 (Inlet)
Power Dissipation	60 W (205 BTU, 52 kcal)

PHYSICAL

Dimensions (D × W × H)	483mm x 265mm x 44.5mm
Net Weight	device 3.4kg
Operating Temperature	0°C - 40°C (32°F - 104°F)
Cooling System	2 variable-speed fans, side venting

GENERAL

PC Configuration Software	OLED
Network Control	Ethernet (RJ-45), 1 Gbps
RS-232/485 ports	On Display

APPLICATION ARCHITECTURE

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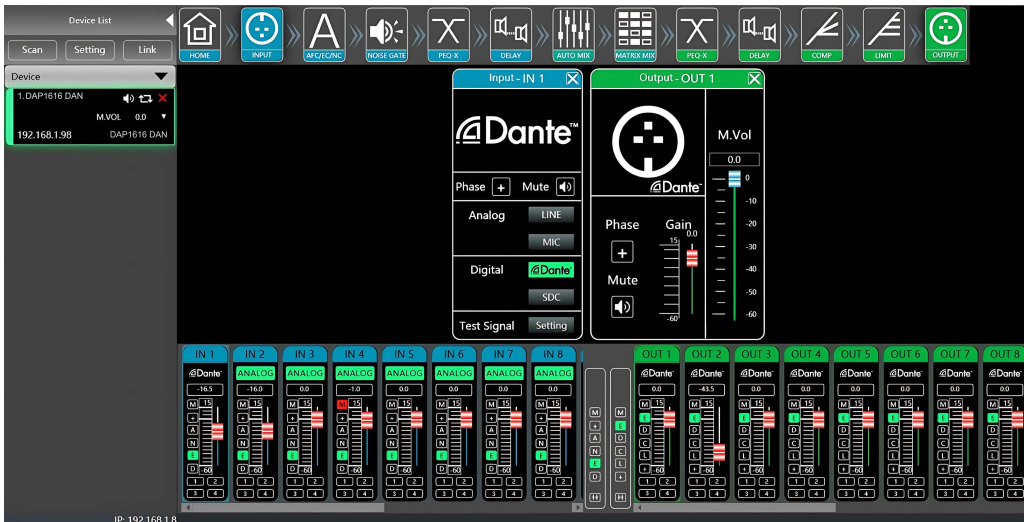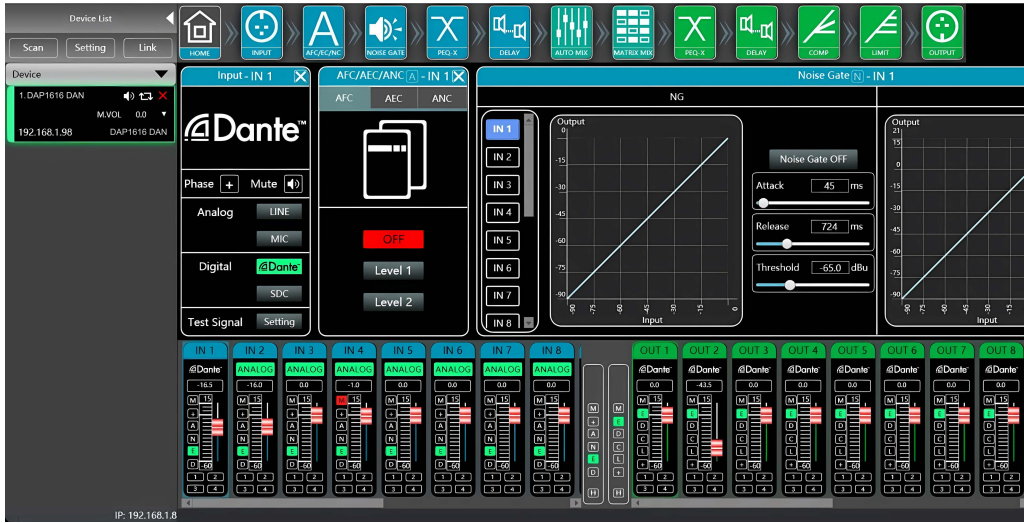
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