DSP-1281

Avia™ 12x8 Digital Signal Processor w/Dante™

- *Engineered to deliver exceptional pro audio performance with faster, easier implementation*
- *Ready to go out of the box and extensively configurable*
- *Hybrid channel strip architecture*
- *Customizable inputs and outputs*
- *Eight internal aux buses*
- *Clean and intuitive software*
- *Real-time configuration and adjustment*
- *Work offline or live via Ethernet or USB*
- *Native Crestron system integration for rapid programming [1]*
- *Highest-quality converters, preamps, and line amps*
- *Twelve mic/line inputs with 66 dB gain range*
- *Eight +24 dB balanced line outputs*
- *32x32 Dante™ audio network interface*
- *Front panel VU meters*
- *Internal universal power supply*
- *Single-space 19" rack mountable*

The Crestron® Avia™ family of digital signal processors leverages the highest quality components and the expertise of veteran audio industry engineers to deliver a revolutionary audio processing platform that's easy to integrate and configure. It has all the features and performance top sound system designers demand — complemented with an intuitive graphical workspace conceived to inspire exceptional results quickly.

Delivering quality sound in any meeting space, performance venue, courtroom, sports facility, or house of worship demands high-performance, professional audio signal processing. A good digital signal processor (DSP) must deliver sophisticated processing, mixing, and routing for all types of audio signals with a comprehensive set of controls and adjustments to manage the behavior and sound quality of each signal. Until now, DSP products have been either limited in their functionality and flexibility or too complicated and time consuming to implement economically. With Avia, Crestron has addressed all of those concerns.

Avia Audio Tool Software

Rapid system configuration and adjustment is enabled using the Avia Audio Tool software. Its clean, modern user interface provides a workspace that's easy and intuitive to navigate. The Avia Audio Tool allows setup and operation to be performed live over a USB or LAN connection, or "virtual DSPs" can be configured offline and uploaded locally or remotely.

Crestron Control® Integration [1]

Avia offers native Crestron control system integration to substantially reduce the amount of programming required. It even eliminates much of the touch screen UI design work by allowing components within the Avia Audio Tool to be selected and exported as a Smart Graphics™ file containing ready-to-use SmartObject® touch screen controls and meters. In fact, along with a variety of buttons and sliders, Avia supports up to 32 real-time VU meters running simultaneously on a touch screen. With minimal programming, a system integrator can provide their customer with a touch screen control solution custom tailored to their needs, with anything from a few selectable presets and volume controls to a complete virtual mixing console.

Dante™ Audio Networking

System expansion and integration with other audio devices is facilitated using Dante audio networking. Dante networking provides an additional 32 mono inputs and 32 mono outputs. Multiple DSP-1281 units can be linked via Dante to expand the number of inputs and outputs in the system. Dante also provides a digital multichannel audio bridge to a Crestron DigitalMedia™ system via Dante-enabled DM® switcher I/O blades. Additionally, Dante networking enables plug and play integration with other Dante-enabled mixers, switchers, sources, amplifiers, and computers.

The Avia DSP family comprises five models designed to address a full range of applications:

Model	Analog Mic/Line Inputs	+24 dB Analog Outputs	Internal Auxiliary Buses	Acoustic Echo Cancellation	SIP/POTS Phone Interface	8x8 USB Audio I/O	32x32 Dante™ I/O	Front Panel Meters
DSP-860	8	6	8					
DSP-1280	12	8	8					
DSP-1281	**12**	**8**	**8**				•	•
DSP-1282	12	8	8	•	•	•		
DSP-1283	12	8	8	•	•	•	•	•

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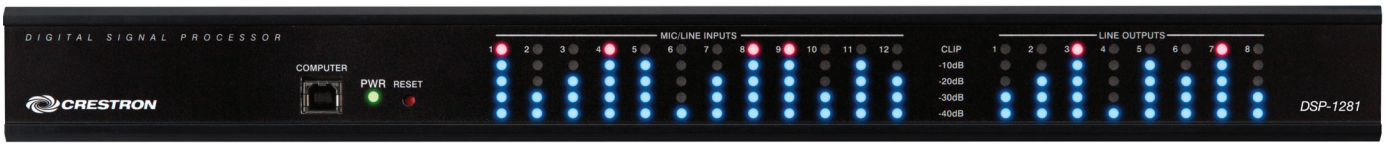
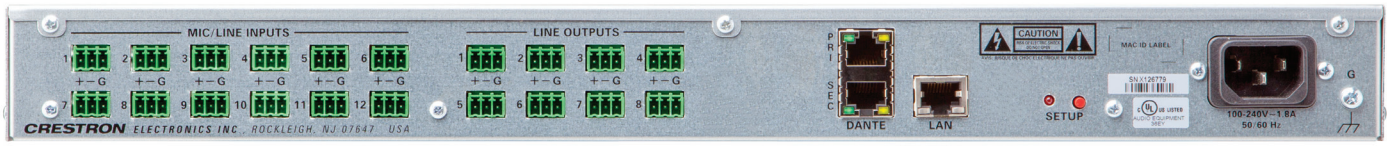


Front View



Rear View

SPECIFICATIONS

Audio – General

Analog-To-Digital Conversion: 24-bit 48 kHz
Digital-To-Analog Conversion: 24-bit 48 kHz
Frequency Response: 20 Hz to 20 kHz ±0.5 dB
THD: 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
EIN: -125 dBu, 22 Hz to 22 kHz, no weighting
Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain
Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel
-75 dB, 1 kHz, -50 dBu input, channel to channel
Latency: 3.0 ms (analog in to analog out)
Dante I/O: 32 channels in, 32 channels out, at up to 24-bit 48 kHz

Communications

Ethernet: 10/100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, SSH, SFTP (SSH File Transfer Protocol)
Dante: Dedicated 1000 Mbps primary and secondary Dante network ports
USB Device: USB device port for computer console (setup)

Connectors

MIC/LINE INPUTS 1 – 12: (12) 3-pin 3.5 mm detachable terminal blocks;
Balanced microphone/line-level audio inputs;
Input Level: +24 dBu maximum;
Gain Range: 66 dB;
Input Impedance: 10k Ohms balanced;
Phantom Power: +48 Volts DC, 12 mA, software enabled/disabled per channel

LINE OUTPUTS 1 – 8: (8) 3-pin 3.5 mm detachable terminal blocks;
Balanced/unbalanced line-level audio outputs;
Output Level: +24 dBu maximum;
Output Impedance: 150 Ohms balanced

DANTE, PRI: (1) 8-pin RJ45 female;
1000Base-T Primary Dante network port

DANTE, SEC: (1) 8-pin RJ45 female;
1000Base-T Secondary Dante network port

LAN: (1) 8-pin RJ45 female;
10Base-T/100Base-TX/1000Base-T Ethernet LAN port

100-240V~1.8A 50/60 Hz: (1) IEC 60320 C14 main power inlet;
Mates with removable power cord, included

G: (1) 6-32 screw, chassis ground lug

COMPUTER (front): (USB Type B female;
USB computer console port (for setup only)

Controls & Indicators

PWR: (1) Bi-color green/amber LED, indicates operating power supplied from AC line power, turns amber while booting and green when operating, alternates colors if no network connection
RESET: (1) Recessed pushbutton, restores last saved settings
MIC/LINE INPUTS 1 – 12: (12) 5-segment LED bar graph audio level meters for each corresponding input; each contains (4) blue LEDs for -40, -30, -20, and -10 dBFS, and (1) red LED for CLIP (-2 dBFS)
LINE OUTPUTS 1 – 8: (8) 5-segment LED bar graph audio level meters for each corresponding output; each contains (4) blue LEDs for -40, -30, -20, and -10 dBFS, and (1) red LED for CLIP (-2 dBFS)
DANTE, PRI (rear): (2) Bi-color green/amber LEDs, indicate primary Dante network activity and link status
DANTE, SEC (rear): (2) Bi-color green/amber indicate secondary Dante network activity and link status
LAN (rear): (2) Bi-color green/amber LEDs, indicate Ethernet activity and link status
SETUP (rear): (1) Red LED and (1) pushbutton for Ethernet setup

Power Requirements

Main Power: 1.8 Amps @ 100-240 Volts AC, 50/60 Hz
Power Consumption: 30 Watts typical

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Environmental

Temperature: 41° to 104° F (5° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 102 BTU/hr
Ambient Noise Level: 30 dBA

Enclosure

Chassis: Metal, fan-cooled, vented sides
Front Panel: Metal, black finish with polycarbonate label overlay
Mounting: Freestanding or 1 RU 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 1.72 in (44 cm) without feet
Width: 17.28 in (439 mm);
19.00 in (483 mm) with rack ears
Depth: 14.35 in (365 mm)

Weight

9.2 lb (4.1 kg)

MODELS & ACCESSORIES

Available Models

DSP-1281: Avia™ 12x8 Digital Signal Processor w/Dante™

Available Accessories

AMP-8000 Series: Avia™ Power Amplifiers
Avia™ Audio Tool: DSP Configuration Software

Notes:

1. Crestron control system, touch screens, and custom programming are sold separately. A control system is typically required for any installation that includes end-user adjustment or selection of presets, automated interaction with other equipment, and/or monitoring via Crestron Fusion®.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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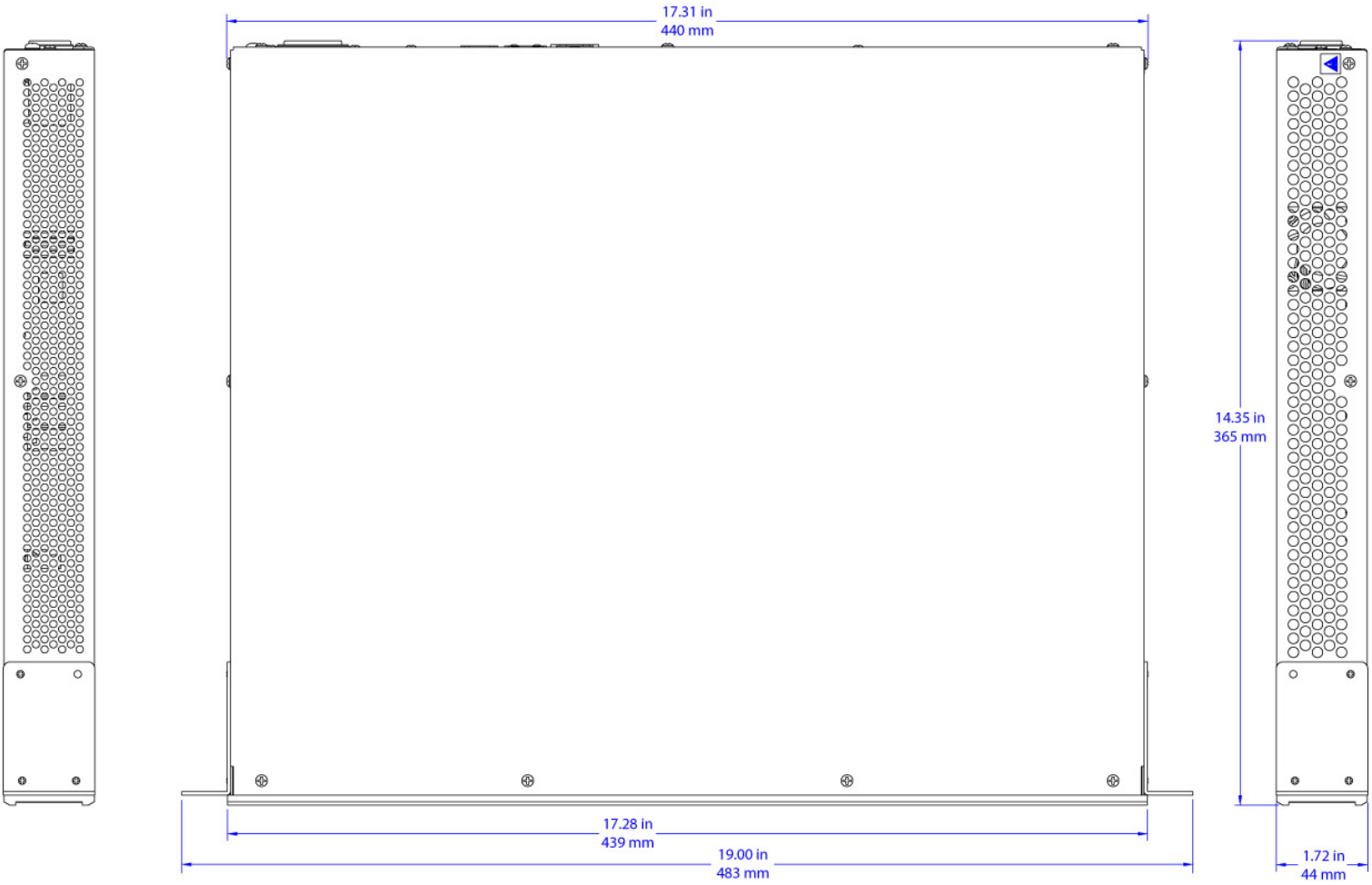
DIMENSIONAL DIAGRAM



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