DMPS3-4K-350-C

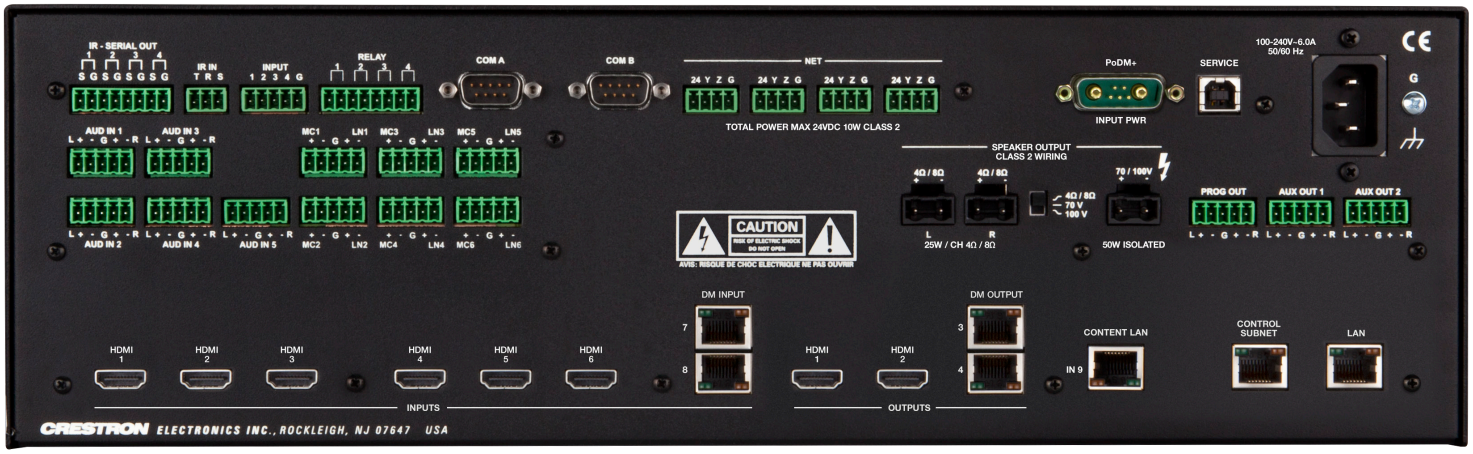
DigitalMedia™

3-Series® 4K DigitalMedia™ Presentation System 350

AirMedia

- Ultra high-definition 9x4 system switcher, scaler, mic mixer, audio DSP, amplifier, and control system
- Built-in .AV Framework™ delivers a fully-functional system without any programming [2]
- Integrated 3-Series Control System® allows fully-programmable room control
- Onboard AirMedia® gateway enables wireless BYOD presentation capability [1]
- Built-in H.264 streaming video decoder [3]
- Provides matrix signal routing for up to 9 video sources and 4 displays
- Handles video resolutions up to 4K DCI and Ultra HD
- Includes HDMI®, DM 8G+®, and balanced stereo analog audio inputs
- Also supports Dual-Mode DisplayPort, DVI, and HDBaseT® sources [4]
- QuickSwitch HD™ technology manages HDCP keys for fast, reliable switching
- Auto-Locking® technology achieves rapid switching between disparate sources
- Performs automatic AV signal format management via EDID
- HDCP 2.2 compliant
- Provides adjustable input level compensation on each audio input
- Includes built-in 6-channel gated microphone mixing with DSP
- Provides two HDMI and two DM 8G+ (HDBaseT compatible) outputs
- DigitalMedia 8G+® connectivity enables long-distance wiring over CAT type twisted pair cable [7]
- HDBaseT Certified — Enables direct connection to other HDBaseT certified equipment
- Features an independent, high-performance 4K scaler at each HDMI output
- Upscales input signals to match the native resolution of any screen — including 4K and Ultra HD displays!
- Downscales 4K, UHD, and ultra high-resolution computer signals to fit 1080p and other lower-resolution displays
- Handles any input resolution from standard NTSC 480i or PAL 576i, to UHD and 4K
- Provides intelligent frame rate conversion, content-adaptive noise reduction, and motion-adaptive de-interlacing
- Provides 3D to 2D signal conversion [5]
- Provides three balanced stereo audio outputs, each with independent mixer and DSP
- Provides two additional audio mixes, either of which is selectable at any digital output
- Features a built-in amplifier, selectable for 25W/Ch. @ 8Ω stereo or 50W @ 70/100 Volts mono
- Enables analog-to-HDMI audio embedding and de-embedding
- Enables USB signal routing via DM® transmitters and receivers or USB-EXT-DM series extenders [9]
- Includes onboard IR, RS-232, relay, digital input, and Cresnet® control ports
- Supports Crestron® touch screens, keypads, and wireless remotes
- Supports XPanel with Smart Graphics® computer and web based control
- Supports iPhone®, iPad®, and Android™ control apps
- Supports universal remotes via external RC-5 compatible IR receiver [6]
- Communicates natively with Crestron Fusion®
- Enables IT-friendly network integration via SNMP
- Integrated Ethernet switch provides a single-point LAN connection
- Control Subnet — provides a dedicated local network for Crestron devices
- Private Network Mode — requires just one IP address for the complete system
- Content LAN port allows streaming and AirMedia traffic to be isolated on a secondary network
- Includes front panel controls for basic configuration, diagnostics, and signal routing
- Includes customizable front panel label strips and LCD display
- Allows advanced setup and adjustment via a web browser
- Features an internal universal power supply for worldwide compatibility
- Furnishes power to PoDM+ and HDBaseT PoE+ powered devices [8]
- 3-space 19-inch rack-mountable

DMPS3-4K-350-C 3-Series® 4K DigitalMedia™ Presentation System 350



DMPS3-4K-350-C – Rear View

The DMPS3-4K-350-C from Crestron® offers an all-in-one 4K AV presentation system for classrooms, boardrooms, lecture halls, and videoconference rooms. Delivering a complete, custom-programmable room solution with fully-configurable signal routing and processing is easy and cost-effective using the DMPS3-4K-350-C. In one 3-space rack mount package, it integrates the control system, matrix switcher, video scalers, streaming decoder, mic mixer, audio DSP, and amplifier. Its built-in AirMedia® gateway, when activated [1], enables wireless presentation from computers and mobile devices. DigitalMedia 8G+® and HDBaseT® connectivity affords a streamlined, long-distance wiring solution for remote sources and display devices, and for facility-wide integration as part of a larger media distribution system.

Note: To purchase the DMPS3-4K-350-C with AirMedia pre-activated (no license required), see model DMPS3-4K-350-C-AIRMEDIA.

4K Ultra HD

Crestron DigitalMedia™ continues to advance the standard for digital AV signal management, delivering the most complete end-to-end 4K system solutions available. The DMPS3-4K-350-C handles 4K/60 video with HDCP 2.2 encryption, ensuring support for all the latest 4K and Ultra HD displays and media sources. Support for 4K is also essential to support the latest generation of computers and monitors with native resolutions beyond 1080p and WUXGA.

No Programming Required!

Installing the DMPS3-4K-350-C is easy, fast, and affordable. Built-in .AV Framework™ technology delivers a fully-functional presentation system with simplified configuration and a choice of control options and other add-ons. For complete details on the capabilities supported by .AV Framework, please visit: http://www.crestron.com/avframework.[2]

AirMedia® Wireless Presentation [1]

Built-in AirMedia technology allows for wireless presentation of content from a laptop, smartphone, or tablet device via a Wi-Fi® wireless network. With AirMedia, anyone can walk into the room with a Windows® or MacBook® laptop and connect without wires, enabling the presentation of any content including Full HD video at frame rates up to 30 fps. iPhone®, iPad®, and Android™ devices can present PowerPoint®, Excel®, Word, and PDF documents, as well as pictures, videos, or any app content with full-screen mirroring. AirMedia lets up to 32 participants connect at once, switching from one to the next for seamless collaboration on the fly.[1]

HD Streaming Video

Its onboard streaming decoder enables the DMPS3-4K-350-C to receive a high-definition AV signal over the network or internet from a DigitalMedia switcher, IP camera, or streaming encoder (Crestron DM-TXRX-100-STR or similar). H.264 and MJPEG streaming formats are supported with resolutions up to HD 1080p and bitrates up to 25 Mbps. High-quality AAC audio decoding is employed to handle 2-channel stereo audio with full frequency response.[3]

4K System Switcher

The DMPS3-4K-350-C provides high-performance routing of HDMI®, AirMedia [1], and streaming AV sources to up to four separate displays, projectors, codecs, and other devices. Its video inputs include six HDMI, two DM 8G+®, and one streaming/AirMedia. The HDMI inputs are compatible with DVI and Dual-Mode DisplayPort sources [4], and the DM 8G+ inputs are compatible with HDBaseT. Five balanced analog audio inputs are also included. Each HDMI and analog audio input includes adjustable input compensation to accommodate a range of signals and maintain consistent volume levels when switching between sources.

Built-in 9x4 video matrix switching allows up to four different video sources to be routed simultaneously to four different display devices. Video outputs are comprised of two HDMI and two DM 8G+. The HDMI outputs are compatible with DVI [4] and the DM 8G+ outputs are compatible with HDBaseT.

The audio signal from any input can be freely routed to any of three separate stereo analog audio outputs. Audio can also be routed to the digital outputs via two independently switchable signal paths, either of which may be selected to feed any HDMI or DM 8G+ output.

4K/60 Video Scaling

An independent, high-performance 4K scaler is included on each HDMI output to ensure an optimal image on each display no matter what sources are selected. Each scaler allows all types of video and computer sources to

be viewed reliably and look their best on any display up to 4K.

Input resolutions from standard definition NTSC 480i to ultra high-definition 4K DCI are scaled beautifully to any output resolution up to 4K DCI (4096 x 2160 @ 60 Hz). Interlaced sources are converted to progressive scan using motion-adaptive deinterlacing. Intelligent frame rate conversion enables support for 24p and PAL format sources. And, 3D to 2D conversion allows 3D content to be viewed on 2D-only displays.[5] Fully automatic operation eliminates any complicated setup by utilizing the displays' EDID to configure each scaler.

Scaling can be added to either DM 8G+ output using the DM-RMC-4K-SCALER-C receiver[6], which features its own built-in 4K scaler. This method of employing an independent scaler for each display device delivers the most versatile and reliable solution for handling a wide array of input sources and routing them to multiple disparate display devices.

DigitalMedia 8G+®

Its DM 8G+ inputs and outputs endow the DMPS3-4K-350-C with incredible potential for connecting remote sources and display devices, and integrating with larger systems. DM 8G+ provides a true one-wire interface for transporting ultra high-definition video, audio, control, power, and networking signals over CAT type cable at distances up to 330 feet (100 meters). Connecting a DM 8G+ receiver to either DM 8G+ output provides a streamlined AV and control interface for a projector or flat panel display located anywhere in the room. Connecting up to two DM 8G+ transmitters provides expanded input connectivity to incorporate remote AV sources and mobile devices at a conference table, lectern, credenza, wall plate, or some other location. DM 8G+ can also provide the interface to a centralized DigitalMedia matrix switcher to enable the distribution of signals between multiple rooms and buildings.[7,8]

HDBaseT® Certified

Crestron DM 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. Via DM 8G+, the DMPS3-4K-350-C can be connected directly to an HDBaseT compliant source or display device without requiring a DM® transmitter or receiver.

6-Channel Microphone Mixer

The DMPS3-4K-350-C includes built-in mixing and processing for six microphones. Each mic input provides 60 dB of gain adjustment, switchable 48V phantom power, fully-adjustable gating, compression, delay, and 4-band semi-parametric EQ. Sophisticated matrix mixing allows for a completely different stereo mix of all six microphones at each of the DMPS3-4K-350-C's three analog audio outputs. Two additional mixes can be configured and selected to feed any of the HDMI or DM 8G+ outputs.

Professional Audio DSP

Each analog audio output on the DMPS3-4K-350-C includes its own digital signal processor, allowing each output to be optimized to feed a power amplifier, codec, recorder, or assistive listening system. In addition to real-time adjustable volume, bass, treble, and mute controls, each DSP provides 10-band graphic equalization, 4-band parametric equalization, fully-adjustable limiting, and up to 85 ms of speaker delay adjustment.

Built-in Power Amplifier

Its built-in power amplifier allows the DMPS3-4K-350-C to directly drive a pair of stereo speakers (25 Watts per channel @ 8Ω), or a group of distributed ceiling speakers (50 Watts mono @ 70 or 100 Volts). Fed by the main "Program" output, the internal amplifier benefits fully from the onboard DSP. For larger applications, Crestron AMP-Series power amplifiers may be added to provide a complete solution for driving separate program and speech speakers, or any multi-zone speaker system.

Audio Embedding & De-Embedding

The inclusion of professionally balanced analog audio inputs and outputs, combined with the ability to route audio signals independent of video, affords extensive flexibility for many specialized applications — without the need for any extra equipment! For instance, its balanced inputs allow the DMPS3-4K-350-C to interface directly with an audio mixing console, allowing the live sound mix to be embedded with the video signal from a digital camera and combined into a single HDMI output signal. Or, any of its balanced outputs may be used to de-embed audio from a digital AV source to feed the mixing console. An "Aux" output may even be re-routed back through an analog input to allow its built-in DSP, or an external DSP, to be used to process the audio signal feeding the HDMI and DM 8G+ outputs.

EDID Format Management

The DMPS3-4K-350-C allows for management of the EDID (Extended Display Identification Data) information that passes between the display devices, scalers, and input sources in the system. From the web browser setup screen, the format and resolution capabilities of each device can be assessed, allowing the installer to configure EDID signals appropriately for the most desirable and predictable behavior.

QuickSwitch HD™ Technology

Handling digital media signals means handling HDCP (High-bandwidth Digital Content Protection), the encryption scheme used by content providers to protect their DVDs, Blu-ray™ discs, and broadcast signals against unauthorized copying. Viewing HDCP encrypted content requires a source device to "authenticate" each display and signal processor in the system and issue it a "key" before delivering an output signal. Crestron QuickSwitch HD manages these keys to ensure fast, reliable switching and immunity to "blackouts" for every source and display device connected to the system.

Auto-Locking® Technology

Crestron Auto-Locking Technology enables super-fast signal switching by instantaneously configuring every device in the signal path, including DM transmitters, DM receivers, and scalers, as soon as the signal hits the first device. Whether switching between sources or changing TV channels, Auto-Locking significantly reduces the time it takes each device to sense the new signal and configure itself to handle the changes, virtually eliminating any noticeable gap while switching.

USB Signal Routing

Along with video and audio, the DMPS3-4K-350-C can also provide for the routing of USB HID (Human Interface Device) signals, allowing a USB HID compliant keyboard and/or mouse at one location to control a computer or media server at another location. USB HID connectivity is provided through select DM receivers and transmitters. Crestron also offers USB over

Ethernet Extenders (USB-EXT-DM-LOCAL and USB-EXT-DM-REMOTE [6]), which may be used to enable the routing of multiple USB devices of virtually any type, all seamlessly managed through the DMPS3-4K-350-C.[9]

Integrated 3-Series Control System®

Its built-in 3-Series control system enables the DMPS3-4K-350-C to provide complete, customizable control of every AV device, as well as room lighting, window shades, and projection screens, without requiring a separate control processor. Onboard control ports include four IR ports, two RS-232 COM ports, four relay ports, and four digital input ports, as well as Cresnet® and Ethernet. The DMPS3-4K-350-C supports the full line of Crestron touch screens, keypads, and wireless remotes for a user experience custom tailored to the specific requirements of each end-user. Support for Crestron control apps and Crestron Fusion® delivers the industry's most powerful platform for remotely controlling, monitoring, and managing multiple rooms using computers and mobile devices.

CEC Embedded Device Control

For controlling third-party AV devices, the DMPS3-4K-350-C provides an alternative to conventional IR, RS-232, and Ethernet by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Using CEC, many devices can be controlled right through their HDMI or HDBaseT connections, eliminating the need for any dedicated serial cables or IR emitters.

Built-in Ethernet Switch

In addition to transporting digital video and audio, the DM 8G+ ports on the DMPS3-4K-350-C can also extend Ethernet out to the display and source devices (via select DM transmitters and receivers), providing high-speed connectivity for each room device that requires a LAN connection. Ethernet is also utilized internally by the Crestron control bus to manage each transmitter and receiver and provide device control.

Dedicated Control Subnet

The Crestron Control Subnet is a Gigabit Ethernet network dedicated to Crestron devices. Via the DMPS3-4K-350-C's Control Subnet port, an installer may simply connect a single touch screen or wireless gateway, or add a Crestron PoE switch (CEN-SW-POE-5 or CEN-SWPOE-16 [6]) to handle multiple touch screens, gateways, and other devices. PoE can be enabled at the Control Subnet port to power a single touch screen or other PoE powered device.[8] Auto-configuration of the entire subnet is performed by the DMPS3-4K-350-C, discovering each device and assigning IP addresses without any extra effort from the installer.

Private Network Mode

To streamline its implementation on a corporate or university LAN, the DMPS3-4K-350-C employs Private Network Mode. Using Private Network Mode, the DMPS3-4K-350-C requires just one IP address for the complete room system including all connected DM receivers and transmitters.

Easy Setup

Every step of the DMPS3-4K-350-C setup process is designed to be quick and easy. Out of the box, the front panel supports basic signal routing for easy testing and troubleshooting during installation. Simplified system configuration is enabled using .AV Framework, which is easily configurable via a computer web browser.[2] Advanced configuration and adjustment is enabled through the front panel or a web browser. The front panel label strips can be customized using Crestron Engraver software or standard 3/8" tape labels, allowing for the clear designation of each input and output. Inputs and outputs may also be designated by name to appear on the LCD display when selected.

Crestron Connect It™

Crestron Connect It is a cost-effective, simple-to-use presentation solution that works seamlessly with the DMPS3-4K-350-C. Simply add one or more Crestron Connect It Cable Caddies (TT-100, TT-101, TT-110, or TT-111 series [6]). to provide BYOD connectivity and one-touch control for multiple participants around a conference table. Power and communications for each cable caddy are provided via Cresnet, or via the USB port on a Crestron Connect It compatible DM transmitter.

SPECIFICATIONS

Operating System

Crestron 3-Series; real-time, preemptive, multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs; preloaded DMPS3 .AV Framework Base Program

Memory

SDRAM: 512 MB
Flash: 4 GB

Communications

Ethernet: 10/100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, industry-standard TCP/IP stack, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), FIPS 140-2 compliant encryption, IEEE 802.1X, SNMP, BACnet™/IP [10], IPv4 or IPv6, Active Directory authentication, IIS v.6.0 Web Server, SMTP e-mail client, RSTP, Private Network Mode
Control Subnet: 10/100/1000 Mbps Ethernet, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP server, DNS Server, port forwarding, Isolation Mode, IEEE 802.3at Type 1 compliant PoE PSE
AirMedia [1]**:** (Via Ethernet) 10/100 Mbps, IPv4, DHCP, TLS, AES, mDNS, HTTPS web server
Streaming: (Via Ethernet) 10/100 Mbps, DHCP, H.264 decoding, MJPEG decoding, HDCP 2.2, RTP, RTSP, SDP
Cresnet: Cresnet master mode
USB: USB signal routing via select DM transmitters and receivers, or via USB-EXT-DM series extenders [9]; USB device port for computer console (setup)
RS-232: 2-way device control and monitoring up to 115.2k baud with hardware and software handshaking
IR/Serial: 1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0-5 Volts) up to 115.2k baud; supports CNXRMIRD IR Receiver [6]
DigitalMedia: DM 8G+, HDCP 2.2, EDID, CEC, PoDM+ [8], Ethernet
HDBaseT: HDCP 2.2, EDID, CEC, RS-232, PoE+ [8], Ethernet
HDMI®: HDCP 2.2, EDID, CEC

NOTE: Supports management of HDCP and EDID; supports management of CEC between the connected HDMI and HDBaseT devices and the control system

Video

Switcher: 9x4 matrix, Crestron QuickSwitch HD technology
Scalers (HDMI outputs): (2) 4K video scalers with motion-adaptive deinterlacing, intelligent frame rate conversion, Deep Color support, 3D to 2D conversion [5], content-adaptive noise reduction, and widescreen format selection (zoom, stretch, maintain aspect-ratio, or 1:1)
Input Signal Types: HDMI w/Deep Color, 3D [5], & 4K (DVI & Dual-Mode DisplayPort compatible [4]) on Inputs 1-6; DM 8G+ & HDBaseT w/Deep Color, 3D [5], & 4K on Inputs 7 & 8; streaming & AirMedia on Input 9 (LAN)
Output Signal Types: HDMI w/Deep Color & 4K (DVI compatible [4]) on Outputs 1 & 2; DM 8G+ & HDBaseT w/Deep Color, 3D, & 4K on Outputs 3 & 4

Maximum Resolutions:

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 DCI 4K & 3840x2160 4K UHD	24 Hz	4:4:4	30 bit
		30 Hz	4:4:4	24 bit
		30 Hz	4:2:2	36 bit
		60 Hz	4:2:0	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
	1920x1080 HD1080p	60 Hz	4:4:4	36 bit
Interlaced *(excluded on HDMI outputs)*	1920x1080 HD1080i	30 Hz	4:4:4	36 bit

NOTE: Common resolutions are shown; other custom resolutions are supported at pixel clock rates up to 300 MHz. Interlaced video is not supported on the HDMI outputs.

Streaming Decoder

Video Formats: H.264 (MPEG-4 part 10 AVC), MJPEG
Audio Format: AAC stereo
Bitrates: Up to 25 Mbps
Resolutions: Up to 1080p60

AirMedia [1]

Users: Supports up to 32 users (presentation device connections)
Client Software OS Support: Windows 7, Windows 8, Window 10, Mac® OS X® (versions 10.10 through 10.13)
Client Software Video Frame Rate: 30 fps, audio supported
Mobile App OS Support: Apple® iOS, Android
Full Screen Device Mirroring: Shares the screen image and audio from an Apple iOS, Android, Mac OS X, or Windows device
Resolutions: 800x600@60Hz, 1024x768@60Hz, 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x1200@60Hz, 1920x1080@60Hz (1080p60), 1920x1200@60Hz
Audio Format: Stereo

Audio – General

Switcher/Mixer: 14x5 stereo source matrix switcher, digital & analog source inputs, streaming & AirMedia source input, 6-channel gated mic mixer w/DSP, independent mixer per analog output (6-ch mic + 1 stereo source), independent stereo DSP per analog output, integrated power amplifier, two independent digital output mixers (6-ch mic + 1 stereo source), 2x1 digital output mix selector per digital output
Analog-To-Digital Conversion: 24-bit 48 kHz
Digital-To-Analog Conversion: 24-bit 48 kHz
Frequency Response, Digital & Analog Line Outputs:
20 Hz to 20 kHz ±0.5 dB (digital source);
20 Hz to 20 kHz ±0.5 dB (analog line source);
20 Hz to 20 kHz ±0.7 dB (microphone source)
Frequency Response, Speaker Output:
20 Hz to 20 kHz ±1 dB @ 25 Watts into 8 Ohms;
100 Hz to 20 kHz ±2.5 dB @ 70 or 100 Volts
S/N Ratio, Digital & Analog Line Outputs:
>108 dB, 1 kHz, A-weighted (digital source);
>103 dB, 1 kHz, A-weighted (analog line source)
S/N Ratio, Speaker Output:
98 dB @ 25 Watts into 8 Ohms, 1 kHz, A-weighted;
96 dB @ 25 Watts into 4 Ohms, 1 kHz, A-weighted
THD+N, Digital & Analog Line Outputs:
<0.002%, 20 Hz to 20 kHz (digital source);
<0.005%, 20 Hz to 20 kHz (analog line source);
<0.05%, 20 Hz to 20 kHz (microphone source)
THD+N, Speaker Output:
<0.1%, 1 kHz @ 25 Watts into 4 or 8 Ohms;
<0.7%, 20 Hz to 20 kHz @ 25 Watts into 4 or 8 Ohms
Stereo Separation, Digital & Analog Line Outputs:
>108 dB (digital source);
>103 dB (analog source)
Stereo Separation, Speaker Output:
>65 dB @ 25 Watts, 1 kHz
Channel Separation, Digital Outputs:
>108 dB (digital source);
>103 dB (analog source)
Channel Separation, Analog Line Outputs:
>103 dB
Speaker Output Modes: 4Ω/8Ω stereo, 70V mono, or 100V mono
Speaker Amplifier Output Power:
25 Watts RMS per channel @ 8 Ohms, 4 Ohms tolerant
50 Watts RMS @ 70 or 100 Volts

Audio – Microphone Inputs

Typical of 6 microphone input channels (Mic/Line 1 – 6):
Input Signal Types: Mono analog mic or line level
Phantom Power: Enable/Disable per channel
Gain: 0 to +60 dB Gain adjustment in 3dB increments, plus Mute
Delay: 0.0 to 85.0 ms
EQ Center Frequencies: 50 to 200 Hz (Band 1), 200 to 800 Hz (Band 2), 800 to 3.2k Hz (Band 3), 3.2k to 12.8k Hz (Band 4)
EQ Gain: ±12.0 dB per band

High-Pass Filter: On or Off
Gating Threshold: -80 to 0 dB
Gating Depth (Attenuation): -80 to 0 dB
Gating Attack: 1 to 250 ms
Gating Release: 1 to 1000 ms
Compression Threshold: -80 to 0 dB
Compression Ratio: 1:1 to 10:1
Compression Attack: 1 to 250 ms
Compression Release: 1 to 1000 ms
Compression Curve: Hard or soft knee

Audio – Source Inputs

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible [4]) on Inputs 1-6, DM 8G+ & HDBaseT on Inputs 7 & 8, streaming & AirMedia on Input 9 (LAN), analog 2-channel on Aud In 1-5
Analog Formats: Stereo 2-channel
Digital Formats: 2-channel LPCM
Input Compensation: ±10.0 dB, adjustable per input

Audio – Analog Line & Speaker Outputs

Typical of 1 analog line/speaker output (Program Out & Speaker Output) and 2 analog line outputs (Aux Out 1 – 2):
Output Signal Type/Format: Stereo 2-channel
Mic 1 – 6: -80 to +10 dB Level adjustment range, plus Mute and Pan
Mics Master: -80 to +10 dB Level adjustment range, plus Mute
Source: -80 to +10 dB Level adjustment range, plus Mute and Balance
Master Volume: -80 to +10 dB Level adjustment range, plus Mute and Mono
Mixer Presets: 1 through 5
Bass: ±12.0 dB
Treble: ±12.0 dB
Equalization: 10-band graphic + 4-band parametric
GEQ Center Frequencies: 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz
GEQ Gain: ±12.0 dB per band
PEQ Center Frequencies: 10 to 22000 Hz per band
PEQ Gain: -36.0 to +24.0 dB per band
PEQ Bandwidth: 0.02 to 3.50 octaves per band
PEQ Types: Peaking EQ, High Pass, Low Pass, High Shelf, Low Shelf, Notch
Delay: 0.0 to 85.0 ms
Limiter Threshold: -80 to 0 dB
Limiter Ratio: 1:1 to 10:1
Limiter Attack: 1 to 250 ms
Limiter Hold: 1 to 200 ms
Limiter Release: 1 to 1000 ms
Limiter Curve: Hard or soft knee
EQ Presets: 1 through 10 (includes Delay and Limiter settings)

Audio – Digital Outputs

Typical of 4 digital outputs (HDMI Output 1 – 2 & DM Output 3 – 4):
Output Signal Types: HDMI (DVI compatible [4]) on Outputs 1 & 2, DM 8G+ & HDBaseT on Outputs 3 & 4
Formats: 2-channel LPCM
Digital Output Mix Select 1 – 2: Selects which mix is routed to the corresponding output

Typical of 2 digital output mixers:
Mic 1 – 6: -80 to +10 dB Level adjustment range, plus Mute and Pan
Mics Master: -80 to +10 dB Level adjustment range, plus Mute
Source: -80 to +10 dB Level adjustment range, plus Mute and Balance
Master Volume: -80 to +10 dB Level adjustment range, plus Mute
Mixer Presets: 1 through 5

Connectors – Audio/Video Inputs

AUD IN 1 – 5: (5) 5-pin 3.5 mm detachable terminal blocks;
Balanced/unbalanced stereo line-level analog audio inputs;
Input Impedance: 24k Ohms balanced/unbalanced;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced

MC1/LN1 – MC6/LN6: (6) 5-pin 3.5 mm detachable terminal blocks;
Comprises (6) balanced microphone/line audio inputs;
Balanced Mic Input Level: -60 to 0 dBV, 1 Vrms maximum;
Balanced Line Input Level: -31 to +11 dBV, 3.7 Vrms maximum;
Unbalanced Line Input Level: -37 to +5 dBV, 1.85 Vrms maximum;
Mic Input Impedance: 3.9k Ohms balanced;
Line Input Impedance: 19k Ohms balanced, 9.5k Ohms unbalanced;
Phantom Power: 48 Volts DC, software enabled/disabled per channel

HDMI 1 – 6 INPUTS: (6) HDMI Type A connectors, female;
Digital video/audio inputs;
(DVI and Dual-Mode DisplayPort compatible [4])

DM INPUT 7 – 8: (2) 8-pin RJ45 connectors, female, shielded;
DM 8G+ inputs, HDBaseT compliant;
PoDM+ PSE ports (HDBaseT PoE+ compatible) [8];
Each connects to the DM 8G+ output of a DM transmitter or other DM device, or to an HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [7]

Connectors – Audio/Video Outputs

SPEAKER OUTPUT 4Ω/8Ω L – R: (2) 2-pin 7.62 mm 15A detachable terminal blocks;
4-8 Ohm stereo speaker-level audio output;
Wire Size: Terminals accept up to 14 AWG (2.5 mm^2);
Output Power: 25 Watts RMS per channel stereo at 8 Ohms, 4 Ohms tolerant

SPEAKER OUTPUT 70/100V: (1) 2-pin 7.62 mm 15A detachable terminal block;
Transformer-isolated 70 or 100 Volt mono speaker-level audio output;
Wire Size: Terminals accept up to 14 AWG (2.5 mm^2);
Output Power: 50 Watts RMS mono at 70 or 100 Volts;
Note: 4Ω/8Ω and 70/100V outputs are mutually exclusive

PROG OUT: (1) 5-pin 3.5 mm detachable terminal block;
Balanced/unbalanced stereo line-level audio output;
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

AUX OUT 1 – 2: (2) 5-pin 3.5 mm detachable terminal blocks;
Balanced/unbalanced stereo line-level audio outputs;
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

HDMI 1 – 2 OUTPUTS: (2) HDMI Type A connectors, female;
Digital video/audio outputs;
(DVI compatible [4])

DM OUTPUT 3 – 4: (2) 8-pin RJ45 connectors, female, shielded;
DM 8G+ outputs, HDBaseT compliant;
PoDM+ PSE ports (HDBaseT PoE+ compatible) [8];
Each connects to the DM 8G+ input of a DM receiver or other DM device, or to an HDBaseT device, via CAT5e, Crestron DM-CBL-8G, or Crestron DM-CBL-ULTRA cable [7]

Connectors - Networking, Control, & Power

IR - SERIAL OUT 1 – 4: (4) 2-pin 3.5 mm detachable terminal blocks;
IR/Serial output ports;
IR output up to 1.2 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

IR IN: (1) 3-pin 3.5 mm detachable terminal block
For connection of the CNXRMIRD IR Receiver [6];
Allows control from IR wireless remotes using RC-5 command set

INPUT 1 – 4: (1) 5-pin 3.5 mm detachable terminal block;
Comprises (4) programmable digital inputs;
Input Voltage Range: 0 to 24 Volts DC, referenced to GND;
Logic Threshold: 2.5 Volts DC nominal with 1 Volt hysteresis band;
Input Impedance: 10k Ohms at >5 Volts, 1M Ohms at <5 Volts;
Pull-up Resistor: 2.2k Ohms per input

RELAY 1 – 4: (1) 8-pin 3.5 mm detachable terminal block;
Comprises (4) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC;
MOV arc suppression across contacts

COM A – B: (2) DB9 connectors, male;
Bidirectional RS-232 ports;
Up to 115.2k baud, hardware and software handshaking support

NET: (4) 4-pin 3.5 mm detachable terminal blocks;
Cresnet Master ports, paralleled;
Available Cresnet Power: 10 Watts

PoDM+ INPUT PWR: (1) Combo D-Sub 7w2 connector, male;
48 Volt DC power input for PoDM power supply [8];
Enables PoDM+ power sourcing on each DM INPUT/OUTPUT port;
Enables PoE power sourcing on the CONTROL SUBNET port

SERVICE: (1) USB Type B connector, female;
For factory use only

100-240V~ 6.0A 50/60Hz: (1) IEC 60320 C14 main power inlet;
Mates with removable power cord, included

G: (1) 6-32 screw;
Chassis ground lug

CONTENT LAN IN 9: (1) 8-pin RJ45 connector, female;
10Base-T/100Base-TX Ethernet port;
Provides a dedicated LAN connection for streaming input & AirMedia [1]

CONTROL SUBNET: (1) 8-pin RJ45 connector, female;
10Base-T/100Base-TX/1000Base-T Ethernet port;
PoE PSE (Power Sourcing Equipment) port [8];
Provides a dedicated local network for Crestron devices

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

COMPUTER (front): (1) USB Type B connector, female;
USB computer console port (for setup only)

Controls & Indicators

PWR: (1) Green LED, indicates operating power supplied from AC power line
NET: (1) Yellow LED, indicates Cresnet bus activity
LAN: (1) Yellow LED, indicates Ethernet activity
HW-R: (1) Recessed pushbutton for hardware reset, reboots the control system
SW-R: (1) Recessed pushbutton for software reset, restarts the software program
LCD Display: (1) Green LCD alphanumeric, adjustable backlight, 2 lines x 20 characters per line, displays input/outputs by name, volume levels, setup menus, signal routing, device info, and other system information
SOFTKEYS: (4) Pushbuttons for activation of LCD driven functions and passcode entry
MENU: (1) Pushbutton, steps the menu back one level
▲, ▼: (2) Pushbuttons, for scrolling up or down through the menu and adjusting menu parameters
ENTER: (1) Pushbutton, executes the highlighted menu or value
VOLUME: (1) Continuous turn rotary encoder, adjusts menu parameters, defaults to Program audio volume
MUTE: (1) Pushbutton and red LED, mutes the Program audio output
INFO: (1) Pushbutton and red LED, selects INFO mode to view AV and device info
ROUTE: (1) Pushbutton and red LED, selects ROUTE mode to allow routing changes
VIEW: (1) Pushbutton and red LED, selects VIEW mode to view current routing
INPUT 1 – 9: (9) Pushbuttons and red LEDs, each selects the corresponding video input for routing
OUTPUT 1 – 4, PROG, AUX 1 – 2: (7) Pushbuttons and red LEDs, each selects the corresponding video or audio output for routing
SPEAKER OUTPUT (rear): (1) 3-position slide switch, selects the amplifier output configuration
DM INPUT 7 – 8 (rear): (4) LEDs, green LEDs indicate DM link status, amber LEDs indicate video and HDCP signal presence, for each corresponding port
DM OUTPUT 3 – 4 (rear): (4) LEDs, green LEDs indicate DM link status, amber LEDs indicate video and HDCP signal presence, for each corresponding port

CONTENT LAN IN 9 (rear): (2) LEDs, (1) green and (1) amber, for indication of Ethernet speed, activity, and link status
CONTROL SUBNET (rear): (2) LEDs, (1) green and (1) amber, for indication of Ethernet speed, activity, and link status
LAN (rear): (2) LEDs, (1) green and (1) amber, for indication of Ethernet speed, activity, and link status

Power

Main Power: 6 Amps @ 100-240 Volts AC, 50/60 Hz
Power Consumption: 93 Watts typical, 72 Watts idle
Available Cresnet Power: 10 Watts
Power over DM (PoDM): IEEE 802.3at compliant PoDM+ PSE (Power Sourcing Equipment), each DM INPUT/OUTPUT port supplies up to 30 Watts to power one PoDM (Class 0-3) or PoDM+ (Class 4) PD (Powered Device) [8]
Power over HDBaseT: IEEE 802.3at PoE+ compliant PSE (Power Sourcing Equipment), each DM INPUT/OUTPUT port supplies up to 30 Watts to power one HDBaseT PoE or PoE+ PD (Powered Device) [8]
Power over Ethernet (PoE): IEEE 802.3at compliant PoE PSE (Power Sourcing Equipment), the CONTROL SUBNET port supplies up to 15.4 Watts to power one PoE (Class 0-3) PD (Powered Device) [8]
PoDM Power Supply: Compatible with model PW-4830DUS or DM-PSU-3X8-RPS [6]

Environmental

Temperature: 41° to 104° F (5° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 317 BTU/hr typical, 246 BTU/hr idle

Enclosure

Chassis: Metal, black finish, fan-cooled, vented sides
Front Panel: Metal, black finish with polycarbonate label overlay
Mounting: Freestanding or 3 RU 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 5.20 in (133 mm) without feet
Width: 17.28 in (439 mm);
19.00 in (483 mm) with rack ears
Depth: 15.75 in (400 mm)

Weight

15.5 lb (7.1 kg)

Compliance

UL Listed for US & Canada, IC, CE, FCC Part 15 Class A digital device

Maximum DM 8G+ Cable Lengths

Cable Type: / Resolution:	DM-CBL-ULTRA DM® Ultra Cable	DM-CBL-8G DM 8G® Cable	CAT5e (or better) [7]
1080p60 Full HD	330 ft (100 m)	330 ft (100 m)	330 ft (100 m)
1920x1200 WUXGA			
1600x1200 UXGA			
2048x1080 DCI 2K			
2560x1440 WQHD		230 ft (70 m)	165 ft (50 m)
2560x1600 WQXGA			
3840x2160 4K UHD			
4096x2160 DCI 4K			

MODELS & ACCESSORIES

Available Models

DMPS3-4K-350-C: 3-Series® 4K DigitalMedia™ Presentation System 350

Available Accessories

SW-DMPS3-AIRMEDIA: AirMedia® License
TSW-760 Series: 7" Touch Screen
TSW-760-NC Series: 7" Touch Screen without Camera, Microphone, or PinPoint™ Beacon
TSW-1060 Series: 10" Touch Screen
TSW-1060-NC Series: 10" Touch Screen without Camera, Microphone, or PinPoint™ Beacon
MP-B10 Series: Media Presentation Button Panel B10
TT-100, TT-101, TT-110, & TT-111 Series: Crestron Connect It™ Cable Caddies
PW-4830DUS: 150W PoDM Power Pack
DM-PSU-3X8-RPS: PoDM+ Redundant Power Supply
DM-TXRX-100-STR: HD Streaming Transmitter/Receiver
DM-RMC-4K-100-C-1G Series: Wall Plate 4K DigitalMedia 8G+® Receiver & Room Controller 100
DM-RMC-4K-100-C: 4K DigitalMedia 8G+® Receiver & Room Controller 100
DM-RMC-4K-SCALER-C: 4K DigitalMedia 8G+® Receiver & Room Controller w/Scaler
DM-RMC-4K-SCALER-C-DSP: 4K DigitalMedia 8G+® Receiver & Room Controller w/Scaler & Downmixing
DM-RMC-200-C: DigitalMedia 8G+® Receiver & Room Controller 200
DM-RMC-SCALER-C: DigitalMedia 8G+® Receiver & Room Controller w/Scaler
DM-TX-4K-100-C-1G Series: Wall Plate 4K DigitalMedia 8G+® Transmitter 100
DM-TX-200-C-2G: Wall Plate DigitalMedia 8G+® Transmitter 200
DM-TX-4K-202-C: 4K DigitalMedia 8G+® Transmitter 202
DM-TX-4K-302-C: 4K DigitalMedia 8G+® Transmitter 302
DM-TX-201-C: DigitalMedia 8G+® Transmitter 201
DM-TX-401-C: DigitalMedia 8G+® Transmitter 401

DMPS3-4K-350-C 3-Series® 4K DigitalMedia™ Presentation System 350

USB-EXT-DM-LOCAL: USB over Ethernet Extender with Routing, Host Module
USB-EXT-DM-REMOTE: USB over Ethernet Extender with Routing, 4-Port Device Module
AMP-150 Series: Single-Channel Modular Power Amplifiers, 50W, 70V or 100V
AMP-225: Dual-Channel Modular Power Amplifier, 25W/Ch., 4/8 Ohm
AMP-1200 Series: Single-Channel Modular Power Amplifiers, 200W, 70V or 100V
AMP-2100 Series: Dual-Channel Modular Power Amplifiers, 100W/Ch.; 4/8 Ohm, 70V, or 100V
AMP-2210HT: 2x210W Commercial Power Amplifier, 4/8Ω or High-Power 70V
AMP-2210S: 2x210W Commercial Power Amplifier, 4/8Ω
AMP-2210T: 2x210W Commercial Power Amplifier, 4/8Ω or 70/100V
AMP-3210S: 3x210W Commercial Power Amplifier, 4/8Ω
AMP-3210T: 3x210W Commercial Power Amplifier, 4/8Ω or 70/100V
GLS-ODT-C-CN: Dual-Technology Occupancy Sensor with Cresnet®
GLS-OIR-C-CN: Passive Infrared Occupancy Sensor with Cresnet®
SW-FUSION-C-3: Crestron Fusion® Cloud
SW-FUSION-P-L: Crestron Fusion® On-premises
CRESTRON-APP Series: Crestron® App for Mobile Devices
XPANEL: XPanel – Crestron Control® for Computers
SW-3SERIES-BACNET-50+: BACnet™/IP Support for 3-Series®
CSP-LIR-USB: IR Learner
CNSP-XX: Custom Serial Interface Cable
IRP2: IR Emitter
CNXRMIRD: IR Receiver
DM-CONN-ULTRA-RECP Series: DigitalMedia™ Ultra Keystone RJ45 Jack
DM-CBL-ULTRA-PC Series: DigitalMedia™ Ultra Patch Cables
DM-CBL-ULTRA Series: DigitalMedia™ Ultra Cable
DM-CONN-20: Connectors for DM-CBL-ULTRA Series
DM-CBL-8G Series: DigitalMedia 8G™ Cable
DM-8G-CONN-100: Connectors for DM-CBL-8G Series
DM-8G-CRIMP: Crimping Tool for DM-8G-CONN-100
DM-8G-CONN-WG-100: Connectors with Wire Guide for DM-CBL-8G Series
DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG-100
CRESNET Series: Cresnet® Control Cable
CBL Series: Crestron® Certified Interface Cables
MP-WP Series: Media Presentation Wall Plates
MPI-WP Series: Media Presentation Wall Plates - International Version

Notes:

1. To enable the onboard AirMedia gateway requires the purchase of one SW-DMPS3-AIRMEDIA license. To obtain the license, or for any questions regarding AirMedia activation, please visit https://www.crestron.com/dmps-airmedia-activation. To purchase the DMPS3-4K-350-C with AirMedia pre-activated (no license required), see model DMPS3-4K-350-C-AIRMEDIA. Wireless presentation using AirMedia requires an external wireless access point (not included). A wired Ethernet connection may also be used. AirMedia network traffic can be routed through the primary LAN port or isolated through the CONTENT LAN port. Performance quality for full-motion video content is dependent upon network performance and sending device performance. AirMedia support in the DMPS3-4K-350-C includes the same essential functionality as the AM-101 AirMedia Presentation Gateway with the exclusion of quad view, moderator mode, and remote view.
2. Some features and functions described in this spec sheet may not be supported using .AV Framework. For a complete list of capabilities and options supported by .AV Framework, please visit: http://www.crestron.com/avframework.
3. The streaming and AirMedia inputs are mutually exclusive. Only one or the other can be used at one time. Streaming network traffic can be routed through the primary LAN port or isolated through the CONTENT LAN port.
4. HDMI connections require an appropriate adapter or interface cable to accommodate a DVI or Dual-Mode DisplayPort signal. CBL-HD-DVI interface cables are available separately.
5. The HDMI outputs do not pass 3D signals. On these outputs, 3D signals are automatically converted to 2D, then scaled and output as 2D. 3D signals can be passed through the DM 8G+ outputs.
6. Item(s) sold separately.
7. The maximum cable length for DigitalMedia 8G+ (DM 8G+) or HDBaseT is dependent upon the type of cable and resolution of the video signal. Refer to the "Maximum DM 8G+ Cable Lengths" table for a detailed overview. Crestron legacy cable models DM-CBL DigitalMedia Cable and DM-CBL-D DigitalMedia D Cable support the same resolutions and cable lengths as CAT5e. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are sold separately.
8. Enabling PoDM and PoE power sourcing requires an external power supply, model PW-4830DUS or DM-PSU-3X8-RPS, sold separately. Due to the inherent power loss that occurs over CATx cable, a maximum of 25.5 Watts is delivered at each PoDM+ or HDBaseT PoE+ powered device. Be aware that the CONTROL SUBNET port is limited to regular PoE (Class 0-3), which delivers a maximum of 12.95 Watts to the powered device. Any wiring that is connected to a PoDM or PoE PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.
9. Manages the routing of USB HID signals between peripheral DM devices that are equipped with USB HID ports. The USB ports onboard the DMPS3-4K-350-C are not usable for USB signal routing. Also programmable to manage the routing of USB signals between Crestron USB over Ethernet Extender modules (USB-EXT-DM, sold separately). Refer to the USB-EXT-DM spec sheet for more information.
10. License required. The DMPS3-4K-350-C supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity.

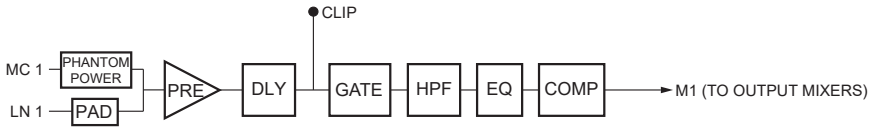
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at http://www.crestron.com/salesreps or by calling 800-237-2041.

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

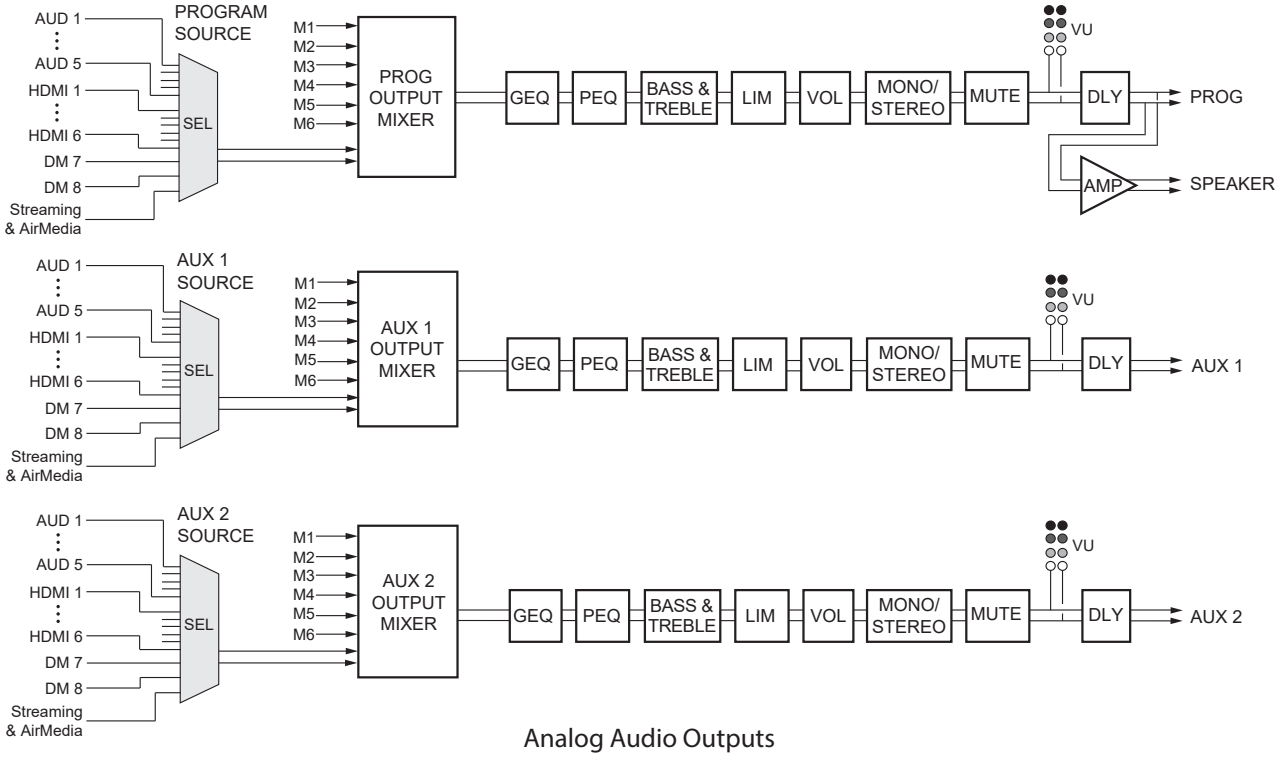
Certain Crestron products contain open source software. For specific information, please visit http://www.crestron.com/opensource.

Crestron, the Crestron logo, 3-Series, 3-Series Control System, AirMedia, Auto-Locking, .AV Framework, Cresnet, Crestron Connect It, Crestron Control, Crestron Fusion, DigitalMedia, DigitalMedia 8G, DigitalMedia 8G+, DM, DM 8G+, PinPoint, QuickSwitch HD, and Smart Graphics are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. BACnet is either a trademark or registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. in the United States and/or other countries. Apple, iPad, iPhone, Mac, MacBook, and OS X are either trademarks or registered trademarks of Apple Inc. in the United States and/or other countries. Blu-ray is either a trademark or registered trademark of the Blu-ray Disc Association in the United States and/or other countries. IOS is either a trademark or registered trademark of Cisco Technology, Inc. in the United States and/or other countries. Android is either a trademark or registered trademark of Google Inc. in the United States and/or other countries. HDBaseT and the HDBaseT Alliance logo are either trademarks or registered trademarks of the HDBaseT Alliance in the United States and/or other countries. HDMI and the HDMI Logo are either trademarks or registered trademarks of HDMI Licensing LLC in the United States and/or other countries. Microsoft, Excel, PowerPoint, and Windows are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Wi-Fi is either a trademark or registered trademark of Wi-Fi Alliance in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography. Specifications are subject to change without notice. ©2017 Crestron Electronics, Inc.

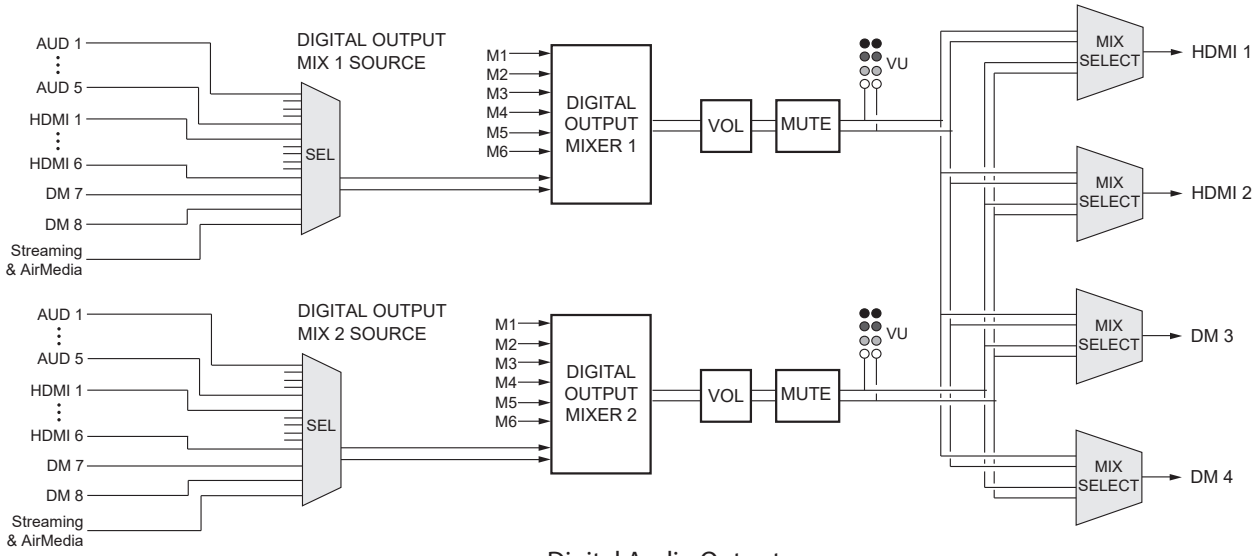
AV SIGNAL FLOW DIAGRAMS



Microphone Inputs (Typical of 6)

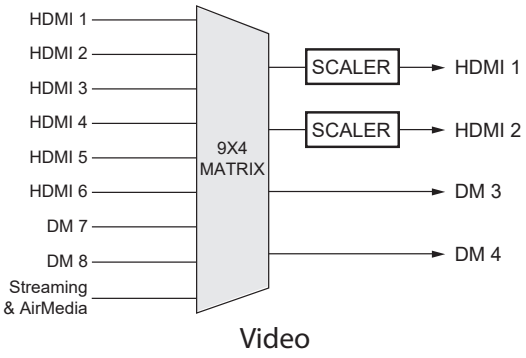


Analog Audio Outputs

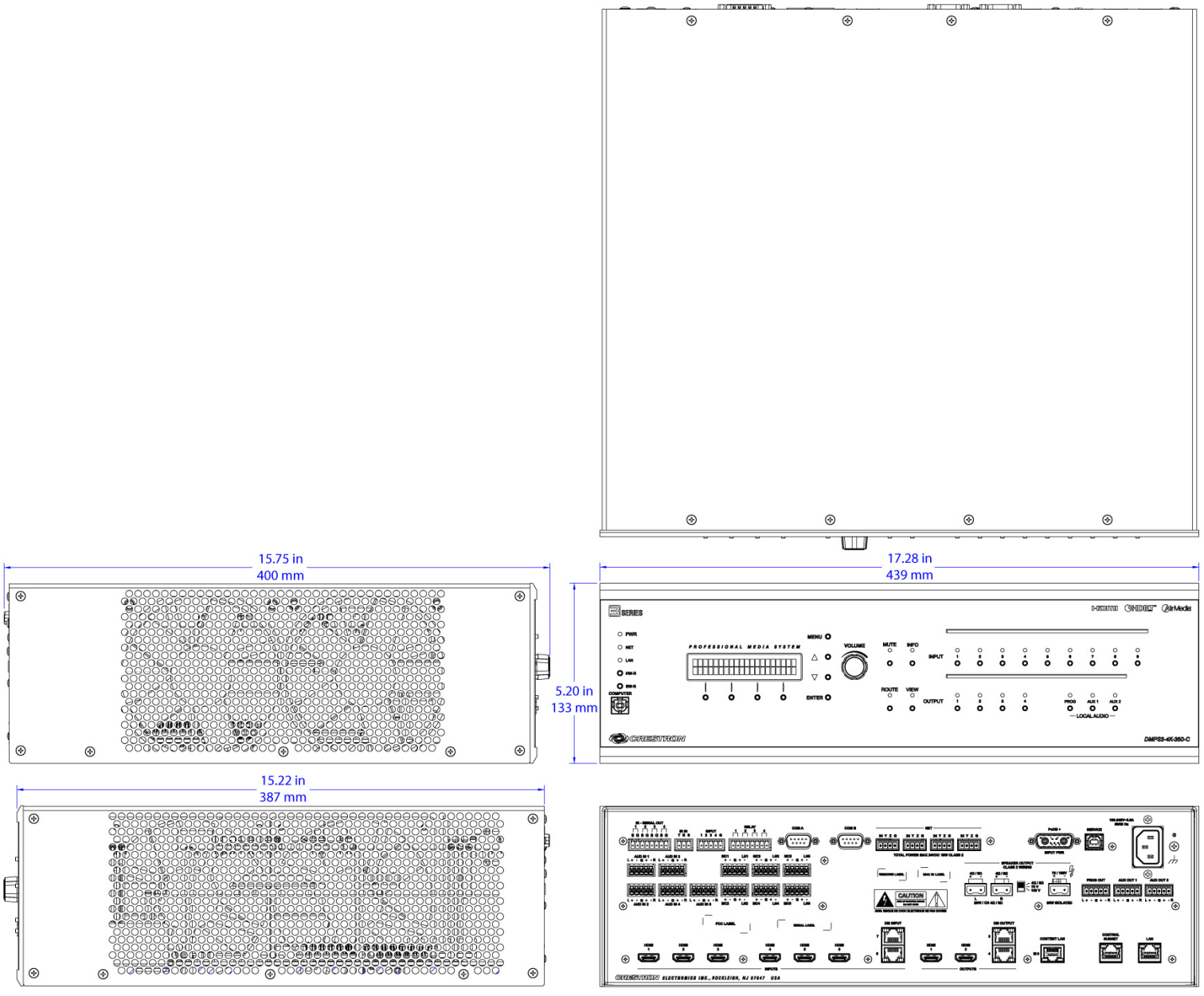


Digital Audio Outputs

DMPS3-4K-350-C 3-Series® 4K DigitalMedia™ Presentation System 350



DIMENSIONAL DIAGRAM



All brand names, product names and trademarks are the property of their respective owners.
©2017 Crestron Electronics, Inc.

Specifications subject to change without notice. Revised 12/04/17