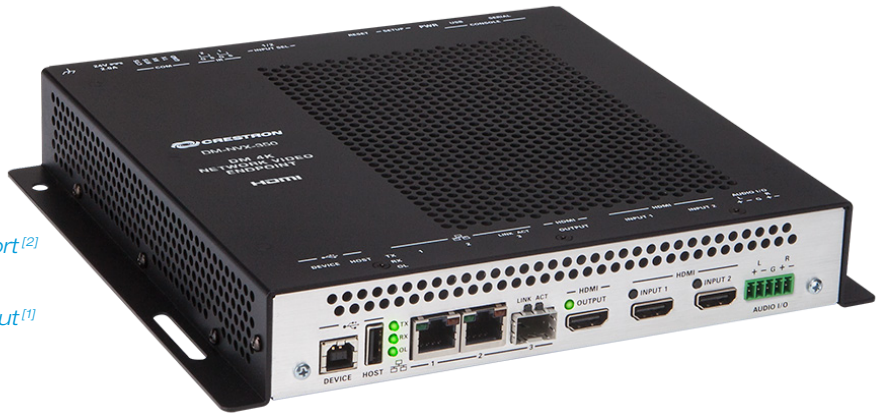
DM-NVX-350

DigitalMedia™

DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder

- *4K60 4:4:4 video over standard Gigabit Ethernet*
- *No latency penalty for real-time video performance*
- *HDR (High Dynamic Range) video support (HDR10)*
- *Dolby® TrueHD, Dolby Atmos®, DTS-HD®, DTS:X®, and uncompressed 7.1 linear PCM audio support*
- *HDCP 2.2 compliant*
- *Configurable as an encoder or decoder*
- *Dual onboard RJ45 LAN ports*
- *Option for a fiber optic network connection via SFP port [2]*
- *Enterprise-grade security*
- *Two auto-switching HDMI® inputs and one HDMI output [1]*
- *Built-in 4K60 4:4:4 scaling*
- *Onboard video wall processing*
- *Analog audio port configurable as a balanced stereo input or output [5]*
- *Analog audio embedding or de-embedding*
- *Audio breakaway capability [6,7]*
- *Dynamic text overlay capability*
- *RS-232 and IR control ports [9]*
- *CEC device control gateway [9]*
- *USB and KVM signal extension and routing [4]*
- *Easy setup via built-in webpages*
- *Fully-controllable via a Crestron® control system*
- *Compact, surface-mountable form factor*
- *Powered via local power pack or optional power injector [8]*
- *100-240V universal power pack included*



DigitalMedia™ NVX technology transports ultra high-definition 4K video with 60 Hz frame rates and 4:4:4 color sampling over standard Gigabit Ethernet. Support for HDR video (HDR10) and HDCP 2.2 ensures the ultimate in picture quality and compatibility for all of today's varied media sources. Using standards-based Ethernet wiring and switches, DM® NVX delivers a vastly scalable, high-performance solution for enterprise-wide 4K content distribution.[1]

The Crestron® DM-NVX-350 is a compact video encoder/decoder designed to function as either a transmitter or receiver with the ability to switch between the two modes programmatically via commands from a Crestron control system. Featuring simple web-based control and management, USB and KVM integration, and support for copper and fiber LAN connectivity, the DM-NVX-350 offers a one-stop solution for any-sized network AV installation.[2]

Real-Time 4K60 Video Distribution

Engineered for demanding conference room and classroom applications, DM NVX ensures real-time, full-motion 4K60 video performance for the presentation of multimedia, videoconferencing, and live camera images. DM NVX employs high-quality JPEG 2000 encoding using a patent-pending technique that overlaps scaling and encoding latencies, achieving an ultra-low end-to-end latency of 30 ms at 60 fps, so on-screen functions such as mousing and game play are fluid and natural.

Encoder and Decoder in One

In a single compact device, the DM-NVX-350 is configurable to operate as either a network AV encoder or decoder.

- As an encoder, it allows a laptop computer, camera, or other media source to be connected via HDMI® and then transmitted over the network.[1]
- As a decoder, it receives the signal from a DM NVX encoder and feeds it to a display device via the HDMI output. It can quickly and easily switch between multiple encoders on the network alongside locally-connected HDMI sources.[1]
- The encoder/decoder mode can be switched on-the-fly via a control system to provide a versatile, cost-effective presentation switching solution using one integrated device.

2x1 HDMI® Auto-Switcher

The DM-NVX-350 includes two HDMI inputs. Switching between the two inputs can be performed automatically using auto-switching mode, manually using the onboard input select button, programmatically via a Crestron control system, or through a computer using a web browser. When used as a decoder mounted behind a typical conference room display device, the HDMI inputs provide a convenient way to connect a Crestron AirMedia® presentation gateway.[1]

HDMI Output

When configured as a decoder, the DM-NVX-350's HDMI output feeds the decoded signal to the local display device (or any other device with an HDMI input). Its built-in scaler ensures an optimal image, scaling the encoded source resolution up or down to match the native resolution of the display device. When used as an encoder, the HDMI output can be used to feed a local display, confidence monitor, or audio system.[1,3]

DM-NVX-350 DM® 4K60 4:4:4 HDR Network AV Encoder/Decoder

Top View

Bottom View

USB and KVM Integration

For a complete signal management solution, DM NVX supports the extension of USB signals, which may be switched and routed alongside the AV signal or separately via the control system. USB 2.0 host and device ports are provided on each DM-NVX-350 box, allowing a USB mouse, keyboard, or other device to be connected at one box and routed to a computer or other host at another box. KVM switch functionality is a natural application for this feature, but all types of USB peripherals are supported including whiteboards, touch screens, game controllers, cameras, mobile devices, headsets, and flash drives.[4]

USB signals can also be routed to other locations where a DM NVX box does not exist using Crestron USB over Ethernet Extender Modules (USB-EXT-DM). USB signals can be freely routed between DM NVX and USB-EXT-DM units over Ethernet under the management of a Crestron control system.

7.1 Surround Sound Audio

DM NVX supports the lossless transport of 7.1 surround sound audio signals, including Dolby® TrueHD, Dolby Atmos®, DTS-HD®, DTS:X®, and uncompressed linear PCM. In decoder mode, the DM-NVX-350 has the ability to receive both multichannel and 2-channel downmix signals from a DM-NVX-351 or DM-NVX-351C encoder, allowing either signal to be selected at the HDMI output while the 2-channel signal is automatically routed to the analog output.

Analog Audio Embedding or De-embedding

A balanced stereo analog audio port is included, which may be configured as either an input or output. As an input, it allows a stereo audio source to be connected and combined with the video signal from either HDMI input or the incoming network video stream. As an output, it can provide a stereo line-level signal to feed a local sound system or sound bar. The output volume is adjustable via a control system or web browser.[5]

Breakaway Audio

A DM NVX decoder may select and combine separate video and audio signals from two different inputs, even two different encoders. There are just two exceptions: A) signals may not be combined between the two onboard HDMI inputs, and B) combining signals from two separate encoders is limited to 2-channel stereo audio.[6,7]

Text Overlay

The ability to display dynamic or fixed text on screen provides a means to label the video source or display special instructions, schedules, announcements, alerts, and other messaging.

Video Wall Processing

A video wall composed of up to 64 individual displays can be configured using multiple DM-NVX-350 units. Each unit provides fully-adjustable zoom capability and bezel compensation to accommodate a range of video wall configurations and display types. One DM-NVX-350 is required per display, supporting configurations of up to eight wide by up to eight high.

Copper or Fiber LAN Connectivity

The DM-NVX-350 includes two RJ45 1000Base-T LAN ports. Either port may be used as the primary LAN connection, allowing the other to be used to provide a network connection for the display, AirMedia gateway, or other local device(s). These ports may also be used to daisy-chain multiple units feeding a single-source video wall or individual displays all showing the same video image. Port 1 is also capable of receiving power from a Crestron power injector (DM-PSU-ULTRA-MIDSPAN).[8]

Connection to a fiber optic network is facilitated by inserting an appropriate SFP transceiver module (Crestron SFP-1G series[2]) into the SFP port on the DM-NVX-350. A selection of modules is offered to accommodate various multimode and single-mode fiber types.

Enterprise-Grade Security

A secure AV network ensures its own reliability by protecting the integrity of the content being delivered and the privacy of the personnel accessing it. Employing advanced security features and protocols like 802.1x authentication, Active Directory credential management, PKI certification, AES encryption, TLS, SSH, and HTTPS, DM NVX delivers a true enterprise-grade network AV solution engineered to fulfill the demanding IT policies of corporate, university, medical, military, and governmental clients. DM NVX runs on a dedicated AV network, with fully-managed access to, or isolation from, the customer's LAN or the Internet.

DM-NVX-350 DM® 4K60 4:4:4 HDR Network AV Encoder/Decoder

Device Controller

The DM-NVX-350 includes built-in RS-232 and IR control ports for control of the connected display, camera, and other devices under the management of a control system. Additional control capability is afforded by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its Ethernet connection to the control system, the DM-NVX-350 provides a gateway for controlling the display and source devices right through their HDMI connections, potentially eliminating the need for any dedicated serial cables or IR emitters.[9]

Web-Based Setup

Setup of the DM-NVX-350 is accomplished using a computer web browser. Full control and monitoring of the device is enabled through integration with a Crestron control system.

Low-Profile Installation

The DM-NVX-350 mounts conveniently to a flat surface or rack rail, and fits easily behind a flat panel display, above a ceiling-mounted projector, beneath a tabletop, or inside a lectern, AV cart, or equipment cabinet. All connections and LED indicators are positioned on the top and bottom, offering optimal access and visibility for a clean, serviceable installation. Power is provided using the included 100-240V universal power pack or an optional power injector (Crestron DM-PSU-ULTRA-MIDSPAN).[8]

Please refer to the DigitalMedia Resources Webpage at http://www.crestron.com/dmresources/ for additional design tools and reference documents.

SPECIFICATIONS

Encoding/Decoding

Video Compression: JPEG 2000
Video Resolutions: Up to 4096x2160@60Hz (DCI 4K60), 4:4:4 color sampling, HDR10 and Deep Color support
Audio Formats: Primary multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound), secondary 2-channel LPCM[10]
Bitrates: 100 to 990 Mbps
Streaming Protocols: RTP, RTSP, SDP
Container: MPEG-2 transport stream (.ts)
Session Initiation: Multicast via RTSP
Copy Protection: HDCP 2.2

Video

Input Signal Types: HDMI w/HDR10, Deep Color, and 4K60 4:4:4 support[1,11] (Dual-Mode DisplayPort and DVI compatible[12])
Output Signal Types: HDMI w/HDR10, Deep Color, and 4K60 4:4:4 support[1] (DVI compatible[12])
Switcher: 2x1 auto-switching, Crestron QuickSwitch HD™ technology
Scaler: 4K60 4:4:4 video scaler with motion-adaptive deinterlacing, intelligent frame rate conversion, Deep Color support, HDR10 support, widescreen format selection (zoom, stretch, maintain aspect-ratio, or 1:1), video wall processing up to 8 wide x up to 8 high, static or dynamic text overlay
Copy Protection: HDCP 2.2

Maximum Resolutions:

Scan Type	Resolution	Frame Rate	Color Sampling	Color Depth
Progressive	4096x2160 DCI 4K & 3840x2160 4K UHD	24 Hz	4:4:4	36 bit
		30 Hz	4:4:4	36 bit
		60 Hz	4:2:2	36 bit
		60 Hz	4:4:4	24 bit
	2560x1600 WQXGA	60 Hz	4:4:4	36 bit
	1920x1080 HD1080p	60 Hz	4:4:4	36 bit
Interlaced (Input only)	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 600 MHz

Audio

Input Signal Types: HDMI (Dual-Mode DisplayPort compatible[12]), analog stereo[5]
Output Signal Types: HDMI, analog stereo[5]
Digital Formats: Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio, DTS:X, LPCM up to 8 channels
Analog Formats: Stereo 2-Channel
Analog-To-Digital Conversion: 24-bit 48 kHz
Digital-To-Analog Conversion: 24-bit 48 kHz
Analog Performance: Frequency Response: 20 Hz to 20 kHz ±0.5 dB;
S/N Ratio: >95 dB 20 Hz to 20 kHz A-weighted;
THD+N: <0.005% @ 1 kHz;
Stereo Separation: >90 dB
Analog Volume Adjustment: -80 to +20 dB

Communications

Ethernet: 10/100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), IEEE 802.1x, IPv4, HTTPS web browser setup and control, Crestron control system integration
USB: USB 2.0 host or device signal extension; USB 2.0 computer console (for setup)
RS-232: 2-way device control and monitoring up to 115.2k baud with hardware and software handshaking (via control system); computer console (for setup)
IR/Serial: 1-way device control via infrared up to 1.1 MHz or serial TTL/RS-232 (0-5 Volts) up to 19.2k baud (via control system)
HDMI: HDCP 2.2, EDID, CEC
DM NVX (via Ethernet): HDCP 2.2, AES, RTP, RTSP, SDP, ONVIF, IGMPv3 (v2 coming soon), SMPTE 2022

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

DM-NVX-350 DM® 4K60 4:4:4 HDR Network AV Encoder/Decoder

Connectors

USB DEVICE: (1) USB Type B female;
USB 2.0 device port;
USB signal extender port for connection to a computer or any other USB 2.0 host [4]

USB HOST: (1) USB Type A female;
USB 2.0 host port;
USB signal extender port for connection of a mouse, keyboard, or any other USB 2.0 device [4];
Available Power: 500 mA at 5 Volts DC

LAN 1: (1) 8-pin RJ45 female;
10Base-T/100Base-TX/1000Base-T Ethernet port;
PD (powered device) port compatible with Crestron DM-PSU-ULTRA-MIDSPAN only [8]

LAN 2: (1) 8-pin RJ45 female;
10Base-T/100Base-TX/1000Base-T Ethernet port

LAN 3: (1) SFP port;
Accepts one Crestron SFP-1G series SFP transceiver module [2]

HDMI OUTPUT: (1) 19-pin Type A HDMI female;
HDMI digital video/audio output (DVI compatible [12]) [1]

HDMI INPUT 1 – 2: (2) 19-pin Type A HDMI female;
HDMI digital video/audio inputs [1];
(DVI & Dual-Mode DisplayPort compatible [12])

AUDIO I/O: (1) 5-pin 3.5 mm detachable terminal block;
Balanced/unbalanced stereo line-level audio input or output [5];
Input Impedance: 24k Ohms balanced/unbalanced;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced;
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

CONSOLE, SERIAL: (1) 8-pin RJ45 female;
RS-232 computer console port (for setup)

CONSOLE, USB: (1) USB Type B female;
USB 2.0 computer console port (for setup)

IR 1 – 2: (1) 4-pin 3.5 mm detachable terminal block;
Comprises (2) IR/Serial ports [9];
IR output up to 1.1 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

COM: (1) 5-pin 3.5 mm detachable terminal block;
Bidirectional RS-232 port [9];
Up to 115.2k baud, hardware and software handshaking support

24VDC 2.0A: (1) 2.1 x 5.5 mm DC power connector;
24 Volt DC power input;
PW-2420RU power pack included

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

Controls & Indicators

TX: (1) Green LED, indicates unit is in transmitter (encoder) mode
RX: (1) Green LED, indicates unit is in receiver (decoder) mode
OL: (1) Green LED, indicates an online connection to a control system via Ethernet
LAN 1 – 2: (4) LEDs, green indicates Ethernet link status, amber indicates Ethernet activity
LAN 3 LNK: (1) Green LED, indicates Ethernet link status
LAN 3 ACT: (1) Green LED, indicates Ethernet activity
HDMI OUTPUT: (1) Green LED, indicates video signal transmission at the HDMI output
HDMI INPUT 1 – 2: (2) Green LEDs, each indicates sync detection at the corresponding HDMI input
PWR: (1) Bi-color green/amber LED, indicates operating power supplied via the power pack or injector, illuminates amber while booting and green when operating
SETUP: (1) Red LED and (1) recessed pushbutton for Ethernet setup
RESET: (1) Recessed pushbutton for hardware reset
INPUT SEL: (1) Pushbutton for manual input selection and (2) bi-color green/amber LEDs to indicate the current active input and signal presence at each corresponding input

Power

Power Pack (included):
Input: 1.5 Amps maximum @ 100-240 Volts AC, 50/60 Hz
Output: 2 Amps @ 24 Volts DC
Model: PW-2420RU

Power over Ethernet: Compatible with Crestron DM-PSU-ULTRA-MIDSPAN only [8]

Power Consumption: 35 Watts typical

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 85 BTU/hr

Enclosure

Chassis: Metal, black finish, integral mounting flanges, fan cooled; vented top, front, bottom, and sides
Mounting: Freestanding, surface mount, or attach to a single rack rail

Dimensions

Height: 8.61 in (219 mm)
Width: 9.27 in (236 mm)
Depth: 1.50 in (39 mm)

Weight

2.0 lb (0.91 kg)

DM-NVX-350 DM® 4K60 4:4:4 HDR Network AV Encoder/Decoder

MODELS & ACCESSORIES

Available Models

DM-NVX-350: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder

Included Accessories

PW-2420RU: Desktop Power Pack, 24VDC, 2A, 2.1mm, Universal (Qty. 1 included)

Available Accessories

SFP-1G: SFP Transceiver Modules
USB-EXT-DM: USB over Ethernet Extender with Routing
DM-PSU-ULTRA-MIDSPAN: Power Injector
DM-CBL-ULTRA-PC: DigitalMedia™ Ultra Patch Cables
DM-CONN-ULTRA-RECP: DigitalMedia™ Ultra Keystone RJ45 Jack
DM-CBL-ULTRA-NP: DigitalMedia™ Ultra Cable, Non-Plenum Type CMR
DM-CBL-ULTRA-P: DigitalMedia™ Ultra Cable, Plenum Type CMP
DM-CBL-ULTRA-LSZH: DigitalMedia™ Ultra Cable, Low Smoke Zero Halogen
DM-CONN: Connector for DM-CBL-ULTRA
DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum
DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum
DM-8G-CONN: Connector for DM-CBL-8G
DM-8G-CRIMP: Crimping Tool for DM-8G-CONN
DM-8G-CONN-WG: Connector with Wire Guide for DM-CBL-8G
DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG
CBL Series: Crestron® Certified Interface Cables
CNSP-XX: Custom Serial Interface Cable
IRP2: IR Emitter Probe w/Terminal Block Connector

Notes:

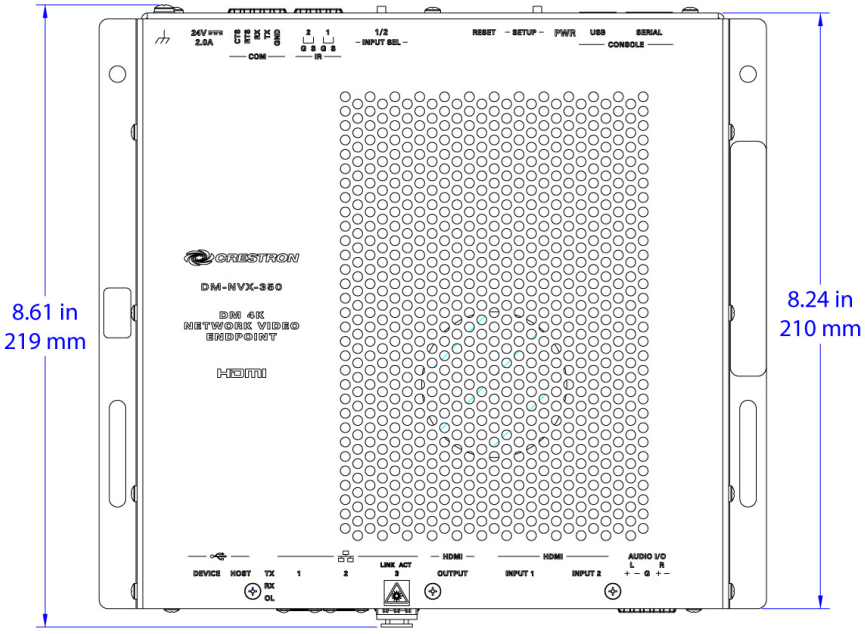
1. 4K60 4:4:4 performance requires the use of HDMI cables with a minimum TMDS bandwidth of 18 Gbps, such as Crestron model CBL-HD (20 ft / 6.1 m max. length). If 4K60 4:2:0 or 4K30 4:4:4 performance is acceptable, cables with a minimum bandwidth of 10.2 Gbps may be used, such as Crestron models CBL-HD-LOCK or CBL-HD (any available length). Performance may also be affected if an HDMI coupler is inserted in the HDMI signal path. Crestron coupling products (MP-WP150, MP-WP152, MPI-WP150, or FTA-CP-HD-101) and cable retractors (CBLR2-HD) all have a specified bandwidth of 10.2 Gbps, and thus do not support 4K60 4:4:4. Please be aware that bandwidth loss is cumulative, so the combination of multiple components inserted inline may reduce performance.
2. To add a fiber optic LAN port requires the purchase of a Crestron SFP-1G series SFP transceiver module (sold separately). All LAN ports on the DM-NVX-350 are for connection to an Ethernet based AV network or device; they cannot be connected to the "DM" ports of other Crestron devices.
3. When in encoder mode, the HDMI output resolution is matched to the resolution of the encoded source.
4. The DM-NVX-350 can be configured to accept the connection of a USB device or a USB host, not both. Crestron DM NVX products are engineered to deliver maximum compatibility with the widest possible range of USB products. Crestron does not guarantee that all USB products are compatible with DM NVX products. DM NVX is compatible with Crestron USB-EXT-DM products, but is not compatible with the "USB HID only" signal extender technology found in other Crestron DM products.
5. The analog audio port can function as an input or output, not both. Analog audio output is only functional when the DM-NVX-350 is receiving a 2-channel stereo input signal. To derive a 2-channel downmix signal from a multichannel surround sound source, please refer to the Crestron DM-NVX-351 or DM-NVX-351C.
6. Audio from one onboard HDMI input may not be combined with video from the other onboard HDMI input.
7. Combining audio from one encoder with video from another encoder utilizes the secondary 2-channel audio stream. Multichannel audio from one encoder cannot be combined with video from another encoder.
8. The DM-NVX-350 is powerable using the 24V power pack (included) or a DM-PSU-ULTRA-MIDSPAN (sold separately).
9. Device control via RS-232, IR, CEC, or Ethernet requires integration with a Crestron control system.
10. As an encoder, the DM-NVX-350 does not transmit audio via the secondary 2-channel stream except when it is receiving a 2-channel stereo input signal via the HDMI or analog inputs.
11. 3D video input signals are automatically converted to 2D.
12. 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.

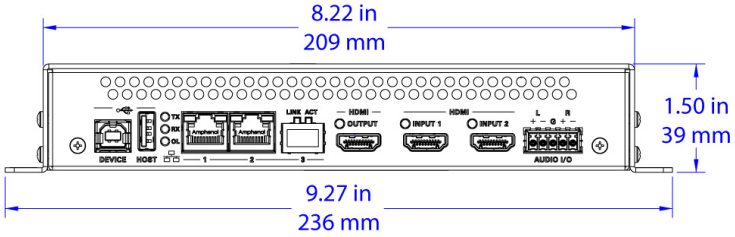
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

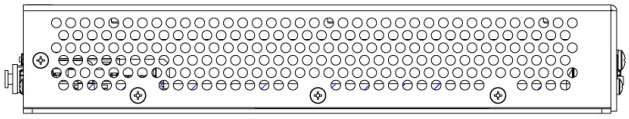
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

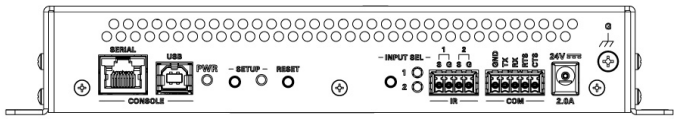
Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

DM-NVX-350 DM® 4K60 4:4:4 HDR Network AV Encoder/Decoder









Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 04/28/17

CP3N

3 SERIES

3-Series Control System®

- > *Enterprise-class control system*
- > *3-Series® Control Engine — substantially faster and more powerful than other control systems*
- > *Exclusive modular programming architecture*
- > *Onboard 512MB RAM & 4GB Flash memory*
- > *Expandable storage up to 1TB*
- > *Rear panel memory card slot*
- > *High-speed USB 2.0 host port*
- > *Industry-standard Ethernet and Cresnet® wired communications*
- > *Control Subnet — provides a dedicated local network for Crestron® devices*
- > *XPanel with Smart Graphics™ computer and web based control*
- > *iPhone®, iPad®, and Android™ control app support*
- > *Crestron Fusion® Cloud Enterprise Management Service support*
- > *SNMP remote management support*
- > *One RS-232/422/485 COM port with hardware and software handshaking*
- > *Two RS-232 COM ports with software handshaking only*
- > *Eight IR/serial, eight relay, and eight Versiport I/O ports*
- > *Programmable event scheduling with astronomical time clock*
- > *Native BACnet™/IP support*[2]
- > *Installer setup via Crestron Toolbox™ software or web browser*
- > *C#, symbol based, and drag-and-drop programming environments*
- > *Full Unicode (multi-language) support*
- > *Increased network throughput and security*
- > *Secure access through full user/group management or Active Directory integration*
- > *Hardware level security using 802.1X authentication*
- > *TLS, SSL, SSH, and SFTP network security protocols*
- > *FIPS 140-2 compliant encryption*
- > *IIS v.6.0 Web Server*
- > *IPv6 ready*
- > *Front panel USB computer console port*
- > *1-space rack-mountable*

The Crestron® CP3N is an enterprise-class control system with a dedicated Control Subnet port. Featuring the 3-Series® control engine, the CP3N forms the core of any modern networked home or commercial building, managing and integrating all the disparate technologies throughout your facility to make life easier, greener, more productive, and more enjoyable.

3-Series® Control Systems

Today's commercial buildings and custom homes comprise more technology than ever before, and all these systems need to be networked, managed, and controlled in fundamentally new ways. The IP based 3-Series platform is engineered from the ground up to deliver a network-grade server appliance capable of faithfully handling everything from boardroom AV and home theater control to total building management.

3-Series embodies a distinctively robust, dynamic, and secure platform to elevate your system designs to higher levels of performance and reliability. Compared to other control systems, Crestron 3-Series provides a pronounced increase in processing power and speed with more memory, rock solid networking and IP control, and a unique modular programming architecture.

Modular Programming Architecture

Designed for enhanced scalability, the CP3N affords high-speed, real-time multi-tasking to seamlessly run multiple programs simultaneously. This exclusive modular programming architecture lets programmers independently develop and run device-specific programs for AV, lighting, shades, HVAC, security, etc., allowing for the optimization of each program, and allowing changes to be made to one program without affecting the whole. Even as your system grows, processing resources can easily be shifted from one 3-Series processor to another without rewriting any code. The end benefit is dramatically simplified upgradability with minimal downtime, whether implementing changes on site or remotely via the network.

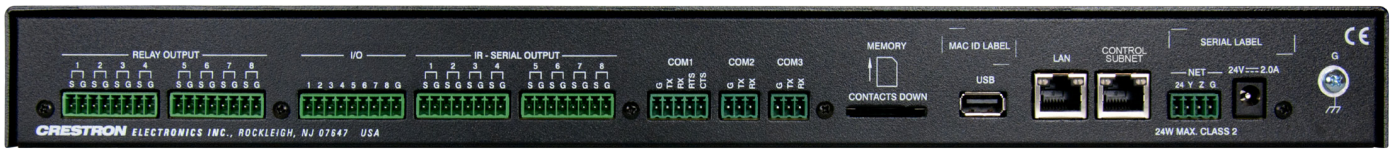
Robust Ethernet & IP Control

IP technology is the heart of 3-Series, so it should be no surprise that its networking abilities are second to none. Gigabit Ethernet connectivity enables integration with IP-controllable devices and allows the CP3N to be part of a larger managed control network. Whether residing on a sensitive corporate LAN, a home network, or accessing the Internet through a cable modem, the CP3N provides secure, reliable interconnectivity with IP-enabled touch screens, computers, mobile devices, video displays, media servers, security systems, lighting, HVAC, and other equipment — whether on premises or across the globe.

Dedicated Control Subnet

The Crestron Control Subnet is a Gigabit Ethernet network dedicated to Crestron devices. Via the CP3N'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)[1] to handle multiple touch screens, gateways, AV components, and other devices. Auto-configuration of the entire subnet is performed by the CP3N, discovering each device and assigning IP addresses without any extra effort from the installer.

CP3N 3-Series Control System®



CP3N – Rear View

A separate LAN port on the CP3N provides a single-point connection to the customer's LAN, requiring just one IP address for the complete control system. The LAN port allows full interconnectivity between devices on the local subnet with other devices, systems, servers, and WAN/Internet connections outside the local subnet. For sensitive applications that require absolute security, the entire Control Subnet can be completely isolated from the customer's LAN using Isolation Mode.

Control Apps & XPanel

Years ago, Crestron pioneered the world's first IP-based control system unleashing vast new possibilities for controlling, monitoring, and managing integrated systems over a LAN, WAN, and the Internet. Today, Crestron offers more ways than ever to control your world the way you want. Using a computer, smartphone, or tablet device, Crestron lets you control anything in your home or workplace from anywhere in the world.

Native to every 3-Series control system, Crestron XPanel technology transforms any laptop or desktop computer into a virtual Crestron touch screen. Crestron control apps deliver the Crestron touch screen experience to iPhone®, iPad®, and Android™ devices, letting you safely monitor and control your entire residence or commercial facility using the one device that goes with you everywhere.

Crestron Fusion® Cloud

Crestron Fusion Cloud provides an integrated platform for creating truly smart buildings that save energy, enhance worker productivity, and prolong the life-span of valuable equipment. As part of a complete managed network in a corporate enterprise, college campus, convention center, or any other facility, the CP3N works integrally with Crestron Fusion Cloud to enable remote scheduling, monitoring, and control of rooms and technology from a central help desk. It also enables organizations to reduce energy consumption by tracking real-time usage and automating control of lighting, shades, and HVAC.

SNMP Support

Built-in SNMP support enables integration with third-party IT management software, allowing network administrators to manage and control Crestron systems on the network in an IT-friendly format.

Cresnet®

Cresnet provides a dependable network wiring solution for Crestron keypads, lighting controls, shade motors, thermostats, occupancy sensors, and other devices that don't require the higher speed of Ethernet. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24VDC power to each device over a simple 4-conductor cable. To assist with troubleshooting, the CP3N includes our patent-pending Network Analyzer which continuously monitors the integrity of the Cresnet network for wiring faults, marginal performance, and other errors.

Onboard Control Ports

In addition to Ethernet, the CP3N includes three bidirectional COM ports and eight IR ports to interface directly with all of your centralized AV sources, video displays, and other devices. Eight programmable relay ports are included for controlling projection screens, lifts, power controllers, and other contact-closure actuated equipment. Eight "Versiport" I/O ports enable the integration of power sensors, motion detectors, door switches, alarms, or anything else that provides a dry contact closure, low-voltage logic, or 0-10 Volt DC signal.

BACnet™/IP

Native support for the BACnet/IP communication protocol provides a direct interface to third-party building management systems over Ethernet, simplifying integration with HVAC, security, fire & life safety, voice & data, lighting, shades, and other systems. Using BACnet/IP, each system runs independently with the ability to communicate together on one platform for a truly smart building.[2]

SPECIFICATIONS

Control Engine

Crestron 3-Series; real-time, preemptive multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs

Memory

SDRAM: 512 MB
Flash: 4 GB
Memory Card: Supports SD and SDHC cards up to 32 GB
External Storage: Supports USB mass storage devices up to 1 TB

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 [2], IPv4 or IPv6, Active Directory authentication, IIS v.6.0 Web Server, SMTP e-mail client
Control Subnet: 10/100/1000 Mbps Ethernet, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP server, DNS Server, port forwarding, Isolation Mode
Cresnet: Cresnet master mode
USB: Supports USB mass storage class devices via rear panel USB 2.0 host port, supports computer console via front panel USB 2.0 device port
RS-232/422/485: For 2-way device control and monitoring, all ports

support RS-232 up to 115.2k baud with software handshaking, one port also supports hardware handshaking, RS-422, and RS-485

IR/Serial: Supports 1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

Connectors & Card Slots

RELAY OUTPUT 1 – 8: (2) 8-pin 3.5 mm detachable terminal blocks;
Comprises (8) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC; MOV arc suppression across contacts

I/O 1 – 8: (1) 9-pin 3.5 mm detachable terminal block;
Comprises (8) "Versiport" digital input/output or analog input ports (referenced to GND);
Digital Input: Rated for 0-24 Volts DC, input impedance 20k Ohms, logic threshold >3.125V low/0 and <1.875V high/1;
Digital Output: 250 mA sink from maximum 24 Volts DC, catch diodes for use with "real world" loads;
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 21k Ohms with pull-up resistor disabled;
Programmable 5 Volts, 2k Ohms pull-up resistor per pin

IR - SERIAL OUTPUT 1 – 8: (2) 8-pin 3.5 mm detachable terminal blocks;
Comprises (8) 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

COM 1: (1) 5-pin 3.5 mm detachable terminal block;
Bidirectional RS-232/422/485 port;
Up to 115.2k baud; hardware and software handshaking support

COM 2 – 3: (2) 3-pin 3.5 mm detachable terminal blocks;
Bidirectional RS-232 ports;
Up to 115.2k baud; software handshaking support

MEMORY: (1) SD memory card slot;
Accepts one SD or SDHC card up to 32 GB for memory expansion

USB: (1) USB Type A female; USB 2.0 port for storage devices

LAN: (1) 8-pin RJ45 jack;
10Base-T/100Base-TX/1000Base-T Ethernet port;
Connects to the customer's LAN

CONTROL SUBNET: (1) 8-pin RJ45 jack;
10Base-T/100Base-TX/1000Base-T Ethernet port;
Provides a dedicated local network for Crestron devices

NET: (1) 4-pin 3.5 mm detachable terminal block;
Cresnet master port;
Outputs power to Cresnet devices if a power pack is connected to the 24VDC power input jack;
Receives Cresnet network power if no power pack is connected to the 24VDC power input jack;
See "Power" section for additional specifications

24VDC 2.0A: (1) 2.1 x 5.5 mm DC power connector;
24 Volt DC power input; PW-2420RU power pack included;
Passes through to NET port to power Cresnet devices;
See "Power" section for additional specifications

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

COMPUTER (front): (1) USB Type B female;
USB 2.0 computer console port (6 ft cable included);
For setup only

Controls & Indicators

PWR: (1) Green LED, indicates operating power supplied from power pack or Cresnet network
NET: (1) Amber LED, indicates communication with the Cresnet system
MSG: (1) Red LED, indicates control system has generated an error message
HW-R: (1) Recessed pushbutton for hardware reset
SW-R: (1) Recessed pushbutton for software reset
LAN (rear): (2) Bi-color green/amber LEDs, left LED indicates Ethernet link status and connection speed, right LED indicates Ethernet activity
CONTROL SUBNET (rear): (2) Bi-color green/amber LEDs, left LED indicates Ethernet link status and connection speed, right LED indicates Ethernet activity

Power

Power Pack: 2.0 Amps @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

Available Cresnet Power: 24 Watts (1 Amp @ 24 Volts DC) when using power pack

Cresnet Power Usage: 15 Watts (0.625 Amp @ 24 Volts DC) when using Cresnet network power

Environmental

Temperature: 41° to 113° F (5° to 45° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 50 BTU/hr

Enclosure

Chassis: Metal, black finish
Faceplate: Extruded metal, black finish, polycarbonate label overlay
Mounting: Freestanding or 1 RU 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 1.70 in (44 mm) without feet
Width: 17.28 in (439 mm);
19.00 in (483 mm) with rack ears
Depth: 6.56 in (167 mm)

Weight

3.1 lb (1.42 kg)

CP3N 3-Series Control System®

MODELS & ACCESSORIES

Available Models

CP3N: 3-Series Control System®

Included Accessories

PW-2420RU: Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

Available Accessories

PWE-4803RU: PoE Injector
CEN-SW-POE-5: 5-Port PoE Switch
CEN-SWPOE-16: 16-Port Managed PoE Switch
C2N-HBLOCK: Multi-type Cresnet Distribution Block
CNTBLOCK: Cresnet Distribution Block
CNSP-XX: Custom Serial Interface Cable
IRP2: IR Emitter Probe w/Terminal Block Connector
Crestron® App: Control App for Apple® iOS® & Android™
XPanel: Crestron Control® for Computers
myCrestron: Dynamic DNS Service for Crestron Systems
Crestron Fusion®: Enterprise Management Platform
3-Series® BACnet™/IP Support: 3-Series Native BACnet/IP Interface License
CSP-LIR-USB: IR Learner

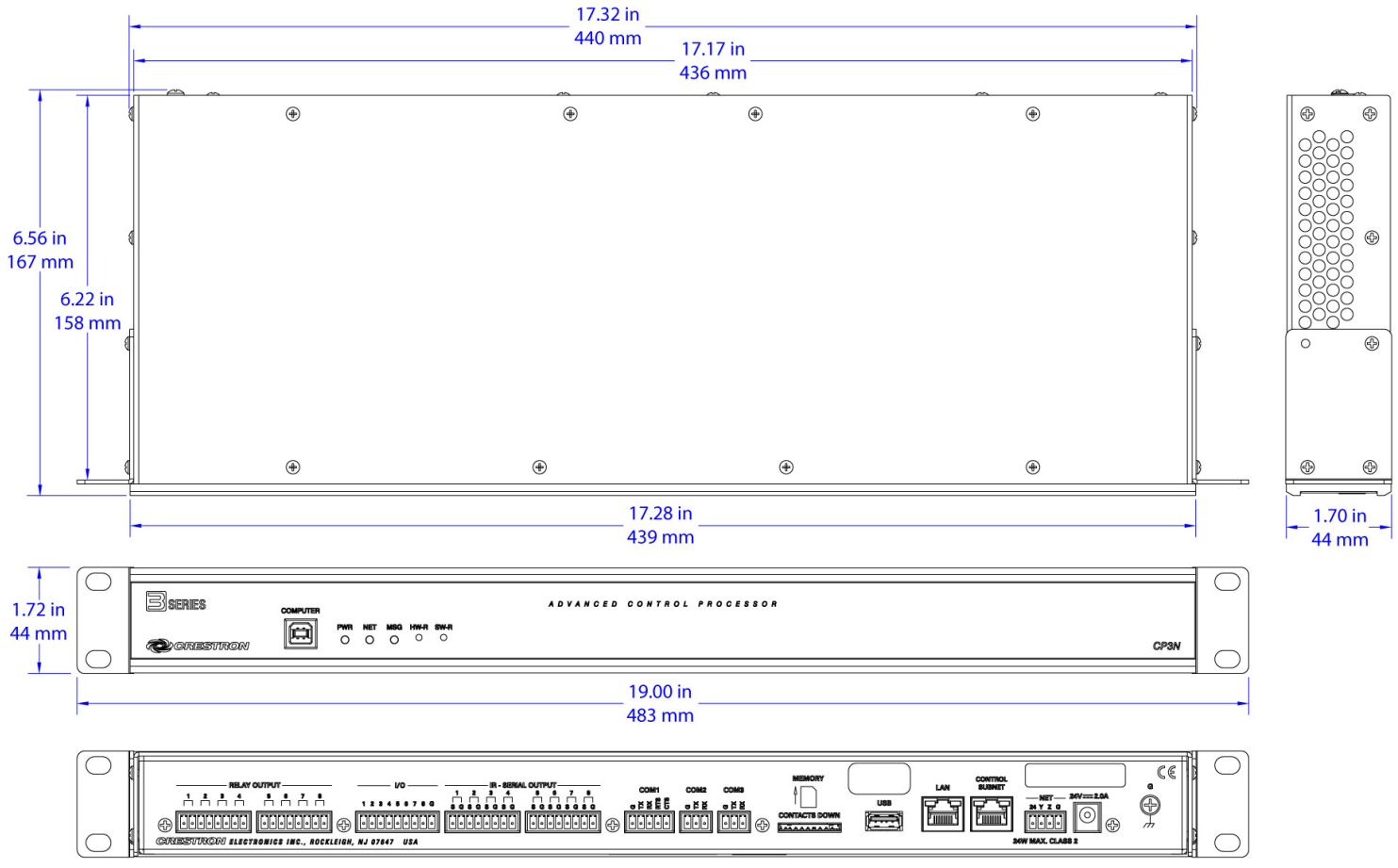
Notes:

1. Item(s) sold separately.
2. License required. The CP3N supports a maximum of 1000 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 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.



Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

TSW-1060

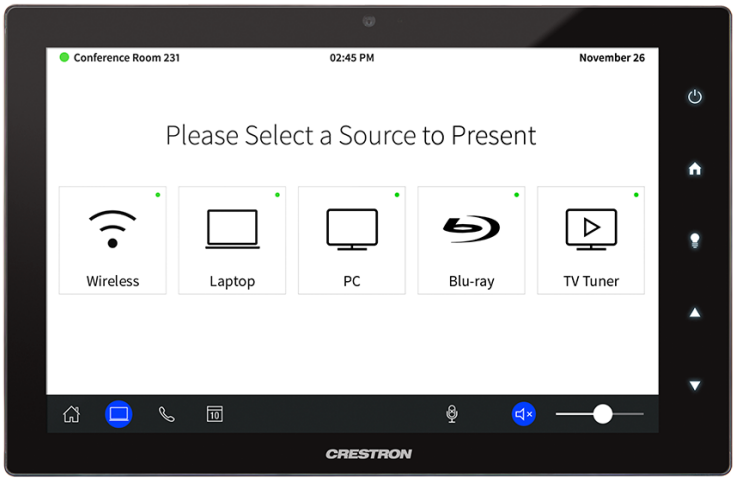
10.1” Touch Screen

- *Ultra clean, modern appearance*
- *Thin profile and compact footprint*
- *Affordable and easy to install*
- *10.1” widescreen active-matrix color display*
- *1280 x 800 WXGA display resolution*
- *Capacitive touch screen technology*
- *Multi-touch capable*
- *Smart Graphics® performance*
- *Backlit soft-touch capacitive buttons*
- *Any/all button hide feature*
- *Auto-brightness control*
- *Voice recognition capability [1,2]*
- *H.264 or MJPEG streaming video display*
- *Built-in 5 MP H.264 IP camera [2]*
- *Built-in microphone and speakers [2]*
- *Rava® SIP intercom and phone technology [2]*
- *Native Sonos® app*
- *Crestron Fusion® room scheduling [4]*
- *Built-in PinPoint™ beacon [5]*
- *Customizable audio feedback*
- *Built-in web browsing [1]*
- *On-screen multi-language keyboard*
- *Customizable screensaver*
- *Single-wire Ethernet connectivity*
- *PoE or PoE+ network powered [4]*
- *US, UK, or European electrical wall box mounting*
- *Lectern mount over a rectangular cutout*
- *Retrofit and masonry mounting options available [6]*
- *Tabletop and swivel mount options available [3]*
- *Available in smooth black or white finish [2]*

Advanced Touch Screen Control

A Crestron® touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens simplify and enhance the way you use technology, doing away with those piles of remote controls, cluttered wall switches, disparate smartphone apps, and cryptic computer screens. For controlling audio, video, lighting, shades, HVAC, security, and other systems, Crestron touch screens are fully-customizable with easy-to-use controls and icons, true feedback and real-time status display, live streaming video, voice recognition, web browsing, and a full-featured media player for an enhanced multiroom entertainment experience.

With its clean, contemporary design highlighted by edge-to-edge glass and stunning HD color graphics, the Crestron TSW-1060 touch screen makes an elegant statement on any wall, tabletop, or lectern. Perfectly at home in the most contemporary residence or modern office building, its high-tech



good looks underline its power for simplifying everyday tasks and functions throughout any facility.

The TSW-1060 delivers the ultimate touch screen experience in an unobtrusive, space-saving design. It features a brilliant, high-definition 10.1 inch capacitive touch screen display with Smart Graphics® and 5 soft-touch buttons. PoE connectivity and a range of mounting options make installation a breeze for both new and retrofit applications. Additional advanced features include the abilities to control any function using voice commands, view security cameras and other video sources, communicate using built-in video intercom and phone capabilities, manage meeting room scheduling through Crestron Fusion®, browse the Internet, and enjoy full access to your Sonos® Home Sound System.[1]

Smart Graphics®

Crestron touch screens use Smart Graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, rich metadata, embedded apps and widgets, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron Smart Graphics offers these enhancements and more:

- Cool-looking graphical buttons, sliders, knobs, and gauges that are intuitive and fun to use
- Kinetic effects to enhance the feeling of realism, with lists and toolbars that scroll with momentum at the flick of a fingertip
- Drag-and-drop objects that snap into place, offering an easy way to switch sources
- Dashboard widgets to personalize the touch screen with clocks, weather, news, and other information [1]
- A power-saving screensaver that allows display of time, temperature, and other text content at a reduced brightness level

TSW-1060 10.1” Touch Screen

TSW-1060-W-S – Shown in White

TSW-1060-B-S with TSW-1060-TTK-B-S Tabletop Kit

- Customizable themes allowing a completely different look and feel for every user, event, or season
- Fully-developed SmartObjects® that enable sophisticated control over complex devices with minimal programming
- A consistent look and feel across multiple touch screens of varying sizes

Soft-Touch Buttons

The TSW-1060 includes five backlit, soft-touch capacitive buttons for quick access to commonly used functions. These buttons are pre-labeled with icons for “Power”, “Home”, “Lights”, “Up”, and “Down” functions. Each button is programmable via the control system for custom functionality, and any unused button can be hidden by simply turning off its backlight.

Auto-Brightness Control

To ensure optimal visibility under varying lighting conditions, the TSW-1060 includes a built-in light sensor, which regulates the brightness of the display and button backlighting according to the ambient light level in the room. Separate auto-brightness settings are provided for the display and buttons to allow each to be adjusted or defeated as needed.

Voice Recognition

Some things are easier *said* than *done*, so why not just *say* what you want and let Crestron *do* it for you? With built-in voice recognition, the TSW-1060 provides the ability to use spoken commands to control virtually anything. Voice recognition can be used to quickly turn devices on or off, select and play a specific media title or playlist, change the channel, choose a lighting scene, lock the doors, arm the security system, or enter a password. Simply say a command and Crestron does the rest.[1,2]

Streaming Video

High-performance streaming video capability makes it possible to view security cameras and other video sources right on the touch screen. Native support for H.264 and MJPEG formats allows the TSW-1060 to display live streaming video from an IP camera, a streaming encoder (Crestron CEN-NVS200, DM-TXRX-100-STR, or similar[3]), or a DigitalMedia™ switcher. Video is delivered to the touch screen over Ethernet, eliminating the need for any extra video wiring.

Rava® SIP Intercom

Rava SIP Intercom Technology enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over Ethernet, supporting 2-way intercom, video intercom, and paging without requiring any special wiring. VoIP phone capability is also possible through integration with a SIP-compatible IP phone system or SIP server, allowing hands-free telephone functionality complete with speed-dialing, caller ID, custom ringers, and other enhancements. Built-in echo cancellation affords full-duplex performance for clear, seamless voice communication using the TSW-1060’s integrated microphone and speakers.[2]

Built-in Camera

A 5 megapixel camera is built into the TSW-1060 to support video intercom and room monitoring capabilities. This feature allows individuals to communicate both verbally and visually between two touch screens, or between one touch screen and a Rava-compatible video door station. It can also be used to visually monitor any room securely using an H.264 compatible decoder (Crestron DM-TXRX-100-STR, DM-RMC-100-STR, or similar[3]) or a third-party video monitoring system. When not needed, the camera feature can be turned off programmatically through the control system. A “no-camera” model is also available.[2]

Sonos® App

Merging technologies from Sonos and Crestron brings a whole-house music experience like no other. From any touch screen in the house, a family can effortlessly browse for tracks, artists, or playlists using all the services available from Sonos and instantly play them in any room using Sonos wireless speakers or a Crestron Sonnex® Multiroom Audio System. The Sonos app runs natively on the TSW-1060, enabling enhanced control of Sonos products as part of a complete Crestron system. The app checks for updates nightly so it’s always current.[1]

Room Scheduling (Coming Soon)

The TSW-1060 can provide an invaluable productivity tool for corporate enterprises and other organizations that use Crestron Fusion to manage room assets and schedule meetings. Mounted on the wall outside each room, the TSW-1060 allows anyone to see at-a-glance if the room is

available or in use, and to view details about the current meeting. A swipe of the finger reveals the room's entire schedule, displaying upcoming meetings and open time slots on a scrolling calendar ribbon, and allowing the room to be reserved right on the spot.

Room scheduling functionality is enabled on the TSW-1060 by loading the Room Scheduling SmartObject®, which syncs with Crestron Fusion over the network. A Room Availability Hallway Sign (model SSW[3]) can be added for enhanced visibility.[4]

PinPoint™ Beacon (Coming Soon)

The built-in PinPoint proximity detection beacon enhances the intelligence and personalization of a Crestron system by enabling an iPhone® or iPad® device to always know what room it's in. It works with the Crestron App or Crestron PinPoint App, using Bluetooth® technology to determine when the mobile device is in or near the same room as the beacon, and signals the mobile app to automatically display the appropriate controls and information for that location.[5]

Web Browsing

Using its built-in web browser, the TSW-1060 provides quick access to online program guides and other web-based services at the touch of a button, allowing enhanced touch screen control of DVRs and other appliances without having to pick up a separate tablet or smartphone. If a device can be controlled or managed through a web browser, it can be integrated into the Crestron system through the TSW-1060. Of course, the web browser may also be used to simply browse the Internet, check traffic conditions, or look up a recipe.[1]

On-Screen Keyboard

Typing in passwords, URLs, and text searches is facilitated using the on-screen multi-language keyboard.

Multi-Touch Support

The TSW-1060's capacitive touch screen affords enhanced capabilities for browsing web pages using multi-touch gestures.

Audio Feedback

Customized audio files can be loaded to add another dimension to the touch screen graphics using personalized sounds, button feedback, and voice prompts.

Single-Wire Connectivity

A simple Ethernet LAN connection is all that is required to wire the TSW-1060, containing all control, video, intercom, and power signals within a single wire.

Power over Ethernet

Using PoE technology, the TSW-1060 gets its operating power right through the LAN wiring. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. A PoE Injector (PWE-4803RU[3]) simply connects in line with the LAN cable at a convenient location. Crestron PoE switches (CEN-SW-POE-5 or CEN-SWPOE-16[3]) may also be used to provide a total networking solution with built-in PoE.

Note: The TSW-1060 must be powered by a PoE+ power source if a SSW hallway sign is connected via USB.[4]

Simple, Versatile Mounting

Using the bracket provided, the TSW-1060 is easily installed over a 2-gang or 3-gang electrical box, or a 2-gang European or UK electrical box. The same bracket allows for installation in a wooden lectern or podium over a rectangular cutout. When installed, the touch screen protrudes just 1/2 inch from the mounting surface and latches firmly into its mounting bracket leaving no visible screws for an ultra clean appearance.

Additional mounting options are afforded using the TSW-UMB-60 Universal Mounting Bracket. By itself, the TSW-UMB-60 provides a post-construction solution for retrofitting the TSW-1060 into existing drywall. For pre-construction applications that don't require a back box, the TSW-UMB-60 can be used along with a TSW-UMB-60-PMK Pre-Construction Mounting Kit. Masonry and concrete applications are accommodated using the TSW-UMB-60 along with a TSW-UMB-60-BBI back box. The TSW-UMB-60 is compatible with TSW-560, -760, and -1060 model touch screens, making it easy to change devices at any time without having to cut or patch the wall.[6]

Secure Mounting

Every TSW-1060 includes an optional security latch for installations in which the physical security of the touch screen is important. When installed, the security latch ensures that a casual passerby cannot remove the TSW-1060 from its mounted position in the wall. The latch can only be disengaged through a special removal sequence, protecting the touch screen against theft while still allowing serviceability where required.

Tabletop Option

Using the optional Tabletop Kit (TSW-1060-TTK[3]), the TSW-1060 becomes a stylish, freestanding touch screen that fits perfectly on a table, desk, or countertop. It can even be permanently attached to the surface using the optional Swivel Mount Kit (TSW-560/760/1060-SMK[3]).

SPECIFICATIONS

Touch Screen Display

Display Type: TFT active matrix color LCD
Size: 10.1 inch (257 mm) diagonal
Aspect Ratio: 16:10 WXGA
Resolution: 1280 x 800 pixels
Brightness: 400 nits (cd/m²)
Contrast: 950:1
Color Depth: 24-bit, 16.7M colors
Illumination: Edgelit LED w/auto-brightness control
Viewing Angle: ±80° horizontal, ±80° vertical
Touch Screen: Projected capacitive, 5-point multi-touch capable

Buttons

Hard Keys: (5) Projected capacitive pushbuttons, backlit w/auto-brightness control, per-button show/hide (backlight enable/disable), pre-labeled with icons for "Power", "Home", "Lights", "Up", and "Down"
Reset: (1) Miniature pushbutton on rear panel for hardware reset

TSW-1060 10.1” Touch Screen

Graphics Engine

Crestron Smart Graphics, multi-language web browser [1], multi-language on-screen keyboard, screensaver, single scalable streaming video window, native Sonos app [1], optional room scheduling SmartObject [4]

Languages

Smart Graphics: Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, English (UK), English (US), Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Portuguese (Brazilian), Romanian, Russian, Slovak, Spanish, Swedish, Thai

On-Screen Keyboard: Arabic, Chinese (Simplified), Croatian, Czech, Danish, Dutch, English (UK), English (US), Finnish, French (Canada), French (Switzerland), German, Hebrew, Hungarian, Italian, Japanese, Norwegian Bokmal, Polish, Portuguese, Russian, Serbian, Spanish, Swedish, Turkish

Voice Recognition: Afrikaans (South Africa); Chinese, Mandarin (China, Simplified); Chinese, Mandarin (Hong Kong, Simplified); Chinese, Mandarin (Taiwan, Traditional); Chinese, Yue (Hong Kong, Traditional); Czech (Czech Republic); Dutch (Netherlands); English (Australia); English (Canada); English (Generic); English (India); English (New Zealand); English (South Africa); English (UK); English (US); French (France); German (Germany); isiZulu (South Africa); Italian (Italy); Japanese (Japan); Korean (South Korea); Polish (Poland); Portuguese (Brazil); Russian (Russia); Spanish (Spain); Turkish (Turkey)

Web Browser: Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Danish, Dutch, English, Filipino, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian Bokmal, Pashto, Persian, Polish, Portuguese, Romanian, Romansh, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkish, Ukrainian, Vietnamese

Room Scheduling [4]: Chinese (Simplified), Chinese (Traditional), Danish, Dutch (Netherlands), English (US), English (UK), French, German, Hebrew, Italian, Japanese, Korean, Norwegian, Portuguese (Brazil), Portuguese (Portugal), Russian, Spanish, Swedish

Memory

RAM: 2 GB DDR3L
Storage: Firmware/Application: 4 GB Class 10 microSD card;
System: 4 GB eMMC
Maximum Project Size: 600 MB

Communications

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), IEEE 802.1X, SNMP, IPv4 or IPv6, IEEE 802.3at compliant
USB: USB 2.0 host for room availability hallway sign [3,4]
Bluetooth: Crestron PinPoint proximity detection beacon [5]

Streaming Decoder

Video Formats: H.264 (MPEG-4 part 10 AVC), MJPEG
Audio Formats: AAC stereo
Bitrates: Up to 25 Mbps (20 Mbps maximum recommended)
Streaming Input Resolutions: Up to 1920x1080@30fps
Streaming Protocol: RTSP

Streaming Encoder & Camera [2]

Camera Resolution: 5.0 MP
Field of View: 50º horizontal
Video Format: H.264 (MPEG-4 part 10 AVC)
Streaming Output Resolution: 1280x720
Streaming Protocol: RTSP

Audio

Features: Built-in microphone and speakers, Rava SIP Intercom, multi-language voice recognition [1,2]
Audio Feedback Formats: MP3

Connectors

LAN PoE: (1) 8-pin RJ45 with 2 LED indicators;
10Base-T/100Base-TX Ethernet port, Power over Ethernet compliant [4];
Green and yellow LEDs indicate Ethernet port status

USB: (1) USB Type A female;
USB 2.0 host port;
For optional room availability hallway sign, model SSW [3,4]

Power

Power over Ethernet:
Without USB device connected: IEEE 802.3at Type 1 (802.3af compatible) Class 3 (12.95 W) PoE Powered Device;
With USB device connected: IEEE 802.3at Type 2 Class 4 (25.5 W) PoE+ Powered Device

Environmental

Temperature: 32° to 112° F (0° to 45° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 44 BTU/hr

Enclosure

Construction: Plastic, smooth black or white finish, edge-to-edge glass with black or white surround [2]
Mounting: Surface mount over a 2 or 3-gang electrical box, 2-gang European (DIN 49073) electrical box, or 2-gang UK (BS 4662) electrical box; lectern mount over a 2-1/5” H x 3-3/4” W (56 mm H x 96 mm W) cutout; 1-3/8” (35 mm) minimum mounting depth; additional wall mount and tabletop options available separately

Dimensions

Height: 6.59 in (168 mm)
Width: 10.23 in (260 mm)
Depth: 1.52 in (39 mm)
Dimensions do not include the mounting bracket

TSW-1060 10.1” Touch Screen

Weight

23.9 oz (675 g)

MODELS & ACCESSORIES

Available Models

TSW-1060-B-S: 10.1” Touch Screen, Black Smooth
TSW-1060-W-S: 10.1” Touch Screen, White Smooth
TSW-1060-NC-B-S: 10.1” Touch Screen without Camera or Microphone, Black Smooth

Available Accessories

TSW-1060-TTK: Tabletop Kit for TSW-1060
TSW-560/760/1060-SMK: Swivel Mount Kit for TSW-1060-TTK
TSW-UMB-60: Universal Mounting Bracket for TSW-x60 Series
TSW-UMB-60-PMK: Pre-Construction Mounting Kit for TSW-UMB-60
TSW-UMB-60-BBI: Wall Mount Back Box for TSW-UMB-60
PWE-4803RU: PoE Injector
CEN-SW-POE-5: 5-Port PoE Switch
CEN-SWPOE-16: 16-Port Managed PoE Switch
CEN-NVS200: Network Video Streamer
DM-TXRX-100-STR: HD Streaming Transmitter/Receiver
DM-RMC-100-STR: HD Streaming Receiver & Room Controller 100
SSW: Room Availability Hallway Sign, Wall Mount

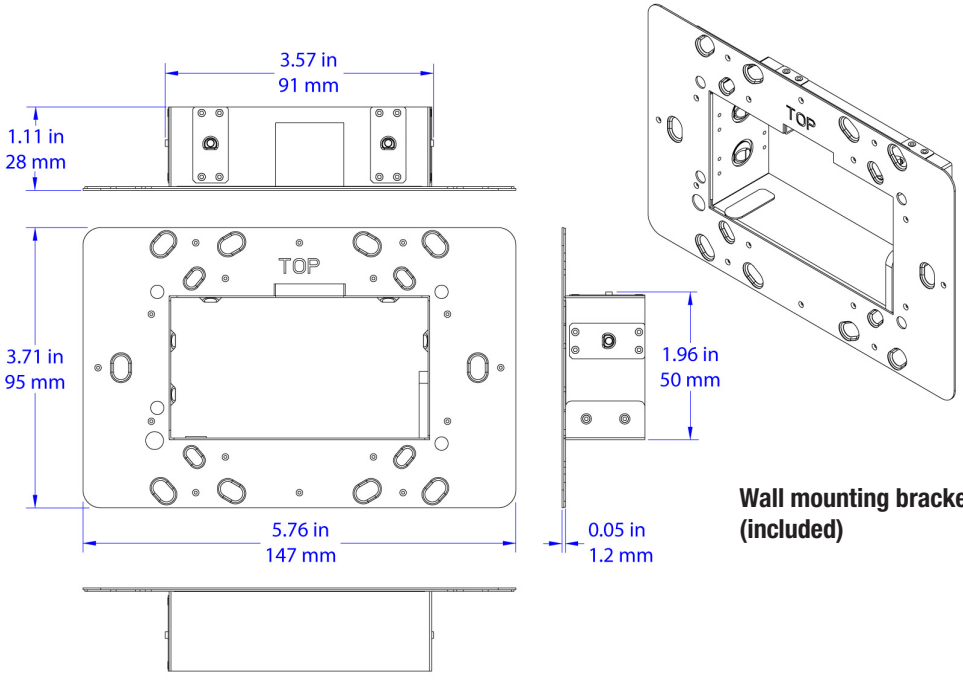
Notes:

1. Voice recognition, web browsing, weather information, Sonos app, and certain other functions require an Internet connection.
2. The camera and microphone are included on models TSW-1060-B-S and TSW-1060-W-S only. To ensure privacy, the camera and microphone can be defeated programmatically at any time. For applications demanding an extra measure of privacy, Crestron offers the TSW-1060-NC-B-S “no camera” model, which has no physical camera or microphone installed. The no camera model is only available in the smooth black finish.
3. Item(s) sold separately.
4. Room scheduling functionality and support for the SSW hallway sign via USB require the Room Scheduling SmartObject to be loaded on the touch screen. Certain functionality and hardware features are disabled when running the Room Scheduling SmartObject. The Room Scheduling SmartObject is not yet available. The touch screen must be powered by a PoE+ power source when a SSW hallway sign is connected via USB.
5. PinPoint beacon functionality will be enabled through a future firmware update. When enabled, the TSW-1060 will provide an integrated, equivalent alternative to the standalone PP-100 beacon. For more details, refer to the PP-100 spec sheet. Bluetooth technology is used solely for proximity detection and does not transmit or receive any control, multimedia, or personal data. PinPoint beacons are only visible to Bluetooth enabled devices that are specifically programmed and configured to work with your system. PinPoint is currently only compatible with Apple® iOS® devices.
6. The TSW-UMB-60, TSW-UMB-60-PMK, and TSW-UMB-60-BBI are all sold separately. The TSW-UMB-60 is also compatible with older TSW-UMB-PMK preconstruction mounting kits and TSW-550-BBI back boxes, allowing the TSW-1060 touch screen to be installed in place of a previous generation TSW-5xx series touch screen, or any other device that was originally installed using the a TSW-UMB-PMK or TSW-550-BBI, without modification to the wall.

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.

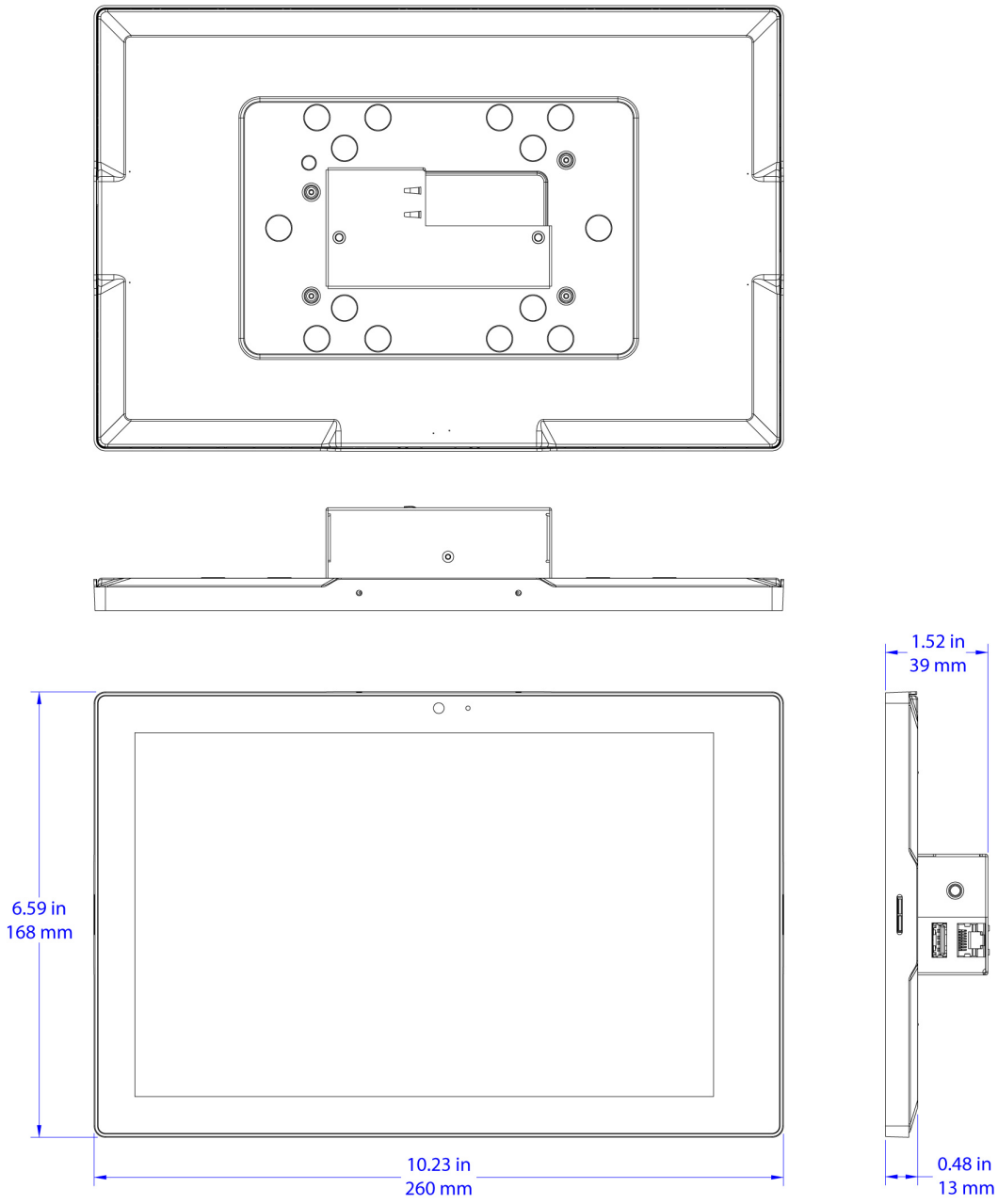
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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



Wall mounting bracket (included)

TSW-1060 10.1” Touch Screen



Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 05/03/17

TSW-1060-TTK

Tabletop Kit for TSW-1060

- *Converts a TSW-1060 to a stylish 10.1" tabletop touch screen*
- *Provides a 38° fixed operating angle*
- *Allows permanent mounting using the optional swivel mount kit [1]*
- *Provides the choice of a rear or bottom wire exit*

The TSW-1060-TTK provides a stylish and convenient tabletop enclosure for a TSW-1060 Touch Screen. The touch screen is angled when installed in the enclosure. The complete assembly may be placed on any flat, level surface.

An optional swivel mount accessory (TSW-560/760/1060-SMK) is available separately and provides a means for permanently mounting the enclosure while retaining the ability to rotate it for optimal positioning. The swivel range can be customized using optional limit screws, with a maximum of 330-degree rotation allowed. The swivel mount may be installed on any flat table, desk, or counter top surface with a thickness of 1 inch (25 mm) minimum to 1-3/8 inch (35 mm) maximum.

Wiring may be passed out the rear of the enclosure through a grommet and strain relief, or routed through the bottom for a very clean, cordless appearance. The rear wire opening can accommodate a single cable up to 1/4 inch (6 mm) diameter such as standard CAT5. The bottom opening measures 29/32 inch (23 mm) diameter, while the swivel mount[1] can accommodate wiring up to 11/16 inch (17 mm) diameter

Shown with TSW-1060 Touch Screen (Sold Separately)

SPECIFICATIONS

Enclosure

Plastic, black or white; 38° fixed angle device opening; freestanding or swivel mount installation [1]

Dimensions

Height: 4.12 in (105 mm), 4.25 in (108 mm) with swivel mount [1]
Width: 7.86 in (200 mm)
Depth: 5.15 in (131 mm)

With touch screen installed:

Height: 5.45 in (139 mm), 5.58 in (142 mm) with swivel mount [1]
Width: 10.23 in (260 mm)
Depth: 5.80 in (148 mm)

Weight

17.3 oz (491 g), 41.2 oz (1166 g) with touch screen installed

MODELS & ACCESSORIES

Available Models

TSW-1060-TTK-B-S: Tabletop Kit for TSW-1060, Black Smooth
TSW-1060-TTK-W-S: Tabletop Kit for TSW-1060, White Smooth

Available Accessories

TSW-560/760/1060-SMK: Swivel Mount Kit for TSW-560-TTK, TSW-760-TTK & TSW-1060-TTK

Notes:

1. TSW-560/760/1060-SMK Swivel Mount Kit sold separately.

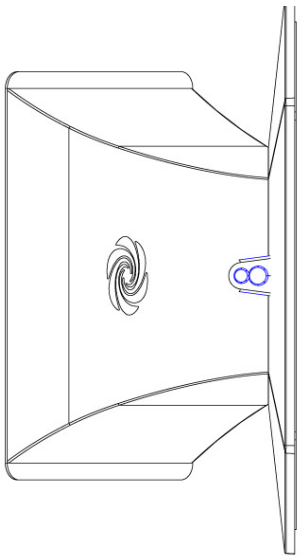
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

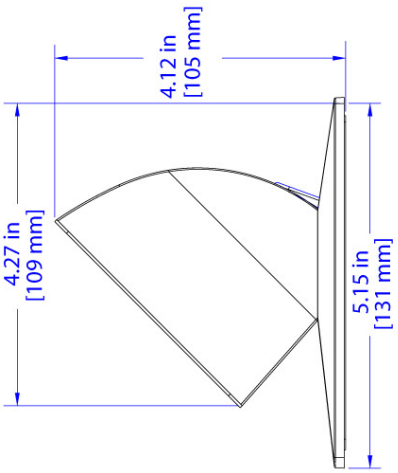
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

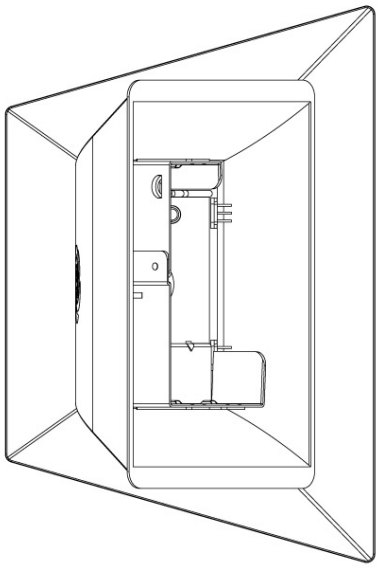
Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

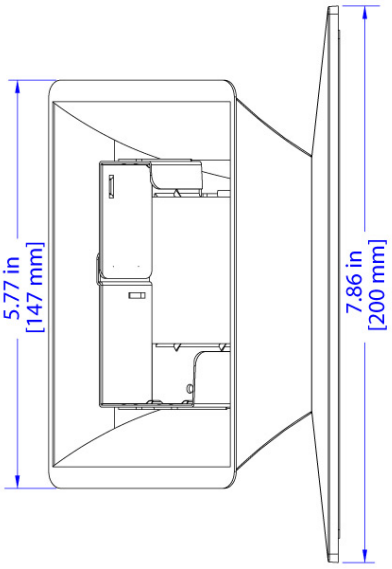
TSW-1060-TTK Tabletop Kit for TSW-1060

CAD DRAWINGS









Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 11/14/16

DSP-1283

Avia

Avia™ 12x8 Digital Signal Processor w/Dante™, USB Audio, AEC, & Audio Conferencing Interface

- > *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*
- > *8x8 USB Audio interface*
- > *SIP or POTS audio conferencing 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.

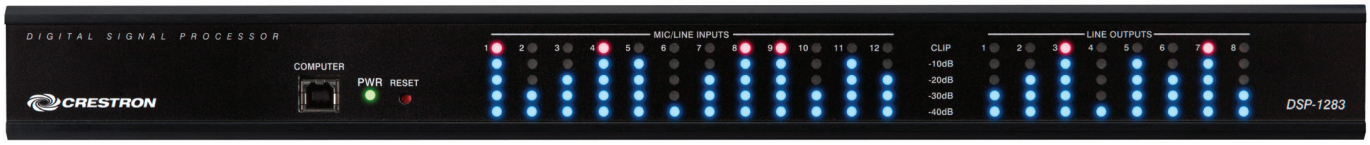
Dante™ Audio Networking

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-1283 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.

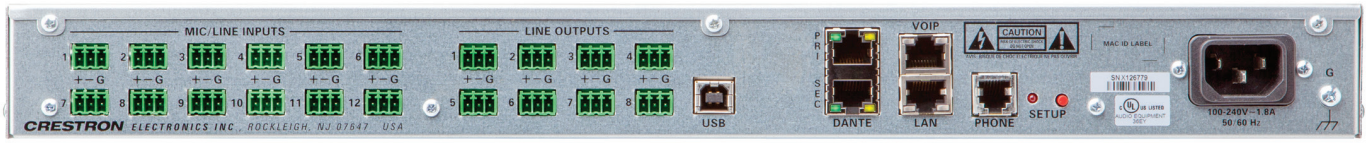
The Avia DSP family comprises five models designed to address a full range of applications:

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**	•	•	•	•	•

DSP-1283 Avia™ 12x8 Digital Signal Processor



Front View



Rear View

Additionally, Dante networking enables plug and play integration with other Dante-enabled mixers, switchers, sources, amplifiers, and computers.

USB Audio Interface

The DSP-1283 includes a USB Audio port, which can be connected to a computer, codec, or other USB Audio host. This USB 2.0 interface allows integration with a Crestron RL® 2 Group Collaboration System to enable the routing of stereo input and output signals between the DSP-1283 and the Crestron RL 2 codec. It can also be used to provide up to eight independent output signals to feed a computer based court recording system.

Acoustic Echo Cancellation

High-performance adaptive AEC on each analog input enables high-quality audio conferencing capability for systems with multiple table or ceiling microphones. Low-latency, full-bandwidth performance affords highly-effective echo cancellation with natural sound quality.

SIP & POTS Phone Interface

The DSP-1283 includes a built-in audio conferencing interface and phone dialer to enable full-duplex voice conferencing capability over a SIP or POTS phone line. Crestron Rava® technology allows Avia to interface over Ethernet with a SIP-compatible phone system or other SIP compatible device. An RJ11 POTS interface is also built in to allow for direct connection to a conventional analog phone line or extension port. Using either SIP or POTS, participants can leverage a control system touch screen to place outgoing calls, receive incoming calls, and control the entire session.[1]

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
USB Audio I/O: 2 channels in & out or 8 channels in & out, 16 or 24 bit, 48 kHz
AEC Performance:
Bandwidth: 20 Hz to 20 kHz
THD+N: 0.001%, +4 dBu input
Convergence Rate: 100 dB/s
Tail Length: 300 ms

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)
Phone/VoIP: POTS (RJ11 wired interface) supporting DTMF & Caller ID, SIP (via Ethernet) supporting SIP server mode
Dante: Dedicated 1000 Mbps primary and secondary Dante network ports
USB Audio Device: USB 2.0 device port for a USB Audio device
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

USB: (1) USB Type B female;
USB 2.0 device port for USB Audio

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

DSP-1283 Avia™ 12x8 Digital Signal Processor

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

VOIP: (1) 8-pin RJ45 female;
10Base-T/100Base-TX/1000Base-T Ethernet SIP VoIP network port

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

PHONE: (1) RJ11 female;
POTS analog telephone 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
VOIP (rear): (2) Bi-color green/amber LEDs, indicate SIP VoIP 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

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

9.3 lb (4.2 kg)

MODELS & ACCESSORIES

Available Models

DSP-1283: Avia™ 12x8 Digital Signal Processor w/Dante™, USB Audio, AEC, & Audio Conferencing Interface

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®.

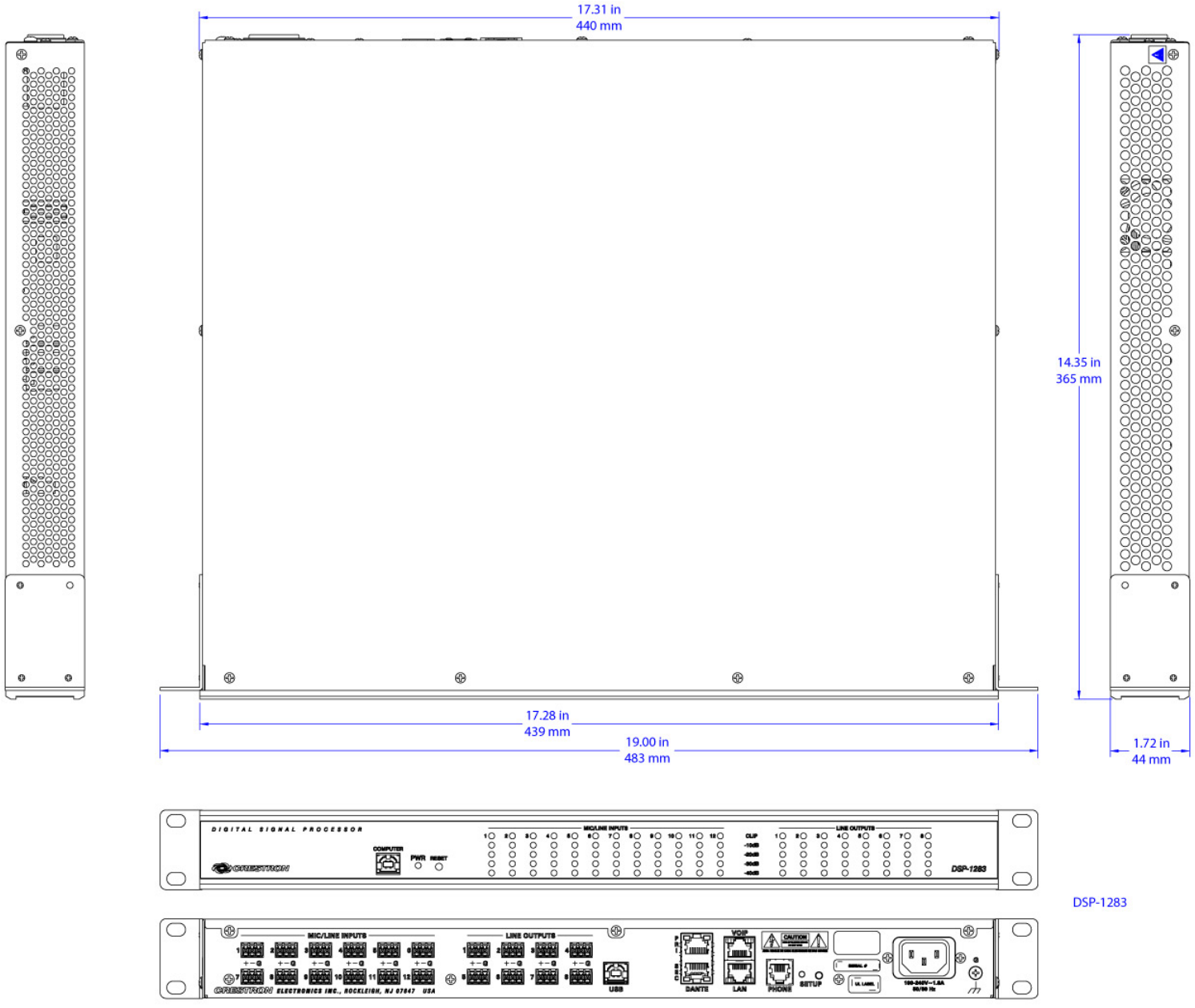
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

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.

DSP-1283 Avia™ 12x8 Digital Signal Processor

DIMENSIONAL DIAGRAM



DSP-1283

Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 11/29/16

AMP-8075

Avia™ 8-Channel Power Amplifier, 75W/Ch.

- > *High-efficiency eight-channel amplifier*
- > *Robust and reliable performance*
- > *Professional sound quality*
- > *75 watts per channel @ 4/8 Ohms*
- > *Each channel configurable for Lo-Z or Hi-Z operation*
- > *Model AMP-8075 supports 100-120V AC line power and 4/8Ω or 70V output*
- > *Model AMPI-8075 supports 220-240V AC line power and 4/8Ω or 100V output*
- > *Mono, stereo, and bridged modes*
- > *Comprehensive fault and speaker protection per channel*
- > *Extensive front panel status indicators and output meters*
- > *High-speed Ethernet LAN connectivity*
- > *Software configuration, control, and monitoring*
- > *Crestron® control system integration support*
- > *Crestron Fusion® enterprise management support [1]*
- > *Rear panel +24 dBu balanced inputs and level adjustments*
- > *Detachable terminal block connectors for easy servicing*
- > *Single-space 19" rack mountable*
- > *High-density stackable without extra vent spacing*

Crestron® Avia™ AMP-8000 series amplifiers are designed to complement the Avia family of digital signal processors, and are well-suited for all types of commercial audio applications. Each model furnishes eight channels of clean, efficient amplification in a space-saving 1 RU rack-mountable chassis. Each channel is configurable for Lo-Z or Hi-Z operation, as well as stereo and bridged modes. Network connectivity enables configuration, monitoring, and control via the Avia Audio Tool software, a Crestron control system, or Crestron Fusion®.[1]

Solid & Efficient Performance

Avia amplifiers are engineered to deliver exceptional performance and reliability with low distortion, low noise, and high power headroom. Advanced Class D technology maximizes efficiency to reduce power consumption and heat dissipation. An internal universal power supply with power factor correction ensures consistent performance with varying line voltages.

Configurable & Controllable

The AMP-8075 model delivers 75 watts per channel into 4 or 8 ohm "Lo-Z" loads. Each channel is individually configurable via software for use with "Hi-Z" distributed speaker systems (either 70V or 100V depending on model). Adjacent pairs of channels may be configured for stereo or bridged operation. Stereo mode enables remote control of a stereo pair of speakers using a single set of controls. Bridged mode allows two channels to be combined to provide a single channel delivering 150 watts into 8 ohms.

Two versions of the AMP-8075 are offered. The namesake AMP-8075 model supports 4/8 ohm and 70V output, and operates on 100-120V AC line power. The "international" AMPI-8075 model supports 4/8 ohm and 100V output, and operates on 220-240V AC line power.

Both models feature professionally balanced inputs and support input signal levels up to +24 dBu. Rear panel input attenuation controls allow for signal level matching. Remote level control and monitoring is enabled using the Avia Audio Tool software, or using a touch screen control panel or mobile device through integration with a Crestron control system. Integration with a control system also enables centralized monitoring and control of multiple amplifiers throughout a facility as part of a Crestron Fusion managed enterprise.

Fully Protected

Avia amplifiers feature comprehensive protection against overheating, shorted or overloaded speaker lines, excessive signal levels, and other faults. Each channel is independently protected, allowing an individual channel to enter protection mode without interrupting the operation of other channels. Protection is automatic, quickly disconnecting the speaker line and shutting down the affected channel, and then restoring normal operation once the fault is resolved. Clear indication of any fault is provided on the front panel, and may also be reported to a control system to provide notification on a touch screen or mobile device, through a text message or e-mail, or at a central help desk using Crestron Fusion.

AMP-8075 Avia™ 8-Channel Power Amplifier, 75W/Ch.

AMP-8075 – Front View

AMP-8075 – Rear View

SPECIFICATIONS

Communications

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

Audio

Input Signal Types: Balanced or unbalanced analog line-level
Output Signal Types: 4/8 Ohm, 70 Volt direct-coupled (AMP-8075 only), 100 Volt direct-coupled (AMPI-8075 only)
Operating Modes: (Configurable via Avia Audio Tool software)

- **Mono:** Each channel is configurable to operate independently from all other channels
- **Stereo:** Adjacent channels (1&2, 3&4, 5&6, 7&8) are configurable to operate as a stereo pair with linked control settings
- **Bridged:** Adjacent channels (1&2, 3&4, 5&6, 7&8) are configurable to operate as an 8 Ohm bridged mono output
- **4/8Ω Mode:** Each channel is configurable for 4/8 Ohm "Lo-Z" output
- **70V Mode (AMP-8075 only):** Each channel is configurable for 70 Volt "Hi-Z" output
- **100V Mode (AMPI-8075 only):** Each channel is configurable for 100 Volt "Hi-Z" output

Output Power, AMP-8075:

- 75 Watts per channel @ 4-8 Ohms or 70 Volts nominal
- 150 Watts per bridged pair of channels @ 8 Ohms

Output Power, AMPI-8075:

- 75 Watts per channel @ 4-8 Ohms or 100 Volts nominal
- 150 Watts per bridged pair of channels @ 8 Ohms

Frequency Response:

- 20 Hz to 20 kHz ±0.5 dB at 1 Watt, 4-8 Ohms;
- 200 Hz to 20 kHz ±0.5 dB at 1 Watt, 70/100 Volts

High Pass Filter: -3 dB @ 80 Hz, 12 dB per octave in 70V or 100V mode
THD+N: <0.1% @ 1 kHz at 3 dB below clipping
S/N Ratio: >103 dBA, 20 Hz to 20 kHz
Channel Separation: >70 dB
Input Sensitivity: 1.23 Vrms, +4 dBu (balanced) for full rated output power

Fault Protection:

- **Over Current:** Protects each channel individually against an excessive speaker load or shorted speaker line
- **DC Offset:** Protects each channel and speaker line against DC voltages sensed at each output
- **Over Temperature:** Protects the amplifier power supply and each channel against overheating due to poor ventilation or excessive temperature
- **Under Voltage:** Protects the amplifier if the internal power supply voltage is below tolerance due to excessive output levels or insufficient line voltage
- *Note: All faults report to the control system, and indicate on the front panel and in the software tool.*

Output Relays: Disconnects the speaker line at each output under fault conditions, and during startup and shutdown
Audio Ramp: Ramps each channel's audio level up to its last used setting after the corresponding output relay has closed following startup or fault recovery; ramp time ~2 seconds

Connectors

LINE INPUTS 1 – 8: (8) 3-pin 3.5 mm detachable terminal blocks;
Balanced line-level audio inputs;
Maximum Input Level: 12.3 Vrms, +24 dBu;
Input Impedance: 20k Ohms balanced

SPEAKER OUTPUTS 1 – 8: (8) 2-pin 7.62 mm reversed gender 20A detachable terminal blocks;
Power amplifier outputs;
Wire Size: Terminals accept up to 12 AWG (3.31 mm^2);
Note: Output is direct-coupled in all modes for all load types, not transformer isolated

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

100-120V~ 50/60Hz 3A (AMP-8075): (1) IEC 60320 C14 main power inlet;
Mates with removable power cord (included)

220-240V~ 50/60Hz 2A (AMPI-8075): (1) IEC 60320 C14 main power inlet;
Mates with removable power cord (included)

FUSE: T10AH250V (AMP-8075): Main fuse;
1/4" x 1-1/4", 10A, time-lag, 250V, ceramic

AMP-8075 Avia™ 8-Channel Power Amplifier, 75W/Ch.

FUSE: T6AH250V (AMPI-8075): Main fuse; 5 x 20 mm, 6.3A, time-lag, 250V, ceramic

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

COMPUTER (front): (1) 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, amber indicates startup in progress, green indicates normal operation, alternating green/amber indicates absence of a network connection

RESET: (1) Recessed pushbutton, restores last saved settings

STATUS, FAULT 1 – 8: (8) Red LEDs, each indicates an under-voltage fault condition on the corresponding channel

STATUS, CURRENT 1 – 8: (8) Blue LEDs, each indicates an over-current fault condition on the corresponding output

STATUS, DC 1 – 8: (8) Blue LEDs, each indicates a DC offset fault condition on the corresponding channel

STATUS, THERM 1 – 8: (8) Blue LEDs, each indicates an over-temperature fault condition on the corresponding channel

STATUS, 70V 1 – 8 (AMP-8075 only): (8) Blue LEDs, each indicates the corresponding channel is configured for 70 Volt operation

STATUS, 100V 1 – 8 (AMPI-8075 only): (8) Blue LEDs, each indicates the corresponding channel is configured for 100 Volt operation

VU 1 – 8: (8) 5-segment LED bar graph audio level meters for each corresponding output; each contains (4) blue LEDs for -40dB, -30dB, -20dB, and -10dB, and (1) red LED for CLIP

LINE INPUTS 1 – 8 (rear): (8) Screwdriver-adjustable rotary controls, each adjusts the input attenuation level for the corresponding channel

LAN (rear): (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

SETUP (rear): (1) Red LED and (1) pushbutton for Ethernet setup, flashes while updating firmware

Power Switch (rear): (1) Rocker switch, turns main power on or off

Power

Main Power (AMP-8075): 3 Amps @ 100-120 Volts AC, 50/60 Hz
Main Power (AMPI-8075): 2 Amps @ 220-240 Volts AC, 50/60 Hz
Power Consumption: 173 Watts, all channels driven at 1/8th output power; 70 Watts, all channels idle

Environmental

Temperature: 41° to 104° F (5° to 40° C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 350 BTU/hr, all channels driven at 1/8th output power; 250 BTU/hr, all channels idle

Construction

Chassis: Metal, variable-speed fan-cooled, vented sides
Front Panel: Metal, black finish with polycarbonate label overlay

Mounting: Freestanding or 1 RU 19-inch rack-mountable (front rack ears and rear support brackets included)

Dimensions

Height: 1.72 in (44 cm)
Width: 17.28 in (439 mm); 19.00 in (483 mm) with rack ears
Depth: 14.69 in (374 mm)

Weight

12.6 lb (5.72 kg)

Compliance

UL 60065, FCC Class A commercial use

MODELS & ACCESSORIES

Available Models

AMP-8075: Avia™ 8-Channel Power Amplifier, 75W/Ch., 4/8Ω or 70V, North America & Japan, 100-120V
AMPI-8075: Avia™ 8-Channel Power Amplifier, 75W/Ch., 4/8Ω or 100V, International, 220-240V

Available Accessories

DSP Series: Avia™ Digital Signal Processors
SW-AAT: Avia™ Audio Tool
SAROS Series: Saros® Commercial Speakers

Notes:

1. Integration with Crestron Fusion requires a control system and custom programming.

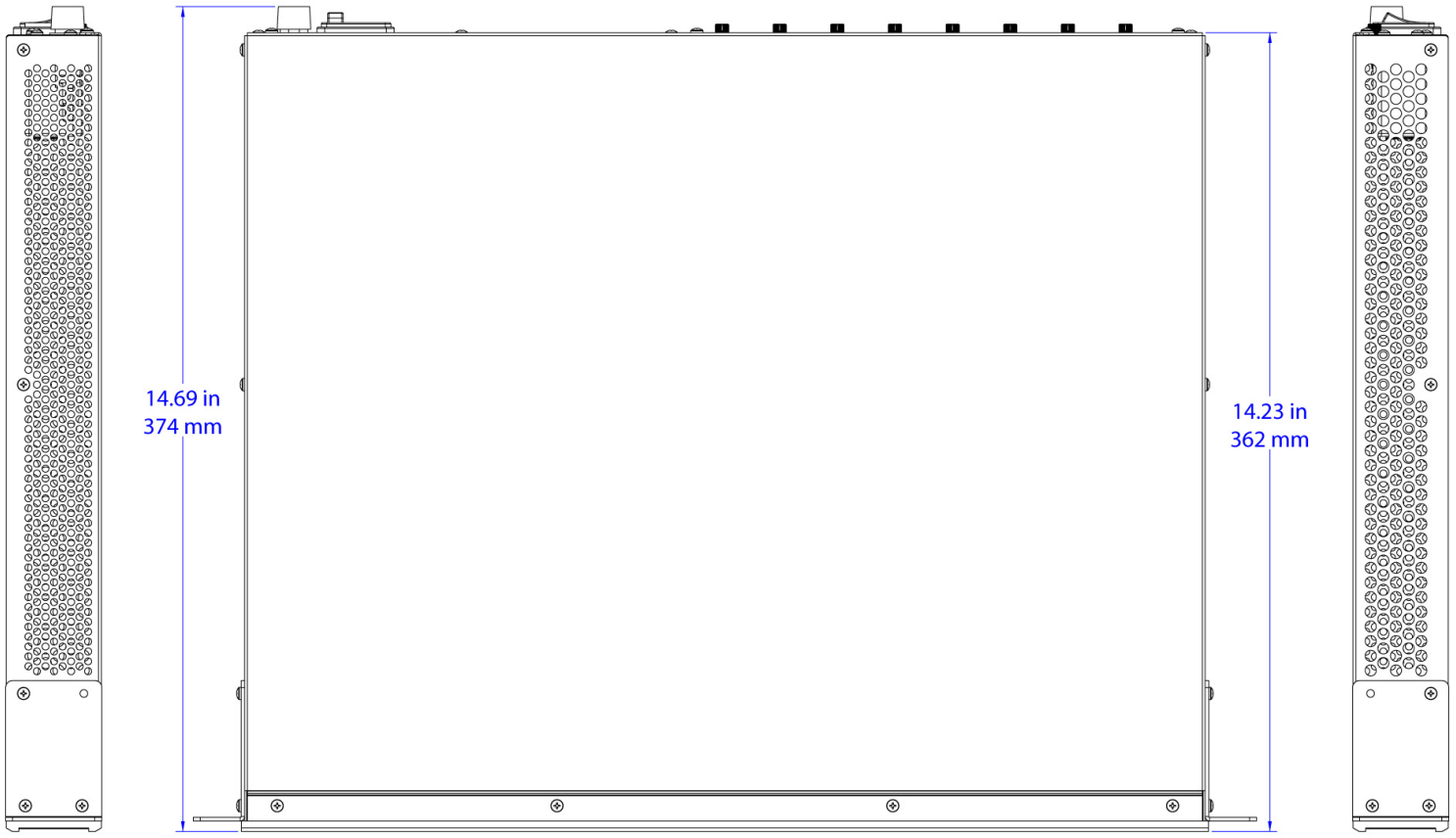
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

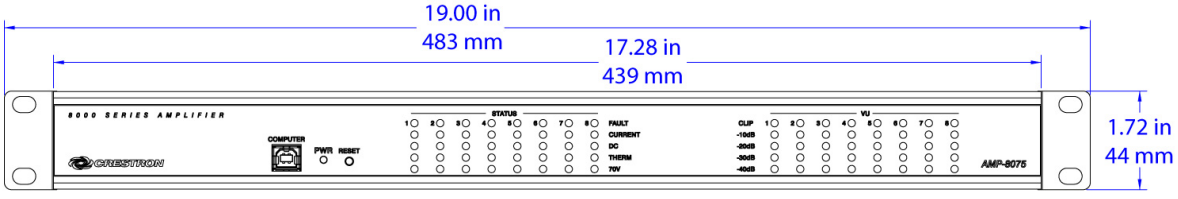
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

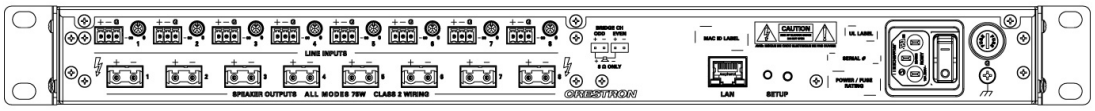
Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

AMP-8075 Avia™ 8-Channel Power Amplifier, 75W/Ch.

DIMENSIONAL DIAGRAM







Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 04/11/17

SAROS IC6T

Saros® 6.5” 2-Way In-Ceiling Speaker

- *High-performance 2-way in-ceiling speaker*
- *6.5” polypropylene woofer with damped cloth surround for tight, controlled bass and clear midrange*
- *Optimized dual front ports for enhanced low-frequency response*
- *Wide-dispersion, horn-loaded titanium dome tweeter for crisp, clear high-end and enhanced pattern control*
- *Built-in 60 Watt 70/100V multi-tap transformer*
- *“Zero-bezel” frameless grille for a clean, contemporary appearance*
- *Integral metal back can with top and side conduit knockouts*
- *Two-step toggle clamps for fast, easy installation*
- *Includes tile bridge for installation in a drop-tile ceiling*
- *Meets the requirements of UL® 2043 for installation in an environmental air-handling space*
- *125 Watts program power handling at 8 Ohms*
- *50 Hz - 20 kHz frequency response*
- *100° nominal coverage pattern*
- *Available in black or white*
- *Paintable to blend with surroundings*

Saros® speakers by Crestron® deliver professional grade performance and flexible installation in a range of popular sizes for demanding commercial applications. Solid construction, easy installation, and high-end components are hallmarks of the Saros speaker line. Ideal for use in background or foreground music, paging, and sound reinforcement systems, Saros speakers are engineered to achieve smooth, even coverage, high output, and clear, natural sound quality through the employment of horn-loaded titanium dome tweeters, high-efficiency damped cone woofers, ported enclosures, and precisely tuned crossovers.

The Saros IC6T model is a 2-way in-ceiling speaker featuring a 6-1/2 inch woofer and wide-dispersion, horn-loaded 1 inch dome tweeter. A built-in 60 Watt multi-tap transformer allows for use with 70 and 100 Volt distributed speaker systems. Power handling at 8 Ohms is an impressive 125 Watts (program), with a wide frequency response from 50 Hz to 20 kHz (±3 dB).

The Saros IC6T is smartly designed for quick and easy installation and years of reliable performance. Its “zero-bezel” frameless grille achieves an unobtrusive and contemporary appearance well-suited for use in restaurants and night clubs, retail spaces, houses of worship, convention facilities, universities, and office buildings. Installing the grille requires no hardware or tools, utilizing powerful magnets to hold it in place. A safety tether is included to prevent the grille from ever falling from the ceiling.

Unitized construction of the speaker enclosure simplifies specification and installation for use in new and existing ceilings. Mounting the speaker is facilitated using rugged, 2-step toggle clamps integrated into the enclosure. Each toggle clamp offers two positions to accommodate standard and extra thick surfaces up to 2.4 inches (61 mm). A tile bridge is included to provide proper support when installed in a typical drop-tile ceiling. The tile bridge is adjustable to enable off-center speaker positioning, and can be folded to fit through the speaker cutout in blind-mount situations. Two rigging points are also provided on the top of the speaker enclosure for securing to the building structure using the optional safety tether kit (SPKA-ST-15 [1]).

An integral metal back can is employed to meet the requirements of UL® 2043 for installation in an environmental air-handling (plenum) space. The wiring connection is accessible behind a rear cover panel by removing a single screw. Top and side knockouts are provided on the cover panel to accommodate 1/2” or 3/4” flexible conduit. A cable clamp is also provided. Connecting the wiring behind the cover planel is facilitated using a detachable screw terminal block with provisions for easy parallel wiring in a multi-speaker application. Setting the 70/100V transformer tap is performed via a screwdriver-adjustable control located on the front baffle behind the grille.

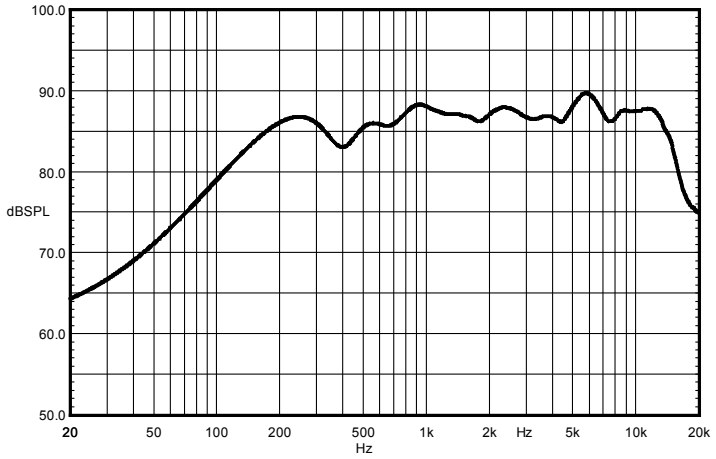
Saros IC6T speakers are available in white or black, and can be painted to blend with the ceiling surface. They are priced individually, but must be ordered in pairs.

SAROS IC6T Saros® 6.5” 2-Way In-Ceiling Speaker

SPECIFICATIONS

Features & Performance

Woofer: 6.5 inch (165 mm) polypropylene w/ring mode decoupled cloth surround & steel basket
Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded
Crossover Frequency: 2.5 kHz
Impedance: 8 Ohms nominal with transformer set to “8Ω”
Transformer Taps: 3.75W/7.5W/15W/30W/60W at 70V;
7.5W/15W/30W/60W at 100V
Frequency Response: 50 Hz to 20 kHz (±3 dB)



SAROS IC6T – Frequency Response

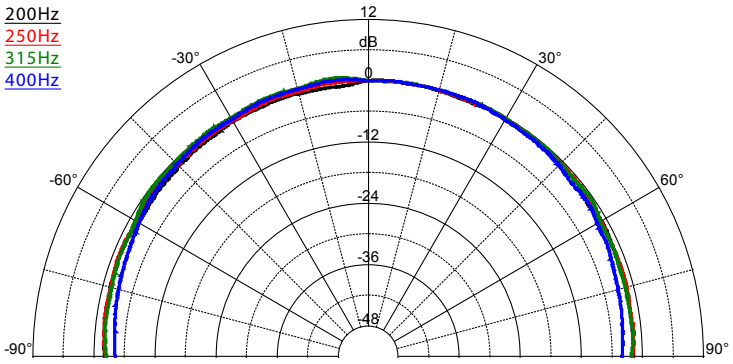
Frequency Range: 40 Hz to 20 kHz (-10 dB)
Power Handling: 125 Watts program (8 Ohms)
Sensitivity: 88.5 dB @ 1W/1m
Coverage: 100° conical (nominal)

Connections

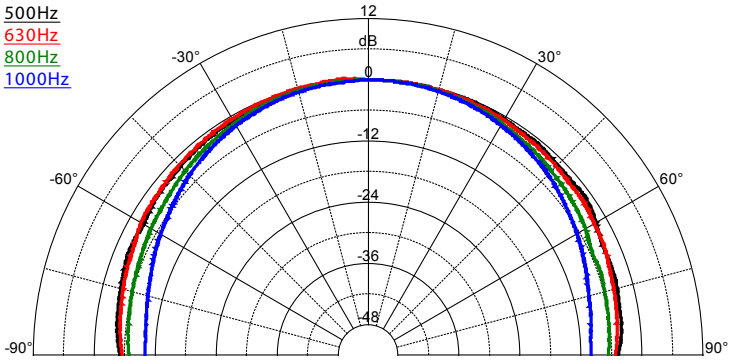
Input: (1) 4-pin 5 mm detachable terminal block with screw-down flanges; Speaker input with parallel pass-thru;
Maximum Wire Size: 12 AWG

Controls

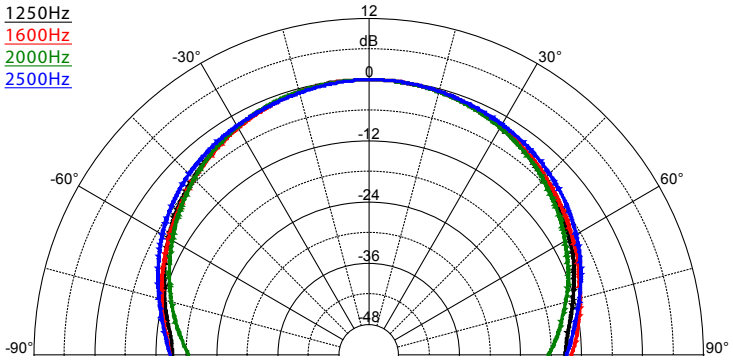
Transformer Tap: (1) Recessed screwdriver-adjustable rotary switch on baffle; used to select 70/100V tap or 8 Ohms (bypass)



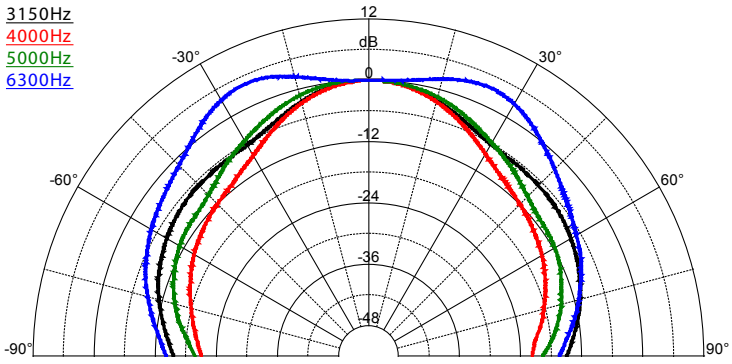
SAROS IC6T – Dispersion Pattern, 200 Hz - 400 Hz



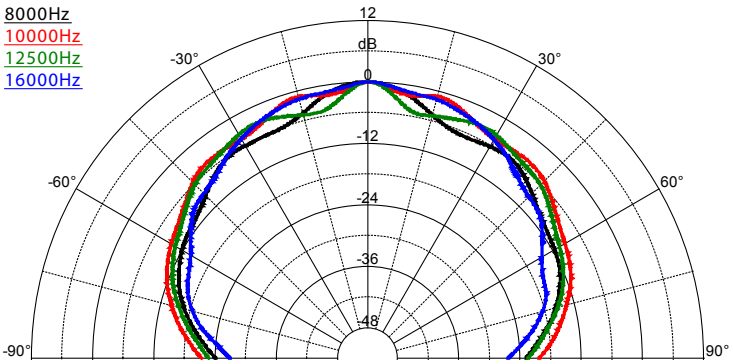
SAROS IC6T – Dispersion Pattern, 500 Hz - 1000 Hz



SAROS IC6T – Dispersion Pattern, 1250 Hz - 2500 Hz



SAROS IC6T – Dispersion Pattern, 3150 Hz - 6300 Hz



SAROS IC6T – Dispersion Pattern, 8000 Hz - 16000 Hz

SAROS IC6T Saros® 6.5” 2-Way In-Ceiling Speaker

Environmental

Temperature: -2° to 120° F (-19° to 49° C)
Humidity: 5% to 95% RH (non-condensing)

Construction

Enclosure: Zinc-plated steel, plenum-rated, 1/2” or 3/4” conduit knockout top and side, (1) cable clamp included
Baffle: Glass fiber reinforced ABS plastic, UL® 94V-0 flame rated
Grille: Steel with white or black textured finish, paintable, magnetically-held “zero-bezel” frameless design, safety tether included
Mounting: Flush ceiling mount using 4 integral 2-step toggle clamps, 2.4 in (61 mm) maximum surface thickness, 8.1 in (206 mm) minimum mounting depth, 9.7 in (245 mm) diameter recommended cutout, tile bridge included, (2) rigging points for safety tether (SPKA-ST-15 sold separately)

Dimensions

Diameter: 10.57 in (269 mm) not including toggles
Depth: 8.31 in (211 mm)

Weight

10.38 lb (4.7 kg)

Compliance

UL 1480, UL 2043 [2]

MODELS & ACCESSORIES

Available Models

SAROS IC6T-B-T-EACH: Saros® 6.5” 2-Way In-Ceiling Speaker, Black Textured, Single (must be ordered in multiples of 2)
SAROS IC6T-W-T-EACH: Saros® 6.5” 2-Way In-Ceiling Speaker, White Textured, Single (must be ordered in multiples of 2)

Available Accessories

SPKA-ST-15: Safety Tether/Tie Down Kits, 10 Sets
SPKA-NCTP-IC610: New-Construction Speaker Templates, Flat
SPKA-NCTP-IC611: New-Construction Speaker Templates, Collared
SPKA-GRILLE-IC610: Round Grilles (for replacement)
SAROS ICS8T: Saros® 8” In-Ceiling Subwoofer

Notes:

1. Item(s) sold separately.
2. UL 1480 speakers for fire alarm and signaling systems in the United States, in accordance with the National Electrical Code, NFPA 70, and the National Fire Alarm and Signaling Code, NFPA 72. In Canada, in accordance with CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations; and with CAN/ULC S524, Standard for Installation of Fire Alarm Systems. UL 2043 in accordance with the Standards for Fire Test for Heat and Visible Smoke Release for Discrete Products and Accessories Installed in Air-Handling Spaces, UL 2043 and ULC ORD-C2043.

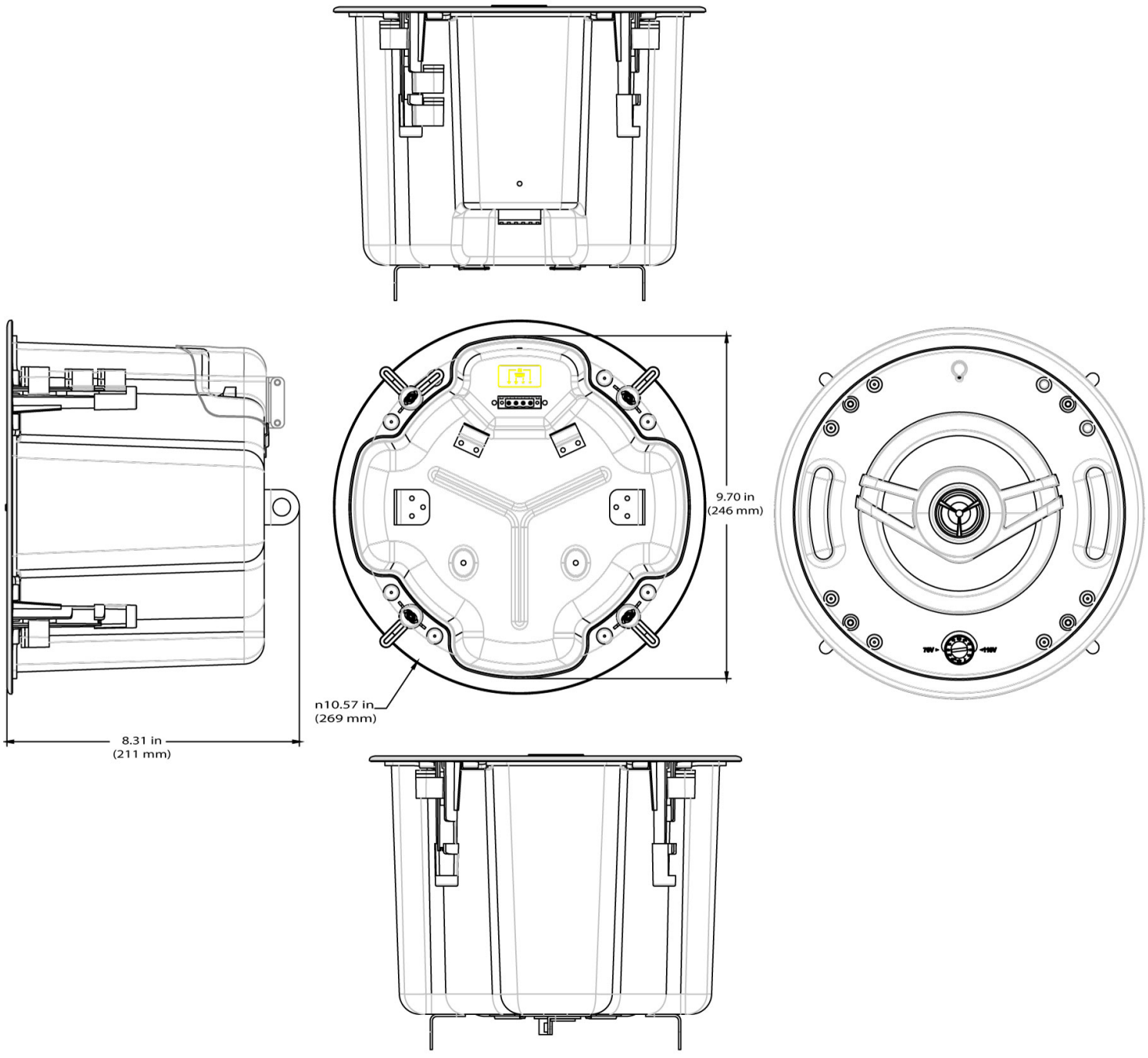
Crestron warrants to the original end purchaser that this Crestron Speaker Product, when purchased directly from Crestron or an authorized Crestron Dealer, will be free from defects in material and workmanship for the life of the product except for speaker grills and outdoor rated speakers, which are warranted for five (5) years. Crestron will at its option and expense either repair the defect or replace the Speaker Product with a new or remanufactured Product or a reasonable equivalent. In cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Crestron assumes no responsibility or liability for such modifications.

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.

SAROS IC6T Saros® 6.5” 2-Way In-Ceiling Speaker



Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 10/24/16

FT-600

FlipTop™ Basic

- *Flush mount tabletop connectivity in a stylish FlipTop™ design*
- *An ideal complement to Crestron® DigitalMedia™*
- *Configurable connection compartment allows versatile combinations of pullout cables, cable retractors, connector plates, and AC power outlets*
- *Tapered cable notch allows lid to be closed with cables plugged in*
- *Lacing bar for under table cable management*
- *Universal cutout size fits all new and future FlipTops™*
- *Black anodized or brushed aluminum finish*

Shown in Brushed Aluminum Finish with Optional Cable Retractors, Power Outlet Module, and Connector Plates

The FT-600 FlipTop™ Basic by Crestron® provides a highly-configurable connectivity solution in a stylish, flush mount tabletop design. Flipping open the "FlipTop" lid accesses its connection compartment where interface cables and connectors are kept at the ready for plugging in laptop computers, mobile devices, AV sources, and other equipment. A FlipTop is an ideal complement to a DigitalMedia™ transmitter or any other AV interface device, providing easy access to necessary connections while keeping the more intimidating and mundane technology hidden away beneath the tabletop.

FlipTop Design

Handsomely finished in a choice of black anodized or brushed aluminum, Crestron FlipTops™ lend a contemporary metallic accent to conference tables and podiums. The FT-600 installs cleanly in virtually any flat, horizontal surface up to 1-3/4 inch (44 mm) thick. Beveled edges provide for a nearly flush appearance.

The FlipTop lid flips open with just the tip of a finger to access the connection compartment. Once connections are made, the lid can be closed. A generous, tapered notch at the front of the lid opening allows interface cables to remain connected even when the lid is closed.

Connection Compartment

The FT-600 is highly configurable to provide a well-organized connectivity solution tailored to each unique application. It provides options for both pullout cables and panel-mounted connectors, with or without AC power outlets. It comes standard with two cable pass-through plates and four blank plates, all of which can be swapped out for your choice of cable retractors, connector plates, and AC power outlet modules.

- **Cable Pass-Through Plates -** Each cable pass-through plate provides four grommeted holes to accommodate Crestron Certified Interface Cables [1] and other AV, data, and communication cables. The user end of each cable stows neatly within the connection compartment ready for use while excess cable simply drops out-of-sight below the cable pass-through plate. The grommets provide a smooth, slippery surface for easy pullout of each cable. Blank caps are also provided to cover any unused holes. The cable pass-through plates are positioned at the left and right sides of the connection compartment. The FT-600 supports one or two cable pass-through plates. Two are included.
- **Cable Retractors -** For an even more refined cable management solution, the FT-600 accommodates up to six Crestron CBLR2 Cable Retractors.[1] Crestron cable retractors feature a patented mechanism that ensures smooth operation while eliminating hanging cable loops beneath the table. Up to three cable retractors can be installed in place of each cable pass-through plate, allowing for a total of six cable retractors.
- **Connector Plates -** If panel-mounted connectors are preferred, the FT-600 can accommodate up to four FTA-CP Connector Plates.[1] Connector plates are offered with a variety of common AV and data connector types. Custom connector plates may also be fabricated by the installer using the blank plates provided. All four connector plates are positioned at the center of the connection compartment.
- **AC Power Outlet Modules -** To provide power for laptops and other portable devices, the FT-600 can be equipped with up to four 120 Volt AC (NEMA 5) outlets, or up to two international AC outlets, using your choice of FTA-PWR series AC Power Outlet Modules.[1] Each FTA-PWR module occupies either two or three connector plate spaces. Modules containing two international outlets additionally require one adjacent cable pass-through plate space.

FT-600 FlipTop™ Basic

Build Yours Now

Your custom FlipTops are waiting. Simply use the Crestron FlipTop Configuration Tool to build and order yours in just minutes!

SPECIFICATIONS

Connectors – Connection Compartment

Cable Pass-Through Plates: Supports up to two cable pass-through plates (included). Each plate includes four grommeted holes which may be selectively covered using blank caps provided. The cable pass-through plates are positioned at the left and right sides of the connection compartment.

Cable Retractors: Up to three CBLR2 Cable Retractors [1] can be installed in place of each pass-through plate, allowing for a total of six cable retractors.

Connector Plates: Supports up to four FTA-CP Connector Plates.[1] Four blank plates are included. The connector plates are positioned at the center of the connection compartment.

AC Power Outlet Modules: A single FTA-PWR-102 Dual AC Power Outlet Module [1] can be installed in place of any two adjacent connector plates, or two FTA-PWR-102 modules can be installed in place of all four connector plates. A single FTA-PWR-2*1 series International AC Power Outlet Module [1] can be installed in place of any three contiguous connector plates. A single FTA-PWR-2*2 series Dual International AC Power Outlet Module [1] can be installed in place of any three contiguous connector plates plus the adjacent cable pass-through plate.

Connectors – Bottom Panel

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

Power Requirements

Utility Power: Dependent upon the AC power outlet module installed; refer to the FTA-PWR spec sheet for more information [1]

Environmental

Temperature: 32° to 112° F (0° to 45° C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Chassis: Metal, black
Cover: Aluminum, black anodized or brushed aluminum finish
Mounting: Flush tabletop mount, 1-3/4 in (44 mm) maximum surface thickness, 6-1/4 in (159 mm) deep x 7-1/2 in (190 mm) wide cutout (template provided)

Dimensions

Height: 8.59 in (218 mm);
12.34 in (314 mm) with lid open
Width: 7.98 in (203 mm);
9.19 in (234 mm) with mounting brackets
Depth: 6.77 in (172 mm);
7.88 in (200 mm) with lid open

Weight

5.7 lb (2.6 kg)

MODELS & ACCESSORIES

Available Models

FT-600-B: FlipTop™ Basic, Black Anodized
FT-600-BALUM: FlipTop™ Basic, Brushed Aluminum

Available Accessories

CBL Series: Crestron® Certified Interface Cables
CBLR2 Series: Cable Retractors for FlipTops™
FTA-CBLRA-INSERT-2WIRE-102: Cable Retractor Spacer Insert
FTA-CP: FlipTop™ Connector Plates
FTA-PWR: FlipTop™ AC Power Outlet Modules

Notes:

1. Item(s) sold separately.

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.

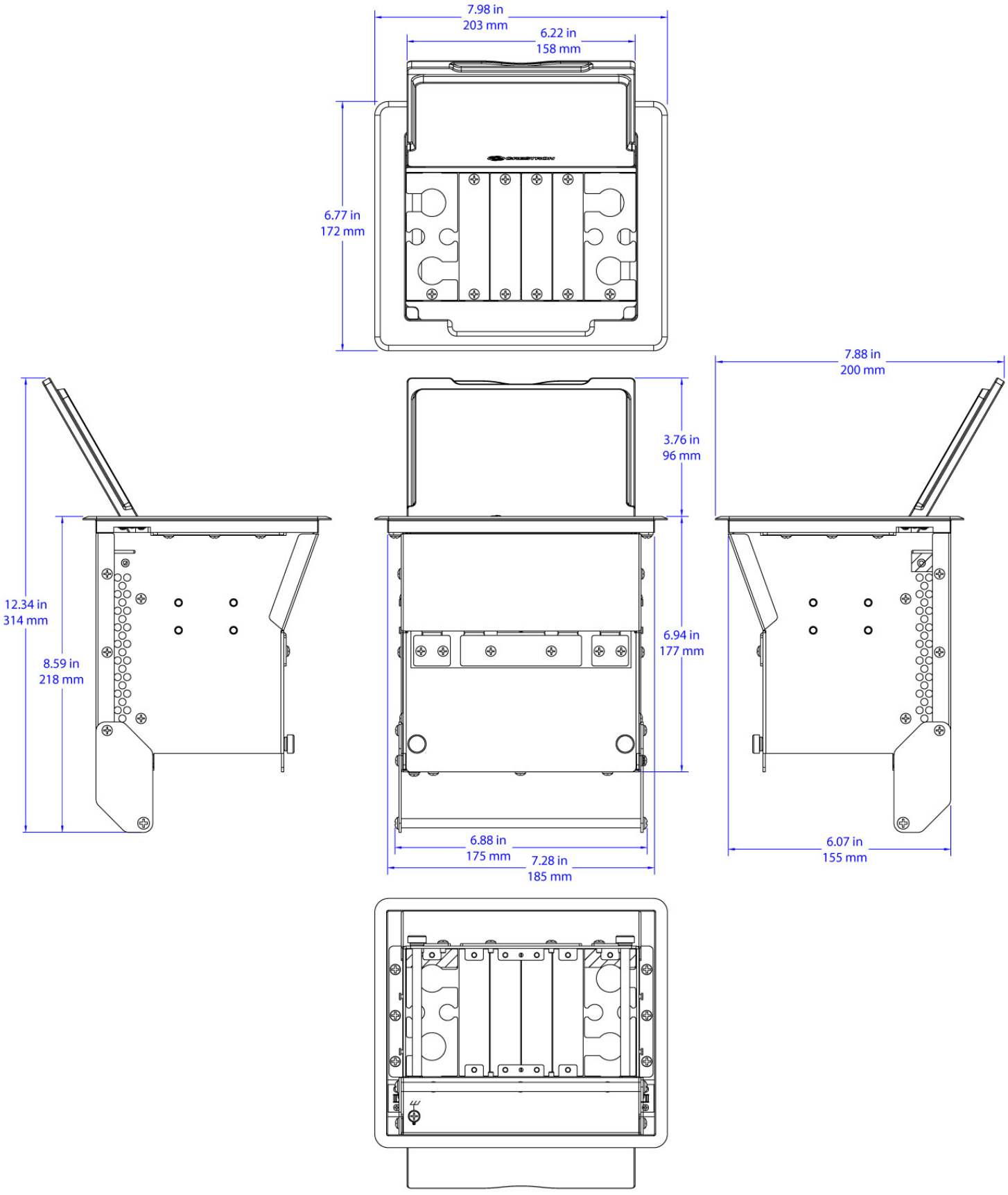
Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

FT-600 FlipTop™ Basic

All cables, power outlet module,
& connector plates sold separately

FT-600-B - Shown in Black Anodized Finish
with Standard Cable Pass-Through Plates, Optional Power Outlet Module, and Optional Connector Plates

FT-600 FlipTop™ Basic



Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 02/16/16

FTA-PWR

FlipTop™ AC Power Outlet Modules

Crestron® FTA-PWR series AC Power Outlet Modules are designed for use with any 600 Series FlipTop™ to provide convenience receptacles within the FlipTop connection compartment. A selection of modules is available to support a range of different countries and regions.

The FTA-PWR-102 model provides two NEMA 5 type outlets rated for 10 Amps (total) at 125 Volts AC, 50/60 Hz. This module occupies two adjacent FlipTop connector plate spaces allowing up to two modules to be installed in a single FlipTop. The FTA-PWR-102 is UL® Listed, and features an attached 9 ft (2.7 m) grounded AC power cord, which exits the bottom of the module and provides for connection to a local AC power source.

Models FTA-PWR-211, -221, and -251 each provide a single "International" outlet rated for 10 Amps at 220-240 Volts AC, 50/60 Hz. Each of these modules occupies three contiguous FlipTop connector plate spaces, and features an IEC 60320 C14 type main power inlet on the bottom of the module for connection to a local AC power source. Refer to the chart below for the type of outlet and applicable countries for each model.

Model FTA-PWR-261 provides a single "universal" outlet, which accommodates several different types of plugs (refer to the chart below). It is rated for 10 Amps at 100-240 Volts AC, 50/60 Hz.

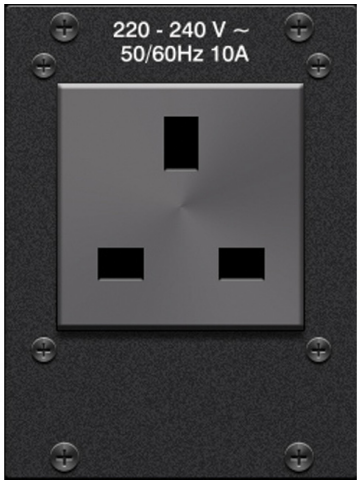
Models FTA-PWR-212, -222, and -262 are dual outlet versions of the FTA-PWR-211, -221, and -261 respectively. Each of these modules occupies three contiguous connector plate spaces plus one adjacent cable pass-through plate space. Two main power inlets are provided on the bottom of each module (one per outlet).

To configure a complete 600 Series FlipTop with your choice of finishes, cables, cable retractors, connector plates, and power outlets, please use the online Crestron FlipTops Configuration Tool.

Available Models

FTA-PWR-102: FlipTop™ AC Power Outlet Module, Dual, US NEMA 5, Type B
FTA-PWR-211: FlipTop™ AC Power Outlet Module, Single, UK, Type G
FTA-PWR-212: FlipTop™ AC Power Outlet Module, Dual, UK, Type G
FTA-PWR-221: FlipTop™ AC Power Outlet Module, Single, European "Schuko", Type F
FTA-PWR-222: FlipTop™ AC Power Outlet Module, Dual, European "Schuko", Type F
FTA-PWR-251: FlipTop™ AC Power Outlet Module, Single, Australia/China, Type I
FTA-PWR-261: FlipTop™ AC Power Outlet Module, Single, Universal
FTA-PWR-262: FlipTop™ AC Power Outlet Module, Dual, Universal

FTA-PWR-102
US NEMA 5
Type B



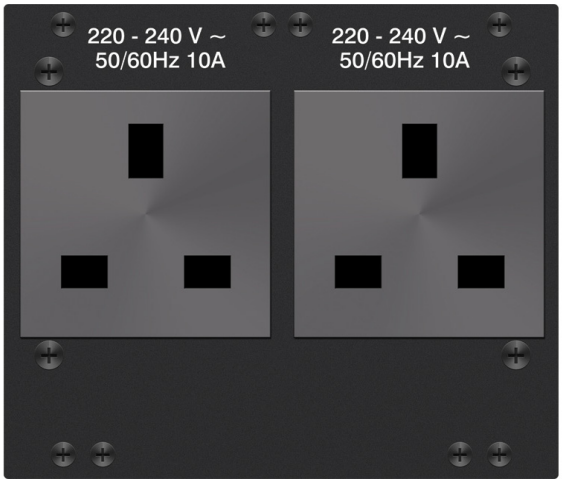
FTA-PWR-211, UK, Type G

FTA-PWR-221, Euro, Type F

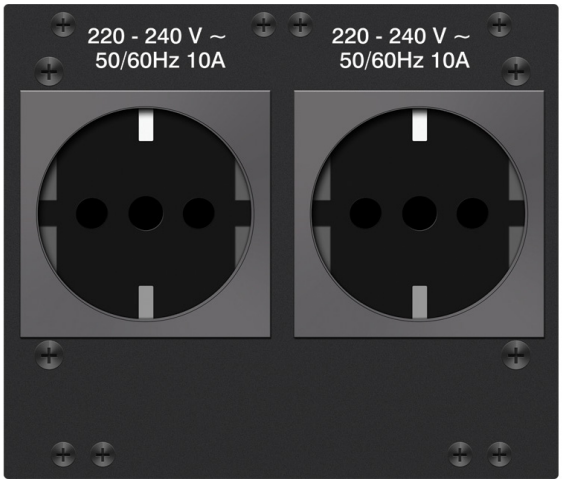
FTA-PWR-251, AU/CN, Type I

FTA-PWR-261, Universal

FTA-PWR FlipTop™ AC Power Outlet Modules



FTA-PWR-212, UK, Type G



FTA-PWR-222, Euro, Type F

Notes:

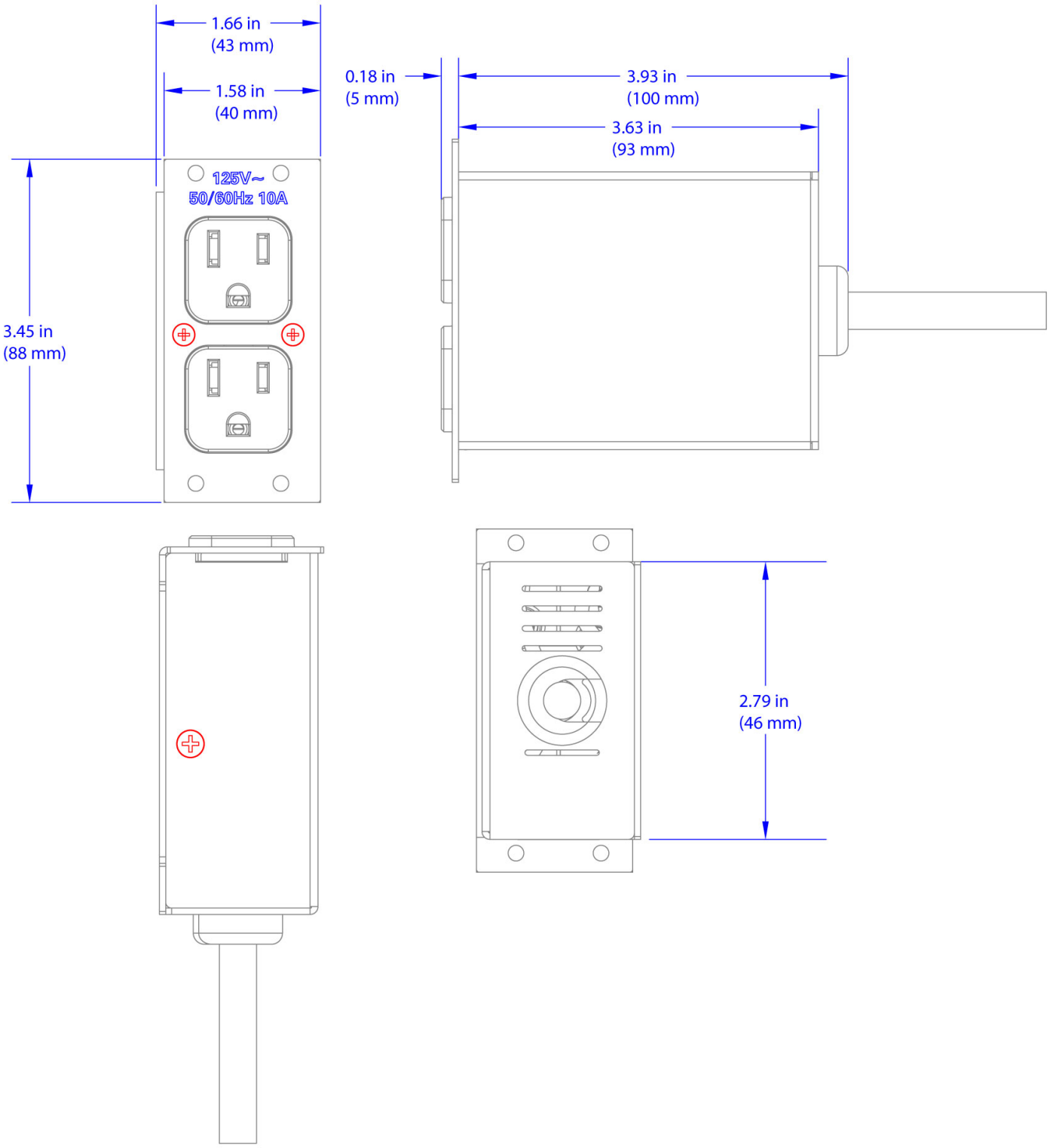
This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

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.

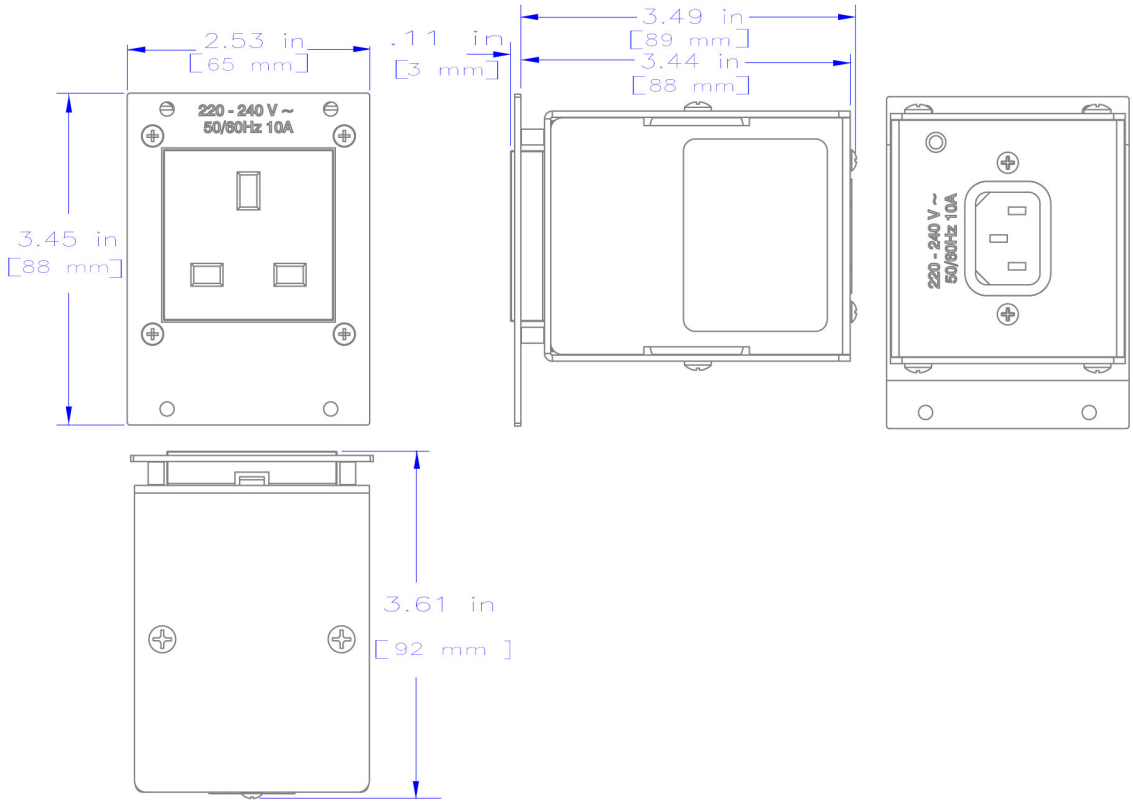
FTA-PWR FlipTop™ AC Power Outlet Modules

Model	Commerce Dept Plug Type	Ratings	Applicable Countries	Quantity of Outlets	FlipTop Plate Spaces
FTA-PWR-102 US NEMA 5	Type B	10A 125V AC 50/60Hz (total)	American Samoa, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Canada, Cayman Islands, Columbia, Cuba, Ecuador, El Salvador, Guam, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Mariana Islands, Marshall Islands, Mexico, Micronesia, Midway Islands, Nicaragua, Palau, Panama, Puerto Rico, Taiwan, Trinidad & Tobago, Turks and Caicos Islands, United States, Venezuela, Virgin Islands, Wake Island	2	2 Connector Plate Spaces
FTA-PWR-211 UK	Type G	10A 220-240V AC 50/60Hz	Anguilla, Bahrain, Botswana, Burma (Myanmar), Cyprus, Dominica, Falkland Islands (Malvinas), Gambia, Ghana, Gibraltar, Hong Kong, Iraq, Ireland, Kenya, Kuwait, Liberia, Malawi, Malaysia, Malta, Mauritius, Nigeria, Northern Ireland, Oman, Qatar, St. Kits-Nevis, St. Lucia, St. Vincent, Saudi Arabia, Seychelles, Sierra Leone, Singapore, Sudan, Tanzania, Uganda, United Arab Emirates, United Kingdom, Yemen, Zambia, Zimbabwe	1	3 Connector Plate Spaces
FTA-PWR-212 UK		10A 220-240V AC 50/60Hz (per outlet)		2	3 Connector Plate Spaces + 1 Cable Pass-Through Plate Space
FTA-PWR-221 European “Schuko”	Type F	10A 220-240V AC 50/60Hz	Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Brunei, Bulgaria, Burundi, Cape Verde, Chad, Croatia, Egypt, Eritrea, Finland, Georgia, Germany, Greece, Greenland, Guinea-Bissau, Hungary, Iceland, Jordan, Kazakhstan, Korea (South), Kyrgyzstan, Liechtenstein, Luxemburg, Macedonia, Monaco, Montserrat, Morocco, Mozambique, Netherlands, Netherlands Antilles, New Caledonia, Norway, Poland, Portugal, Reunion, Romania, Russia, San Marino, Senegal, Serbia and Montenegro, Slovenia, Spain, Suriname, Sweden, Syria, Tunisia, Turkey, Ukraine, Vietnam	1	3 Connector Plate Spaces
FTA-PWR-222 European “Schuko”		10A 220-240V AC 50/60Hz (per outlet)		2	3 Connector Plate Spaces + 1 Cable Pass-Through Plate Space
FTA-PWR-251 Australia/ China	Type I	10A 220-240V AC 50/60Hz	Argentina, Australia, China, Fiji, New Zealand, Papua New Guinea	1	3 Connector Plate Spaces
FTA-PWR-261 Universal	Combines Types B, F, G, & I	10A 100-240V AC 50/60Hz	American Samoa, Anguilla, Antigua & Barbuda, Argentina, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Barbados, Belarus, Belize, Bermuda, Bosnia and Herzegovina, Botswana, British Virgin Islands, Brunei, Bulgaria, Burma (Myanmar), Burundi, Canada, Cape Verde, Cayman Islands, Chad, China, Columbia, Croatia, Cuba, Cyprus, Dominica, Ecuador, Egypt, El Salvador, Eritrea, Falkland Islands (Malvinas), Fiji, Finland, Gambia, Georgia, Germany, Ghana, Gibraltar, Greece, Greenland, Guam, Guatemala, Guinea-Bissau, Guyana, Haiti, Honduras, Hong Kong, Hungary, Iceland, Iraq, Ireland, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Korea (South), Kuwait, Kyrgyzstan, Liberia, Liechtenstein, Luxemburg, Macedonia, Malawi, Malaysia, Malta, Mariana Islands, Marshall Islands, Mauritius, Mexico, Micronesia, Midway Islands, Monaco, Montserrat, Morocco, Mozambique, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Nicaragua, Nigeria, Northern Ireland, Norway, Oman, Palau, Panama, Papua New Guinea, Poland, Portugal, Puerto Rico, Qatar, Reunion, Romania, Russia, St. Kits-Nevis, St. Lucia, St. Vincent, Samoa, San Marino, Saudi Arabia, Senegal, Serbia and Montenegro, Seychelles, Sierra Leone, Singapore, Slovenia, Spain, Sudan, Suriname, Sweden, Syria, Taiwan, Tanzania, Trinidad & Tobago, Tunisia, Turkey, Turks and Caicos Islands, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Venezuela, Vietnam, Virgin Islands, Wake Island, Yemen, Zambia, Zimbabwe	1	3 Connector Plate Spaces
FTA-PWR-262 Universal		10A 100-240V AC 50/60Hz (per outlet)		2	3 Connector Plate Spaces + 1 Cable Pass-Through Plate Space

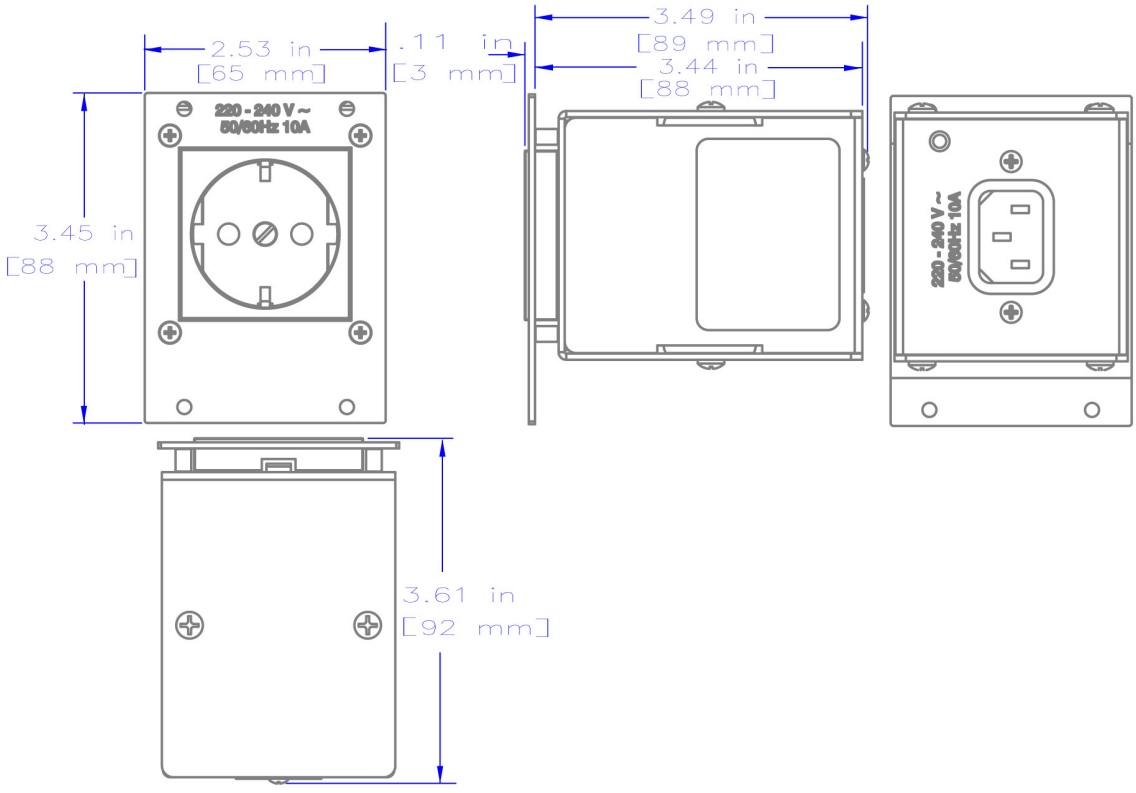

1.66 in
(43 mm)
1.58 in
(40 mm)
3.45 in
(88 mm)
125V~
50/60Hz 10A
0.18 in
(5 mm)
3.93 in
(100 mm)
3.63 in
(93 mm)
2.79 in
(46 mm)

FTA-PWR-102

FTA-PWR FlipTop™ AC Power Outlet Modules

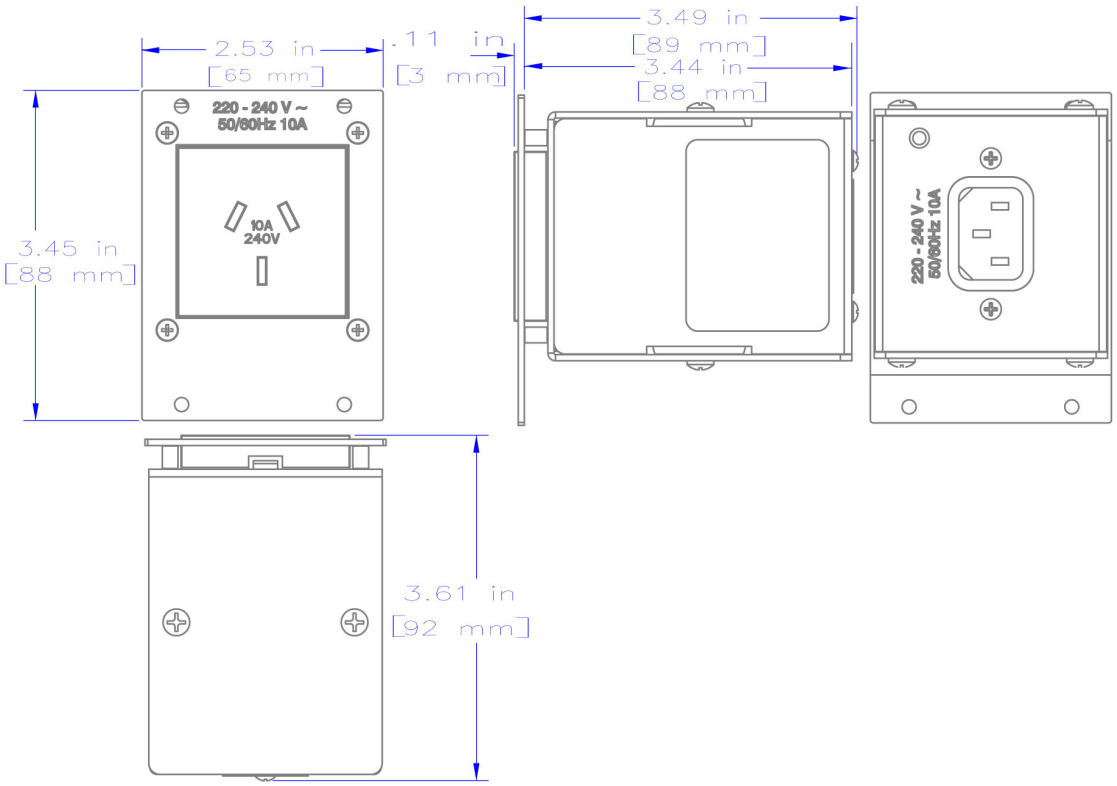


FTA-PWR-211

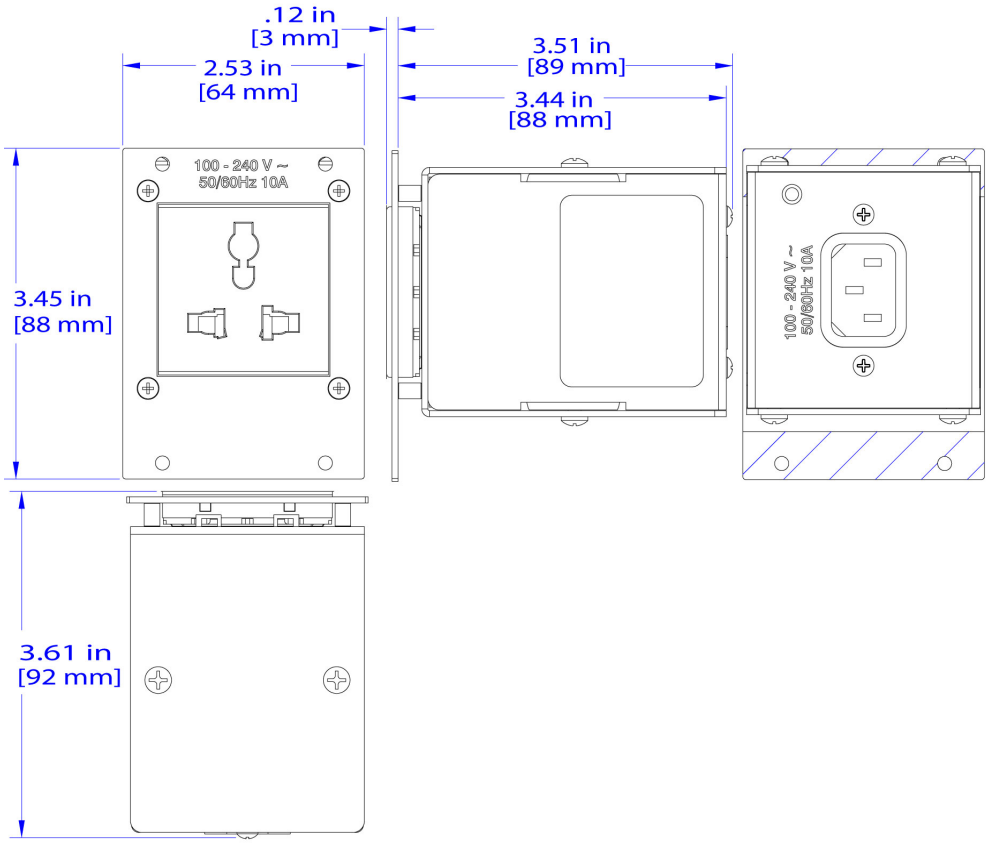


FTA-PWR-221

FTA-PWR FlipTop™ AC Power Outlet Modules

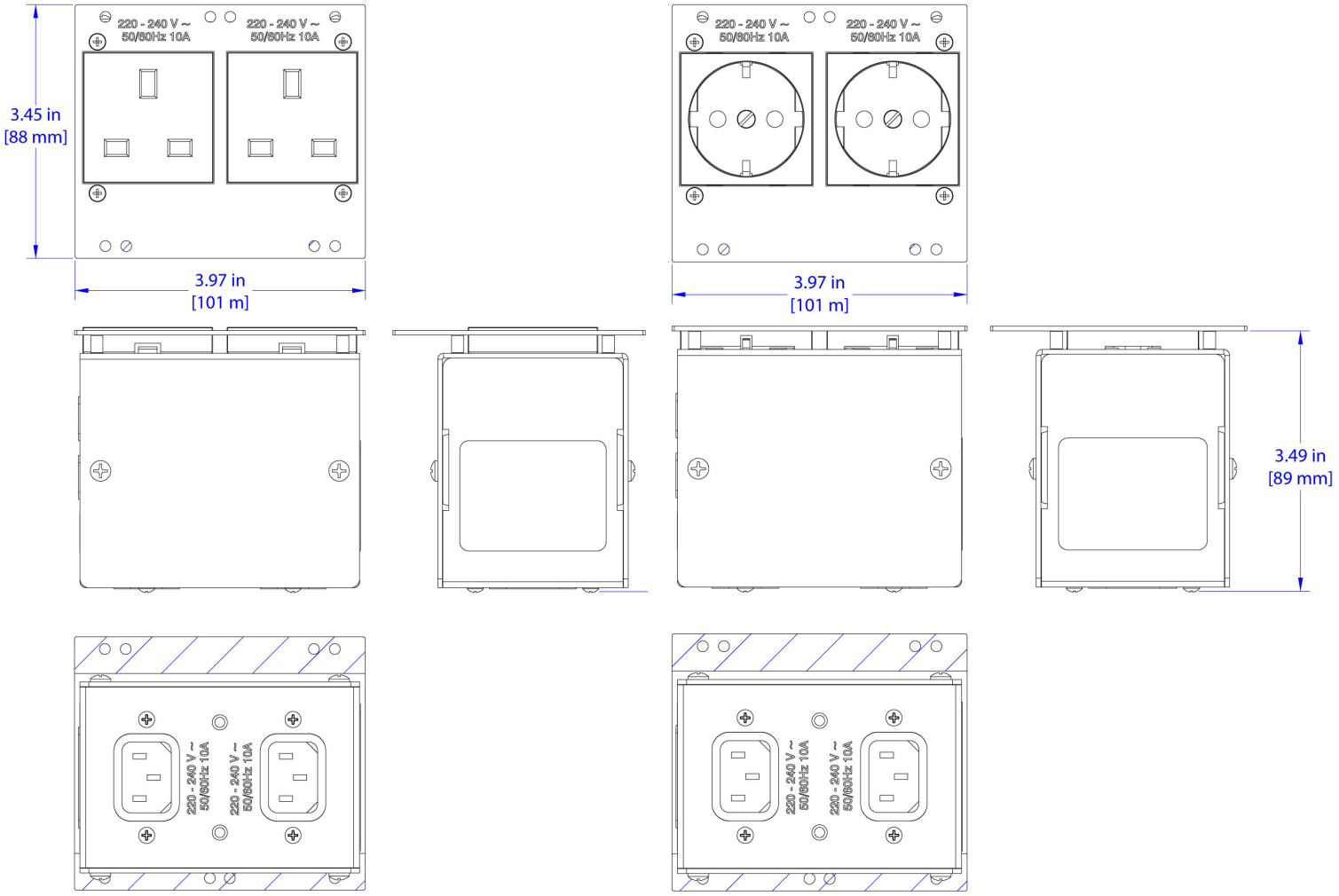


FTA-PWR-251



FTA-PWR-261

FTA-PWR FlipTop™ AC Power Outlet Modules



FTA-PWR-212

FTA-PWR-222

Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

Specifications subject to change without notice. Revised 01/20/16