



NUCLEUS

AV OVER IP – SIMPLIFIED



A division of Evertz

AV over IP – Simplified

Introducing EvertzAV's all-new AV over IP distribution and control solution: **NUCLEUS**, an AV routing platform developed exclusively for customers looking for a simplified, all-in-one AV distribution, presentation, collaboration and control solution.

NUCLEUS delivers:

Enterprise class AV distribution

By utilizing the experience and strength cultivated through the many years of being a global leader in broadcast audio and video infrastructure equipment, Evertz Microsystems has developed an extremely powerful, yet simplified and all around easy-to-use AV distribution platform for enterprises of all sizes.

No fuss simple setup, no programming required

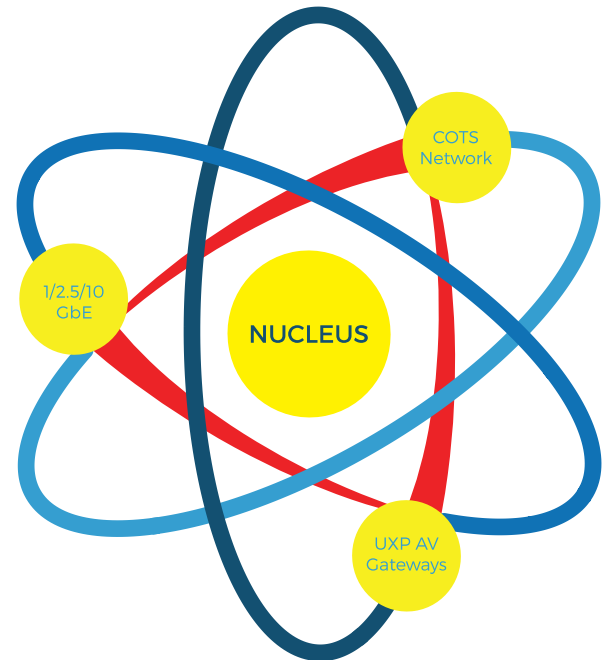
NUCLEUS operates on a simplified configuration framework, allowing administrators the ability to set up a fully functional AV distribution network in minutes – without the hassles associated with most AV distribution platforms available on the market today.

Proven, reliable, future-proof hardware

The NUCLEUS platform is comprised of the NUCLEUS Session Manager and UXP AV Gateways (standalone and modular available). Any combination of modular and standalone UXP AV Gateways can be interconnected using a COTS switch and then configured, controlled and managed using the NUCLEUS Session Manager.

Unparalleled versatility and scalability

The NUCLEUS platform can be integrated into your enterprise using your existing standard 1GbE IT infrastructure/IP network. NUCLEUS also supports 2.5GbE and 10GbE networks, providing the highest resolutions possible with unbeatable image quality at the lowest latencies. All this equates to a great investment now and also in the future as you won't have to worry about replacing your infrastructure and hardware.



Universal Applications

In this globalized economy, the ability to collaborate on projects and share ideas instantly and consistently on a day-to-day basis without geographic limitations is absolutely critical. The constant on-screen pixelated artifacts, jerky/juttering video and poor audio quality found in many of today's collaboration solutions can be a costly distraction.

EvertzAV's NUCLEUS platform was developed to eliminate the stress and frustration often associated with collaboration technology. With its ultra low latency video capabilities, high bitrate audio support, and USB HID control functionality, NUCLEUS is the ideal platform for your collaboration needs.

In addition to being the ideal enterprise collaboration platform, NUCLEUS is, at its foundation, an extremely flexible and versatile AV distribution solution. This means NUCLEUS can be used in a multitude of spaces and for many different applications, including:



**Auditoriums/
Lecture Halls**



**Video
Conferencing**



**Learning
Labs**



**Security
Centers**



**Digital
Signage**



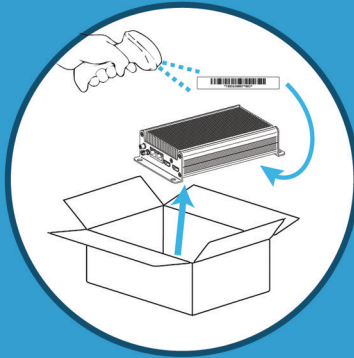
**Gaming
and more...**

Contact your local EvertzAV sales representative today to see how NUCLEUS can be integrated into your professional AV project.

The Ultimate Out-of-Box Experience

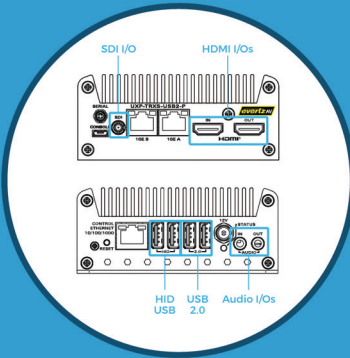
Adding devices to the network can be accomplished in no time at all. The process has been streamlined so that a device can be taken out of the box and be fully functional in less than five minutes. Whether big or small, deployments of all sizes are handled the same way, using the same consistent process. NUCLEUS' simplified configuration framework ensures that all the complicated legwork is already done for you.

Step 1



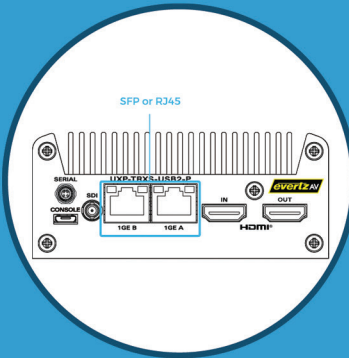
Unpack and register UXP AV Gateway with NUCLEUS Session Manager

Step 2



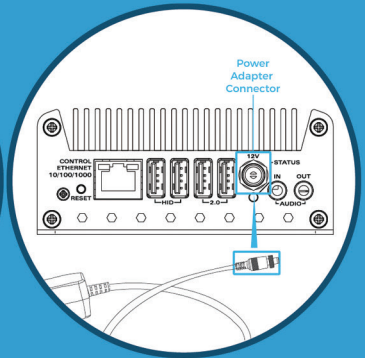
Connect AV devices to UXP AV Gateway

Step 3



Connect UXP AV Gateway to network

Step 4



Apply power

Coupled with the Ultimate User Experience

The NUCLEUS Session Manager UI has been optimized so that Administrators don't have to fumble through multiple levels of pages and options to configure a simple setting. Even with its integrated services, logging and diagnostics tools and extensive feature set, the NUCLEUS Session Manager UI is straightforward and easy to use.

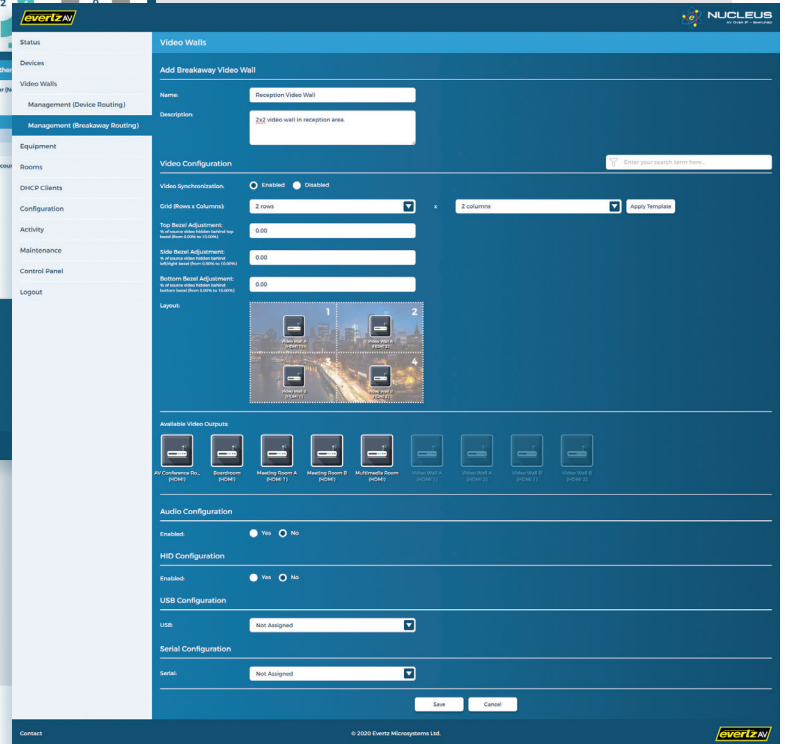


Likewise, a click or two is all it takes to perform important actions on the UXP AV Gateways. With the addition of NUCLEUS Control Panels to your system, you can easily create end-user control interfaces that route video, audio, and data from one UXP AV gateway to another as well as configure buttons that dynamically change PIP layouts, multiviewer layouts, and more. EvertzAV's NUCLEUS Control Panels give you the power to design robust routing and layout control interfaces in a short amount of time without having to pay expensive programming fees whenever a change is required. NUCLEUS truly provides a user experience unlike any other AV distribution solution on the market today.

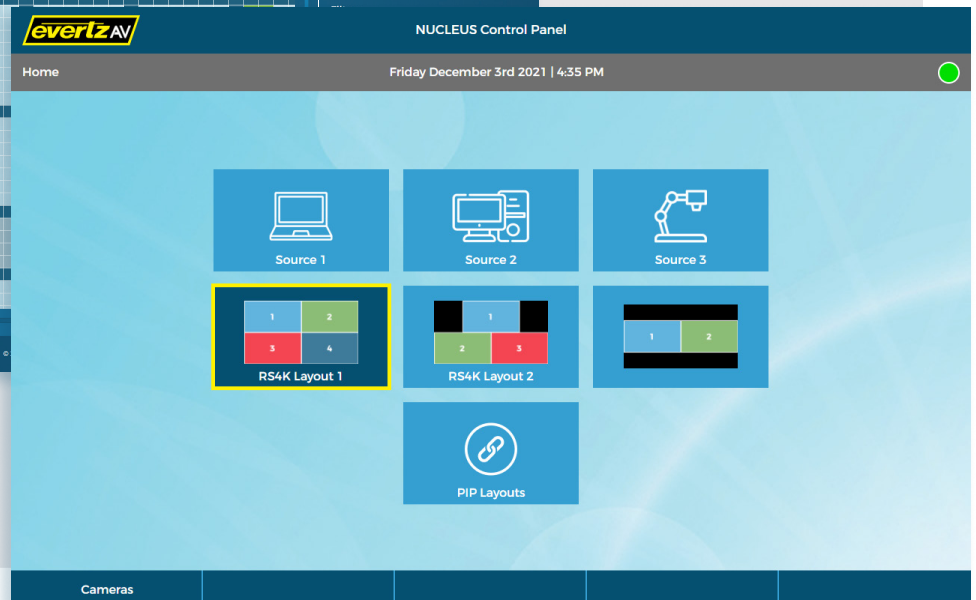
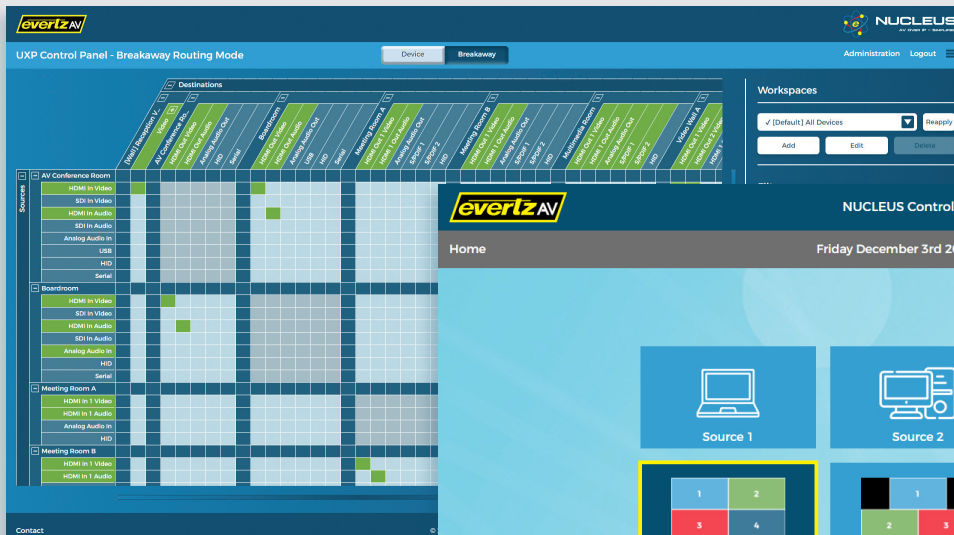


NUCLEUS truly provides a user experience unlike any other AV distribution solution on the market today

Even with its integrated services, logging and diagnostics tools and extensive feature set, the NUCLEUS Session Manager UI is straightforward and easy to use



Transport audio, video, and data separately or together from one device to another with just one click



NUCLEUS Session Manager

At the core of the NUCLEUS platform is the NUCLEUS Session Manager. The NUCLEUS Session Manager is a full-featured Linux-based centralized management server used for the configuration, control and orchestration of the UXP AV Gateways.



The NUCLEUS Session Manager delivers...

- Three models to choose from (NUC-AV-10/-100/-ENT) based on deployment size
- Linux-based controller
- Enterprise-level security
- Robust network and DHCP configuration options
- Straightforward process for adding new, modifying existing and deleting unused gateways
- Integrated services, logging and diagnostics
- Manual and automatic backup functionality
- BYOD (Bring Your Own Device) web-based UI

	NUC-AV-10	NUC-AV-100	NUC-AV-ENT
LAN	1x 1Gb/s RJ-45 port	2x 1Gb/s RJ-45 ports	2x 1Gb/s RJ-45 ports 2x 10Gb/s RJ-45 ports
USB	4x USB 3.0	1x USB 3.0 1x USB 2.0	2x USB 3.0
Outputs	1x VGA 1x HDMI	1x VGA 1x HDMI 1x DisplayPort	1x VGA
Key Features	Support for up to 10 gateways Device and room control management Routing profile management Firmware/group management Session control Enterprise-level security DHCP server and client Syslog and diagnostics support Backup/restore Automatic periodic restarts BYOD web-based UI	Support for up to 100 gateways Device and room control management Routing profile management Firmware/group management Session control Enterprise-level security DHCP server and client Syslog and diagnostics support Backup/restore Automatic periodic restarts BYOD web-based UI	Support for 100+ gateways Device and room control management Routing profile management Firmware/group management Session control Enterprise-level security DHCP server and client Syslog and diagnostics support Backup/restore Automatic periodic restarts BYOD web-based UI
Input Voltage	100-240V / 50-60Hz auto-ranging 12-19VDC	100-240V auto-ranging	100-240V auto-ranging
Power Consumption	65W	250W	250W
Rack Units	N/A (standalone)	1RU	1RU
Dimensions (H x W x D)	4.37 in x 4.53 in x 2.01 in (111mm x 115mm x 51mm)	1.75 in x 17 in x 10 in (44.5mm x 431.8mm x 254mm)	1.75 in x 17 in x 10 in (44.5mm x 431.8mm x 254mm)

UXP AV Gateways

Revolving around the NUCLEUS Session Manager are the UXP AV Gateways, which encapsulate and transport video, audio, USB and control data. The UXP AV Gateways can be integrated into your enterprise's rooms and spaces using your IP network. As you grow, NUCLEUS grows with you, without any limitations. To connect additional rooms, simply add additional UXP AV Gateways.

The UXP AV Gateways deliver...

- Auto-discovery and simplified provisioning features
- Support for 1GbE, 2.5GbE and 10GbE networks
- Resolution support for up to 4K/60
- Video scaling, clean switching and many additional advanced AV features
- Minimal end-to-end latency through system
- Robust API allowing for third-party control
- Graphically rich, icon-based BYOD web-based UI
- Preconfigured workflow profiles
- Full audio breakaway support



	UXP-TRXS-USB2	UXP-TXS	UXP-RXS	UXP-TRS4K	UXP-TRS4K-2/-2U	UXP-TRS4K-2UH	UXP-TRM4K	UXP-TRM4K-2/-2U
Form Factor	Standalone	Standalone	Standalone	Standalone	Standalone	Standalone	Modular	Modular
Video Inputs	1x HDMI 1.4, 1x SDI (software defined)	1x HDMI 1.4	N/A	1x HDMI 2.0a	2x HDMI 2.0a (software-defined and dependent on network bandwidth); 1x HDMI 2.0a Auxiliary to HDMI Input 2	2x HDMI 2.0a (software-defined and dependent on network bandwidth); 1x HDMI 2.0a Auxiliary to HDMI Input 2	1x HDMI 2.0a	2x HDMI 2.0a (software-defined and dependent on network bandwidth); 1x HDMI 2.0a Auxiliary to HDMI Input 2
Video Outputs	1x HDMI 1.4, 1x SDI (software defined)	N/A	1x HDMI 1.4	1x HDMI 2.0a	2x HDMI 2.0a (software-defined and dependent on network bandwidth)	2x HDMI 2.0a (software-defined and dependent on network bandwidth)	1x HDMI 2.0a	2x HDMI 2.0a (software-defined and dependent on network bandwidth)
Supported Resolutions	Up to 3840x2160p @ 30 Hz (dependent on network bandwidth)	Up to 3840x2160p @ 30 Hz	Up to 3840x2160p @ 30 Hz	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)
Audio Inputs	HDMI/SDI audio, 1x stereo analog	HDMI audio	N/A	HDMI audio, 1x stereo analog	HDMI audio, 1x stereo analog	HDMI audio, 1x stereo analog	HDMI audio, 1x stereo analog	HDMI audio, 1x stereo analog
Audio Outputs	HDMI/SDI audio, 1x stereo analog	N/A	HDMI audio	HDMI audio, 1x stereo analog, 2x S/PDIF	HDMI audio, 1x stereo analog, 2x S/PDIF	HDMI audio, 1x stereo analog, 2x S/PDIF	HDMI audio, 1x stereo analog	HDMI audio, 1x stereo analog
USB	2x HID device ports, 1x HID host port, 2x USB 2.0 ports (can be software defined as host or client)	N/A	N/A	2x HID device ports, 1x HID host port	2x HID device ports, 1x HID host port, 5x USB 2.0 ports (-2U only)	2x HID device ports, 1x host port for HID and other USB devices	1x HID host port	1x HID host port Above port also supports USB 2.0 (-2U only)
Ethernet Control	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port	1x 1 Gb/s RJ-45 port
Transport Ports	1x SFP+ (-USB2), 2x fixed 1000/2.5GBASE-T RJ-45 (-USB2-P)	1x fixed 1000/2.5GBASE-T RJ-45	1x fixed 1000/2.5GBASE-T RJ-45	1x SFP+	1x SFP+	1x SFP+	1x SFP+	1x SFP+

And More UXP AV Gateways

In addition to the conventional standalone and modular UXP AV Gateways, specialized gateways are available that can compliment your NUCLEUS deployment with supplementary capabilities. Some of the specialized gateways and their key features include:



UXP-TRS4K-4x2/-4x2U
Dual HDMI Transceivers



UXP-RS4K-4/-4U
10GE Quad Image Processors



UXP-TRXS-5G/-HC
HEVC/H.264 Encoder/Decoders



UXP-HUBA-32x32
32x32 Analog Audio Switch with Dante™

- Four HDMI 2.0a inputs and two HDMI 2.0a outputs
- Transmit to the IP network from any two local HDMI sources
- Output two videos selected from any of the four local HDMI sources or any two remote sources on the IP network
- Can be used as an extremely versatile and compact in-room AV switcher/hub

- Select from up to four input videos and independently arrange and output on two separate 4K60 videos (with optional alpha blending, if desired)
- Choose from up to four local HDMI sources or up to four sources from the IP network in local or remote source operating modes
- Select from 16 layout presets or customize your own

- One HDMI 2.0a input and one HDMI 2.0a output; one 12G SDI input and one 12G SDI output (3G/HD/UHD via SFP+)
- Simultaneous single HEVC/H.264 encode and decode up to 4K60, 10-bit, 4:2:2 color sampling (with a selectable bitrate from 1 - 50 Mbps)
- UXP-TRXS-5G contains a 5G module for AV transport over mobile networks

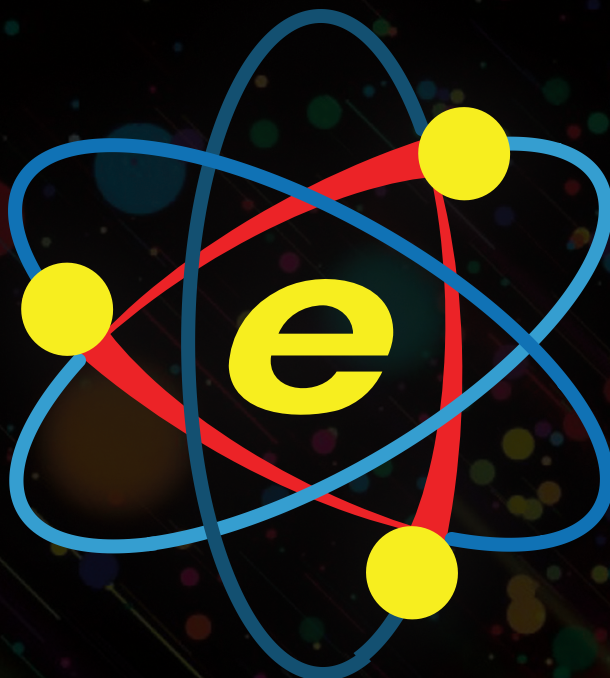
- Audio switching powerhouse with 32 mono (or 16 balanced stereo) analog audio inputs and outputs
- Dante Brooklyn II module included allowing for up to 32x32 simultaneous Dante audio streams
- Two SFP+ ports allow for the transmission and reception of up to 32 ST302M stereo pairs

	UXP-TRS4K-4x2/-4x2U
Form Factor	Standalone
Video Inputs	4x HDMI 2.0a
Video Outputs	2x HDMI 2.0a
Supported Resolutions	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)
Audio Inputs	HDMI audio, 1x stereo analog
Audio Outputs	HDMI audio, 1x stereo analog, 2x S/PDIF
USB	2x HID device ports, 1x HID host port, 5x USB 2.0 ports (-4x2U only)
Ethernet Control	1x Gb/s RJ-45 port
Transport Ports	1x SFP+

	UXP-RS4K-4/-4U
Form Factor	Standalone
Video Inputs	4x HDMI 2.0a
Video Outputs	2x HDMI 2.0a
Supported Resolutions	Up to 4096x2160p @ 60 Hz (dependent on network bandwidth)
Audio Inputs	HDMI audio, 1x stereo analog
Audio Outputs	HDMI audio, 1x stereo analog, 2x S/PDIF
USB	2x HID device ports, 1x HID host port, 5x USB 2.0 ports (-4U only)
Ethernet Control	1x Gb/s RJ-45 port
Transport Ports	1x SFP+

	UXP-TRXS-5G/-HC
Form Factor	Standalone
Video Inputs	1x HDMI 2.0a 1x 12G SDI (via SFP+)
Video Outputs	1x HDMI 2.0a 1x 12G SDI (via SFP+)
Supported Resolutions	Up to 4096x2160p @ 60 Hz
Video Compression	HEVC/H.265, H.264 (8-bit and 10-bit, 4:2:2 - 1 to 50 Mbps)
Analog Audio Inputs/Outputs	1 8-pin Mini XLR input/output (balanced mono)
Audio Sampling Frequency and Bitrate	48/96kHz up to 24-bit, PCM (Broadcast) and 32/44.1/48/96/192kHz @ 16/20/24-bit (ProAV)
Streaming Protocols	SRT and RTMP/RTMPS
Wireless Support	-5G Yes (5G w/ nano sim card) -HC No (1x 1 Gb/s RJ-45 port)

	UXP-HUBA-32x32
Form Factor	Standalone
Internal Switching	32x32 analog audio switching
Analog Audio Inputs	32 mono (16 balanced stereo)
Analog Audio Outputs	32 mono (16 balanced stereo)
Attenuation Control	Line level default, 1dB steps to -9dB and mute on analog outputs
Dante Audio	Dante Brooklyn II module included. Supports 32x32 simultaneous Dante audio streams
10GE Ports	2x SFP+ for transmit/receive of up to 32 ST302M stereo pairs
Ethernet Transport	2x Gb/s RJ-45 port (1x for Control and 1x for Dante)



av.evertz.com

   @EvertzAV

North America AV Sales: +1-877-995-3700 | AVSales@evertz.com

Europe/UK AV Sales: +44 (0)118-921-6800 | AVSales@evertz.com

Rv05
2.22