

The System's primary function shall be to facilitate Audio and Video Distribution over a standard 1 GbE or higher Ethernet network. System includes support for Real-Time 4K and HDR content transmission.

System shall be capable of being supplied as factory configured to consultant/architect's specification for video, audio and IP settings.

System end-to-end latency shall be capable of 1 frame of latency (including encoding and decoding).

The System shall be capable of supporting an unlimited number of endpoints.

Encoder shall be available in a 2-gang Decora® or 2-gang UK electrical box configuration.

Encoder shall be able to be installed in a 4" square US electrical box, with 2-gang mud-ring with no modification required to the box or mud ring.

The Encoder graphical user interface and built-in dashboard functions shall not require custom or project specific programming or API development.

Encoders shall provide control without the need for any additional components. Any system requiring the need of a control system interface or system discovery device shall not be accepted.

System shall be capable of receiving control from a variety of third-party manufacturers, example supported systems include (among others) Crestron, Extron, AMX, RTI, QSC and Symetrix.

System shall be capable of presenting live thumbnail previews to 3<sup>rd</sup> party control UI, for all content on encoders and decoders, in JPEG snapshot format, updated once per second.

The System shall support integration with enterprise grade software management platforms to provide complete system monitoring, management, and control.

The Encoder shall enable control of 3<sup>rd</sup> party equipment via built-in control ports: RS-232 serial, IP, and CEC.

System shall be able to be controlled using ASCII-readable HTTP(S) GET/POST, UDP Unicast, or UDP Multicast API.

System shall provide SSH security capability.

System shall provide 802.1X security capability.

System shall provide AES stream encryption capability.

System shall support JPEG2000 based codec with optimization for computer-generated content as well as support for fast-motion, cinema-grade content.

System shall support USB-HID.

System shall be TAA compliant.

The AV over IP System shall not require proprietary network management software or hardware.

The AV over IP hardware shall not require proprietary or manufacturer specific Ethernet switches.

The system shall support the following digital audio 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.

Encoder shall support HDMI 2.0, EDID, CEC.

The Encoder shall include one HDMI input port.

Encoder shall support HDCP (High-bandwidth digital copy protection) for versions 1.x and 2.2.

AV over IP services (Audio, Video, USB, KVM, RS-232, and GPIO) shall be capable of independent routing.

USB and KVM routing shall not add additional latency to AV transmission.

USB peripheral device switching functionality shall support: Whiteboards, Touch screens, Game controllers, and Flash drives.

Encoder shall be capable of being powered by standard PoE (Power over Ethernet, in accordance with 802.3af, with a maximum power consumption less than 15.4 watts.

The Maximum bandwidth requirement per encoder including AV and Network Audio stream shall be 1 Gbps.

Encoder shall be capable of transmitting 1080p and 4K resolutions at less than 1Gbps total throughput.

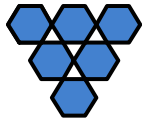
Encoder shall support de-embedding of LPCM audio up to 8 channels from the HDMI input.

Encoder shall be capable of LPCM audio format compatible with QSC Q-SYS DSP, Media Stream Receiver (MSR) object.

Encoder RJ-45 Ethernet port exit angle shall be 45 degree to allow cable bend radius relief for rear, side, top, or bottom cable exit.

Encoder shall include a single Ethernet port for Video over IP and Dante®/AES67 functionality with VLAN tagging capability to separate Video & Audio network traffic as needed.

Encoder shall be capable of de-embedding up to 2 channels of LPCM audio from the HDMI input and 2 channels of analog audio (3mm front panel input) and making it available as a Dante®/AES67 source.



## **DuetE-WP • ENCODER**

## **A&E SPECIFICATIONS**

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Encoder shall be capable of receiving up to 4 channels of network audio (Dante®/AES67) and embedding it into the AV stream audio.

Encoder stream audio transmission shall be selectable between Dante®, analog, and HDMI audio.

Encoder shall support balanced audio output via 5 pin Euroblock 3.81mm pitch connector (rear panel).

Encoder shall support IR (infrared) output over IP capability to send IR commands to TVs, Cable Boxes, and other devices.

Encoder shall support IR (infrared) input over IP capability to receive IR commands from remote controls, control systems, and other devices.

Encoder shall have no moving parts, including but not limited to cooling fan.

The Encoder shall be the Visionary Solutions DuetE-WP.