The Ultimate Unified Communication Processor

The IPX-UC1 ULTRA is the most advanced unified communication IP Streaming solution on the market utilizing SDVoE™ technology and more. It is the industry's first 4K transceiver capable of simultaneous encode and decode over a single cable with zero compression or lossless compression with zero frame latency. What really separates the IPX-UC1 is the ability to stream 10G, 1G, and 10/100 at the same time in both directions. Advanced compression CODECs for H.264, H.265, and NDI are all part of the highly integrated Ultra platform.

The internal Pentium™ class processor with 1TB SSD allows for Zoom™, Teams™, WebEx™, and more. This enables the ability to deliver high quality locally while providing remote content for others. The processor can also do an optional WIFI (future capability) for BYOD applications of wireless laptop and mobile connections as a source.

The input card slot provides 3 choices of cards depending on the application needs. These inputs in addition to the SDVoE output and processor output can be routed to either of the two external HDMI outputs or the SDVoE and Processor inputs. This is made possible with a quad scaler processor with advanced features. These features consist of contrast edge blending for side-by-side projectors, image rotation for portrait and jigsaw puzzle mode videowalls, chroma keying for overlaying of sources on top of others, vector scope and pattern generation for signal integrity diagnosing, localized seamless switching and windowing opens new capabilities of encode side processing and the bitmap OSD engine can enhance content on input and outputs.

Audio, video, data, and control can be sent securely to one or many units using off-the-shelf 10G and 1G Ethernet switches. The Ultra has many ports for control and communication. 10G LAN, 1G LAN, SFP+, USB 2.0 extension over LAN, USB 3.1 for processor expansion, and RS-232/IR for device control, are some of these capabilities.

Another incredible feature of the Ultra is the ReAX® control core. With the ReAX, the Ultra can automate any function or device connected to it. Custom remote web pages for PC or mobile can be served from the ultra for the best experience possible. Even digital signage content can be scheduled and controlled at will. This is made possible with the free creation tool Core Studio.

Choice is important. That's why the IPX-UC1 Ultra is the ultimate Unified Communication product on the market today.

www.auroramm.com

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Spec Sheet: 231101

Features

- Simultaneous Transmitter (Encoder) and Receiver (Decoder) over single CAT cable
- 4K60 4:4:4 Over 10G Fiber or Copper
- 1.3:1 Lossless Compression and Zero Frame Latency (100us) for 4K60 4:4:4
- Zero Compression/Frame Latency (22us) for 4K60 4:2:0 and below
- Secure Content Encryption
- 128x128 Capable with HDCP, Larger for Non-Encrypted Sources
- Windows Processor with Ability to Run Zoom, Teams, and More.
- Dual Internal HDMI Graphics Output for Processor
- Three USB 3.1, One USB2.0 Available for Processor
- Two Internal LAN for Processor
- 1TB Internal SSD
- Neural Processing Unit (NPU) Option. People Counting, Emotion Detection, Facial Recognition, & More.
- SFP selectable for 10G or 1G use with Processor for Secondary External Port
- Encode and Decode H.264/H.265
- NDI (Option)
- Video Wall Capability (16x16), Image Rotation, Edge Blending, Chroma Keying
- Waveform Monitoring, Histogram, Vector scope Display & Built-in Pattern Generator
- Bitmap & Character Based OSD for Inputs and Output Channels
- Windowing/Multi-viewer up to 32 windows with Local Windowing of Sources up to 4
- Multi-Input Mode Can Transmit up to 4 1080p Signals over Single 10G Cable
- Two HDMI Outputs with Independent Scaling & Two Internal Scalers for Internal PC and SDVoE
- 3ms Scaling
- Seamless Switching including local inputs & Break-away Switching
- Audio DSP
- SFP+ for Multi/Single Mode Fiber
- 10/100/1000Mbps LAN PoE (PD)
- Input Boards (4 HDMI, Multi-Input 1 USB Type-C, DisplayPort, 2 HDMI or 1 HDMI and 12G SDI)
- Line In/Out Stereo
- RS-232 Serial Port and IR (Bidirectional)
- Integrated Web Server for Custom Control Pages
- USB 1.1 (HID) or USB 2.0 480Mbps IP Extension
- Dante®/AES67 IP 2Ch Included and 8Ch Audio (Optional)
- ReAX IP Control
- Front Keypad with OLED Display
- Auto Sense Switching
- Rack and Under Table Mounting
- 4K Auto-Framing USB 3.1 Camera Option

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Benefits

The IPX-UC1 Ultra is many devices in one product providing not just the ultimate experience but the ultimate value.

Here is why:

1. SDVoE 10G Encoder & SDVoE 10G Decoder (Simultaneous)
2. SDVoE Server (Eliminates need for external server PC)
3. H.264/H.265 Encoder & H.264/H.265 Decoder (Simultaneous)
4. Pentium Class Processor for Linux or Windows with 1TB SSD (Zoom, Teams, & WebEx meetings)
5. Control System (Integrated ReAX for full room automation)
6. USB 2.0 Extender
7. Video Effects Processor (Contrast Edge Blending, Chroma Keying, Image Rotation, Bitmap OSD)
8. Windowing up to 4 sources locally to any of the 4 outputs
9. Presentation 7x4 Seamless Switching Scaler Matrix with two external HDMI Outputs
10. Videowall Processor with Image Rotation
11. NDI Encoder (option)
12. NDI Decoder (option)
13. Audio DSP with Dante
14. Diagnostic Tools (Vector Scope, Waveform Analyzer, Histogram, Pattern Generator)
15. Wi-Fi BYOD wireless laptop connectivity (TeamStream™ Capability coming soon)

Three different input option cards for true flexibility.

ICS-H4 – Four HDMI Input Card

ICS-M1 – Multi-Input Card with 1 Type-C USB, 1 DisplayPort, & 2 HDMI

ICS-M2 – Multi-Input Card with 1 Type-C USB, 1 DisplayPort, 1 HDMI, & 1 12G SDI

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Technical Specifications

Model Name	IPX-UC1-ULTRA
Technical	
Compression	Zero (4K30 4:4:4/4K60 4:2:0), 1.3:1(4K60 4:4:4)
Latency	Zero Frame Latency (100us without Scaling, 3ms with Scaling)
HDMI Outputs	Two HDMI 2.0 External & Two Internal
Audio Analog	Stereo Line In/Out
SFP+	1G for Processor or 10G for SDVoE (Single Mode or Multi-Mode)
10G Copper Ethernet	RJ-45 330ft(100m) with CAT 6A PoE
1G LAN	RJ-45 10/100/1000M PoE
Video Bandwidth	600MHz
Video support	Up to 4K2K 4:4:4 @60Hz
Audio support	Up to 32 channels & Break-away Capable
RS-232	Up to 115k Baud
IR	30KHz-60KHz
USB Function	USB 1.1 Standard 10Mbps or USB 2.0 480Mbps
USB Connectors	ExtremeUSB 2 x USB 2.0 Type A, 1 x USB 2.0 Type-C Processor USB 2.0 Type A, USB Type-C 3.1
Expansion Ports	Processor, ExtermeUSB® & Dante®, (Populated for Ultra)
Interface	IR or Keypad for OSD and OLED, Webserver, IPBaseT Manager
Scaler	
Bandwidth	4K60 4:4:4
Scaling Processors	Quad Scaler Processors
Effects	Image Rotation, Videowall, Windowing, OSD, Edge Blending, Chroma Keying
Pattern Generator	Color Bar, Moving Pattern, Hash, & More
Processor	
CPU	Intel 12th Gen NUC Element (i5 or i7)
Memory	16GB RAM (i5), 32GB RAM (i7) and 1TB SSD
LAN	2.5G LAN PoE++ & 1G LAN PoE++ Connected to Internal Router
Video	Dual HDMI Outputs Input Matrix Scaler, One Input for Video Capture
Video Processing Unit	H.264/H.265 4K Encode and Decode
USB	One USB 2.0 Type A Front, 1 USB2.0/USB 3.1 Type-C Rear
Wi-Fi	Intel® Wi-Fi 6e AX211 (802.11ax)
Bluetooth	v5.3
Options	NDI Encode and Decode, Wi-Fi TeamStream BYOD

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Mechanical	
Housing	Black Aluminum Enclosure
Dimensions [L x W x H]	10.5" x 8" x 1.22"
Weight	4.3lbs
Mounting	Rack mount (optional) and included under table/wall mount
Power supply	100 Watt USB-C or PoE++ 85W (LAN)
Max Power consumption	100 Watts
Operation temperature	0~40°C [32~100°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]

RK7-1-K Optional 1RU Rack Mount

Ordering Information:
IPX-UC1-ULTRA-1-i512-1T16G All-in-one UC platform with integrated Intel i5 based PC ICS-H4 Input Card with Intel i5 12th Gen, 16GB RAM and 500GB SSD 60W PoE++ (Includes 100 Watt USB-C Power Supply)

IPX-UC1-ULTRA-1-i712-1T32G All-in-one UC platform with integrated Intel i7 based PC ICS-H4 Input Card with Intel i7 12th Gen, 32GB RAM and 1TB SSD 60W PoE++ (Includes 100 Watt USB-C Power Supply)

Power Supplies:
PS0104-1-US USB-C 100-Watt Power Supply USA
PS0104-1-EU USB-C 100-Watt Power Supply Europe
PS0104-1-UK USB-C 100-Watt Power Supply United Kingdom
PS0104-1-AU USB-C 100-Watt Power Supply Australia

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