

Dante AVIO™



Connect your USB-enabled computers and mobile devices directly to a Dante audio network, no drivers or additional software required

Dante AVIO USB Adapters support 2 x 2 channels of bidirectional audio, allowing PCs and mobile devices to playout and record audio with any Dante-enabled devices over a standard IP network. Use audio applications like media players, conferencing software, presentations and recorders with network-connected speakers, microphones, mixers and DSPs. Cost effective, compact and built for the road, the Dante AVIO family of adapters bring the modern network connectivity that every audio pro needs in their toolbox.

PLUG & PLAY

Each Dante AVIO USB adapter is a complete, high performance Dante device, delivering all the automation and ease of use that have made Dante the most popular audio networking solution worldwide. Dante AVIO USB adapters is automatically discovered and ready to use when connected, and no separate power supplies are required – just use a common PoE (Power over Ethernet) switch or the USB power built-in to your computer and the Dante AVIO USB adapter is ready to go.

USB

- ▶ Easy audio drop-point for laptops in conference settings, no need to reconfigure your Dante network for different computers
- ▶ USB Type-C® or USB Type-A connectors
- ▶ Record or playout 2-channel audio from any PC or Mac with no additional software at all
- ▶ Connect mobile devices to a Dante network (with adapters as required)

FEATURES

- ▶ Plug & play operation
- ▶ Built for the road
- ▶ 24-bit audio support
- ▶ Dante Audio over IP and AES67 RTP transport formats
- ▶ Power over Ethernet (PoE) support
- ▶ USB-C® to USB-C® cable included with USB-C® model
- ▶ Dante Domain Manager ready



BUILT FOR THE ROAD

We've made all Dante AVIO adapters road-ready and tour-tough. Sonically welded ABS enclosures and quality hardware are used throughout, while cable assemblies are stress-tested to ensure reliable operation under grueling conditions. Toss them in your toolbox, show after show.

ALL DANTE

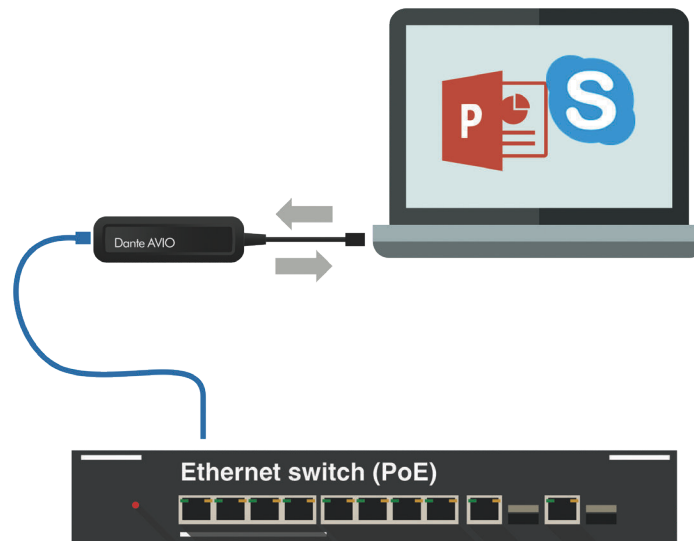
Dante AVIO adapters are all fully functional Dante interfaces, with all the features you'd expect from Dante audio networking. Each one delivers bit-perfect audio reproduction, super-low latency and sample-accurate synchronization across the entire network. All Dante devices automatically discover one another, and the entire system is managed by our easy-to-use Dante Controller software on any connected PC or Mac. Most importantly, every Dante device can connect to every other Dante device – no questions asked.

All Dante AVIO adapters are fully compatible with

Dante Domain Manager (DDM) for IT-level security and management, while AES67 is supported for connection to non-Dante networks.

COST-EFFECTIVE

We've worked hard to make the Dante AVIO family of products a cost-effective addition to any system or piece of gear, so that everyone can enjoy the benefits of Dante. Audio networking has never been easier to or more affordable, no matter how you choose to use it.



Audio channels	2 in, 2 out	
Connectors	RJ45 & USB Type-A	RJ45 & USB Type-C®
Power	Class 1 802.3af PoE or USB	
Sample Rates	48 kHz	
Bit Depth	24	
Dante Device Latency	1, 2, or 5ms (configurable using Dante Controller)	
Network Transport	Dante Audio over IP, AES67 RTP	
USB	Class compliant USB 2.0 device	
Part Number	ADP-USB-AU-2X2	ADP-USBC-AU-2X2

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Dante AVIO USB Marketing
Datasheet
10-Aug-2020

Audinate

MultiSync® E221N
LCD 22" Enterprise Display

Datasheet



NEC MultiSync® E221N Ultra-Thin Bezel - The Office Workhorse, combining sleek and elegant design with health-conscious performance

The 22" ultra-thin bezel display targeting reliable office productivity, performance and quality, fulfils demand for future-ready design. Enduring productivity requires high attention to healthcare. Ensuring the well-being of the user, built-in Low Blue Light technology filters out hazardous blue light emissions whilst Flicker-Free technology eliminates the effect of flickering. The users' eyes are protected whilst ensuring a true-to-life display colour performance from all viewing angles. The LED backlight panel with AH-IPS technology supports a high display brightness of 250 cd/m² and in parallel lowers power consumption.

The ultra-narrow bezel display reduces the display footprint without compromising on screen size and gives an office a fresh professional interior with its sleek and elegant design.

Benefits

Protecting your eyes from strain and damage - Built-in Low Blue Light technology filters out hazardous blue light emissions whilst Flicker-Free technology eliminates any backlight flickering, thus protecting your eyes against cataracts and macular degeneration without compromise to true-to-life display colour performance.

Ergonomic Office - full height adjustability (110 mm), swivel, tilt and pivot functionality ensures perfect individual ergonomic set-up.

Business Class Image Quality - IPS (AH-IPS) panel provides the very best viewing angles as well as noticeably better colour reproduction.

Future-Ready Design - best in form and function design with 3-sided ultra-narrow bezel gives an office a fresh professional interior.

Your environmental and social responsibility - NEC's TCO 7 and ENERGY STAR 7 certified display is environmentally designed with minimal hazardous material meeting the growing demand for more sustainable technologies.

Product Information

Product Name	MultiSync® E221N
Product Group	LCD 22" Enterprise Display
Order Code	60004223 (WH) , 60004224 (BK)

Display

Panel Technology	IPS TFT with W-LED backlight
Screen Size [inch/cm]	22 / 55
Screen Aspect Ratio	16:9
Pixel Pitch [mm]	0.248
Brightness (typ.) [cd/m ²]	250
Contrast Ratio (typ.)	1000:1
Viewing Angle [°]	178 horizontal / 178 vertical (typ. at contrast ratio 10:1)
Response Time (typ.) [ms]	6
Colours [Mio.]	16.77

Synchronisation Rate

Horizontal Frequency [kHz]	31.5 - 81.1
Vertical Frequency [Hz]	56 - 76

Resolution

Optimum Resolution	1920 x 1080 at 60 Hz
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Connectivity

Digital	1 x DisplayPort; 1 x HDMI
Analog	1 x D-sub 15 pin

Electrical

Power Consumption on Mode [W]	15 (Eco Mode 1); 17 (typ.); 25 (max.)
Power Savings Mode [W]	0.29

Environmental Conditions

Operating Temperature [°C]	+5 to +35
Operating Humidity [%]	20 to 80

Ergonomics

Height adjustable stand [mm]	110
Screen Tilt [°]	-5 to 20
Screen Swivel [°]	45 to 45

Mechanical

Bezel Width [mm]	1 (left and right); 1 (top); 16.2 (bottom)
Dimensions (W x H x D) [mm]	488.1 x 359.8 x 213.9
Weight [kg]	With stand: 5
VESA Mounting [mm]	100 x 100

Additional Features

Special Characteristics	DisplayPort; EcoModes; LED Backlight Technology; NaViSet Administrator 2
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Colour Versions	Black Front Bezel, Black Back Cabinet; White Front Bezel, White Back Cabinet
Cable Management	yes
Plug and Play	VESA DDC2Bi
Audio	1W + 1W (De-activateable); Headphone Jack
Shipping Content	DisplayPort Cable; Power Cable; Setup Guide; VGA-VGA Cable
Safety and Ergonomics	EnergyStar 7.0; Flicker-free; Low Blue Light; RoHS; TCO 7.0; TÜV Ergonomics; TÜV GS; WEEE

Green Features

Energy Efficiency	Carbon Footprint Meter / Carbon Savings Meter; ECOMode; Energy efficiency class: A
Ecological Standards	Energy Star 7.0; RoHS compliant; TCO 7.0; WEEE



RoHS



TÜV
Ergonomics



TÜV GS

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EdgeSwitch®

Managed PoE+ Gigabit Switches with SFP

Models: ES-8-150W, ES-16-150W, ES-24-250W,
ES-24-500W, ES-48-500W, ES-48-750W

Non-Blocking Throughput Switching Performance

Gigabit Ethernet RJ45 and SFP+/SFP Ports

Auto-Sensing IEEE 802.3af/at PoE



Advanced Switching Technology for the Masses

Build and expand your network with Ubiquiti Networks® EdgeSwitch®, part of the EdgeMAX® line of products. The EdgeSwitch is a fully managed, PoE+ Gigabit switch, delivering robust performance and intelligent switching for growing networks.

The EdgeSwitch offers an extensive suite of advanced Layer-2 switching features and protocols, and also provides Layer-3 routing capability.

Switching Performance

The EdgeSwitch offers the forwarding capacity to simultaneously process traffic on all ports at line rate without any packet loss.

The EdgeSwitch provides total, non-blocking throughput:

- **8-Port Model** Up to 10 Gbps
- **16-Port Model** Up to 18 Gbps
- **24-Port Models** Up to 26 Gbps
- **48-Port Models** Up to 70 Gbps

PoE+ Flexibility

The EdgeSwitch models are available with 8, 16, 24, or 48 PoE Gigabit Ethernet ports of auto-sensing IEEE 802.3af/at or configurable 24V Passive PoE to simplify your infrastructure.

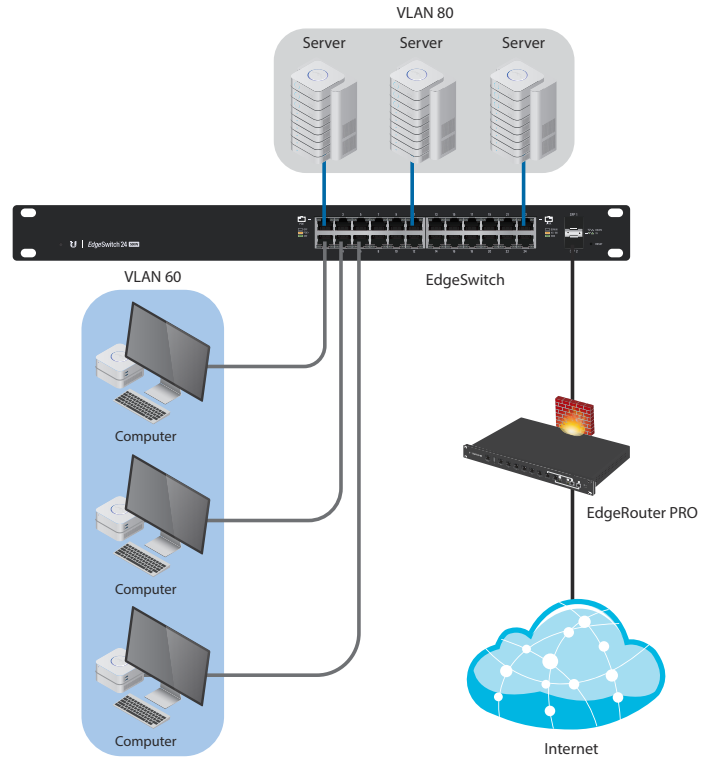
By default, the EdgeSwitch automatically detects 802.3af/at devices so they automatically receive PoE. For 24V Passive PoE devices, manually enable 24V passive PoE using the EdgeSwitch Configuration Interface.

Fiber Connectivity

The EdgeSwitch provides fiber connectivity options for your growing networks. The 8, 16, and 24-port models include two SFP ports, providing up to 1 Gbps uplinks.

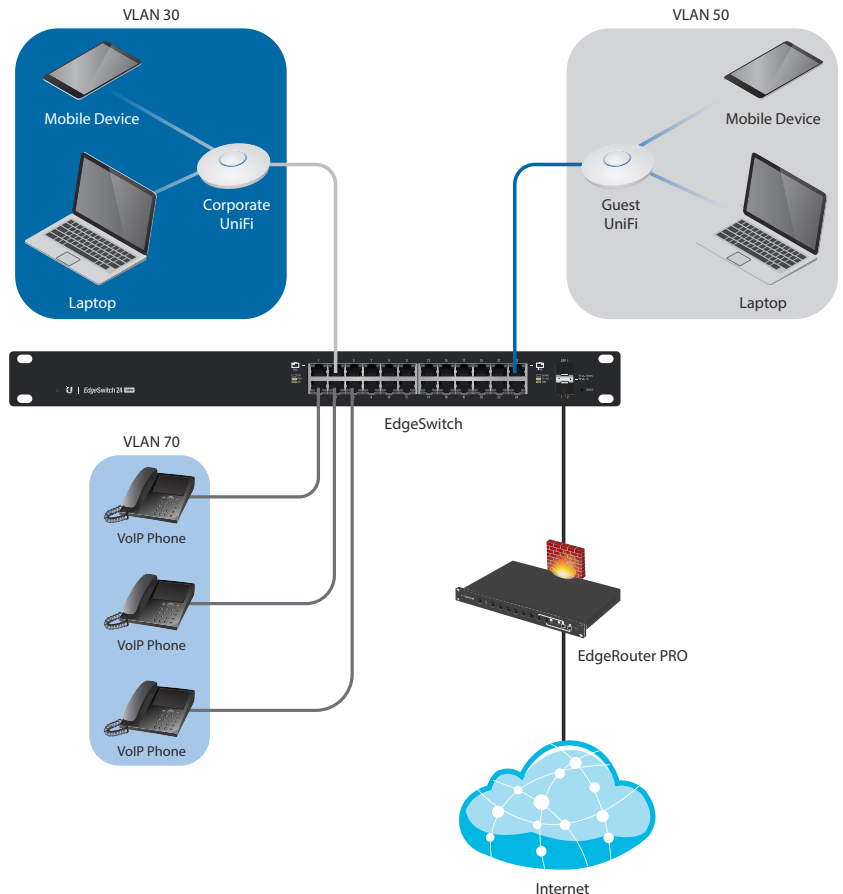
For high-capacity uplinks, the 48-port models include two SFP and two SFP+ ports, providing uplinks of up to 10 Gbps.

Deployment Examples



VLANs for Servers and Computers

The EdgeSwitch connects to the Ubiquiti EdgeRouter™ PRO via an SFP uplink.



VLANs for Corporate Wireless, Guest Wireless, and VoIP

For wireless access, two Ubiquiti UniFi® Access Points connect to the EdgeSwitch.

Models

EdgeSwitch® 8 150W

Model: ES-8-150W

- (8) Gigabit RJ45 Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 10 Gbps
- Switching Capacity: 20 Gbps
- Forwarding Rate: 14.88 Mpps
- Maximum Power Consumption: 150W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Wallmountable with Mount Brackets (Included)
- Desktop-Mountable (Do not physically stack the ES-8-150W.)
- DC Input Option (Redundant or Stand-Alone)



EdgeSwitch® 16 150W

Model: ES-16-150W

- (16) Gigabit RJ45 Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 18 Gbps
- Switching Capacity: 36 Gbps
- Forwarding Rate: 26.78 Mpps
- Maximum Power Consumption: 150W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable with Rack-Mount Brackets (Included)



EdgeSwitch® 24 250W

Model: ES-24-250W

- (24) Gigabit RJ45 Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 26 Gbps
- Switching Capacity: 52 Gbps
- Forwarding Rate: 38.69 Mpps
- Maximum Power Consumption: 250W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



EdgeSwitch® 24 **500W**

Model: ES-24-500W

- (24) Gigabit RJ45 Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 26 Gbps
- Switching Capacity: 52 Gbps
- Forwarding Rate: 38.69 Mpps
- Maximum Power Consumption: 500W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



EdgeSwitch® 48 **500W**

Model: ES-48-500W

- (48) Gigabit RJ45 Ports
- (2) SFP+ Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 70 Gbps
- Switching Capacity: 140 Gbps
- Forwarding Rate: 104.16 Mpps
- Maximum Power Consumption: 500W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



EdgeSwitch® 48 **750W**

Model: ES-48-750W

- (48) Gigabit RJ45 Ports
- (2) SFP+ Ports
- (2) SFP Ports
- (1) Serial Console Port
- Non-Blocking Throughput: 70 Gbps
- Switching Capacity: 140 Gbps
- Forwarding Rate: 104.16 Mpps
- Maximum Power Consumption: 750W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



EdgeSwitch® 8 **150W**

Hardware Specifications

ES-8-150W			
Dimensions	204 x 43 x 235 mm (8.03 x 1.69 x 9.25")		
Weight	Without Mount Brackets		With Mount Brackets
	1.72 kg (3.79 lb)		1.8 kg (3.96 lb)
Total Non-Blocking Throughput	10 Gbps		
Switching Capacity	20 Gbps		
Forwarding Rate	14.88 Mpps		
Max. Power Consumption	Includes PoE Output		Excludes PoE Output
	150W		20W
Power Method	AC		DC
	100-240VAC/50-60 Hz, AC/DC Integrated PSU, Universal Input		42 to 56VDC External, (Self-Correcting Polarity Protection) Terminal Block Input
Power Supply	AC/DC, Internal, 150W DC		
LEDs Per Port	RJ45 Data Ports		SFP Data Ports
	PoE, Speed/Link/Activity		Speed/Link/Activity
Networking Interfaces	(8) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1 Gbps SFP Ethernet Ports		
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band		
Certifications	CE, FCC, IC		
Wallmount	Yes		
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV		
Operating Temperature	Internal AC/DC @ 150W	Internal AC/DC @ 100W	External DC
	-25 to 45° C (-13 to 113° F)	-25 to 55° C (-13 to 131° F)	-25 to 60° C (-13 to 140° F)
Operating Humidity	5 to 95% Noncondensing		
Shock and Vibration	ETSI300-019-1.4 Standard		

PoE Per Port	
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50–57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V

EdgeSwitch® 16 **150W**

Hardware Specifications

ES-16-150W		
Dimensions	443 x 43 x 221 mm (17.44 x 1.69 x 8.70")	
Weight	Without Mount Brackets	With Mount Brackets
	2.80 kg (6.17 lb)	2.89 kg (6.37 lb)
Total Non-Blocking Throughput	18 Gbps	
Switching Capacity	36 Gbps	
Forwarding Rate	26.78 Mpps	
Max. Power Consumption	Includes PoE Output	Excludes PoE Output
	150W	28W
Power Method	100-240VAC/50-60 Hz, Universal Input	
Power Supply	AC/DC, Internal, 150W DC	
LEDs Per Port	RJ45 Data Ports	SFP Data Ports
	PoE, Speed/Link/Activity	Speed/Link/Activity
Networking Interfaces	(16) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1 Gbps SFP Ethernet Ports	
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band	
Certifications	CE, FCC, IC	
Rackmount	Yes, 1U High	
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV	
Operating Temperature	-5 to 40° C (23 to 104° F)	
Operating Humidity	5 to 95% Noncondensing	
Shock and Vibration	ETSI300-019-1.4 Standard	

PoE Per Port	
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50–57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V

EdgeSwitch® 24

Hardware Specifications

ES-24-250W, ES-24-500W				
Dimensions	485 x 43.7 x 285.4 mm (19.09 x 1.72 x 11.24")			
Weight	ES-24-250W		ES-24-500W	
	4.7 kg (10.4 lb)		4.8 kg (10.6 lb)	
Total Non-Blocking Throughput	26 Gbps			
Switching Capacity	52 Gbps			
Forwarding Rate	38.69 Mpps			
Max. Power Consumption	ES-24-250W		ES-24-500W	
	Includes PoE Output	Excludes PoE Output	Includes PoE Output	Excludes PoE Output
	250W	30W	500W	30W
Power Method	100-240VAC/50-60 Hz, Universal Input			
Power Supply	ES-24-250W		ES-24-500W	
	AC/DC, Internal, 250W DC		AC/DC, Internal, 500W DC	
LEDs Per Port	RJ45 Data Ports		SFP Data Ports	
	PoE, Speed/Link/Activity		Speed/Link/Activity	
Networking Interfaces	(24) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1 Gbps SFP Ethernet Ports			
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band			
Certifications	CE, FCC, IC			
Rackmount	Yes, 1U High			
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV			
Operating Temperature	-5 to 40° C (23 to 104° F)			
Operating Humidity	5 to 95% Noncondensing			
Shock and Vibration	ETSI300-019-1.4 Standard			

PoE Per Port	
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50–57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V

EdgeSwitch® 48

Hardware Specifications

ES-48-500W, ES-48-750W				
Dimensions	485 x 43.7 x 374.6 mm (19.09 x 1.72 x 14.75")			
Weight	ES-48-500W		ES-48-750W	
	6.1 kg (13.5 lb)		6.5 kg (14.3 lb)	
Total Non-Blocking Throughput	70 Gbps			
Switching Capacity	140 Gbps			
Forwarding Rate	104.16 Mpps			
Max. Power Consumption	ES-48-500W		ES-48-750W	
	Includes PoE Output	Excludes PoE Output	Includes PoE Output	Excludes PoE Output
	500W	64W	750W	64W
Power Method	100-240VAC/50-60 Hz, Universal Input			
Power Supply	ES-48-500W		ES-48-750W	
	AC/DC, Internal, 500W DC		AC/DC, Internal, 750W DC	
LEDs Per Port	RJ45 Data Ports		SFP+/SFP Data Ports	
	PoE, Speed/Link/Activity		Speed/Link/Activity	
Networking Interfaces	(48) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1/10 Gbps SFP+ Ethernet Ports (2) 1 Gbps SFP Ethernet Ports			
Management Interface	(1) RJ45 Serial Port, Ethernet In/Out Band			
Certifications	CE, FCC, IC			
Rackmount	Yes, 1U High			
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV			
Operating Temperature	-5 to 40° C (23 to 104° F)			
Operating Humidity	5 to 95% Noncondensing			
Shock and Vibration	ETSI300-019-1.4 Standard			

PoE Per Port	
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50–57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V



Software Specifications

Software Information	
Core Switching Features	<ul style="list-style-type: none">• ANSI/TIA-1057: LLDP-Media Endpoint Discovery (MED)• IEEE 802.1AB: Link Layer Discovery Protocol (LLDP)• IEEE 802.1D: Spanning Tree Compatibility• IEEE 802.1S: Multiple Spanning Tree Compatibility• IEEE 802.1W: Rapid Spanning Tree Compatibility• IEEE 802.1Q: Virtual LANs with Port-Based VLANs• IEEE 802.1p: Ethernet Priority with User Provisioning and Mapping• IEEE 802.1X: Port-Based Authentication with Guest VLAN Support• IEEE 802.3: 10BASE-T• IEEE 802.3u: 100BASE-T• IEEE 802.3ab: 1000BASE-T• IEEE 802.1ak: Virtual Bridged Local Area Networks - Amendment 07: Multiple Registration Protocol• IEEE 802.3ac: VLAN Tagging• IEEE 802.3ad: Link Aggregation• IEEE 802.3x: Flow Control• IEEE 802.1D-2004: Generic Attribute Registration Protocol: Clause 12 (G)• IEEE 802.1D-2004: Dynamic L2 multicast registration: Clause 10 (GMRP)• IEEE 802.1Q-2003: Dynamic VLAN registration: Clause 11.2 (GVRP)• RFC 4541: Considerations for Internet Group Management Protocol (IGMP) Snooping Switches
Advanced Layer 2 Features	<ul style="list-style-type: none">• Broadcast Storm Recovery• Broadcast/Multicast/Unknown Unicast Storm Recovery• DHCP Snooping• IGMP Snooping Querier• Independent VLAN Learning (IVL) Support• Jumbo Ethernet Frame Support• Port MAC Locking• Port Mirroring• Protected Ports• Static MAC Filtering• TACACS+• Voice VLANs• Unauthenticated VLAN• Internal 802.1X Authentication Server

Software Information	
Platform Specifications	<ul style="list-style-type: none"> • DHCP Server <ul style="list-style-type: none"> • Maximum Number of Pools: 128 • Maximum Number of Leases (Total): 2048 • Routing <ul style="list-style-type: none"> • Number of Routes: 16 • Number of Routing Interfaces: 15 • VLANs: 4093 • MAC Addresses: 16,384 • ARP Cache Size: 493 • MSTP Instances: 4 • LAGs: 6 • ACLs: 100 with 10 Rules per Port • Traffic Classes (Queues): 8
System Facilities	<ul style="list-style-type: none"> • Event and Error Logging Facility • Run-Time and Configuration Download Capability • PING Utility • FTP/TFTP Transfers via IPv4/IPv6 • Malicious Code Detection • BootP and DHCP • RFC 2021: Remote Network Monitoring Management Information Base Version 2 • RFC 2030: Simple Network Time Protocol (SNTP) • RFC 2819: Remote Network Monitoring Management Information Base • RFC 2865: RADIUS Client • RFC 2866: RADIUS Accounting • RFC 2868: RADIUS Attributes for Tunnel Protocol Support • RFC 2869: RADIUS Extensions • RFC 3579: RADIUS Support for EAP • RFC 3580: IEEE 802.1X RADIUS Usage Guidelines • RFC 3164: BSD Syslog Protocol
Management	<ul style="list-style-type: none"> • Web UI • Industry-Standard CLI • IPv6 Management • Password Management • Autoinstall Support for Firmware Images and Configuration Files • SNMP v1, v2, and v3 • SSH 1.5 and 2.0 • SSL 3.0 and TLS 1.0 • Secure Copy (SCP) • Telnet (Multi-Session Support)
Layer 3 Routing	<ul style="list-style-type: none"> • Static Routing

Software Information

<p>QoS</p>	<ul style="list-style-type: none"> • Access Control Lists (ACLs), Permit/Deny Actions for Inbound IP and Layer 2 Traffic Classification Based on: <ul style="list-style-type: none"> • Time-Based ACL • Source/Destination IP Address • TCP/UDP Source/Destination Port • IP Protocol Type • Type of Service (ToS) or Differentiated Services (DSCP) Field • Source/Destination MAC Address • EtherType • IEEE 802.1p User Priority • VLAN ID • RFC 1858: Security Considerations for IP Fragment Filtering • Optional ACL Rule Attributes <ul style="list-style-type: none"> • Assign Flow to a Specific Class of Service (CoS) Queue • Redirect Matching Traffic Flows • Differentiated Services (DiffServ) <ul style="list-style-type: none"> • Classify Traffic Based on Same Criteria as ACLs • Mark the IP DSCP or Precedence Header Fields, Optional • Police the Flow to a Specific Rate with Two-Color Aware Support • RFC 2474: Definition of the Differentiated Services Field (DS field) in the IPv4 and IPv6 Headers • RFC 2475: An Architecture for Differentiated Services • RFC 2597: Assured Forwarding Per-Hop Behavior (PHB) Group • RFC 3246: An Expedited Forwarding PHB • RFC 3260: New Terminology and Clarifications for DiffServ • Class of Service (CoS) Queue Mapping Configuration <ul style="list-style-type: none"> • AutoVoIP: Automatic CoS Settings for VoIP • IP DSCP-to-Queue Mapping • Configurable Interface Trust Mode (IEEE 802.1p, DSCP, or Untrusted) • Interface Egress Shaping Rate • Strict Priority versus Weighted Scheduling per Queue
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Príloha č. 2:

Návrh na plnenie kritéria

Predmet zákazky:

Systém riadenia a ovládania prenosu video-mítingov - 36

Verejný obstarávateľ:

Univerzita Komenského v Bratislave

Šafárikovo námestie 6, 814 99 Bratislava

(uveďte, prosím, označenie konkrétnej značky a modelu, ktorý predkladáte do ponuky)	Návrh na plnenie kritéria
<i>Systému riadenia a ovládania prenosu video-mítingov (otvorený systém riadenia a ovládania digitálnych technológií pre zabezpečenie prenosu video konferenčných mítingov a vzdelávacích kurzov prostredníctvom MS Teams)</i>	
Snímacie zariadenie s pohyblivým sledovaním prezentujúceho: Panasonic AW-HE38 s kabelážou, inštaláciou a konfiguráciou	2 482,00
Riadiaci systém so systémom automatického sledovania prezentujúceho: Panasonic AW-SF100, Dell Inspiron 3881, NEC-MultiSync E221N, Ubiquiti-EdgeSwitch 8 150W, vrátane kabeláže, inštalácie, konfigurácie a integrácie so zariadeniami v miestnosti	2 806,00
Audio systém: Shure MXA710, Audac imeo sound bar, Dante AVIO USB IO adapter 2x2, vrátane inštalácie, parametrizácie, integrácie s existujúcimi zariadeniami v miestnosti, doprava	2 906,00
Cena celkom bez DPH	8194,00
DPH	1638.80
Cena celkom s DPH	9832,80

Názov uchádzača: **AP MEDIA s.r.o.**

Sídlo uchádzača: Navrátkach 3410/1C

Štatutárny zástupca uchádzača: Ing. Peter Juhás

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Podpis štatutárneho zástupcu uchádzača

Kúpna zmluva

uzavretá podľa § 409 zákona č. 513/1991 Z. z. v znení neskorších predpisov (ďalej len „Obchodný zákonník“) a v súlade so zákonom č. 343/2015 Z. z. o verejnom obstarávaní a o zmene a doplnení niektorých zákonov v znení neskorších predpisov (ďalej len „zákon o verejnom obstarávaní alebo ZVO“)

Článok I.

Zmluvné strany

- 1.1. Kupujúci:** **Univerzita Komenského v Bratislave**
Sídlo: Šafárikovo nám. 6, 814 99 Bratislava
Korešpondenčná adresa: Šafárikovo nám. 6, P. O. Box 440, 814 99 Bratislava 1
Štatutárny orgán: prof. JUDr. Marek Števček, PhD., rektor
Osoba oprávnená na podpis zmluvy: Ing. Ingrid Kútina Želonková, PhD., kvestorka
IČO: 00 397 865
DIČ: 2020845332
- (ďalej len „kupujúci“)
- 1.2. Predávajúci:** **AP MEDIA s.r.o.**
Sídlo: Na vrátkach 3410/1C
Zastúpený: Ing. Peter Juhás
IČO: 35691883
DIČ: 2020348462
IČ DPH: SK2020348462
Osoby oprávnené konať:
- vo veciach zmluvy: Ing. Peter Juhás
- vo veciach realizácie zmluvy: Miroslav Baumgartner
Bankové spojenie:
IBAN:
Zapísaný v Obch. registri: na Okr. súde Bratislava I, oddiel Sro, vložka č.11135/B.
Kontakt: Ing. Peter Juhás
- (ďalej len „predávajúci“)

Článok II. Úvodné ustanovenia

- 2.1. Podkladom pre uzavretie tejto zmluvy je výsledok verejného obstarávania zákazky „Systém riadenia a ovládania prenosu video-mítingov - 36“ uskutočnenej v rámci dynamického nákupného systému „IKT pre Univerzitu Komenského v Bratislave“ .
- 2.2. Touto zmluvou sa stanovuje právny režim kúpy a predaja Systému riadenia a ovládania prenosu video-mítingov - otvoreného systému riadenia a ovládania digitálnych technológií pre zabezpečenie prenosu video konferenčných mítingov a vzdelávacích kurzov prostredníctvom MS Teams, a to podľa technickej špecifikácie uvedenej v Prílohe č. 1 Opis predmetu zmluvy a podľa Prílohy č. 2 Cenová ponuka. Príloha č. 1 a Príloha č. 2 sú neoddeliteľnou súčasťou tejto zmluvy.

Článok III. Predmet plnenia zmluvy

- 3.1. Predmetom tejto zmluvy je dodávka tovaru predávajúcim uvedeného v Prílohe č. 1 Opis predmetu zmluvy a podľa Prílohy č. 2 Cenová ponuka, na základe objednávok kupujúceho za podmienok uvedených v tejto zmluve a záväzok kupujúceho prevziať tovar a zaplatiť za neho predávajúcemu dohodnutú cenu podľa platobných podmienok dohodnutých v tejto zmluve.
- 3.2. Predávajúci sa zaväzuje, že kupujúcemu dodá tovar špecifikovaný v Prílohe č. 1 tejto zmluvy za cenu uvedenú v Prílohe č. 2 tejto zmluvy v súlade s príslušnými legislatívnymi predpismi a zároveň kupujúcemu umožní nadobúdať vlastnícke právo k tomuto tovaru.
- 3.3. Predávajúci sa zaväzuje dodať tovar podľa bodu 3.2 vrátane príslušnej kabeláže, inštalácie, potrebnej konfigurácie, ako aj integrácie s existujúcimi zariadeniami Kupujúceho, parametrizácie a dopravy namiesto dodania predmetu zmluvy. Dodávaný systém musí byť otvorený pre budúce zapojenie ďalších zariadení pre snímanie obrazu a zvuku.
- 3.4. Predávajúci sa zaväzuje:
 - a) dodávať tovar na základe objednávky kupujúceho,
 - b) potvrdiť objednávku do dvoch pracovných dní od jej doručenia kupujúcim podľa bodu 5.1 a dodať tovar do najneskôr do 30 dní od doručenia objednávky,
 - c) dodať tovar výlučne podľa špecifikácie uvedenej v Prílohe č. 1 zmluvy.

Článok IV. Cena tovaru

- 4.1. Cena za predmet plnenia zmluvy je stanovená v zmysle zákona č. 18/1996 Z. z. o cenách v znení neskorších predpisov (ďalej len „zákon o cenách“) a vyhlášky Ministerstva financií SR č. 87/1996 Z. z., ktorou sa vykonáva zákon o cenách v znení

neskorších predpisov a v súlade s cenovou ponukou uvedenou v Prílohe č. 2 tejto zmluvy.

- 4.2. Zmluvná cena pokrýva všetky ekonomicky oprávnené náklady predávajúceho vynaložené v súvislosti s dodávkou predmetu plnenia zmluvy, napr. prepravné obaly na prepravu tovaru, doprava na miesto dodania prepravnými prostriedkami predávajúceho a v súlade s príslušnými legislatívnymi predpismi, vyložením tovaru na konkrétne miesto. V cene sú zahrnuté náklady spojené s výmenou reklamovaného tovaru počas záručnej doby.
- 4.3. Zmluvná cena za predmet zákazky je cenou konečnou, t. j. nebude sa navyšovať o ďalšie náklady.
- 4.4. Zmluvné strany dohodli cenu predmetu zmluvy tak ako je uvedená v Prílohe č. 2 tejto zmluvy:

Cena bez DPH:	8194,00 Eur
DPH:	1638.80 Eur
Cena spolu s DPH:	9832,80 Eur

Článok V.

Podmienky dodania a preberania tovaru

- 5.1. Predávajúci je povinný dodávať predmet zmluvy na základe e-mailovej objednávky kupujúceho. Objednávku posielajú predávajúcemu zodpovedná osoba kupujúceho uvedená v objednávke.
- 5.2. Dodávka tovaru bude realizovaná dopravou na náklady predávajúceho, s vyložením na mieste určenom kupujúcim v súlade s článkom VI. ods. 1 tejto zmluvy.
- 5.3. Dodávka požadovaného tovaru sa uskutoční v čase dohodnutom v objednávke, najneskôr do 30 dní od doručenia objednávky. Tovar za kupujúceho preberá zodpovedná osoba uvedená v objednávke.
- 5.4. Tovar sa považuje za dodaný po podpísaní dodacieho listu zástupcami zmluvných strán s uvedením špecifikácie dodaného tovaru, dátumom, pečiatkou.
- 5.5. Kupujúci je pri prevzatí predmetu tejto zmluvy povinný prekontrolovať jeho úplnosť, kompletnosť, balenie a svojím podpisom na dodacom liste túto skutočnosť potvrdiť.
- 5.6. Kupujúci je oprávnený odmietnuť dodávku predmetu tejto zmluvy v prípade, ak táto bola dodaná po lehote na dodanie tovaru určenej zmluvou alebo objednávkou, alebo ak má viditeľné vady (najmä poškodené obaly), alebo ak nebolo dodržané objednané množstvo a druh tovaru alebo vlastnosti a špecifikácia uvedená v Prílohe č. 1 tejto zmluvy. V takomto prípade sa bude postupovať akoby tovar nebol dodaný a kupujúci je oprávnený odstúpiť od zmluvy.

Článok VI.

Miesto dodania a vyloženia tovaru a lehota dodania tovaru

- 6.1. Miesto dodania a vyloženia tovaru je Univerzita Komenského v Bratislave, Prírodovedecká fakulta, Katedra didaktiky prírodných vied, psychológie a pedagogiky, Ilkovičova 6, Bratislava.
- 6.2. Predávajúci sa zaväzuje dodať predmet zmluvy špecifikovaný v Prílohe č. 1 v súlade s článkom III ods. 2 tejto zmluvy najneskôr do 30 dní od doručenia objednávky.

Článok VII.

Platobné podmienky

- 7.1. Kupujúci sa zaväzuje za riadne a včas dodaný tovar zaplatiť predávajúcemu kúpnu cenu podľa Prílohy č. 2 tejto zmluvy na základe faktúry vystavenej predávajúcim po dodaní tovaru podľa článku V. tejto zmluvy. Kupujúci neposkytne predávajúcemu preddavok na zrealizovanie predmetu plnenia zmluvy.
- 7.2. Faktúra bude obsahovať náležitosti podľa zákona č. 222/2004 Z. z. o dani z pridanej hodnoty v znení neskorších predpisov. Neoddeliteľnou súčasťou faktúry bude originál dodacieho listu.
- 7.3. Predávajúci je povinný uvádzať vo faktúrach tovar, jeho výrobcu tak, ako je uvedené v Prílohe č. 1 a v Prílohe č. 2 tejto zmluvy.
- 7.4. Lehota splatnosti faktúry je 30 dní odo dňa prevzatia a odsúhlasenia faktúry kupujúcim. Ak predložená faktúra nebude spĺňať náležitosti podľa tohto článku alebo nebude vystavená v súlade so zmluvou, kupujúci ju vráti v lehote splatnosti predávajúcemu na dopracovanie. Opravená faktúra je splatná do 30 dní odo dňa jej prevzatia a odsúhlasenia kupujúcim. Faktúry budú uhrádzané výhradne prevodným príkazom.

Článok VIII.

Záruky na tovary

- 8.1. Zmluvné strany sa dohodli, že záručná doba na predmet zmluvy - dodaný tovar je 24 mesiacov odo dňa dodania tovaru.
- 8.2. Predávajúci zodpovedá za to, že tovar bude riadne dodaný v súlade s touto zmluvou, bude mať vlastnosti dohodnuté v tejto zmluve, bude v súlade s právnymi predpismi a bude spĺňať všetky náležitosti stanovené platnou legislatívou.
- 8.3. Predávajúci zodpovedá za kvalitu dodávaných tovarov, vrátane skrytých väd tovaru počas celého trvania záručnej doby.
- 8.4. Kupujúci je oprávnený reklamovať vady dodaného tovaru e-mailom. Súčasťou môže byť aj fotodokumentácia reklamovaného tovaru. Náklady na dopravu súvisiacu s reklamovaným tovarom znáša predávajúci v plnom rozsahu.
- 8.5. Vady zjavné, kvalitatívne alebo množstevné, zistené pri prevzatí tovaru bude kupujúci reklamovať najneskôr do 5 pracovných dní odo dňa dodania tovaru. Ostatné vady je

kupujúci povinný reklamovať okamžite po zistení vady, najneskôr však do skončenia záručnej doby.

- 8.6. Zmluvné strany sa dohodli, že v prípade zistenia vady počas záručnej doby dodávateľ začne s odstraňovaním vady a riešením servisnej požiadavky objednávateľa najneskôr v nasledujúci pracovný deň.
- 8.7. Kupujúci má právo v prípade zistenia akýchkoľvek väd dodaného tovaru na:
 - a) výmenu vadného tovaru za tovar nový, bezchybný, najneskôr do 3 dní od okamihu uplatnenia zodpovednosti za vady,
 - b) odstúpenie od zmluvy v prípade nesplnenia povinnosti predávajúceho vymeniť vadný tovar za bezchybný v stanovenej lehote alebo v prípade, ak objednávateľ požadoval v rámci jedného kalendárneho mesiaca reklamáciu viac ako trikrát.
- 8.8. Kupujúci bude akceptovať iba faktúru za dodávku bezchybného predmetu zmluvy, t. j. v súlade s dodacím listom.

Článok IX. Sankcie

- 9.1. V prípade, že predávajúci bude v omeškaní s plnením predmetu tejto zmluvy, teda s dodaním tovaru v lehote uvedenej v čl. V. ods. 3, kupujúci si môže uplatniť zmluvnú pokutu vo výške 0,1 % za každý začatý deň omeškania z ceny nedodaného tovaru, a to až do doby dodania tovaru. Týmto však nie je dotknutý nárok na náhradu škody.
- 9.2. V prípade, že predávajúci bude v omeškaní s dodaním reklamovaného tovaru v lehote uvedenej v čl. VIII. ods. 5 písm. a), kupujúci si môže uplatniť zmluvnú pokutu vo výške 0,1 % za každý začatý deň omeškania z ceny nedodaného tovaru, a to až do doby dodania tovaru. Týmto však nie je dotknutý nárok na náhradu škody.
- 9.3. Ak predávajúci nedodrží jednotkové ceny uvedené v Prílohe č. 2 tejto zmluvy, kupujúci je oprávnený si uplatniť zmluvnú pokutu vo výške 100 € za každú jednu nesprávne vyfakturovanú položku.
- 9.4. V prípade, že predávajúci nedodrží vlastnosti tovaru uvedené v Prílohe č. 1 zmluvy alebo nedodrží niektorú z požiadaviek na tovar uvedenú v čl. III ods. 3 zmluvy, je kupujúci oprávnený uplatniť zmluvnú pokutu vo výške 0,1 % z hodnoty vadného plnenia za každé jedno porušenie.
- 9.5. Ak nebude vykonaná úhrada predávajúcemu v zmysle platobných podmienok tejto kúpnej zmluvy, môže si predávajúci uplatniť za každý deň omeškania úrok z omeškania v zákonnej výške z hodnoty neuhradenej faktúry.
- 9.6. V prípade, ak zmluvná strana poruší zmluvu podstatným spôsobom podľa čl. X. ods. 3, je zmluvná strana, okrem odstúpenia od zmluvy, oprávnená uplatniť si zmluvnú pokutu vo výške 5% z celkovej zmluvnej ceny.
- 9.7. V prípade, ak zmluvná strana poruší zmluvu iným ako podstatným spôsobom a takéto porušenie nenapraví ani v dodatočnej primeranej lehote určenej na nápravu, je druhá

zmluvná strana, okrem odstúpenia od zmluvy, oprávnená uplatniť si pokutu vo výške 5% z celkovej zmluvnej ceny.

- 9.8. Zmluvné pokuty sú splatné do 14 dní odo dňa doručenia výzvy na ich uhradenie. Kupujúci je však oprávnený aj započítať akúkoľvek svoju i nesplatnú pohľadávku, ktorú má voči predávajúcemu, s pohľadávkou, i nesplatnou, ktorá vznikne z tejto zmluvy predávajúcemu voči kupujúcemu. Zápočet pohľadávok môže kupujúci uplatniť pri úhrade faktúry predávajúceho.
- 9.9. Zaplatením zmluvnej pokuty nie je dotknutý nárok kupujúceho požadovať náhradu škody.

Článok X.

Právo odstúpenia od zmluvy

- 10.1. Zmluvu je možné ukončiť dohodou zmluvných strán k určitému dátumu alebo odstúpením od zmluvy.
- 10.2. Odstúpenie od zmluvy je možné:
- a) pri podstatnom porušení zmluvy druhou zmluvnou stranou, alebo keď sa pre druhú zmluvnú stranu stalo splnenie podstatných zmluvných povinností úplne nemožným (*vis maior*), napr. v prípade poistnej udalosti, živeľnej udalosti,
 - b) ak predávajúci poruší zmluvu iným ako podstatným spôsobom a takéto porušenie nenapraví ani v dodatočnej primeranej lehote na nápravu určenej kupujúcim.
- 10.3. Za podstatné porušenie zmluvy na účely odstúpenia od tejto zmluvy sa považuje najmä:
- a) dodanie tovaru za iné ako jednotkové ceny uvedené v Prílohe č. 2 zmluvy,
 - b) ak predmet plnenia zmluvy bude fakturovaný v rozpore s dohodnutými podmienkami v zmluve alebo bude opakovane fakturovaný,
 - c) neschopnosť predávajúceho dodať predmet zmluvy za jednotkové ceny uvedené v Prílohe č. 2 zmluvy,
 - d) omeškanie predávajúceho s dodávkou tovaru o viac ako 2 pracovné dni,
 - e) omeškanie predávajúceho s dodaním reklamovaného tovaru o viac ako 2 pracovné dni,
 - f) omeškanie kupujúceho s úhradou faktúry o viac ako 15 dní,
 - g) omeškanie zmluvnej strany s úhradou sankcie o viac ako 15 dní,
 - h) predávajúci poskytne kupujúcemu predmet zmluvy takým spôsobom, ktorý je v rozpore s touto zmluvou (napr. nebolo dodržané objednané množstvo a druh tovaru alebo vlastnosti a špecifikácia uvedená v Prílohe č. 1 tejto zmluvy, opätovné dodanie nekvalitného tovaru, tovaru so zjavnými vadami alebo tovaru nespĺňajúceho kritéria podľa čl. III. ods. 3 v prípade, že kupujúci na nedostatky predávajúci a aspoň raz písomne alebo elektronicky, prostredníctvom emailu upozornil),

- i) ak predávajúci alebo kupujúci vstúpi do likvidácie, na jeho majetok bude vyhlásený konkurz, konkurzné konanie bolo zastavené pre nedostatok majetku, bude začatá reštrukturalizácia, bude zahájené exekučné konanie.

10.4. Zmluva zaniká dňom doručenia písomného oznámenia o odstúpení od zmluvy druhej zmluvnej strane.

10.5. Odstúpením od zmluvy nie je dotknutý nárok na náhradu škody vzniknutej porušením zmluvy a nárok na zaplatenie zmluvnej pokuty.

Článok XI. Zmena zmluvy

11.1. Zmluvné strany sa dohodli, že túto zmluvu je možné meniť v súlade s § 18 ods. 1 písm. a) zákona o verejnom obstarávaní jednostranne na základe písomného oznámenia zo strany kupujúceho za podmienok dohodnutých v tomto článku.

11.2. Zmenou zmluvy v zmysle tohto Článku nemôže dôjsť k zmene ceny tovaru uvedenej v Prílohe č. 2.

Článok XII. Záverečné ustanovenia

12.1. Právne vzťahy oboch zmluvných strán neupravené touto zmluvou sa riadia príslušnými ustanoveniami Obchodného zákonníka a ostatnými právnymi predpismi SR.

12.2. Táto zmluva nadobúda platnosť dňom jej podpisu obidvoma zmluvnými stranami a účinnosť v deň nasledujúci po dni jej zverejnenia v Centrálnom registri zmlúv vedenom Úradom vlády SR.

12.3. Predávajúci berie na vedomie zverejnenie tejto zmluvy v celom rozsahu v Centrálnom registri zmlúv vedenom Úradom vlády SR.

12.4. Zmluva je vyhotovená v štyroch rovnopisoch, pričom kupujúci aj predávajúci dostanú po dvoch rovnopisoch.

12.5. Zmluvné strany prehlasujú, že zmluvu pred jej podpisom prečítali, jej obsahu porozumeli a s ním súhlasili, čo potvrdzujú svojimi podpismi.

Príloha č. 1: Opis predmetu zmluvy

Príloha č. 2: Cenová ponuka

V Bratislave dňa

V Bratislave dňa 3.12.2020

za Kupujúceho :

za Predávajúceho:

.....
Ing. Ingrid Kútna Želonková, PhD.
kvestorka
Univerzita Komenského v Bratislave

.....
Ing. Peter Juhás
Konateľ spoločnosti



IMEO1

Professional 2.1 soundbar

Highlights:

- Integrated Bluetooth receiver
- Clever bracket system included
- 2.1 Soundbar
- Integrated subwoofer
- Preset equalizer modes
- HDMI (ARC with CEC) input
- Optical & coaxial inputs (SPDIF)

The IMEO1 Soundbar features a slim and elegant design and includes all required functions for expansion of any audiovisual system with an impressive sound, while having a minimal hassle for installation. It's perfectly suited for installations such as classrooms, presentation rooms or meeting rooms where it can be used and installed in combination with screens, smartboards or projectors.

The acoustics feature two 1.75" high frequency drivers with an RMS rating of 15 Watt and a low frequency section composed of two 2.5" low frequency drivers with an RMS rating of 30 Watt, resulting in an overall 60 Watt RMS rating. The Class-D amplifier with integrated WaveSelect DSP processing and transmission line configuration for the low-frequency drivers offers a crystal clear sound reproduction with stunning low-frequency response. Selectable DSP presets offer optimization for applications such as presentations, music playback or video's.

Various input possibilities such as an unbalanced line input, HDMI (ARC) input or SPDIF (optical and coaxial) allow compatibility with a variation of input sources, while Bluetooth allows wireless connections with portable devices.

In installations with multiple IMEO1's installed throughout the building, it can be desirable to assign custom Bluetooth ID's to distinguish them from each other. Typical applications are hotels, conference rooms, schools, ... The hotel mode function in the firmware offers a solution for these applications. An additional function is also implemented to define a specific wake-up source, allowing the IMEO1 to always turn-on with the same input source selected, no matter which input source was selected before power-down.

An included IR remote control allows input selection, volume control and EQ preset selection while the unique and clever wall mounting bracket allows convenient mounting to walls on any kind of surface or location with an optimal guiding and coverage for the cables.

The auto standby function ensures that the IMEO is automatically put in energy-saving mode after 15 minutes without input. This way, no unnecessary energy is lost, while the IMEO remains ready to play at any moment.



Applications:

- Education
- Hotels
- Corporate spaces
- Residential

System specifications:

Inputs	Connector	3.5 mm Jack (Unbalanced)
		Coaxial SP/DIF digital input
		Optical SP/DIF digital input
		HDMI ARC
Outputs	Power	2 x 15 W
		1 x 30 W
Sound Pressure (Max. W/1m)		90 dB
Frequency	Response (± 3 dB)	40 Hz - 20 kHz
THD+N (@ 1 kHz)		1%
Bluetooth specification		V3.0
		Class 2 output power
Power	Source	220 ~ 240 V AC / 50 ~ 60 Hz
	Consumption	30 W
	Standby	0.5 W
Control		Remote control (IR)
		Selection / volume switches (side panel)
Drivers		2 x 2.5" MF / LF Woofer
		2 x 1.75"

Product Features:

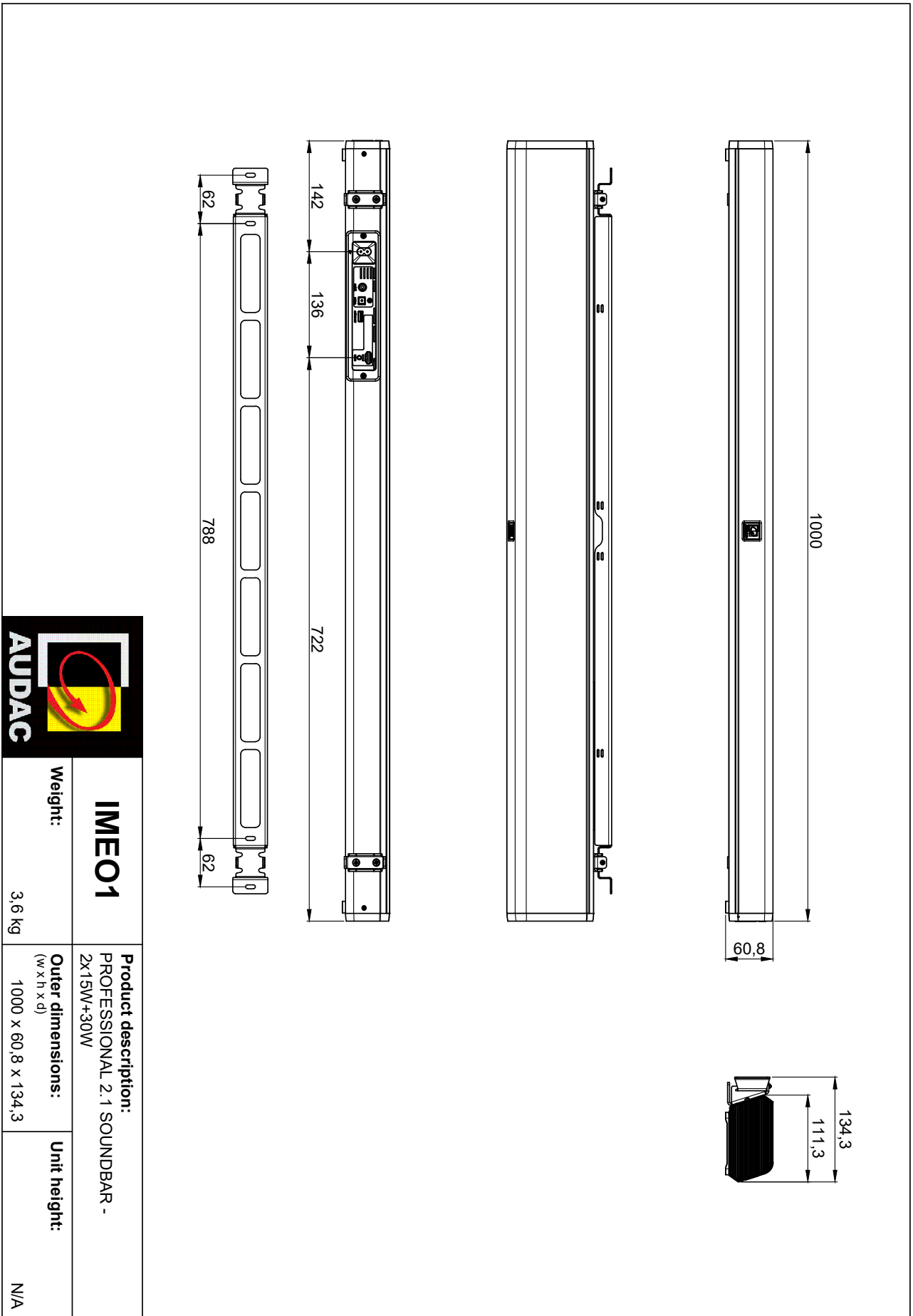
Weight		3.6 kg
Dimensions		1000 x 60.8 x 111.3 mm (W x H x D) (Excl.bracket)
		1000 x 60.8 x 134.3 mm (W x H x D) (Incl.bracket)
Colours		Black (RAL9005) (IMEO1/B)
		White (RAL9003) (IMEO1/W)
Mounting & handling		Mounting wall bracket
Front finish		Steel grill
Construction		ABS
Accessories	Included	Power cable
		Wall mounting bracket
		Remote control (IR)
		3.5 mm jack audio cable (1 meter)
		3.5 mm jack audio pigtail (0.15 meter)
		90° HDMI angle adapter

Variants:

- IMEO1/B - Black
- IMEO1/W - White

Architects' and Engineers' Specifications:

The loudspeaker shall be a 2.1 active sound bar system with integrated subwoofer, composed of two 1.5" high frequency drivers and two 2.5" mid/low frequency drivers in a transmission line configuration offering crystal clear sound reproduction with stunning low-frequency response. The enclosure shall be slim and elegant, constructed using ABS materials with a finely perforated steel grill front finishing. The high frequency section shall have a power handling of 2 x 15 Watt and the low frequency section shall have a power handling of 30 Watt, resulting in an overall rating of 60 Watt RMS. The frequency response (± 3 dB) shall range from 40 Hz to 20 kHz. Various signal inputs shall be implemented, including a stereo line input using 3.5 mm jack connections, a digital audio input with both optical and coaxial implementation and a HDMI ARC input. An integrated Bluetooth receiver shall allow wireless connection of portable devices including smartphones, tablets or any other. The overall volume and input selection shall be selectable using controls on the side panel of the device, while an included remote control (IR) shall allow selection of various equalizer presets. The input selection shall be lockable through the remote control, avoiding users to make any changes. An unique and clever wall bracket system shall be included, allowing the loudspeaker to be installed to walls on any kind of surface and with an optimal guiding and coverage of the cables. It shall allow two-directional installation offering possibilities for installation on top or bottom of a screen or projection surface while having optimal directional placement of the speaker. The speaker system shall operate on a 220~240 V AC / 50 ~ 60 Hz mains network and shall be equipped with a removable power cord having a standard Europlug (CEE 7/16) AC plug. The connector on the active speaker shall be a fused IEC C8 type. The speakers' enclosure shall be 60.8 mm high, 1000 mm wide and 134.3 mm deep (including the mounting bracket) and the weight shall not exceed 3.6 Kg.



IMEO1	Weight:	3,6 kg	Product description: PROFESSIONAL 2.1 SOUNDBAR - 2x15W+30W	Unit height:	N/A
	Outer dimensions: (w x h x d)	1000 x 60,8 x 134,3			

Technická špecifikácia ponúkaných zariadení zapojených do funkčného celku

Technická špecifikácia Riadiaceho systému:

Snímacie zariadenie s pohyblivým sledovaním prezentujúceho:

Panasonic AW-HE38

1/2.3-Type MOS

Motorizovaný objektív: 22x zoom, F1.6 to F4.3

Inteligentné zväčšenie až 30-násobne a 1,4-násobný digitálny predlžovač

HDMI video výstup, navyše k nahrávaniu zabudovanému na USB a microSD kartu

PoE + pre napájanie, zvuk a video s veľmi nízkou latenciou, zaznamenávanie a ovládanie pomocou jediného kábla

Rozsah natáčania $\pm 175^\circ$ a rozsah naklonenia -30° až $+90^\circ$

Vstavaný kódér H.264 / MJPEG pre 7 kanálov kódovania až 25 Mb / s. s podporovaným hardvérovým alebo softvérovým dekodérom

sériová kompatibilita RS-422, podpora NDI/HX

Virtuálny ovládač USB PTZ

Technická špecifikácia Riadiaceho systému:

Panasonic AW-SF100 – autotracking software:

Detekcia pohybu, rozpoznávanie tváre a precízne sa učenie pre na vysoko presné automatické sledovanie s minimálnou chybou sledovania, Otvorene API, inštalovaný na kontroleri Dell Inspiron 3881

Dell Inspiron 3881 - kontroler

Procesor Intel Core i7-10700 (2,9GHz, Turbo 4,8GHz, 16MB, 8jadrový)

Pamäť 8GB (1x8GB) 2933MHz DDR4

SSD disk 512GB (M.2 PCIe NVMe)

Grafická karta NVIDIA GeForce GTX 1650 SUPER GDDR6 4GB

Mechanika DVD+/-RW

Wi-Fi Dell Wireless 1810 + Bluetooth

Klávesnice Dell KB216 SK

Myš Dell MS116, USB, optická

Zdroj 360W

Nainštalované Windows 10 Pro 64-bit, multijazyčné

Barva čierná

Záruka 3 roky, Basic on-site

Monitor MultiSync® E221N

Product Group LCD 22" Enterprise Display

DisplayPanel Technology IPS TFT with W-LED backlight

Screen Aspect Ratio 16:9

AP MEDIA, s.r.o.

Na vrátkach 3410/1c, 841 01 Bratislava, Slovakia
tel.: +421 2 602 021 11; e-mail: info@apmedia.sk
www.apmedia.sk, www.smartboard.sk



Pixel Pitch [mm] 0.248

Brightness (typ.) [cd/m²] 250

Contrast Ratio (typ.) 1000:1

Viewing Angle [°] 178 horizontal / 178 vertical (typ. at contrast ratio 10:1)

Response Time (typ.) [ms] 6

Colours [Mio.] 16.77

Synchronisation Rate

Horizontal Frequency [kHz] 31.5 - 81.1

Vertical Frequency [Hz] 56 - 76

Resolution

Optimum Resolution 1920 x 1080 at 60 Hz

Connectivity

Digital 1 x DisplayPort; 1 x HDMI

Analog 1 x D-sub 15 pin

Ubiquiti-EdgeSwitch 8 150W

Menežovateľný gigabitový prepínač s PoE + so SFP switch

MSTP / RSTP / STP

- VLAN, súkromná VLAN, hlasová VLAN

- Agregácia liniek

- DHCP Snooping, IGMP Snooping

- TACACS +, RADIUS, 802.1X, MAC Filtrovanie, ACL,

- DiffServ, CoS

- Statické smerovanie

- Funkčnosť servera DHC

Technická špecifikácia Audio systému:**Lineárne pole mikrofónov Shure MXA710**

Technológia smerovania na snímanie zvuku kdekoľvek v miestnosti

Technológia automatického sústredenia

automatické miešanie, potlačenie akustickej ozveny, redukcia šumu a automatické riadenie zosilnenia, PoE napájanie,

Dante & AES67, montáž na strop

AP MEDIA, s.r.o.

Na vrátkach 3410/1c, 841 01 Bratislava, Slovakia
tel.: +421 2 602 021 11; e-mail: info@apmedia.sk
www.apmedia.sk, www.smartboard.sk

**Ozvučenie Audac imeo sound bar:****2.1 Soundbar**

Integrated subwoofer

HDMI (ARC with CEC) vstup

Optický & coaxialny vstup (SPDIF)

2 x 15 W a 1x 30W

Inputs Connector 3.5 mm Jack (Unbalanced)

Coaxial SP/DIF digital input

Optical SP/DIF digital input

HDMI ARC

Outputs Power 2 x 15 W

1 x 30 W

Sound Pressure (Max. W/1m) 90 dB

Frequency Response (± 3 dB) 40 Hz - 20 kHz

THD+N (@ 1 kHz) 1%

Bluetooth specification V3.0

Class 2 output power

Power Source 220 ~ 240 V AC / 50 ~ 60 Hz

Consumption 30 W

Standby 0.5 W

Control Remote control (IR)

Selection / volume switches (side panel)

Drivers 2 x 2.5" MF / LF Woofer

2 x 1.75"

Dante AVIO USB IO adapter 2x2**SPECIFICATION****Audio channels****AVIO USB ADAPTER**

2 in, 2 out

AVIO USB TYPE-C® ADAPTER**Connectors**

RJ45 & USB Type-A

RJ45 & USB Type-C®

Power

Class 1 802.3af PoE or USB

Sample Rates

48 kHz

Bit Depth

24

Dante Device Latency

1, 2, or 5ms (configurable using Dante Controller)

Network Transport

Dante Audio over IP, AES67 RTP

USB

Class compliant USB 2.0 device

Part Number

ADP-USB-AU-2X2

ADP-USBC-AU-2X2

V Bratislave 3.12.2020

S pozdravom

Digitally signed
by Peter Juhás
Date:
2020.12.03
15:56:58
+01'00'

Ing Peter Juhás

Panasonic

BUSINESS

AW-HE38HW/HK [HDMI Model]

HD Integrated PTZ Camera

For indoor use



AW-HE38HW

Features 22x optical zoom lens
and support for PoE+*¹
for outstanding operability
and installation flexibility



AW-HE38HK

*1: Abbreviation of Power over Ethernet Plus.



Full HD camera with integrated pan-tilt for lectures, meetings and a wide variety of applications.

The integrated full HD camera AW-HE38HW/HK performs in a wide variety of onsite shooting applications that require high-quality video, such as conferences, lecture capture and other events, thanks to its high-performance zoom, wide angle of view and outstanding color reproducibility.

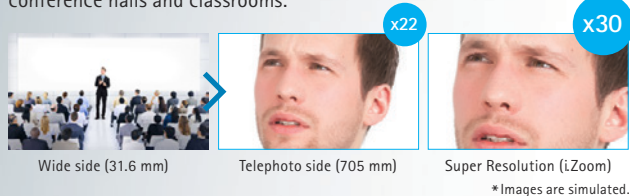
In addition to IP video transmission, support for PoE+*1 enables power to be supplied via a LAN cable*2. The result is installation flexibility. It also supports HD-IP video output, output of video and audio via USB, and SD card recording.

Developed 1/2.3-type MOS Sensor

Equipped with a developed 1/2.3-type MOS sensor and DSP (Digital Signal Processor) for high sensitivity and high resolution.

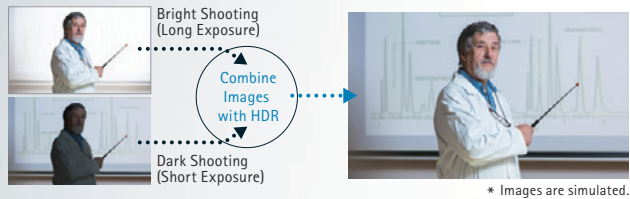
High Performance Optical 22x Zoom Lens/ Super Resolution 30x Zoom

In addition to a 22x optical zoom, the AW-HE38HW/HK can zoom up to 30x while maintaining high resolution thanks to Super Resolution technology. It also features a 16x digital zoom*3 and a 1.4x digital extender, which enables the AW-HE38HW/HK to shoot in large conference halls and classrooms.



Equipped with High Dynamic Range (HDR) Mode

In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE38HW/HK is newly equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE38HW/HK can create video with high visibility that corrects for halation and black defects even under backlit conditions.



Outputs Still Image During Preset Movements; Supports One-Camera Operations

The new Freeze During Preset function enables to freeze the video during preset playback. The immediately preceding still image is output during preset movements so that the swiveling movement is not displayed, making operations possible with one camera.

With Freeze During Preset function OFF and ON



Audio Input Function

The AW-HE38HW/HK also supports audio input, embedding and encoding. Audio output to IP is also supported. The ALC (Audio Automatic Level Control) in the original AW-HE38HW/HK can be switched ON/OFF and an equalizer function can be used. By reducing low-frequency sound from air conditioners, projectors, and other devices, it is possible to emphasize and increase the clarity of the spoken words.

Supporting PoE+*1 for Lower Installation Costs

By connecting network devices that support the IEEE802.3at PoE+ standard, power can be supplied via LAN cable. Since it is not necessary to install a power supply or even a local AC outlet, installation costs can be significantly reduced.

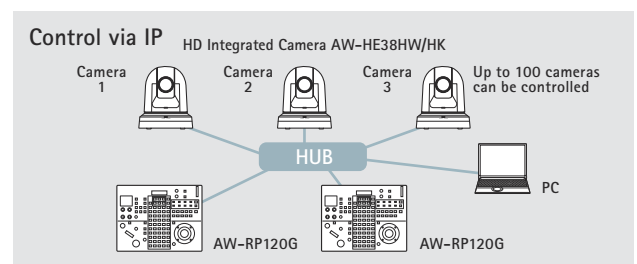
Equipped with a JPEG Image Saving Function*

The equipped JPEG Image Saving Function enables up to 99 still images (JPEGs) to be captured from video and saved to the microSD card. These images can easily be remotely saved, played back and deleted from a PC web browser connected via a LAN cable.

*A version software update may be required for use.

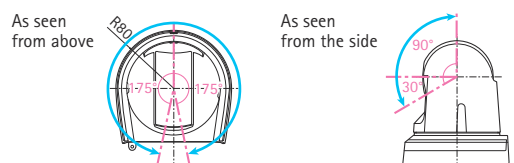
Flexible IP Control Architecture Simplifies System Design and Operation*4

Up to 100 x AW-HE38HW/HK cameras can be controlled via IP from a single AW-RP120G/RP50 or PC. An AW-HE38HW/HK can also be simultaneously controlled by up to five AW-RP120G/RP50's via IP.



Exceptional Pan-tilt Performance for Smooth Shooting Over a Wide Area*5

The pan range of $\pm 175^\circ$ and the tilt range of -30° to $+90^\circ$ cover a wide shooting area*5. Pan and tilt operate at a maximum speed of 90°/second and respond quickly to remote control operation. They operate quietly at a sound level of NC35 or lower.

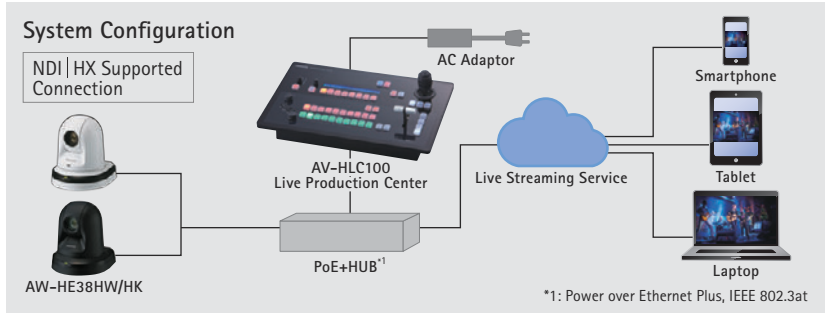


*1: Abbreviation of Power over Ethernet Plus. *2: The software for the AW-HE38HW/HK may need to be updated depending on the existing software version. For details, see the Panasonic website (<https://pro-av.panasonic.net/>). *3: Picture quality is lower with the digital zoom. *4: Controller upgrade required. For details, please refer to the "service and support" section on the Panasonic website (<https://pro-av.panasonic.net/>). *5: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.

NDI|HX Compatibility for Excellent Video Streaming Quality

The AW-HE38HW/HK can be upgraded to an NDI|HX compatible model if purchasing a license from the NewTek website (<https://www.newtek.com/ndi/>). Highly efficient NDI|HX compatibility enables excellent broadcast streaming by encoding and transmitting high-quality video in real time. This technology eliminates the need for IP decoders, allowing input to be sent directly to the switcher.

* Contact your local Panasonic vendor for further information.



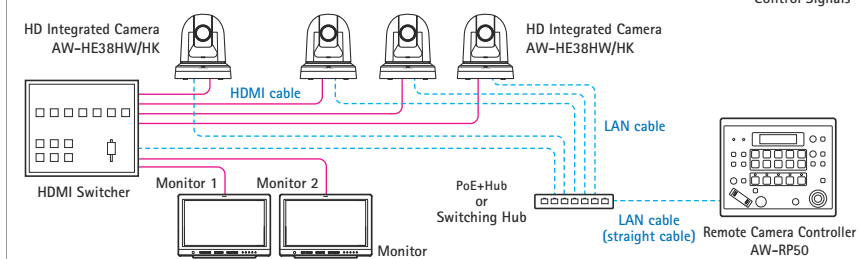
Specifications

As of February, 2018

GENERAL		FUNCTIONS AND PERFORMANCE	
Power requirements	DC 12 V (Supplied AC adaptor) DC 42 V to 57 V (PoE+ power supply)	Output format	HD 1080:59.94p/50p 1080:59.94i/50i 1080:29.97p/25p 1080:29.97PsF/25PSF 720:59.94p/50p
Current consumption	1.2 A (Supplied AC adaptor) 0.4 A (PoE+ power supply)	Synchronization system	Internal synchronization
Ambient operating temperature	0 °C to 40 °C (32 °F to 104 °F)	[USB connection]	* This may vary depending on the operating environment.
Storage temperature	-20 °C to 50 °C (-4 °F to 122 °F)	Video output	USB Video Class Ver1.0
Allowable humidity ranges	20 % to 90 % (no condensation)	Video compression format	Motion JPEG
Mass	Approx. 1.5 kg (3.30 lb)	Resolution	1920 x 1080, 1280 x 720, 640 x 360
Dimensions (W x H x D)	160 mm x 186 mm x 166 mm (6-5/16 inches x 7-41/128 inches x 6-17/32 inches) [excluding protrusions, direct ceiling mount bracket]	Frame rate	max 30 fps (System frequency 59.94 Hz) max 25 fps (System frequency 50 Hz)
Finish	[AW-HE38HW] Pearl white, [AW-HE38HK] Metallic black	Audio output	USB Audio Class Ver1.0
Controller supported*1	AW-RP50, AW-RP120G, AK-HRP200G	Audio compression format	Linear PCM, 48 kHz, 16-bit, 2 channels
Power	DC 12 V IN, PoE+ (IEEE802.3at standard)	Supported models	Devices standardly equipped with a USB 2.0 compatible port
INPUT	Mic/line input	[Pan-tilt head unit]	
		Installation method	Stand-alone (Desktop) or suspended (Hanging)*4
OUTPUT	Output Video	HDMI	[AW-HE38HW/HK] HDMI connector * HDCP is not supported. * VIERA Link is not supported.
	LAN	LAN connector for IP control (RJ-45) Equipped with straight/crossover cable auto detection function	Pan/tilt operation speed
INPUT/OUTPUT	Input/Output connector	RS-232C	Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT)
		RS-422	CONTROL IN RS422A (RJ-45)
FUNCTIONS AND PERFORMANCE	[Camera unit]	USB	Mini-B port
		SD card	microSD card slot
FUNCTIONS AND PERFORMANCE	Imaging sensors	Imaging sensors	1/2,3-type MOS
		Lens	AW-HE38HW/HK : Motorized 22x zoom, F1.6 to F4.3 [f=4.3 mm (11/64 inches) to 94.6 mm(3-23/32 inches); 35 mm (1-3/8 inches) equivalent: 31.6 mm (1-31/128 inches) to 705.0 mm (27-49/64 inches)]
FUNCTIONS AND PERFORMANCE	Focus	Focus	Switching between auto and manual
		Focus distance	Entire zooming range:1.2 m (3.94 ft) Wide end: 10 cm (0.33 ft)
FUNCTIONS AND PERFORMANCE	Color separation optical system	Color separation optical system	On-chip color filter system
		Minimum illumination	59.94 Hz 0.7 lx (50 IRE, F1.6, 48 dB, 1/60 without accumulation) 0.35 lx (50 IRE, F1.6, 48 dB, 1/30 with accumulation)[Frame Mix 6 dB] 50 Hz 0.7 lx (50 IRE, F1.6, 48 dB, 1/50 without accumulation) 0.35 lx (50 IRE, F1.6, 48 dB, 1/25 with accumulation)[Frame Mix 6 dB]
FUNCTIONS AND PERFORMANCE	Horizontal resolution	Horizontal resolution	1000 TV lines Typ (Center area)
		Gain selection*2	Auto, 0 dB to 48 dB (3 dB step)
FUNCTIONS AND PERFORMANCE	Frame mix*3	Frame mix*3	Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB
		Electronic shutter speed	During Auto 1/30 to 1/2000 [59.94 Hz] 1/25 to 1/2000 [50 Hz] During Auto 1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz] During Manual 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [59.94 Hz] 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [50 Hz]
FUNCTIONS AND PERFORMANCE	Synchro scan	Synchro scan	59.94 Hz : 59.94 Hz to 660.09 Hz 50 Hz : 50.00 Hz to 570.12 Hz
		Gamma	Off, Normal (Low, Mid, High), Cinema
FUNCTIONS AND PERFORMANCE	White balance	White balance	AWB A, AWB B, ATW, 3200K, 5600K, VAR (2400K to 9900K)
		Chroma amount variability	±3 step
FUNCTIONS AND PERFORMANCE	Scene file	Scene file	Full Auto, Manual1, Manual2, Manual3
		IP connecting cable	When connecting through a hub: LAN cable*6 (category 5 or above),max. 100 m (328 ft) When using a PoE+ hub: LAN cable*6 (category 5e or above),max. 100 m (328 ft) When a hub is not used: LAN cable*6 (category 5 or above),max. 100 m (328 ft)
FUNCTIONS AND PERFORMANCE	AW protocol connecting cable	AW protocol connecting cable	LAN cable*6 (category 5 or above,straight cable), max. 1000 m (3280 ft)
		Standard protocol connecting cable	Mini DIN 8-pin cable, male
FUNCTIONS AND PERFORMANCE	[SD card recording]	SD card type	micro SDHC (4 GB to 32 GB), micro SDXC (64 GB to 128 GB), Speed class 10 or higher
		System frequency	59.94 Hz/50 Hz
FUNCTIONS AND PERFORMANCE	Video compression format	Video compression format	MPEG-4 AVC/H.264 High Profile
		Audio compression format	AAC-LC (48 kHz, 16 bit, 2 ch, 128 kbps)
FUNCTIONS AND PERFORMANCE	SD card recording	SD card recording	MPEG-4 AVC file standard compliant (.MP4)
		Recording format	1920 x 1080/59.94p, 1920 x 1080/50p, 1920 x 1080/29.97p, 1920 x 1080/25p, 1280 x 720/59.94p, 1280 x 720/50p, 1280 x 720/29.97p, 1280 x 720/25p
FUNCTIONS AND PERFORMANCE	[Network]	Resolution	JPEG VGA (640 x 360), QVGA (320 x 180) max.30 fps 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 max.30 fps H.264 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 max.60 fps
		Supported protocol	IPv4 TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTMP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast IPv6 TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTMP/RTCP, FTP, DHCPv6, DNS, NTP, ICMPv6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
FUNCTIONS AND PERFORMANCE	i-OS, Android support	i-OS, Android support	JPEG image display
		Mount bracket for installation surface (Hanging*7 / Desktop): 1 Drop-prevention wire (already attached to the unit): 1 Bracket mounting screws (bind-head) M4 x 10 mm: 4 Main unit mounting screw (with flat washer, spring washer) M3 x 6 mm: 1 Power cable (1.5 m (4.92 ft)) [AW-HE38HW/HKPJ]: 1, [AW-HE38HW/HKEJ]: 3, [AW-HE38HW/HKPC]: 1 AC adaptor: 1	

*1: It may be necessary to upgrade the version of the controller so that the controller will support the unit. *2: During Auto, 6 dB to 48 dB (6 dB step) are available for AGC Max Gain setting.
*3: During Auto, 0 dB, 6 dB, 12 dB and 18 dB are available for Auto F.Mix Max Gain setting. *4: To ensure safety, the unit must be secured using the mount bracket supplied.
*5: Depending on the pan or tilt position, the camera may be reflected in the image. *6: Use of an STP (shielded twisted pair) cable is recommended.
*7: To ensure more safety, AW-HE38HW/HK can be secured by using the direct ceiling mount bracket (WV-Q105A).

System Configuration Example



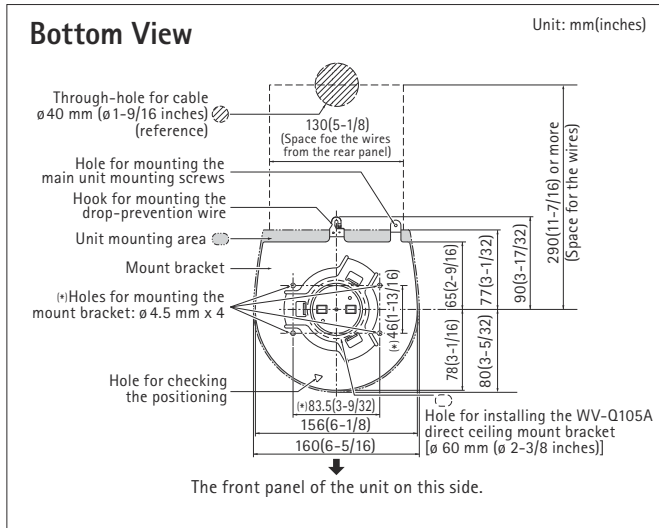
*The AC adaptor provided with the unit is not shown in the above figure.
*The camera unit automatically recognizes straight cables and cross cables connected to the LAN terminal.

Rear View



Other Functions

- Preset memory up to 100 positions.
- Functions such as freeze during preset, digital extender zoom and color temperature settings can be assigned to the user buttons on Panasonic controllers.
- Equipped with RS422 remote terminal; up to five units can be controlled via serial control from a controller.
- Equipped with RS232C remote terminal (standard serial communication support). Up to seven units can be controlled via daisy chain connection.
- Up to four units can be operated with a wireless remote controller (AW-RM50G sold separately).
- Easy installation thanks to use of turn-lock mechanism.



Optional Software

Auto Tracking Software Key AW-SF100/AW-SF200

- 2 Additional Licenses AW-SF202
- 3 Additional Licenses AW-SF203

A 30-day Free Trial is Available

- Motion detection and face detection technologies using video streaming from camera achieves smooth auto tracking regardless of where the person is facing.
- AW-SF100 allows a single PTZ camera to be controlled on either a stand-alone or web application version.
- AW-SF200 enables simultaneous auto tracking and centralized control of multiple cameras.*1

*1: Up to four cameras per server can be controlled simultaneously.

PTZ Control Center

Free Software

- Intuitive GUI with the capability to control multiple cameras.
- Image quality adjustment and pan-tilt-zoom control on a GUI.
- Easy to recall presets by clicking preset buttons with thumbnails.



Main View

PTZ Virtual USB Driver

Free Software

- High quality video perfect for web conferencing, utilizing a PTZ camera on the network as a USB camera.
- Automatic detection of connected cameras, and network settings supported.

* For further information on the optional software, please see "Software Download" on the Panasonic website <<https://pro-av.panasonic.net/>>.

System Camera Options

As of February, 2018

Live Production Center AV-HLC100 Scheduled for release in the spring of 2018.  * Not available in some areas.	Control Assist Camera AW-HEA10W 	Control Assist Camera AW-HEA10K 
	Remote Camera Controller AW-RP50 	Remote Camera Controller AW-RP120G (AC adaptor (DC12 V) is required separately.) 
Remote Operation Panel AK-HRP200G (AC adaptor (DC12 V) is required separately.) 	Wireless Remote Control AW-RM50G ("AA", "R6" or "LR6" battery x 2 are not included.) 	Direct Ceiling Mount Bracket WV-Q105A 

For more information, please visit Panasonic web site



<https://pro-av.panasonic.net/>

* Specifications are subject to change without notice.

Panasonic®

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Connected Solutions Company

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<https://pro-av.panasonic.net/>

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Australia	+61 (0) 2 9491 7400
Brazil	+55 11 3889 4035
Canada	+1 905 624 5010
China	+86 10 6515 8828
Hong Kong	+852 2313 0888
Czech Republic	+421 (0) 903 447 757
Denmark	+45 43 20 08 57
Egypt	+20 2 23938151
Finland, Latvia, Lithuania, Estonia	+358 (9) 521 52 53
France	+33 (0) 1 47 91 64 00
Germany, Austria, Switzerland	+49 (0) 6103 313887
Greece	+30 210 96 92 300
Hungary	+36 (1) 382 60 60
India	+91 1860 425 1860
Indonesia	+65 6277 7284
Iran (Vida)	+98 21 2271463
(Panasonic Office)	+98 2188791102
Italy	+39 02 6788 367
Jordan	+962 6 5859801
Kazakhstan	+7 727 298 0891
Korea	+82 2 2106 6641

Kuwait	+96 522431385
Lebanon	+96 11665557
Malaysia	+60 3 7809 7888
Mexico	+52 55 5488 1000
Mongolia	+976 70115577
Netherlands, Belgium	+31 73 640 2729
New Zealand	+64 9 272 0100
Norway	+47 67 91 78 00
Pakistan	+92 21 111 567 111
Palestine	+972 2 2988750
Panama	+507 229 2955
Philippines	+65 6277 7284
Poland	+48 (22) 338 1100
Portugal	+351 21 425 77 04
Romania, Albania, Bulgaria, Macedonia	+40 (0) 729 164 387
Russia & CIS	+7 495 9804206
Saudi Arabia	+966 (1) 4790499
Singapore	+65 6277 7284
Slovak Republic, Croatia, Serbia, Bosnia, Montenegro, Slovenia	+421 (0) 903 447 757
South Africa	+27 11 3131622
Spain	+34 (93) 425 93 00

Sweden	+46 (8) 680 26 41
Taiwan	+886 2 2227 6214
Thailand	+662 731 8888
Turkey	+90 216 578 3700
U.A.E. (for All Middle East)	+971 4 8862142
Ukraine	+380 44 4903437
U.K.	+44(0)1344 70 69 13
U.S.A.	+1 877 803 8492
Vietnam	+65 6277 7284



Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)



MICROFLEX[®] ADVANCE[™]

MXA710 LINEAR ARRAY MICROPHONE

OVERVIEW

The Shure Microflex[®]Advance[™] MXA710 Linear Array Microphone represents the next evolution in Shure array microphone technology, designed for high-quality audio capture in premium AV conferencing environments. The linear form factor of the MXA710 allows for placement virtually anywhere in a meeting space, including on a wall, around a display, on a ceiling, or in a conference room table.

FEATURES

- Steerable Coverage[™] technology to capture audio anywhere in the room (up to 4 lobes with a 2-foot array, 8 lobes with a 4-foot array)
- Autofocus technology fine-tunes each lobe position in real time, even if meeting participants lean back or stand up.
- Default room coverage template enables quick and easy lobe optimization for wall, ceiling, or table installations.
- IntelliMix DSP includes automatic mixing, acoustic echo cancellation, noise reduction, and automatic gain control.
- Shure Designer System Configuration software for easy setup and configuration
- SystemOn Audio Asset Management software for remote management and troubleshooting
- PoE powered
- LED status bars with configurable colors and brightness
- Dante & AES67 audio networking protocols
- Shure network audio encryption compatible
- Multiple mounting accessories for wall, ceiling, or table installation

SPECIFICATIONS (subject to change)

GENERAL

All specifications measured from narrow lobe width. Values for all widths are within ± 3 dB of these specifications unless otherwise noted.

Lobe Width (adjustable)	Narrow 30 degrees, Medium 40 degrees, Wide 70 degrees
Connector Type	RJ45
Power Requirements	Power over Ethernet (PoE), Class 0
Power Consumption	10 W maximum
Control Software	Shure Designer
Plenum Rating	UL2043 (Suitable for Air Handling Spaces)
Dust Protection	IEC 60529 IP5X Dust Protected
WEIGHT	
MXA710-2FT	2 lbs (0.91 kg)
MXA710-4FT	3.7 lbs (1.67 kg)

PRODUCT DIMENSIONS

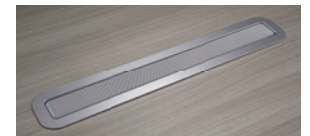
MXA710-2FT	0.87 x 2.36 x 25.04 in. (22.09 x 60 x 636 mm) H x W x L
MXA710-4FT	0.87 x 2.36 x 49.12 in. (22.09 x 60 x 1247.76 mm) H x W x L
Operating Temperature Range	-6.7°C (20°F) to 40°C (104°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

AUDIO

Frequency Response	100 Hz to 20 kHz
AES67 or Dante Digital Output	
Channel Count MXA710-2FT	6 total channels (4 independent transmit channels, 1 Automix output, 1 AEC reference in channel)
Channel Count MXA710-4FT	10 total channels (8 independent transmit channels, 1 Automix output, 1 AEC reference in channel)
Sampling Rate	48 kHz
Bit Depth	24
Sensitivity at 1 kHz	
MXA710-2FT	-7.4 dBFS/Pa
MXA710-4FT	-7.9 dBFS/Pa



MXA710
Microflex Advance Linear Array
Microphone



MXA710
Flush Mount



MXA710
with Full Box Contents



A710-DS Desk Stand



A710-MSA Mic Stand Adapter



Maximum SPL Relative to 0 dBFS overload

MXA710-2FT	101.4 dB SPL
MXA710-4FT	101.9 dB SPL
Signal-To-Noise Ratio (Ref. 94 dB SPL at 1 kHz)	71.2 dB A-weighted

Latency (Does not include Dante latency)

Direct Outputs	8.7 ms
Automix output (Includes IntelliMix processing)	19.3 ms

Self Noise

MXA710-2FT	22.9 dB SPL-A
MXA710-4FT	22.8 dB SPL-A

Dynamic Range

MXA710-2FT	78.5 dB
MXA710-4FT	79.1 dB

Built-in Digital Signal Processing Automatic mixing, Acoustic Echo Cancellation (AEC), Noise Reduction, Automatic Gain Control, Compressor, Delay, Equalizer (4-band Parametric), Mute, Gain (140 dB range)

Networking

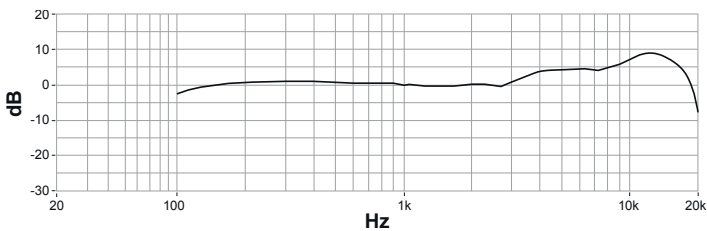
Cable Requirements	Cat 5e or higher (shielded cable recommended)
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Data subject to change without notice in interest of product improvements.

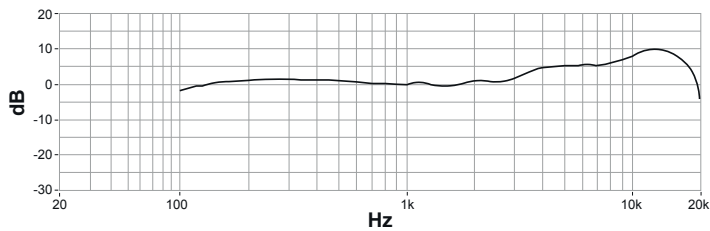
MXA710 Frequency Response

Frequency response measured directly on axis from a distance of 6 feet (1.83 m)

MXA710-2FT



MXA710-4FT



OPTIONAL ACCESSORIES

- A710-FM-2FT Flush Mount Kit - 2 Foot
- A710-FM-4FT Flush Mount Kit - 4 Foot
- A710B-DS Desk Stand, Black
- A710AL-DS Desk Stand, Aluminum
- A710-MSA Mic Stand Adapter
- A710-TB Tile Bridge

Panasonic

BUSINESS

Auto Tracking Software Key

AW-SF100

AW-SF200

2 Additional Licenses **AW-SF202**

3 Additional Licenses **AW-SF203**



Clear, Sharp Video with Auto Tracking of Presenter



Face recognition and human body detection for high precision and smooth tracking control for natural-looking video



Face recognition and human body detection with deep learning*1 for high-precision auto tracking

The camera uses highly accurate face recognition and high-performance human body detection. Tracking is possible regardless of the direction the subject is facing, so the camera can capture subjects in a lecture setting with almost no interruption, even when the subject turns to write on the board. The human body detection function uses deep learning technology*1 which accumulates and learns from tens of thousands of human images, achieving highly accurate detection even in settings with poor visibility, such as dark rooms.

Two core technical features for high-precision auto tracking

Face Recognition

This technology compares faces with those that have been registered before to detect the position of faces in the picture.

Deep Learning*1

This technology learns features of the human images for high-precision human body detection.



GUI for intuitive setting

The auto-tracking settings can be easily made with an intuitive GUI only with the necessary icons to minimize the setting up labor and assist smooth operation. Tracking adjustment tools, such as masking, limiters, tracking disable zone and sensitivity level adjustment, are also available.



<Main View>

•Provisions for correction by an operator are required, as the camera may misdetect or fail to detect a subject depending on the conditions in which it is used. •The screen layout may differ depending on the version you are using. •The face recognition function uses face recognition software from PUX Corporation.

*1: The software may need to be updated before using this product. Restrictions may also occur depending on your server or PC. See "Service and Support" on Panasonic's website (<https://pro-av.panasonic.net/en/>) for more details.

*2: This refers to the Standalone version. If using the web app, install the Auto Tracking Software in your HTTP server.

Using IP-based software to support remote operation

IP-based software brought system flexibility and it achieved IP connection (IP streaming/IP control), installation/operation of camera in classroom from remote locations.

Simple, low-cost installation to easily migrate to the existing system without additional devices

After installing the Auto Tracking Software on your server or PC*2, simply connect a 4K/HD Integrated Camera and your auto tracking system is complete – no new sensors or other equipment required! With its simple configuration, this system reduces the startup costs that are usually associated with tracking systems.

* See the reverse for details on cameras that can be connected.

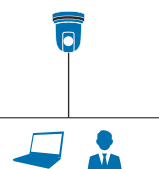
AW-SF100 has standalone and Web application versions to choose from; AW-SF200 operates on a server

You can choose to use AW-SF100 as a Web application, so it also supports control from a tablet, smartphone, desktop PC, etc. Providing centralized control of multiple cameras, AW-SF200 uses a floating license for flexible operations matched to the user environment.

Software key usage examples

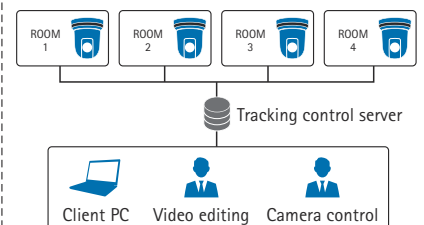
AW-SF100

With auto tracking, full-time manual tracking is not necessary. Auto tracking remote camera can record dynamic video with simple operations.



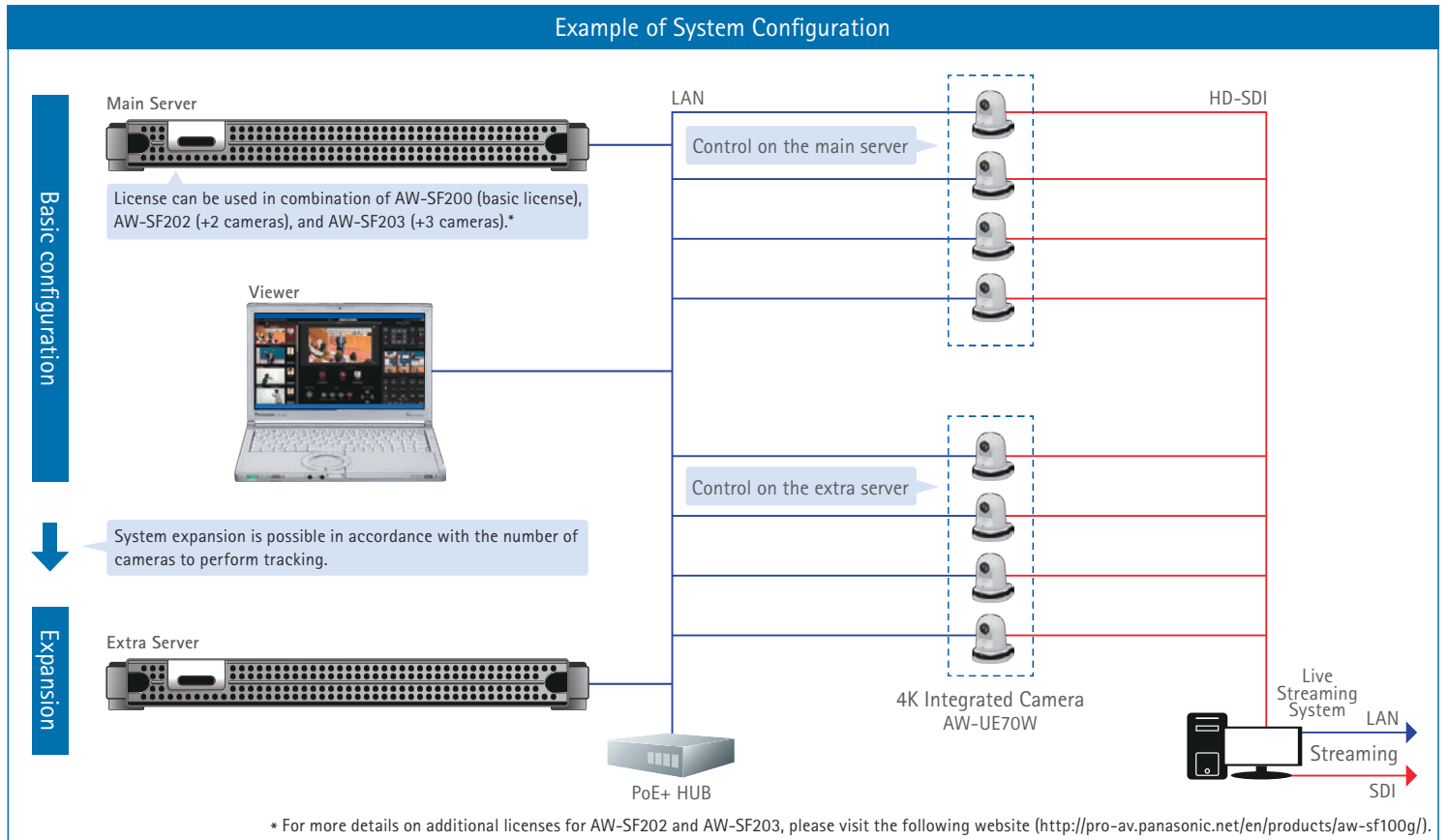
AW-SF200

Simultaneous auto tracking and centralized control of multiple cameras are possible. A server and simplified operations enable efficient lecture capture in multiple classrooms.



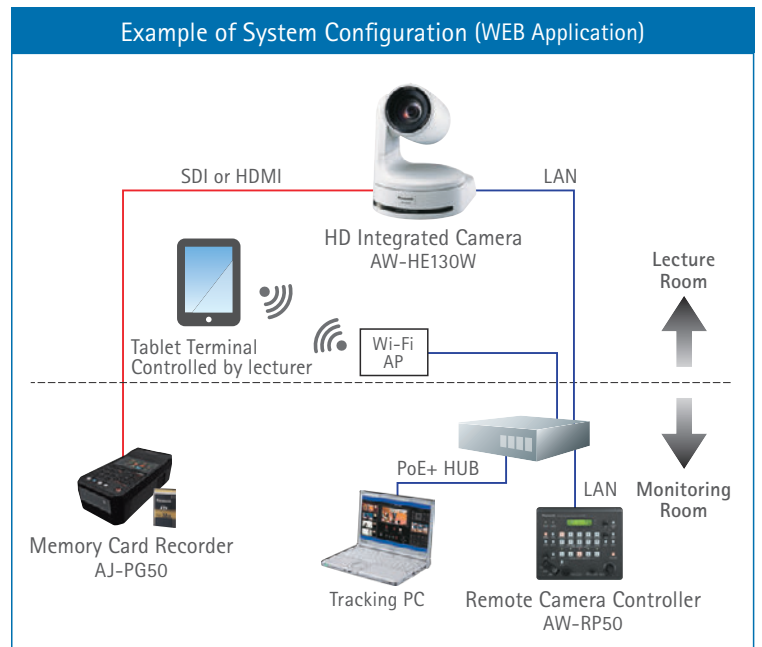
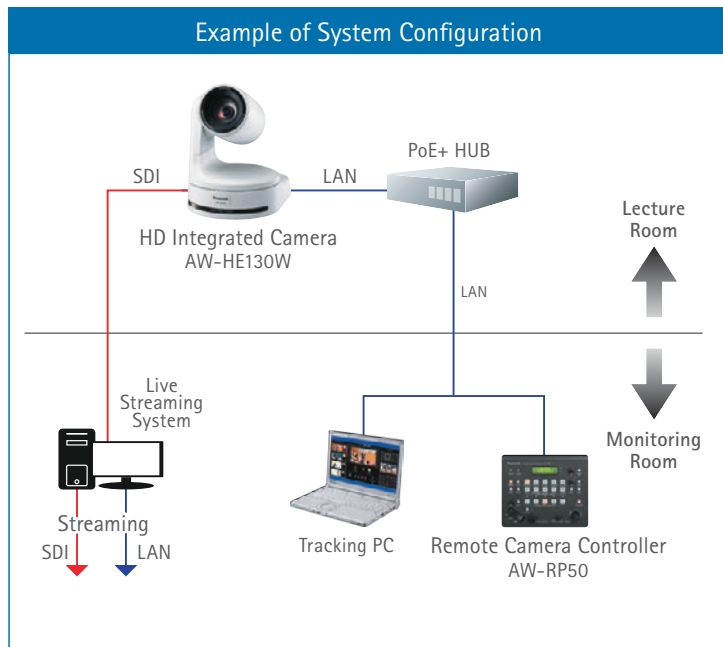
● AW-SF200 system example: Lecture capture of entire school

Use of central servers for simultaneous auto tracking and centralized control of multiple cameras in a large hall and cameras in multiple classrooms.



● AW-SF100 system example: Lecture capture of a classroom

Auto tracking and control of one camera with one PC.



● Various applications of Auto Tracking



Scan these QR codes to view system requirements for the Auto Tracking Software

AW-SF100G



AW-SF200G



30-Day Free Trial

There is a 30-day free trial available for Auto Tracking Software. Please purchase this "Auto Tracking Software Activation Key" after checking precautions and confirming that this will work in your environment during this free trial period.

4K / HD Integrated Camera Lineup (indoor use only)

4K Integrated Camera



AW-UE150W
[White Model]
AW-UE150K
[Black Model]



AW-UE70W
[White Model]
AW-UE70K
[Black Model]



HD Integrated Camera



AW-HE130W
[White Model]
AW-HE130K
[Black Model]



AW-HE40SW/HW
[SDI/HDMI White Model]
AW-HE40SK/HK
[SDI/HDMI Black Model]



AW-HE42W
[White Model] **NEW**
AW-HE42K
[Black Model] **NEW**
* Planned for future.



AW-HE38HW
[White Model]
AW-HE38HK
[Black Model]

For external control, API is released supporting connection with a variety of devices.
<http://pro-av.panasonic.net/en/pass/remote.html>

* Specifications are subject to change without notice.

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Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)



For more information, please visit Panasonic web site
<https://pro-av.panasonic.net/en/qr/>



Broadcast and Professional AV Website



Contact Information



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Mobile App