2014-2020 REGIONAL OPERATIONAL PROGRAM
PRIORITY AXIS 2 "IMPROVING SMALL AND MEDIUM ENTERPRISE COMPETITIVENESS"
INVESTMENT PRIORITY 2.1. "PROMOTING ENTREPRENEURSHIP, PARTICULARLY BY FACILITATING THE ECONOMIC EXPLOITATION OF NEW IDEAS AND BY FOSTERING THE CREATION OF NEW ENTERPRISES, INCLUDING THROUGH BUSINESS INCUBATORS"
BENEFICIARY: CONFERENCE SYSTEMS S.R.L.
PROJECT TITLE: Enhance the competitiveness of SC CONFERENCE SYSTEMS SRL by diversifying its operations and making innovating investments in production
SMIS Code 2014+: 130873
Reg. no.: DP-06072021-CS037/POR

APPROVED BY,
Project Manager
Dan Pascu

TENDER SPECIFICATIONS
for the acquisition of IT and sound equipment

CPV CODES - *32321100-0 – Video and Film equipment, 38651600-9 – Digital cameras, 32320000-2 – Television and audio-visual equipment, 30230000-0 – Computer related equipment, 32341000-5 - Microphones, 38651100-4 – Camera lenses, 48520000-9 - Multimedia software package, 48000000-8 – Software package and information systems, 32342420-2 – Studio mixing console*

These tender specifications are an integral part of the documentation necessary for the awarding of the contract and accounts for the full basic requirements each tenderer must use to draft their technical proposal. These tender specifications contain ***technical specifications*** *which shall be deemed as* ***minimal.***

In this sense, any submitted offer that diverges from the provisions herein shall only be taken into consideration provided the technical proposal ensures a higher quality of the minimal requirements described in the tender specifications.

Any submitted offer that diverges from the provisions herein shall only be taken into consideration provided the technical proposal ensures a higher quality of the minimal requirements described in the tender specifications. The submission of a product offer that is technically inferior to what is provided herein shall result in the **rejection of the offer as non-compliant.**

NOTE:

The technical specifications that indicate a certain origin, source, production, special procedure, production or commercial brand, patent, production license, *shall only be mentioned for the purpose of identifying the type of product,* and shall NOT impact the selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

This acquisition procedure was initiated as part of the implementation of the project "Enhance the competitiveness of SC CONFERENCE SYSTEMS SRL by diversifying the operations and by making innovating investments in production", SMIS code 2014+: 130873, project funded through 2014-2020 Regional Operational Program.

As beneficiary, CONFERENCE SYSTEMS SRL launches a call to any interested economic agents to submit their offer for product acquisition – IT and sound equipment.

- The products shall be delivered at Aleea Şuica no. 10, pp. 68, sc. A, ap. 1, ground floor, Scornicesti city, Olt County,Romania
- No additional costs shall be covered other than those mentioned herein.
- The equipment must be new.
- The price includes the following expenses: transportation of the equipment to the office of the Contracting Authority, installation, if necessary, training of the Acquirer, if necessary, technical support throughout the warranty period.

The products must meet the quality requirements set out by the applicable legislation, rules and regulations.

1. OVERALL PRESENTATION OF THE PROJECT

Project title: ***"Enhance the competitiveness of SC CONFERENCE SYSTEMS SRL by diversifying the operations and making innovating investments in production", SMIS code 2014+: 130873***

Overall project objective:

The overall project objective is the development of SC CONFERENCE SYSTEMS SRL by expanding its operation in a new business area in order to enhance its competitiveness.

Specific objectives:

Specific objective 1: Setting out and equipping a place of business in Scornicesti, South West Oltenia Region, by acquiring high-tech innovating state-of-the-art equipment for a new operation focused on audio-video production, film and TV production, within 12 months.

With this project, the company intends to set out of a place of business in Scornicesti town, South West Oltenia Region, once it obtains a new CAEN code corresponding to the audio-video, film and television production activity for the project implementation location and once all necessary permits are obtained. The place of business shall go through a cleaning process and shall be equipped with furniture, office supplies and all materials required in order to become operational, all costs being covered by the company's own resources. The production equipment necessary for the new operation that will take place in this newly set-out place of business shall be acquired as part of this project. The staff using this equipment shall be trained also as part of this project. Project promotion and advertising shall be implemented in compliance with the Visual Identity Guidelines by acquiring and fitting in a permanent board at the new office, as well as by adding custom-made stickers on the equipment.

Once the Specific objective OS1 is met, the Overall objective of the project shall be achieved by creating the logistics and ensuring the necessary equipment for the operation of the company, which is estimated to increase the market share and enhance competitiveness.

Specific objective 2: Grow the turnover of SC CONFERENCE SYSTEMS SRL by 50% by developing the audio-video, film and television production activity, as well as by providing innovating services, within 12 months. The basic investment made to acquire equipment and licenses shall contribute to the diversification of the company's portfolio with the addition of new media, advertising, digital television and film products. These products shall be marketed as part of a range of comprehensive, innovating services comprising design, story-telling, subtitle, video processing to live transmission,

including live-streaming. The plan of SC CONFERENCE SYSTEMS SRL is to reach a wide range of customers including corporations, institutions, NGOs, companies and individual beneficiaries, operating in various areas that are now in full expansion (media and advertising, culture, education including e-learning, MICE – Meetings, Incentives, Conferences, Exhibitions, healthcare, pharma, production of detergents, fashion, community or institutional development projects etc.). As soon as the equipment and the licenses are acquired and installed, and the newly employed staff is trained to operate it, the company intends to shift to the production and marketing of services in the 6th month of implementation, thus creating the necessary framework to ensure the recovery of the investment and a 50% increase of the company's turnover by the end of the project. With the achievement of OS2, the project's overall objective shall also be met, namely to enhance the company's competitiveness by setting out a new operation.

Specific objective 3: Increase the number of employees by 50% by creating and keeping 5 new jobs for the new operation set out aimed at placing a more diverse range of products and services on the market, within 12 months. This objective entails the employment, training and retaining of 5 persons in audio-video, film and television production jobs, of whom at least half must come from disadvantaged categories. The categories taken into consideration upon employment in terms of persons from disadvantaged categories are:

(a) no stable remunerated job in the past 6 months;
(b) between 15 and 24 years of age;
(c) has not graduated high school or has no professional qualification (International Standard Education Classification 3) or is in the first two years after graduating form a full-time education courses and has not yet a stable paid job. The company shall proceed to employing the first two employees in the 6th month of the project, while the remaining 3 will be employed gradually until the end of the project. The newly employed staff shall benefit from training on how to use the high-tech innovating equipment acquired, both in theory (as per the instructions of the providers/manufacturers), as well as practical training. The 5 new jobs created shall be kept throughout the project sustainability period, which is 3 years since the final payment of the funding contract is made.

1. OBJECT OF THE CONTRACT

The object of the contract consists in the acquisition of products – audio=video, photo, IT and sound equipment necessary for the implementation of the project "Enhance the competitiveness of SC CONFERENCE SYSTEMS SRL by diversifying its operations and making innovating investments in production", SMIS Code 2014+: 130873.

2. Equipment Description

Nr. crt.	Lot Nr	Prod No.	Equipment	PCS	Unit Price without VAT- RON	Price without VAT-RON
1	**Lot 1**	1	Working Station for Online Platform	1	56.716,60	56.716,60
2		2	Graphics Working Station	2	19.087,37	38.174,74
3		3	4k 32 Inch Monitor	5	5.736,13	28.680,65
4		4	4K 27 Inch Monitor	1	2.630,39	2.630,39
			Total Lot 1			**126.202.38**
5	**Lot 2**	1	LED Panel	14	3.388,69	47.441,66

			Total Lot 2			**47.441,66**
6	**Lot 3**	1	Online Platform	1	93.826,93	93.826,93
			Total Lot 3			**93.826,93**
7	**Lot 4**	1	Digital wireless microphone combo KIT	1	221.180,96	221.180,96
			Total Lot 4			**221.180,96**
8	**Lot 5**	1	Digital Audio mixer with Dante interface	2	9.604,70	19.209,40
			Total Lot 5			**19.209,40**
9	**Lot 6**	1	4k AG-CX350 Video Camera	3	16.887,38	50.662,14
10		2	4K Blackmagic Video Mixer	2	11.721,00	23.442,00
11		3	Fluid head video tripod	3	7.916,98	23.750,94
12		4	7” Recording -Monitor	4	6.588,23	26.352,92
13		5	Video Mini Mixer	1	3.409,51	3.409,51
14		6	Professional Headset Kit	1 set	3.091,15	3.091,15
15		7	Digital Foto Camera	1	8.401,65	8.401,65
16		8	3 Axes video crane	1	3.691,04	3.691,04
17		9	Video lens camera kit	1 set	10.385,49	10.385,49
18		10	Panoramic Background	2	3.627,09	7.254,18
			Total Lot 6			**160.441.02**
19	**Lot 7**	1	Professional Video Camera	5	10.214,17	51.070,85
20		2	PTZ professional camera controller	1	7.465,66	7.465,66
			Total Lot 7			**58.536.51**
21	**Lot 8**	1	Mini working station	2	6.134,35	12.268,70
22		2	16” Laptop	4	12.787,52	51.150,08
23		3	13” Laptop	2	9.884,03	19.768,06
24		4	iPad Tablet	2	4.256,52	8.513,04
			Total Lot 8			**91.699.88**
25	**Lot 9**	1	Wirecast Pro License or equivalent	2	2.497,48	4.994,96
26		2	Payback Pro Collection IA or equivalent	6	3.240,72	19.444,32
27		3	Office 2019 License or equivalent	6	799,21	4.795,26
			Total Lot 9			**29.234.54**
			TOTAL PRICE without VAT			**847.773,28**

I. LOT 1

1. **Working station for online platform – 1 PCS**

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selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

Components	Technical requirements
Case	Motherboard size support: ATX, E – ATX Fans supported: front 2x 140m / 3 x 140mm, back 1x 140mm, top 3 x 140mm Dust filter, no glass components Sound proofing of some degree Ample room for cooling components mentioned from this point on.
Processor	Minimum of 1 processor with 64 cores 256 MB cache Base clock 2.9 GHz HT, PCIe 4.0
Chipset	AMD TRX40
RAM	Minimum of 256 GB RAM DDR4 Operating clock minimum 3000 MHz Minimum 4 DIMMS is accepted
Motherboard	E-ATX / ATX, minimum 4 x DDR4 DIMM slots, minimum 2x PCIe 4.0, minimum 2x M.2 /M-key (PCIe 4.0 x4 / SATA/ DIMM.2) minimum 1 x 10GBBase-T minimum 1 x Gb LAN minimum 1 x USB-C 3.2 Ample cooling for VRM's Adequately picked to fit requirements regarding space and placements of components
Graphics Card	Nvidia Turing chipset Base clock 1335Mhz, Minimum 13686GFLOPS Single / 6843GFLOPS Double, Minimum DirectX 12.1, OpenGL 46, OpenCL 2.0, Vulkan 1.1.92, Shade Model 6.3, Ports 4x DisplayPort 1.4, 1x USB-C DisplayPort 1.4 Encoder h.265, HDCP 2.2, 10bit color channel depth, tensor cores 576, raytracing cores 72
Storage	Minimum 2 x SSD PCIe 4.0 2TB, Read 4950 MB/s, Write 4250 MB/s, TLC Minimum 2x HDD SATA 3 12TB, Cache 256MB, 7200 RPM, Rated for continuous Operation
RAID Controller	Chipset Broadcom, 4x Sas3 (12Gb/s) / SATA3(6Gb/s) Interface, Cache 1024 MB, Clock Cache 1866Mhz, RAID level 0/1/5/6/10/50/60
PSU	Minimum 1200W Minimum 80Plus Titanium Certified Fully modular
Processor Cooler	AIO format cooler Compatible socket TS4, sTRX4, SP3 3 x 120 mm fan

	Radiator size 360mm Adequate cooling for selected processor
Card Reader	Mount type - internal Support for 3.5” bay mounting Support for SD 3.0/ microSD 3.0/ CF 6.0, MS memory card. USB 3.0 connector to motherboard and passthrough
Auxiliary peripherals	Full size keyboard and mouse combo – wireless, 3 x 140mm fans, pwm, min 95cfm, Bearing type – magnetic
Operating System	Windows 10 PRO 64 bit - EN
Warranty	Minimum 36 months

2. **Graphics working station – 2 PCS**

Components	Technical requirements
Case	Supported form factors: ITX, Micro-ATX, E-ATX, XL-ATX, SSI-EEB Expansion slots: 9+3 Processor cooler max height: 185mm No glass components, Adequately provisioned for selected parts, Soundproofing
Processor	Minimum of 1 processor 16 cores 3.4 Ghz base clock 24 PCIe lanes HT PCIe 4.0
Chipset	X570
RAM	Minimum 64 GB RAM DDR4 Minimum frequency 3000 Mhz Any number of DIMMS is accepted
Motherboard	ATX 4 DDR4 DIMM slots, max 128gb 3x slot PCIe 4.0 minimum 1 x USB-C 3.1 minimum 1 x 2.5Gbase-T 1x 1Gb LAN
Graphics card	Chipset Nvidia Ampere Base clock 1395 MHz minimum Minimum 24 GB GDDR6 VRAM 350 Watt power draw 2x HDMI 2.1, 3x DisplayPort 1.4a
Storage	Minimum 1 x SSD PCIe 4.0 1TB, Read 4950 MB/s, Write 4250 MB/s, TLC Minimum 1x SDD SATA 3 1TB, read 560 MB/s, write 530 MB/S, TLC Toggle
PSU	Minim 1000W Minim 80Plus Titanium Certified Fully modular
Processor Cooler	Air cooler 1500 RPM, 2x 140mm fans

	AM4 Compatible Adequately selected to cool processor
Operating system	Windows 10 PRO 64 bit - EN
Warranty	Minimum 36 months

3. **4k 32” Monitor – 5 PCS**

Components	Technical requirements
Panel size	32”
Aspect ratio	16:9
Display surface	Anti-glare
Panel Type	IPS 10 bit
Viewing Angle	178/178
Pixel pitch	0.185
Resolution	3840x2160
Color space	DCI-P3 98% sRGB 100% Rec.2020 85% Adobe RGB 100%
Brightness	Peak/HDR 600 cd/m2 Typ. 400cd/m2
Response time	5 ms GTG
Refresh rate	60Hz
HDR Support	HDR10
Interface	DP over USB-C with 60w power, Display port, HDMI and USB hub
Color Calibration	Factory Calibrated with Delta E <2
Warranty	Minimum 24 months

4. **4K 27” Monitor – 1 PCS**

Components	Technical requirements
Panel size	27”
Aspect ratio	16:9
Display surface	Non-Glare
Panel Type	IPS 10 bit
Viewing Angle	178/178
Pixel pitch	0.155
Resolution	3840x2160
Color space	sRGB 100%, 100% Rec. 709
Brightness	Typ. 350cd/m2
Response time	5 ms GTG
Refresh rate	40-60Hz
HDR Support	HDR10
Interface	DP over USB-C with 65w power, Display port, HDMI and USB hub
Color Calibration	Factory Calibrated with Delta E <2
Warranty	Minimum 24 months

II. Lot 2

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1. **LED Panel – 14 PCS**

a) **Dual Color 60 LED Panel – 4 PCS**

The led panel shall have the format 2x1, with 800 led, operated with optional battery and mains, with supplied DC power supply – 14.8 to 24V DC, 100% dimming with Linear, Exponential and Logarithmic curve, integrated DMX 8/16 bit-1/512 channels, OLED display for settings and functions

Dimensions	– 650 x 340 x 110mm
Weight	– 9 Kg
Voltage AC	– 90V – 240V
Power consumption	– 400W
Light Output	– 69000 Lux at 1 m(5600K), 59000 Lux at 1m(3200K)
V mount Battery optional	– two 14.8V, 160W, standard XRL 4 pin
Frequency(input)	– 50/60Hz
USB Connector	– for firmware update
Compliance	– CE
Light Dimmer	– 0-100%, Linear, Exponential, Logarithmic
Light Color Temperature	– 5600K-3200K
Color Rendering Index	
CRI	> 95
TCLI	> 98
Warranty	Minimum 24 months
Barndoors, Soft box, padded bag, power supply	Included

b) **Dual Color 30 LED Panel – 4 PCS**

The led panel shall have the format 1x1, with 400 led, operated with optional battery and mains, with supplied DC power supply – 14.8 to 24V DC, 100% dimming with Linear, Exponential and Logarithmic curve, integrated DMX 8/16 bit-1/512 channels, OLED display for settings and functions

Dimensions	– 335 x 320 x 100mm
Weight	– 3.7 Kg
Voltage AC	– 90V – 240V
Power consumption	– 200W
Light Output	– 30600 Lux at 1 m(5600K), 29000 Lux at 1m(3200K)
V mount Battery optional	– one 14.8V, 160W, standard XRL 4 pin
Frequency(input)	– 50/60Hz
USB Connector	– for firmware update
Compliance	– CE
Light Dimmer	– 0-100%, Linear, Exponential, Logarithmic
Light Color Temperature	– 5600K-3200K
Color Rendering Index	
CRI	> 95
TCLI	> 98
Warranty	Minimum 24 months
Barndoors, Soft box, padded bag, power supply	Included

c) **ACTIONPACK Dual Color – 2 PCS**

The led panel shall be ultra-portable and compact, with 100 led, operated with optional battery and mains with supplied DC power supply – 14.8 to 24V DC, 100% dimming curve and integrated DMX 8/16 bit-1/512 channels, OLED display for settings and functions

Dimensions	– 205 x 205 x 105mm
Weight	– 2,15 Kg
Voltage AC	– 90V – 240V
Power consumption	– 60W
Light Output	– 13000 Lux at 1 m(5600K), 11400 Lux at 1m(3200K)
V mount Battery optional	– one 14.8V, 160W, standard XRL 4 pin
Frequency(input)	– 50/60Hz
USB Connector	– for firmware update
Compliance	– CE

Light Dimmer	– 0-100%, Linear, Exponential, Logarithmic
Light Color Temperature	– 5600K-3200K
Color Rendering Index	
CRI	> 95
TCLI	> 98
Barndoors, Soft box, padded bag, power supply	– included
Warranty	Minimum 24 months

d) **SMARTPANEL Dual Color – 4 BUC**

The led panel shall be ultra-portable camera light, with 50 led, operated with optional battery, 100% dimming knob, Color temperature adjustable knob and power supply 12V-CC.

Dimensions	– 150 x 40 x 85mm
Weight	– 300 g
Color Rendering Index- CRI	>97
Dimmer 0-100%	– present
USB tip C connector	– present
NP-F battery adapter	– present
USB-C cable	– included
Compliance	– CE
Consum putere	– 20W
Light Color Temperature	– 5600K-3200K
Light Output	– 4200 Lux la 1 m(5600K), 3960 Lux la 1m(3200K)
Power supply 12V - CC	– included
Warranty	Minimum 24 months

III. Lot 3

1. **Online Platform -1 PCS**

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elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

The platform should offer secure connection between two or more remote locations by the means of using a locally installed video server and on request by using a virtual server hosted in the cloud when the use of such server is appropriate, making the remote participant part of the live event as if they are physically there.	• If a remote participant presses their virtual microphone button, his/her voice become part of the system audio, for everyone to hear. • When speaking, their webcam video becomes the live speaker for everyone to see. • When voting, their voting result is registered and recorded for everyone to see.
The platform software should give the remote participant the same rights as if the speaker present in the studio.	• If the person is in the studio, location, then a conference system microphone is used. When its microphone is enabled, a PTZ camera will show the speaker. The conference unit can be used to cast votes. • If this person would be participating from a remote location, the webcam feed will be used, and the webcam/laptop microphone is used. And the platform software can be used to cast votes. If the remote participant was already allocated on a system seat, it will be automatically removed from that seat when logging in from remote. • For the chairman/moderator, the audience, the recoding, live-stream system and voting system there is no difference, all will look and work the same if the person is either remotely present or participating in physically in the location.
Integration	• Full integration with supported digital systems provided by Bosch, Shure or Televic. • Efficient re-use of the existing AV infrastructure in the location including the conference system, audio amplification, guest microphones and existing streaming and recording solutions. • Full support for remote delegates and their voting results in our streaming meeting metadata (with speaker, agenda and voting results information) to be used by third-party recording and streaming solutions for video marking.
Control	• Full chairman/moderator control over the room units' microphone and remote microphones, all from the platform software. • Microphone control works in the traditional way and is the same for location and remote participants. • Individual and group speech time support. • Full visibility and control over the request list and microphone modes. • Remote participants microphone is instant-on when

	the microphone is enabled.
Invitation and participation	• After receiving a digital meeting invitation, remote participants can become fully part of the meeting for which they were invited to. • Only remote participants with a valid meeting invitation are allowed into the meeting. • Invitations can be removed anytime during the meeting to disallow people who misbehave, or to temporarily disallow persons during a closed/private event.
Audio Video Distribution	• Spoken audio from the room and other remote participants can be heard in high-fidelity by both the location/room/studio and remote participants. • Audio mixing happens locally, so every speaker can be clearly heard. Even when you are speaking yourself! • The live video from the hall, the presentation feed and the video from active speakers in the hall or remote can be watched by remote viewers. • Recording and streaming can be configured with their own unique feed. So, the live feed to the audience watching the streams at home may be differ from what the hall is seeing and may differ from what remote delegates are seeing. • Support for the distribution of language channels towards remote participants, who can tune-in on their own selected channel.
Mosaic view, multi video outputs	• All remote participants webcams can be shown to the hall permanently in a mosaic view and can be viewed by remote participants. • The chairman/moderator/operator and the room can see the quorum at all time by looking at all live webcam feeds in the mosaic view. • Up to 100 persons can be shown at the same time in an automatically sized mosaic format. • The mosaic view is nicely sorted by group and alphabetically. No more difficult searching for participants there. • Multiple video output, to allow the live view and mosaic view to be shown on different screens in the hall. • The chairman/operator can switch the view 'live view' to 'mosaic view', for instance during a voting session so people watching the live feed at home can also see everyone at the same time.
(Remote) Digital voting	• Full digital voting support for remote participant and full integration into the digital meeting AV system. • These results can be combined with the results from digital meeting system including group and individual results. • Voting results can be shown in the existing way to hall displays and to the video recording and live viewers of

	the meeting. PDF voting reports are created in the same way as usual. • All remote delegates can be shown during the voting session in a mosaic-format, including the (individual) voting results. This view can be made part of the video recordings. • The mosaic is nicely sorted by political party, making the viewing of persons and their voting results easy to understand. • When a remote microphone is enabled, it's instantly visible and audible to the hall and into the recording to allow quick roll-calling of voting answers if there is need for this kind of voting. • Our custom UI allows for different look and feel on how the voting screen looks.
Custom UI for delegates	• Customizable UI for remote participants should be supported!
(Cloud) Distribution	• The audio/video distribution to and from all remote participants can be hosted either in the Cloud (Azure, AWS, OVH, etc.) or directly on the local AV system • The cloud server software is part of the platform • When using cloud hosting, the cloud server just requires a high-speed up and downlink. Nearly no CPU performance required there. • The server software can run locally as well, simplifying the concept even more. This does require the local AV network and internet towards remote users to have a high-quality, high bandwidth internet connection.
Privacy	• The connection between the hall, the (cloud) server and remote users is a closed loop. No other internet service, connection or API is used. • The (cloud) server and remote users don't store delegate or personal data. • Only the room-PC contains and stores the participant and meeting database. • Connecting to the (cloud) distribution server is a choice. It's only required to allow remote participants to join in. At any moment, this connection can be severed, where the room runs in the traditional stand-alone mode with no internet required.
Components of the Platform:	
EASYCONF_BASE	EasyConf Subsystem: Easy conference system control suite license and sub-licenses Base EasyConf package. Contains Mouse/Touch screen control for various conference systems, Includes meeting management and delegate database. Includes speech timers and drag-drop seat assignments and ID-card support. Allows 10 control clients

EASYCONF_ADVANCED	Subsystem Adds Voting and voting preparation to EasyConf base. Adds PDF, XL and XML reporting of meeting, agenda, attendance and voting results including automatic printing. Adds fingerprint reading support and more advanced login capabilities for EasyConf-DelegateUI Adds signage/hall displaying presentation capabilities to the EasyConf base package using our flexible UI and displaying design tool. Adds the same signage/hall displaying overlay capabilities on the EasyCam camera switching client. Allows 10 hall display clients
EasyConf-Delegate UI - Subsystem	Subsystem Additional Delegate UI features for EasyConf
EASYCONF_DELUI_SEAT	10 seats included Per-seat license to allow usage of delegate UI features on a single MMD device using our android app Note: Required when a single MMD device is used for (chairman) control
EasyCam - Subsystem	Dome camera control, software video switcher and character generator
EASYCAM_BASE	Full-HD Automatic dome camera control, including automatic multi-speaker view. Includes scaling, switching and character generator. Up to 7 camera inputs and 1 presentation input. Multi-room-layout preposition configuration Full H264/H265 low latency RTSP video support.
EASYCAM_ADVANCED	Adds extra features to EASYCAM_BASE: Per-preposition color control. Advanced camera preselection. Up to 24 cameras 1080p60 and/or 8 4K60 support. Allows for fast witching between sitting, standing, ... using the same camera (Skaarhoj) joystick support. Virtual-Seat support with synoptic control. Video encoding capabilities like streaming video to Bosch MMD devices
EC_CONNECT_DEL100_2	Allow 100 remote participants to enter EasyConf Meetings – up to 200. Contains cloud (or local) hosting server executable
MVI_SMA4 - Warranty	4 years extended SMA - Software management agreement.

IV. <u>Lot 4</u>

Digital wireless microphone combo KIT – 1 SET

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selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

a) 19'' 2-Channel receiver, 19inch 1RU – 5 PCS

The rack-mountable 2-channel receiver shall be for use with two companion handheld or bodypack transmitters as part of a digital wireless RF transmission system.
The true bit diversity receiver shall operate in the UHF frequency range between 470 and 714 MHz. The receiver shall be usable with active and passive wide range UHF antennas for the entire supported RF spectrum. RF selection filters shall be integrated into the receiver´s frontend.
The receiver shall feature 6 fixed frequency banks with up to 66 compatible frequency presets each and 6 user banks with up to 66 user programmable frequencies each. The receiver shall feature an automatic frequency setup function with spectrum scan functionality in order to establish an equidistant frequency grid. Additionally, the receiver shall feature a frequency bank/channel setup to all associated receivers connected to the same network range.
The receiver shall be menu-driven with an OLED display for each of the 2 channels showing the current frequency or channel name, metering of RF level, a link quality indicator (LQI), metering of AF level, AES 256 encryption status, command mode status and battery status of the associated transmitter. An additional red LED shall indicate warning messages.
The following settings shall be configurable by function buttons and an encoder for each channel in the menu: frequency, channel name, AES 256 encryption, command mode, AF output, test tone, user bank frequencies, word clock settings, network settings, integrated antenna booster settings, display brightness, auto setup settings for automatic frequency setup.
Some parameters of the associated transmitters such as frequency, channel name, gain, low cut, auto lock and cable emulation shall be adjustable in the receiver and synchronizable to the associated transmitter via an integrated infrared interface.
The receiver shall feature a command mode which allows the audio signal to be routed to a different audio output if a transmitter with a command button is used.
The receiver shall provide a walk test mode for monitoring the RF, LQI and AF signal status in the location over time.
The receiver shall feature one XLR-3 and one 6.3 mm jack analog audio output for each of the 2 channels with a maximum output of +18 dBu. The analog outputs shall be transformer balanced. The receiver shall also feature an AES3-2003 XLR-3 digital audio output. A headphone output with headphone volume control shall be provided and shall utilize a 6.3 mm stereo jack socket. The headphone output shall support audio monitoring of both channels independently or a mix of both channels.
The receiver shall have an Ethernet port (RJ-45) for remote network-based monitoring and control using the Wireless System Manager software, Wave tool software.

Two BNC-type input sockets (50 Ω each) shall be provided for connecting the antennas. An integrated antenna splitter with two BNC outputs (50 Ω each) shall be capable of daisy-chaining up to eight receivers. Booster supply voltage shall be 12 V DC, max. 200 mA each via the antenna sockets and shall be switchable.
The receiver principle shall be double superheterodyne. Sensitivity shall be -100 dBm (typical). Image rejection shall be > 100 dB (typical) and blocking shall be > 80 dB (typical). The audio frequency response shall be 30 Hz to 20 kHz (1.5 dB). The audio output level shall be adjustable in steps of 1 dB between -10 dBu and +18 dBu. Latency for both analog and digital audio out shall be 3 ms. Total harmonic distortion (THD) shall be < 0.03 % at 1 kHz.
Supported word clock sampling rates shall be 48 kHz and 96 kHz internal and external. The sampling rate of the digital audio outputs shall be adjustable between 48 kHz or 96 kHz at 24 bit.
For secure transmission the receiver shall feature AES 256 encryption.

The receiver shall operate on 100 to 240 V power supplied via a mains cable with EU plug. Power consumption shall be max. 35 W. The receiver shall have a rugged metal housing; dimensions shall be approximately 44 x 483 x 373 mm (1.75“ x 19“ x 14.69“). Weight shall be approximately 5200 grams (11 lbs 7 oz). Operating temperature shall range from −10 °C to +50 °C (+14 °F to +122 °F).

The Dante™ variant of the receiver shall feature an additional Dante™ interface with an Audinate Brooklyn Card with two RJ-45 sockets (primary and secondary) to support 2 independent redundant Dante™ networks and a daisy-chain mode. The sampling rate shall be adjustable between 48 kHz or 96 kHz internal or external at 24 bit. The Dante RJ-45 network sockets shall be lockable Amphenol™ sockets.

Audio Out	
Dante™, RJ-45:	48 kHz, 96 kHz, 24 bit
Digital Output:	AES3-2003, XLR-3: 48 kHz, 96 kHz, 24 bit
Dante™	RJ-45: 48 kHz, 96 kHz, 24 Bit Can be externally synchronized using WCLK loop-through with BNC sockets
Analog Audio Outputs: XLR-3 and 6.3 mm jack per channel (transformer balanced)	-10 dBu to +18 dBu in steps of 1 dB (2 kΩ)
Dimensions	- 44 x 483 x 373 mm
Frequency Response	- 30 Hz - 20 kHz (1.5 dB)
TDH, Total Harmonic Distortion	- < 0.03 % (@ 1 kHz)
Weight	- Approx. 5.2 kg
Power Consumption	Max. 35 W
Storage Temperature	-25°C to +70°C
Operating Temperature	-10°C to +50°C
Switching Bandwidth	- 244 MHz
Power supply	100V- 240 V AC, 50/60 Hz
Antenna connector	Input 2 x BNC (50 Ω), 12 V DC, max. 200 mA each via antenna sockets, short circuit proof, Output 2 x BNC (50 Ω)
Codecs	- SeDAC, SePAC
Dynamic Range	- 111 dB (A) type
Frequency Range	- 470 - 714 MHz
Headphone Output Level	- 6.3 mm jack, 2x 100mW at 32 Ω
Image rejection	> 100 dB typ.
Sensitivity	-100 dBm typ.
Word clock	Input: BNC, 75 Ω Output: BNC, 75 Ω Sampling Rates: 48 kHz, 96 kHz
Operating relative humidity	
Operation	Max. 85% at 40°C (non - condensing)
Storage	Max. 90% at 40°C (non - condensing)
Transmission Method	Digital modulation, “LR” mode Min. frequency spacing for equidistant grid: 325 kHz
Latency – Analog Audio	3ms
Latency – Digital Audio Out	3ms (AES/EBU)
Audio Codec	- SeDAC, SePAC
Network Protocol	- IEEE 802.3-2002 (10/100 Mbit/s), shielded RJ-45 connector
Receiver Principle	- Double superheterodyne
Diversity principle	- True bit diversity

Encryption	- AES 256
Daisy-chain Outputs	2x BNC (50 Ω) 0 dB +/- 0.5 dB amplification relative to antenna inputs
Receiving channels	- 2
Daisy-chained receivers (RF)Max	- 8 units
Power Plug	- 3-pin, protection class I as per IEC/EN 60320-1
Water Protection Code	The product must not be exposed to dripping and splashing (IP2X)
Dante™	- IEEE 802.3 (1000 Mbit/s), shielded RJ-45 connector
Warranty	Minimum 36 months

a) **Wireless Live Vocal Microphone – 10 PCS**

The handheld transmitter shall be for use with a companion receiver as part of a true digital wireless RF transmission system. The handheld transmitter shall operate in the UHF frequency range between 550.000 and 638.000MHz.

The transmitter shall feature a backlit LC display showing battery status, the frequency or the channel name, the status of the lock mode, the AES 256 encryption status and warnings. Remaining operating time shall be indicated by both a battery icon and numeric indication in hours and minutes. All transmitter parameters shall be adjustable with function buttons on the device itself or by infrared synchronization via the associated receiver. The function buttons shall be lockable against accidental misuse.

The frequency switching bandwidth shall be up to 88Mhz with a frequency stability of < 5 ppm and a tunability of 25 kHz steps. RF output power shall be 25mW rms and 50mW peak.

The transmitter shall feature an LED indicating the operating status when the device is switched on. The LED shall flash at audio peaks and shall be defeatable when the device is in lock mode.

The AF frequency response shall range from 30 – 20,000 Hz. The lower frequency limit (-3 dB) shall be adjustable between 60 Hz, 80 Hz, 100 Hz or 120 Hz. The Audio amplification shall be adjustable in steps of 3 dB from 0 dB to +62 dB (depending on the capsule).

The transmitter shall utilize an external polarized dual diaphragm condenser microphone capsule

The transmitter shall be powered by a lithium-ion rechargeable battery pack BA 60 with a typical operating time of 5.5 hours. The rechargeable battery pack shall be exchangeable. The housing of the transmitter shall be made of magnesium.

Dimensions shall be approximately 40 mm (1.57") in diameter and 270 mm (10.63") in length. Weight (with microphone head and battery pack) shall be approximately 350 grams. Operating temperature shall range from −10 °C to +50 °C (+14 °F to +122 °F). All transmitters shall be equipped with the corresponding rechargeable battery – 2 pcs minimum in order to facilitate continuous functioning except the time needed for replacing the battery.

Dimensions	- 270 x 40 mm
Weight	**-** Approx. - 350 g
Power consumption	- Max. 960mW
FR output power	- 25mW rms, 50mW peak
Switching bandwidth	- 88 MHz
Operating time	- 5.5 h (with BA 60 battery pack)
Frequency range	- 550 - 638 MHz(A5-A8)
Audio Codec	**–** SeDAC, SePAC
Frequency stability	< 5 ppm
Tunability	- 25 kHz steps
Low cut-off-frequency	- Adjustable: 60 Hz, 80 Hz, 100 Hz, 120 Hz
Encryption	- AES 256 and Digital 9000
Audio frequency response	- 30 Hz - 20 kHz (3 dB
Audio gain	Can be set in 3 dB steps from 0 dB to +62 dB (for each capsule)
Modulation scheme	Digital modulation long range mode Digital modulation Link Density Mode
Microphone capsule	Externally polarized dual diaphragm condenser microphone
Color	- Black
Pick-up pattern	– cardioid / super cardioid switchable
Sensitivity (free field, no load) (1KHz)	– 7.0mV/Pa
With preattenuation	– 2.2mV/Pa
Max. SLP at 1 kHz	– 144 dB
Dynamic Range	– 126 dB(A)
Diameter of Diaphragm	– 2.54mm
Frequency response	– 40 to 20.000 Hz
Equivalent noise A-weighted (DIN IEC 651)	– 18 dB
Foam windshield	– open cell foam wind shield
Warranty	Minimum 36 months

b) **Bodypack microphone transmitter unidirectional head – 4 PCS**

The bodypack transmitter shall be for use with a companion receiver as part of a true digital wireless RF transmission system. The bodypack transmitter shall operate in the UHF frequency range between 550.000 and 638.000MHz.

The bodypack shall feature a backlit LC display showing battery status, the frequency or the channel name, the status of the lock mode, the AES 256 encryption status and warnings. Remaining operating time shall be indicated by both a battery icon and numeric indication in hours and minutes. All transmitter parameters shall be adjustable with function buttons on the device itself or by infrared synchronization via the associated receiver. The function buttons shall be lockable against accidental misuse.

The frequency switching bandwidth shall be up to 88Mhz with a frequency stability of < 5 ppm and a tunability of 25 kHz steps. RF output power shall be 25mW rms and 50mW peak.

The transmitter shall feature an LED indicating the operating status when the device is switched on. The LED shall flash at audio peaks and shall be defeatable when the device is in lock mode.

The transmitter's microphone/line input shall utilize a lockable 3-pin audio socket. The AF frequency response shall range from 30 – 20,000 Hz (mic and line). The lower frequency limit (-3 dB) shall be adjustable between 30 Hz, 60 Hz, 80 Hz, 100 Hz or 120 Hz. The Audio amplification shall be adjustable in steps of 3 dB from 0 dB to +42 dB (mic) and in steps of 3 dB from -6 dB to +42 dB (instruments and line). The instrument cable emulation shall have an adjustable cable length with 3 steps.

The transmitter shall be compatible with microphones for every application: lavalier microphones MKE 1, MKE 2, MKE Essential and MKE 40, headset microphones HSP 2, HSP 4, HSP Essential and SL Headmic 1-4.

The transmitter shall be powered by a lithium-ion rechargeable battery pack BA 61 with a typical operating time of 6.5 hours. The rechargeable battery pack shall be exchangeable. The housing of the transmitter shall be made of magnesium. The antenna shall utilize a coaxial socket and be detachable by the user.

Dimensions shall be approximately 76 x 62 x 20 mm (2.99"x 2.44"x 0.79"). Weight (with battery pack and belt clip) shall be approximately 147 grams (5.19 oz / 0.32 lbs.). Operating temperature shall range from −10 °C to +50 °C (+14 °F to +122 °F).

All transmitters shall be equipped with the corresponding rechargeable battery – 2 pcs minimum in order to facilitate continuous functioning except the time needed for replacing the battery.

Dimensions	- 76 x 62 x 20mm (with BA 61 battery pack)
Audio Codec	- SePAC , SeDAC
Modulation Scheme	Digital modulation long range mode Digital modulation Link Density Mode
Weight	**-** Approx. - 147 g (with BA 61 battery and belt clip)
Audio Input	- 3 pin audio connector
Power consumption	- Max. 960mW
RF output power	- 25mW rms, 50mW peak
Switching bandwidth	- 88 MHz

Operating time	- 6.5 h (with BA 61 battery pack)
Gain	Mic: adjustable in 3 dB steps from 0 dB to +42 dB Line: adjustable in 3 dB steps from -6 dB to +42 dB
Frequency range	550.000 - 638.000 MHz
Input impedance	- Mic: 22 kΩ, Line: 1 MΩ
AF frequency response	Line: 30 Hz - 20 kHz (3 dB) Mic: 30 Hz - 20 kHz (3 dB)
Frequency stability	< 5 ppm
Tunability	- in steps of 25 kHz
Lower cut-off-frequency	Mic adjustable: 30 Hz, 60 Hz, 80 Hz, 100 Hz, 120 Hz, Line: 30 Hz, 60 Hz, 80 Hz, 100 Hz, 120 Hz
Instrument cable emulation	Adjustable cable length with 3 steps
Encryption	- AES 256 and Digital 9000
Microphone capsule	– pressure gradient transducer
Color	– Black
Min. terminating impedance	– 15 kOhm
Pick-up pattern	– cardioid
Sensitivity	– 42.0mV/Pa, +- 2.5dB (1KHz)
Max. SLP at 1KHz	– 118 dB
Frequency response	– 40 to 20.000 Hz
Equivalent noise level A-weighted (DIN IEC 651)	– 27dB
Equivalent noise level CCIR-weighted (CCIR 468-1)	– 37dB
Wind shield Black, Grey, clip and magnetic mount	Included
Warranty	Minimum 36 months

c) **Bodypack microphone transmitter omnidirectional head – 4 PCS**

The bodypack transmitter shall be for use with a companion receiver as part of a true digital wireless RF transmission system. The bodypack transmitter shall operate in the UHF frequency range between 550.000 and 638.000MHz.

The bodypack shall feature a backlit LC display showing battery status, the frequency or the channel name, the status of the lock mode, the AES 256 encryption status and warnings. Remaining operating time shall be indicated by both a battery icon and numeric indication in hours and minutes. All transmitter parameters shall be adjustable with function buttons on the device itself or by infrared synchronization via the associated receiver. The function buttons shall be lockable against accidental misuse.

The frequency switching bandwidth shall be up to 88Mhz with a frequency stability of < 5 ppm and a tunability of 25 kHz steps. RF output power shall be 25mW rms and 50mW peak.

The transmitter shall feature an LED indicating the operating status when the device is switched on. The LED shall flash at audio peaks and shall be defeatable when the device is in lock mode.

The transmitter's microphone/line input shall utilize a lockable 3-pin audio socket. The AF frequency response shall range from 30 – 20,000 Hz (mic and line). The lower frequency limit (-3 dB) shall be adjustable between 30 Hz, 60 Hz, 80 Hz, 100 Hz or 120 Hz. The Audio amplification shall be adjustable in steps of 3 dB from 0 dB to +42 dB (mic) and in steps of 3 dB from -6 dB to +42 dB (instruments and line). The instrument cable emulation shall have an adjustable cable length with 3 steps.

The transmitter shall be compatible with microphones for every application: lavalier microphones MKE 1, MKE 2, MKE Essential and MKE 40, headset microphones HSP 2, HSP 4, HSP Essential and SL Headmic 1-4.

The transmitter shall be powered by a lithium-ion rechargeable battery pack BA 61 with a typical operating time of 6.5 hours. The rechargeable battery pack shall be exchangeable. The housing of the transmitter shall be made of magnesium. The antenna shall utilize a coaxial socket and be detachable by the user.

Dimensions shall be approximately 76 x 62 x 20 mm (2.99"x 2.44"x 0.79"). Weight (with battery pack and belt clip) shall be approximately 147 grams (5.19 oz / 0.32 lbs). Operating temperature shall range from −10 °C to +50 °C (+14 °F to +122 °F).

All transmitters shall be equipped with the corresponding rechargeable battery – 2 pcs minimum in order to facilitate continuous functioning except the time needed for replacing the battery.

Dimensions	- 76 x 62 x 20mm (with BA 61 battery pack)
Audio Codec	- SePAC , SeDAC
Modulation Scheme	Digital modulation long range mode Digital modulation Link Density Mode
Weight	**-** Approx. - 147 g (with BA 61 battery and belt clip)
Audio Input	- 3 pin audio connector
Power consumption	- Max. 960mW
RF output power	- 25mW rms, 50mW peak
Switching bandwidth	- 88 MHz

Operating time	- 6.5 h (with BA 61 battery pack)
Gain	Mic: adjustable in 3 dB steps from 0 dB to +42 dB Line: adjustable in 3 dB steps from -6 dB to +42 dB
Frequency range	550.000 - 638.000 MHz
Input impedance	- Mic: 22 kΩ, Line: 1 MΩ
AF frequency response	Line: 30 Hz - 20 kHz (3 dB) Mic: 30 Hz - 20 kHz (3 dB)
Frequency stability	< 5 ppm
Tunability	- 25 kHz steps
Lower cut-off-frequency	Mic adjustable: 30 Hz, 60 Hz, 80 Hz, 100 Hz, 120 Hz , Line: 30 Hz, 60 Hz, 80 Hz, 100 Hz, 120 Hz
Instrument cable emulation	Adjustable cable length with 3 steps
Encryption	- AES 256 and Digital 9000
Microphone capsule	– Umbrella Diaphragm, pre-polarized condenser microphone
Color	– Black
Pick-up pattern	– omni-directional
Sensitivity	– 5.0mV/Pa, +- 3 dB
Max. SLP at 1KHz	– 142 dB
Frequency response	– 20 to 20.000 Hz
Equivalent noise level A-weighted (DIN IEC 651)	– 27 dB
Equivalent noise level CCIR-weighted (CCIR 468-1)	– 39 dB
Windshield Black, clip and magnetic mount	Included
Warranty	Minimum 36 months

d) **19” 1 RU, Digital charging station – 3 PCS**

The rack-mountable charger shall be network-enabled and shall be capable of simultaneously charging up to eight BA 60, BA 61 rechargeable battery packs used for transmitters. Three different charging modules with two charging bays each are available for the three different types of battery packs. These modules shall be mountable by the user into the mainframe in any configuration. A colored LED at each charging bay shall indicate the charge status of the respective battery pack and warnings.

The charger shall feature a power status LED indicating the power status or information on booting and firmware updates. An additional LED shall indicate if an error has occurred. The charger shall be equipped with a reset button to restore the factory settings.

The charger shall have an RJ-45 network socket and shall be controllable via the Wireless Systems Manager software. In addition, the charger shall support the Media Control Protocol to provide for remote control via a media control system. Via network control, the charger shall feature a storage mode which allows the battery packs to be charged or discharged to 70 % for storage. Also, via network control, the charger shall provide further battery information like estimated operating time, charging cycles, voltage and battery health.

The charger shall operate on 100 to 240 V~, power consumption shall be max. 85 W. Charging time for a full charge shall be between 2 and 3 hours, depending on the battery pack. Battery charging temperature shall range from 0 °C to 50 °C.

Operating temperature shall range from 0 °C to 45 °C. Dimensions shall be 44 x 483 x 373 mm. Weight (unequipped) shall be approximately 5.1 kg.

Dimensions	- 44 x 483 x 373 mm
Weight	- 5.1 kg
Charging time	
	BA 60: 80 %: approx. 1:15 h, 100%: approx. 2:30h BA 61: 80 %: approx. 1:45 h, 100%: approx. 3:15 h
Power consumption	- Max. 85 W, Min. 1 W
Power supply	- 100 - 240 V AC, 50/60 Hz
Capacity	Up to 8 battery packs (BA 60 and BA 61) via 4 exchangeable charging modules (LM 6060 and LM 6061)
Operating relative humidity	- Max. 90 % at 40 °C
Charging current	- 2 A
Display	- LED multi-colored
Network protocol	- IEEE 802.3-2002 (10/100 Mbit/s), shielded RJ-45 connector
Temperature range	Charging: 0 - 50 °C Ambient: -10 - 50 °C
Charging voltage	- 4.2 V
Power plug	- 3-pin, protection class I as per IEC/EN 60320-1
Average discharge current	- 0.15 A
Water protection Code	The product must not be exposed to dripping and splashing (IP2X)
Warranty	Minimum 36 months

e) **Correspondent charging module for 2 Wireless hand-held battery pack – 6 PCS**
Warranty – 36 months

f) **Correspondent charging module for 2 Wireless bodypack battery pack – 6 PCS**
Warranty – 36 months

g) **Wide band circular Polarized antenna – 2 PCS**

High gain passive antenna provides an optimum solution for both transmitting and receiving RF signals throughout the UHF spectrum.

Dimensions	- 356 x 356 x 140 mm
Connector	- N (mama)
Weight	- 3.1lbs. (1.41 kg)
Gain	- 8dBi
Frequency range 3db:	450 - 960 MHz
RF cable	- 50 Ohm, 20m
Warranty	Minimum 36 months

h) **Wide Band unidirectional antenna – 2 PCS**

The passive unidirectional antenna provides an optimum solution for both transmitting and receiving RF signals throughout the UHF spectrum.

Impedance	– 50 Ohm
Connector	– BNC
Pick-up pattern	- directional
Gain	- 4dBi
Frequency range 3db:	450 - 960 MHz
Opening angle	+- 50 degrees
RF Cable	- 50 Ohm, 20m
Warranty	Minimum 36 months

V. <u>Lot 5</u>

1. <u>Digital Audio Mixer with Dante interface – 2 PCS</u>

The technical specifications that indicate a certain origin, source, production, special procedure, production or commercial brand, patent, production license, *shall only be mentioned for the purpose of identifying the type of product,* and shall NOT impact the selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

The mixer shall be a compact, rack-mountable digital mixer built around a 96kHz XCVI FPGA core with 48 input channels mixing to LR and 12 stereo mix outputs. The surface shall include 17 moving faders with 6 layers, each layer having dedicated keys, giving easy access to input channels, mixes, FX sends, FX returns, DCA masters and MIDI control. Each fader strip shall have dedicated PAFL, Select, and Mute buttons with indicators, a variable LED meter, a peak indicator LED and variable color backlit LCD display. There shall be dedicated physical controls which allow for adjustment of key processing parameters, and which follow the select button for the input and output channels. The fader and rotary controls shall be of a high contrast color to the mixer surface for excellent visibility during operation in low light conditions. The rotary controls shall also be illuminated to indicate function and availability for use. Send levels to mixes shall be displayed and adjusted using the faders. Surface illumination shall be integrated into the bodywork of the mixer.

Local analogue inputs shall use balanced XLR sockets and connect to fully recallable digitally controlled preamplifiers. These shall be able to provide up to +60dB of gain, industry standard 48V phantom power, and include a switchable -20dB Pad to allow a maximum input level of +30dBu. Local analogue outputs shall be provided on 12 XLR sockets and 2 balanced TRS ¼ inch Jack sockets. These will have a nominal line output of +4dBu and a maximum output of +22dBu. There shall be a local “SLink” Ethernet audio expansion port with locking EtherCON connector, supporting multiple AoIP protocols and providing access to 64x64 digital channels, connected over a single cable ‘digital snake’ and allowing remote preamp control of Allen & Heath Remote Audio Units, as well as connection to Allen & Heath ME Personal Mixing Systems. A digital I/O Port DANTE card, supporting 64x64 channels should be installed. All input and output processing, routing options and system configuration shall be accessed and adjusted via a 7-inch color touchscreen and associated dedicated rotary control. 8 user-assignable SoftKeys with variable color LED illumination shall be provided for quick access to Input/Mix/DCA/Group Mutes, Tap Tempo, Scene Controls, MMC and SQ-Drive Controls. A footswitch connection shall be provided to allow assignable control from an optional single or dual footswitch. There shall be dedicated keys for quick Copy/Paste/Reset of processing parameters and mixes. The ability to assign channel on/off status and to switch between Pre/Post fade to the currently selected mix shall also be provided with dedicated keys. All input channels shall contain the following processing: Polarity, Trim, Insert, Gate, High Pass Filter, Parametric EQ, Compressor, Delay, Pan. All FX Return channels shall contain the following: Parametric EQ, Pan. All output mix channels shall contain the following processing: External input, Polarity, Trim, Insert, Parametric EQ, and Graphic EQ with RTA and fader-flip mode, Compressor, Delay, Balance. All signal delays in the system shall be adjustable in Milliseconds. The mixer will allow the insertion of Allen & Heath DEEP processing models to channels, without affecting latency or processing abilities. 8 user-assignable effect racks shall be provided with a library of factory preset FX emulations. The FX racks shall be individually configurable as send/return from a channel or FX/Mix, or inserted into input or output channels. There shall be 8 DCA groups and 8 Mute groups. An Automatic Mic Mixer shall be provided for automatic and dynamic adjustment of gain in spoken word applications. A global source option for the direct out of each input channel shall be provided in the routing screen. The tap-off point shall be adjusted to the following positions in the processing path: post Preamp, post HPF, post Gate, post Insert return, post PEQ, post Compressor, and post Delay. There shall be further global options to follow Fader, DCA and Mute. Direct outputs shall be assignable via the mixer soft patch bay. A Talkback facility shall be provided with the ability to send to any output mix with on screen status indication. An option to enable talkback latching and HPF shall be provided. A signal generator shall be provided with the ability to send a variable level signal to any output mix with visual assignment status on-screen. The following types of signals shall be available: Sine, White Noise, Pink Noise, and Band-Pass. Comprehensive input, output, and FX channel and RTA metering shall be provided on-screen. 12-LED bar meters on the surface shall indicate the Main mix bus level and the PAFL signal shall override the LR meters accompanied by a PAFL-active indicator. A default Mains to PAFL sub-mix shall be provided. There shall be a USB Type-A connector on the surface for stereo/multitrack recording/playback, data-transfer, archiving, and firmware updates direct to USB drives. On the rear panel there shall be a USB-B connection following the USB 2.0

standard for multi-channel, bidirectional audio streaming and MIDI DAW control between the mixer and a computer. A DAW transport control using popular DAW control protocols for computer shall be available via the touchscreen. Stereo digital output shall be provided on XLR following the AES/EBU standard and with switchable sample rates. The mixer shall provide a Fast Ethernet (100 Mbit/s) port for Cat5 cable connection to a computer for MIDI over TCP/IP control of mixer parameters via a wireless router (access point) for live mixing control, and the mixing system shall include application software for tablet and phone devices connected via a wireless network router to the LAN port.

Input and output channel processing and parameters in the mixer shall be saved on demand as a user library item for recall in other channels. All library items shall be archived with the show-file. Library items shall be transferrable to USB drive as portable data to be used in other systems. The mixer shall provide the facility to save 300 scenes of the settings of the mixing system and these scenes shall be nameable. A comprehensive table of 'Scene Safes' shall be provided to prevent selected items from being changed from their state when the safe was enabled. A comprehensive scene filter shall be provided per scene to Allow / Block each parameter saved in a scene from being changed as that scene is recalled. An option shall be provided for password protection for log-in of several users with different levels of system access and permissions. A particular scene may be chosen to be recalled per change of user login if desired. The mixing system shall periodically record all current settings and return the mixer to that state after reboot following a power-cycle. The mixing control surface shall have a built-in power supply accepting AC mains voltages of 100~240V, 50/60 Hz, 75W max via an earthed 3-pin IEC male connector mounted on the rear chassis. A Two Pole Push-Button switch shall be provided near the mains input. Recommended operating temperature for the mixer shall be 5 to 35 degrees Celsius.

Characteristics	Rack-mountable Digital Mixer for Live, Studio and Installation 48 Input Channels 16 Local Mic Inputs (XLR) 2 ¼" Stereo Inputs (TRS) 1 3.5mm Stereo Input 36 Total Busses 12 Stereo Mix (Aux or Group) + Main PAFL Bus 14 Assignable Local Outputs (12 XLR + 2 ¼" TRS) AES Digital Output Dedicated Talkback mic input (XLR) ¼" TRS Headphone out with dedicated control SLink EtherCON connection for remote audio using dSnake/ME, DX or GigaACE/GX protocol (128x128channels) I/O Port with DANTE Card 64x64 8 Mute Groups 8 DCA Groups 8 Stereo FX with dedicated FX Returns DEEP Processing Ready RackFX Effects suite 7" colour touchscreen 8 Assignable SoftKeys Dedicated physical controls for channel processing (Gain, HPF Frequency, Gate Threshold, Compressor, Threshold, Pan, EQ Gain/Frequency/Width) 16+1 Faders with 6 Layers for 96 assignable Channel Strips Motorized faders for sends on faders, GEQ fader flip and mix recall 16 Backlit LCD Channel Strip displays Chromatic Channel Metering Integrated Surface Illumination

	Single/Dual Footswitch Control Input channel pairs switchable mono/stereo Patchable Insert points Input processing – Trim, HPF, Gate, PEQ, Compressor, Delay Output processing – Graphic EQ, PEQ, Compressor, Delay DEEP Automatic Mic Mixing 2 31/61 Band Real Time Analyzers Quick copy/paste/reset for parameters User Permissions to restrict operator access 300 Scene memories per show Channel Safes, Global and per Scene Recall Filters FX, processing and channel Libraries SQ-Drive for stereo and multitrack recording/playback direct to USB drive USB transfer of Scenes, Libraries, Shows 32x32 channel USB streaming to/from Mac/PC MIDI via USB or TCP/IP, including DAW control options Remote mixing apps for iPad, Android, Mac and PC Compatible with ME personal monitoring range

The mixer shall be delivered in a rigid case (Flight case) for transport and protection.

Warranty – Minimum 24 months

VI. Lot 6

The technical specifications that indicate a certain origin, source, production, special procedure, production or commercial brand, patent, production license, *shall only be mentioned for the purpose of identifying the type of product,* and shall NOT impact the selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

1. 4k video camera.

The 4K Camcorder should be a compact professional UHD 4K camcorder, with 1" MOS sensor recording in UHD resolution (3840 x 2160), in the MOV format using a variety of data rates including 400 Mb/s, HEVC at up to 200 Mb/s, HD in MOV, in P2 codecs such as AVC LongG and AVC Intra for ENG production, and HD/SD in AVCHD format for legacy productions. The camcorder should have eight different gamma settings including HLG, which provides an HDR output in the camera. The camera should provide Vlog recording function with 13 stops of dynamic range It also features variable frame rate capability from 1 to 60 fps in UHD and 1 to 120 fps in HD. Two SD card slots allow for simultaneous, relay, and background recording.

Integrated into the camera a 20x optical zoom lens with 32x intelligent zoom. The lens have 5-axis image stabilization and three discrete lens control rings, one each for focus, iris, and zoom. The camcorder should support LANC control via a 2.5mm input port, OLED EVF and a 3.2" LCD touchscreen

monitor, with a built-in stereo microphone and two XLR audio connectors. Other connectors include both 3G-SDI and HDMI out (HDMI supports UHD), timecode in/out as well as USB 3.0, USB 2.0, and an Ethernet port for connecting to a network or wired streaming. An optional USB wireless adapter for wireless streaming.

Included accessories: 1 x Battery, 1 x Battery charger, AC adaptor, 1 AC cable, Microphone holder kit, Shoulder strap, Eye cup, Lens hood, Grip belt.

The camera shall be equipped with cu 2 x SDXC cards x 128GB for 4K recording, protected in a hard case.

The camera will have the latest firmware available from the manufacturer.

Power	DC 7.28 V (when battery is used) DC 12 V (when the AC adaptor is used)
Power consumption	17 W (when LCD monitor is used) 11.5 W (recording 1080i / 422ALL-I 100M, LCD monitor used, no external device connection)
Operating temperature	0 °C to 40 °C
Operating humidity	10 % to 80 % (non-condensing)
Weight Body	approx. 1.9 kg (body only, excluding lens hood, battery and accessories)
Shooting	approx. 2.3 kg (including lens hood, battery and microphone holder)
Dimensions	180 mm (W) x 173 mm (H) x 311 mm (D)
Camera Unit	Sensor MOS 1.0” Effective Pixels 15,030,000 pixel LENS – Optical image stabilizer lens, optical x20 zoom F value: F2.8 la F4.5 Focal length: f=8.8 mm la 176 mm, equivalent 35 mm: 24.5 mm la 490 mm
Filter Diameter	67 mm
ND Filter	Clear, 1/4, 1/16, 1/64 IR Filter: incorporates the ON/OFF control function Shortest Shooting distance (M.O.D.) 10 cm(W), 1.0m(T) from the front of the lens

Gain setting	L/M/H selector switch -3 dB to 18 dB (Adjustable in 1 dB steps) 24dB, 30 dB, 36 dB switched (when assigning [S.Gain] to the USER button
Color temperature setting	ATW, ATW LOCK, A ch, B ch, preset 3200 K/preset 5600 K/VAR (2000 K to 15000 K) Shutter Speed when [SYSTEM MODE] = 59.94 Hz ・59.94i/59.94p mode: 1/60 sec. (shutter off), 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec., 1/4000 sec., 1/8000 sec., 1/10000 sec. ・29.97p mode: 1/30 sec., 1/50 sec. (shutter off), 1/60 sec., 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec.,1/4000 sec., 1/8000 sec., 1/10000 sec. ・23.98p mode: 1/24 sec., 1/48 sec., 1/50 sec. (shutter off), 1/60 sec., 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec., 1/4000 sec., 1/8000 sec., 1/10000 sec. When [SYSTEM MODE] = 50.00 Hz ・50i/50p mode: 1/50 sec. (shutter off), 1/60 sec., 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec., 1/4000 sec., 1/8000 sec., 1/10000 sec. ・25p mode: 1/25 sec., 1/50 sec. (shutter off), 1/60 sec., 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec., 1/4000 sec., 1/8000 sec., 1/10000 sec. Shutter Speed (Slow Shutter) when [SYSTEM MODE] = 59.94 Hz ・59.94i/59.94p mode: 1/1 sec., 1/2 sec., 1/4 sec.,

	1/6 sec., 1/15 sec., 1/30 sec. ・29.97p mode: 1/1 sec., 1/2 sec., 1/4 sec., 1/6 sec., 1/15 sec. ・23.98p mode: 1/1 sec., 1/2 sec., 1/4 sec., 1/6 sec., 1/12 sec. When [SYSTEM MODE] = 50.00 Hz ・50i/50p mode: 1/1 sec., 1/2 sec., 1/4 sec., 1/6 sec., 1/12 sec., 1/25 sec. ・25p mode: 1/1 sec., 1/2 sec., 1/4 sec., 1/6 sec., 1/12 sec. Shutter Speed(Synchro Scan) When [SYSTEM MODE] = 59.94 Hz ・59.94i/59.94p mode: 1/60.0 sec. to 1/7200 sec. ・29.97p mode: 1/30.0 sec. to 1/7200 sec. ・23.98p mode: 1/24.0 sec. to 1/7200 sec. When [SYSTEM MODE] = 50.00 Hz ・50i/50p mode: 1/50.0 sec. to 1/7200 sec. ・25p mode: 1/25.0 sec. to 1/7200 sec. Shutter Open Angle , 3.0 deg to 180.0 deg 360.0 deg (in 0.5 deg steps) VFR Recording Frame Rate when [SYSTEM MODE] = 59.94 Hz 1, 2, 4, 6, 9, 12, 15, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, 32, 34, 36, 40, 44, 48, 54, 60 (fps) When [SYSTEM MODE] = 50.00 Hz 1, 2, 4, 6, 9, 12, 15, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 32, 34, 37, 42, 45, 48, 50 (fps) Super Slow Recording when [SYSTEM MODE] = 59.94 Hz 1920 x 1080 (FHD): shooting frame rate 120 fps When [SYSTEM MODE] = 50.00 Hz 1920 x 1080 (FHD): shooting frame rate 100 fps Sensitivity when [HIGH SENS.] mod

	F12 (2000 lx, 3200 K, 89.9 % reflect, 2160/59.94p, 1080/59.94i) F13 (2000 lx, 3200 K, 89.9 % reflect, 2160/50p, 1080/50i) Horizontal resolution 2000 TLV or higher (UHD: center) 1000 TLV or higher (FHD: center)
I. Zoom	×32 (FHD), ×24 (UHD)
Digital Zoom	×2/×5/×10
Lens Hood	Hood with lens cover
Memory card Recorder	Recording Media SDHC memory card (4 GB to 32 GB), SDXC memory card (32 GB to 128 GB) UHS-I/UHS-II UHS Speed Class3 supported, Video Speed Class V90 supported, card microP2 (A series, B series) 2 x Slot recording card microP2/SDXC UHS-I Resolution 3840 × 2160 (UHD), 1920 × 1080 (FHD), 1280 × 720 (HD), 720 × 480(SD), 720 × 576 (SD) System Frequency 59.94 Hz/50.00 Hz
Recording File Format	MOV (AVC), MOV (HEVC), AVCHD 2 x Slot Functions, Relay Rec, Simultaneous Rec, Background Rec Special Recording Functions: Pre Rec, Interval Rec, Time Stamp
Digital Video	Quantization MOV: 4:2:2 10 bit/4:2:0 8 bit/4:2:0 10 bit (HEVC) AVCHD: 4:2:0 8 bit Digital Video | Video Compression Format H.264/MPEG-4 AVC High Profile H.265/MPEG-H HEVC Main10 Profile
Digital Audio	Recording audio signal MOV: 48 kHz/24 bit, 2 ch, Linear PCM AVCHD: 48 kHz/16 bit, 2 ch, Dolby Audio™ Headroom 12 dB/18 dB/20 dB switchable

	(menu)
Live Streaming	Live Streaming | Video Compression Format H.264/MPEG-4 AVC Main Profile, High Profile Audio Compression Format AAC-LC Network Protocol RTSP/RTP/RTMP/RTMPS
Video Output	Video Output | SDI OUT BNC x 1, SDI REC REMOTE supported HD: 0.8 V [p-p], 75 Ω SD: 0.8 V [p-p], 75 Ω, Output format (4:2:2 10 bit): ・1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97Psf, 25Psf, 23.98PsF ・1280 × 720: 59.94p, 50p ・720 × 480: 59.94i ・720 × 576: 50i Video Output | HDMI OUT HDMI x 1, Type A, HDMI REC REMOTE supported, VIERA Link not supported Output format (4:2:2 10 bit): ・3840 × 2160: 59.94p, 50p, 29.97p, 25p, 23.98p ・1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p ・1280 × 720: 59.94p, 50p ・720 × 480: 59.94p ・720 × 576: 50p VIDEO OUT 3.5 mm diameter mini jack, composite 1.0 V [p-p], 75 Ω
Audio Input/Output	Buit-in Microphone – stereo microphone Input 1/2 XLR (3-pin) x 2 (INPUT1, INPUT2) Input high impedance, LINE/MIC/MIC+48V (switchable SW) MIC: -40 dBu/-50 dBu/-60 dBu (switchable menu) LINE: +4 dBu/0 dBu (switchable menu) Audio IN/OUT | SDI OUT Linear PCM 2 ch

	Audio IN/OUT | HDMI OUT Linear PCM 2 ch Jack 3.5 mm Headphone x 1 AV OUT 3.5 mm diameter stereo mini jack x 1, Output level: 600 Ω, 316 mV Speaker 20 mm diameter x 1
Other Input/Output	TC IN/OUT BNC x 1, Used as the input or output terminal (switchable menu) Input: 1.0 V to 4.0 V [p-p] 10 KΩ Output: 2.0 V ± 0.5 V [p-p] low impedance Jack 2.5 mm Remote – Jack 2.5 mm LAN RJ-45: 1000BASE-T/100BASE-TX/10BASE-T USB 2.0 HOST Type-A, 4-pin (5 V, 0.5 A) for Wireless Module(option) USB 3.0 DEVICE USB 3.1 GEN1 Type-C, USB Mass storage function No USB bus power function DC 12 V EIAJ Type 4
Warranty	Minimum 24 months

2. 4K Video Mixer – 2 PCS

The video mixer features 8 independent 12G-SDI inputs, for working in all popular HD and Ultra HD formats up to 2160p60. Each input features re-sync as well as a full low latency standards converter, which means the input is automatically adapted to the switchers format. The audio mixer features dynamics, 6 band parametric EQ, dual mono channel split and stereo simulator with audio delay on the analog inputs. The 4K video mixer also features an Advanced Chroma Key, Ultra HD multi-view and motion clips in the media pool.

Connections	**-** 8 video inputs
Total Outputs	- 12
Total aux outputs	- 1
SDI rates	- 1.5G, 3G, 6G, 12G.
Total audio inputs	- 2 x XLR. 1 x Microphone

Total audio Outputs	- 1 x Headphone
SDI Video Inputs	- 8 x 10-bit HD/UHD switchable. 2 channel embedded audio
Reference Inputs	- Tri-Sync or Black Burst.
Video input Re-Sync	- On all 8 inputs
Frame rate and format conversion	- On all 8 inputs
SDI Program Outputs	- 9 x 10-bit HD/UHD switchable.
SDI Audio Outputs	- 2 Ch embedded into SDI output
Total Multi view	- 1
SDI Multi view outputs	- 1
HDMI Multi view outputs	- 1
Supported Video Formats	
HD Video standards	720p50, 720p59.94 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94 1080i50, 1080i59.94
UHD Video standards	2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p50, 2160p59.94
SDI compliance	- 292M and 424M, 2081, 2082.
Video sampling	- 4:2:2 10-bit
Color precision	- 4:2:2 10-bit
Color space	- 4:2:2 YUV
Input resolutions for Computers	720p50, 720p59.94 1080p23.98, 1080p24, 1080p25, 1080p29.97,1080p30, 1080p50, 1080p59.94, 1080p60 1080i50, 1080i59.94, 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60
Color space conversion	- none
Processing Delay	- 6 Lines.
Audio Mixer	12 input x 2 channel mixer. Selectable On/Off/Audio-Follow-Video per channel plus separate gain control per channel. Level and Peak metering, Audio Compressor, Gate, Limiter, 6 bands of parametric EQ. Delay line and Stereo Synthesizer on the XLR inputs only. Master gain control. Headphone output level control with separate mix of Program, Talkback and Sidetone.

Upstream Keyer	- 1 with Chroma/Linear/Luma key.
Downstream Keyer	- 2
Chroma Keyer	- 1
Linear/Luma Keyer	- 3
Talkback support	- Built in, uses aviation headset
Mix Minus support	- Yes, on 8 camera PGM outputs
Transition Keyer (Stinger/DVE)	- Stinger and DVE.
Total Number of Layers	- 5
Pattern Generators	- 2
Color Generators	- 2
DVE with 3D Borders & Drop Shadow	- 1
Interface	- Minimum monitor resolution 1366x768 px.
Number of windows	- 1 x 10
Routable windows	- 8 routable and 2 fixed for Program and Preview.
Tally	- RED for – PROGRAM, Green for - Preview
Tally Output	Embedded via SDI. Added via ethernet connection to Blackmagic Design GPI and Tally Interface product. (Not included)
Windows Source Labels	Yes
Multi view Monitoring	1 x10 views
Multi view video standard	HD/UHD
Media Player	-2, with nonvolatile flash memory
Media Poll still image capacity	20 with Fill and Key
Media Poll still image format	PNG, TGA, BMP, GIF, JPEG and TIF
Channels	Fill and Key for each media player
Media Pool Clip capacity	2 cu Fill and Key. Shared pool
Media Pool Clip File Format	TGA sequence
Media Player Clip Length 720HD	1440 frames
Media Player Clip Length 1080HD	360 frames
Media Player Clip Length Ultra HD	90 frames
Media Pool Audio File Format	WAV, MP3 and AIFF
Control Panel	Built in with camera control. Software panel included. Supports optional broadcast panel
Control Panel Compatibility	Compatible with ATEM 1 M/E Advanced Panel, ATEM 2 M/E Advanced Panel and ATEM 4 M/E Advanced Panel. Includes Mixer Software Control

	Panel.
Control Panel Included	Mixer Software Control Panel included free for Mac 10.12 Sierra or Mac 10.13 High Sierra or later and Windows 8.1 64-bit or Windows 10 64-bit.
Software Updates	Using USB connection directly connected to Mac or Windows computers. Includes Mixer Setup Utility.
Configuration	Set via Mixer Software Control Panel, excluding Mixer chassis IP address which is set via the Mixer Setup Utility connected via USB to chassis.
Power Requirements	**Power Supply -** 1 x Internal 100 - 240V AC. 4 pin 12V DC. Power Usage - 70W
Delivered with protective hard case	Included
Warranty	Minimum 24 months

3. Camera tripod system – 3 PCS

Pan Bar count	1
Payload	1.50-8Kg
Bowl size	75mm
Weight	6.3Kg
Spreader type	Ground
Material	Carbon Fiber
Transport length	840mm
Tripod stages	2
Height with spreader	0.57 to 1.74m
Height without spreader	0.41 to 1.69m
Video fluid head	Type FSB6
Temperature range	-40 to 60 °C
Tilt angle	90° to -75°
Camera plate/sliding range	120mm, quick release
Interface compatibility	Sideload
Counterbalance	10 counterbalance steps
Drag horizontal	4 grades of drag (0-3)
Drag vertical	4 grades of drag (0-3)

Payload Range (depending on C.O.G height of the camera) C.O.G. (Center of gravity height in mm)

C.O.G. (Center of gravity height in mm)	Min. Kg	Max. Kg

50	1.6	8.5
75	1.3	6.9
100	1.1	5.9

Touch Bubble	Self-illuminating Touch Bubble. The bubble will glow up to 20 seconds.
Ground spreader, padded bag	Included
Warranty	Minimum 24 months

4. 7” Monitor/Recorder HDR, 4K – 4 PCS

Physical Specifications	Dimensions (W x H x D mm) 214 x 127 x 45 Weight 709g / 25oz. Mount points 1 x Anti rotation 1/4" / 3/8 top and bottom
Environmental	Ambient operating temperature Up to 40° C Construction and Control Body Polycarbonate ABS Plastic Cooling Actively controlled fan and Heat Sink Tally light Rear and front Multi-function button Power / lock Screen
Power	Input voltage 6.2V to 16.8V Operating power 10 - 33W Compatible batteries NPF L series Built in battery No Battery Run time (Record) 5200mAh - up to 1.5hrs (monitor & record 4K 30p) / 7800mAh - up to 2.2hrs (monitor & record 4K 30p) Continuous power Dual battery slots DC in connector DC jack 2.1mm Dtap Via optional DTap to DC cable
Display	Touchscreen SuperAtom IPS panel (capacitive touch) Size 7.2" Resolution 1920 x 1200 PPI 327 Bit depth 10-bit (8+2 FRC) Backlight Type Dynamic zoned back light, Dynamic Full Array Local Dimming (FALD) 360 Zones Brightness (cdm2 / nits) 1500 / 3000 Peak HDR brightness Aspect ratio 1 :9 Color Gamut DCI-P3 (D65) Calibration support Atomos Calibrator with Xrite i1 Display Pro / Plus
Color Pipeline	Gamma Sony SLog / SLog2 / SLog3, Canon CLog / CLog2 / Clog3, Arri Log CEI160 / LogCEI200 / LogCEI250 / LogCEI320 / LogCEI400 / LogCEI500 / LogCEI640 /

	LogCEI800 /LogCEI1000 / LogCEI1280 / LogCEI1600, Panasonic Vlog, JVC JLog1, Red LogFilm / Log3G10 / Log3G12, FujiFilm Flog, PQ (HDR10), HLG, Nikon N-Log Gamut BT2020, DCI P3, DCI p3 65, Sony SGamut / SGamut3 / SGamut3.cine, Canon Cinema / DCI P3 / DCI P3+ / BT2020, Panasonic V Gamut, Arri Alexa Wide Gamut, Rec709, JVC LS300, Red DragonColor / DragonColor2 / RedColor2 / RedColor3 / RedColor4 / RedWideGamut 3D LUT Display.Cube Format 3D LUT Down StreamLoop out 3DLUT 50/50 Yes Monitoring Modes Native / HLG / PQ / 3D LUT
Video input	HDMI 1 x HDMI (2.0) 4k p60 SDI Quad link 3G SDI, cu 2 x 12G SDI backwards compatible, auto detection SDI RAW Apple ProRes RAW up to 6k Bit Depth 8/10Bit Video / RAW up to 16Bit Video Chroma Subsampling 4:2:2
Metadata	HDMI RAW - white balance, Exposure index, Shutter speed/angle, Iris F stop, ISO, Gamma, gamut SDI File Name from, RED Video Output HDMI 1 x HDMI (2.0) 4k p60 SDI loop out 1 x 2 x 12G SDI Backwards compatible Auto detection SDI Play out 2 x2 x 12G SDI Backwards compatible Autodetection level A and B selectable Video Chroma Subsampling 422 Bit Depth 10Bit Video
Streaming Web	USB UVC Optional via Connect 4k
Video converssion	HDMI to SDI Yes - Video and RAW SDI to HDMI Yes - Video and RAW
Audio In/OUT	Audio Quality 24/48kHz Audio Codec PCM HDMI 8ch 24Bit, input dependent SDI 12ch 24Bit, input dependent Analogue Audio in XLR via Optional Break out cable Analogue Audio Out XLR via Optional Break out cable Headphone out 3.5mm 2ch. Timecode / Sync Embedded HDMI and SDI Time of day Yes, Time and Date LTC LTC via BNC input in Record mode GenLock in Playback mode

Resolution and Frame Rates (Record, Monitor & Playback)	6k RAW - Only up to 30p via SDI Only 4k DCI 23.98/24/25/29.9/30/50/59.94/60p 4k UHD 23.98/24/25/29.9/30/50/59.94/60p 2K DCI 2046 x 1080 2k DCI: 23.98/24/25/29.9/30/50/59.94/60p / Sony FX9 RAW up to 180p FHD 1920 x 1080 Progressive 23.98/24/25/29.9/30/50/59.94/60/100/120p FHD 1920 x 1080 PsF - Converted to P and looped out PsF FHD 1920 x 1080 Interlaced 23.98/24/25/29.9/30/50/59.94/60i 1280 x 720p 50/59.94/60p
Recording CODEC	CDNG For SDI RAW inputs Only Apple ProRes RAW ProRes RAW, HQ Apple ProRes LT, 422, 422HQ Avid DNxHD DNxHD 220x,220,145,36 Avid DNxHR LB, SQ, HQ, HQX. Playback Playlist Yes, Create customer play lists from full or sub clips Loop Yes, with user customisable in / out markers Apple ProRes Raw Yes, recorded clips Apple ProRes Yes, with Linear PCM audio Avid DNx Yes, with Linear PCM audio
Recording functions	Pre-roll record Yes (HD 8s, 4K 2s) - Not available in RAW ISO Record Up to 4 x ISO up to 1080p 60 (3G SDI Level A ONLY) Switched Program Record Yes Up to 1080p 60 Multi Input / Switching SDI A/B toggle Yes, Up support up to 12G SDI per input Dual Input display Via Multi ISO input mode Multiple SDI input Up to 4 x up to 1080p 60 (3G SDI Level A ONLY) Input transitions Auto or manual XML transition
Supported media	Master Caddy I Not compatible SSDmini Yes with optional SSDmini handle CFast II Supported cards via optional AtomX CFast Adapter File Naming Unit Name - Scene/Shot/Take, Arri & RED via SDI File System ExFAT
On screen tools	Waveform Yes, 3 size / Position RGB parade Yes, 3 size / Position Vector scope Yes, 2 size / Position 1 x Zoom Yes. 1:1 Pixel mapping for 4k 2 x Zoom Yes Focus peaking Color selected / threshold setting / color/ Mono / edges only

	False color Yes, with Scale Zebra Yes, Adjustable Isolate color channel Blue Only Cine Frame Guides 2.4:1, 2.35:1, 1.9:1, 1.85:1, 4:3 Social Frame guides 9:16, 1:1, 191:1, 4:5 Safe areas Action and Graphic Grid markers 9 grid Anamorphic de squeeze 1.25x 1.33x , 1.5x ,1.8x ,2x Display Flip Vertical Only
Onboard Signal Processing	Pulldown Removal 24/25/30pSF > 24/25/30p (2:2 pulldown)60i > 24p (3:2 pulldown) 4K UHD Downscale for HD Loop out - 4K UHD to FHD DCI Crop Loop out - 17:9 to 16:9 Crop
Remote control	HDMI Auto HDMI Trigger, Supported Protocols - Canon, Sony, Atomos Open Standard SDI - SDI trigger camera selectable Serial 2.5mm Jack LANC control and calibration via optional USB to serial cable
Comanda Externa	Aplicatii suportate XMLCut tag EDL and Multicam with transitions in FCP XML Apple ProRes RAW Apple FCP, Adobe Premiere, After Effects, Avid Media Edius, Assimilate Scratch, Baselight Film Light Video Codecs All applications with support for Apple ProRes and Avid DNX in .MOV wrapper
Accesorii incluse	International power supply, carry case, quick start guide, hard flight case, 2 x 5200mAh battery, Fast charger, USB docking station, DC to D-Tap cable, 4 x Master Caddy II drive caddy, Power Supply, HDR Sun hood
Waranty	Minimum 1 year. Extended to 3 years on product registration

5. Mini Mixer – 1 PCS

Affordable live switcher with 4 standards converted HDMI inputs, USB webcam out, audio mixer with EQ and dynamics, 2D DVE, transitions, green screen chroma key, 20 stills for titles and much more! ATEM Mini Pro also includes recording to USB disks in H.264 format, a built-in hardware streaming engine for YouTube Live, Facebook, Twitch and more, plus multi view to see all cameras on a single monitor. The mini mixer will facilitate recording of 5 streams including all input as clean feeds for editing.

Total Video inputs	- 4

Total Outputs	- 2
Total Auxiliary Outputs	- 1
Total Audio Inputs	- 2 x 3,5mm stereo mini jack
Total Audio Outputs	No – just embedded
Time code connection	No
HDMI Video inputs	4 x HDMI tip A, 10-bit HD switchable
Video input Re-Sync	On all 4 HDMI inputs
Format and frame rate converters	On all 4 HDMI inputs
HDMI Program Output	- 1
Ethernet	Ethernet supports 10/100/1000 BaseT for live streaming, software control, software updates and direct or network panel connection.
Computer interface	1 x USB Type-C 3.1 Gen 1 for external drive recording, webcam out, software control, software updates and panel connection.
HD Video Inputs standards	720p50, 720p59.94, 720p60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 1080i50, 1080i59.94, 1080i60
HD Video Outputs standards	1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
Video streaming standards	1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
Video sampling	- 4:2:2 YUV
Color precision	10 bit
Color space	REC 709
HDMI Input resolutions from computers	1280 x 720p 50Hz, 59.94Hz and 60Hz 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94 and 60Hz 1920 x 1080i 50, 59.94Hz and 60Hz
Color space conversion	Hardware based real time
Upstream Keyer	- 1
Downstream Keyer	- 1
Chroma Keyer	- 1
Linear/Luma Keyer	- 2
Transition Keyer	DVE only
Total number of layers	5
Pattern generator	1
Color Generator	2

DVE with border and drop shadow	1
Audio Mixer	6 input x 2 channel mixer. Selectable On/Off/Audio-Follow-Video per channel plus separate gain control per channel. Level and Peak metering, Compressor, Gate, Limiter, 6 bands of parametric EQ. Master gain control.
Analog inputs	Unbalanced stereo
Analog input delay	Up to 8 frames
Input impedance	1.8k
Max Input level	+6dBV
Mic Plug in Power	Available on both 3.5mm mini jack connections
Direct Streaming	Direct live streaming using Real Time Messaging Protocol (RTMP) over ethernet or a shared mobile internet connection over USBC.
Direct Recording Video and Audio	USB-C 3.1 Gen 1 expansion port can record directly to external media.
Video Recording	4 x HDMI ISO inputs as H.264 .mp4 files at up to 70Mb/s with AAC audio. 1 x Program out as H.264 .mp4 file at the Streaming quality setting with AAC audio.
Audio Recording	6 x 2 channel audio inputs recorded as separate 24bit 48KHz .wav files. Including 2 x analog stereo audio inputs and 4 x HDMI 2 channel embedded audio inputs.
Switching	Program switching recorded as a DaVinci Resolve project .drp file.
Media Format	Supports media formatted ExFAT (Windows/Mac) or HFS+ (Mac) file system.
HD Multi View Monitoring	1 x 10 Views including left right configurable Program/Preview, 4 HDMI inputs, Media Player, Streaming Status, Recording Status and Audio Meters.
Media Player	1 player

Media Pool Still Image Capacity	20 with Fill and Key
Media Pool Still Image Format	PNG, TGA, BMP, GIF, JPEG and TIF
Channels	Fill and Key for each media player
Control Panel	Built in control panel. Software control panel with camera control included. Supports optional hardware panel.
Control Panel Compatibility	Includes Software Control Panel. Also compatible with ATEM 1 M/E Advanced Panel, ATEM 2 M/E Advanced Panel and ATEM 4 M/E Advanced Panel.
Control Panel Connection	Ethernet supports 10/100/1000 BaseT. Ethernet used for direct connection between panel and chassis or via network.
Control Panel Included	Software Control Panel included free for Mac 10.14 Mojave, Mac 10.15 Catalina or later and Windows 10 64 bit only.
Software Updates	Using USB or Ethernet connection directly connected to Mac OS X or Windows computers. Includes Switcher Utility.
Configuration	Set via Software Control Panel, excluding chassis IP address which is set via the Switcher Utility connected via USB to chassis.
Power Supply	1 x External 12V power supply
Warranty	Minimum 12 months

6. Professional DECT Headset, single ear – 1 set

Single ear set, self-contained, full duplex wireless headsets with one speaker. They include a flexible gooseneck microphone boom assembly that swivels 270 degrees to be worn on either left or right. Single muff headsets in order to keep one ear free / open to monitor the ambient environment while communicating.

Field programmable, the base systems listed below are expandable and can even be incorporated into a HUB or Interface system as needed.

Li Poly batteries and multi-Charger included.

Features	Li-Poly Batteries Provide continuous 6-hours of operation and are field replaceable Adjustable Mic Boom Rotates 270 degrees, worn on left or right ear Auto Mute Mute microphone simply by moving the boom to up position Volume Control Simple up / down push button adjustment Water resistant Silicone sealed for use outdoors in inclement conditions Field Programmable
Specifications	Standard - DECT 6.0 (Digital Enhanced Cordless

	Telecommunications) **Frequency** - 1880 – 1900MHz (EURO)
Tuning Range Receive (MHz)	**-** TX/RX: 1921.536 ~1928.448MHz
Maximum Transmit Power	**-** 100mW
Usage Type	**-** TDMA
Channel Tuning Step	**-** 1.728MHz
Weight	~ 115 g
Channel Bandwidth	- 1.728 GHz
Modulation Type	- GFSK
Transmission Speed	**-** 1.152 Mbps (Baud Rate)
Duplexing	**-**Time Division Duplex (TDD)
Speech Encoding	**-** ADPCM / 32bit/s
Range	**-** 400m
Headset Power Supply	**-** Rechargeable Lithium 3.7 V/ 800 mAh 3.0 Wh
Charger Power Supply	- AC Adapter 110-240V
Charge Time	- 3 hours
Operation Time	- 6 hours
Normal Condition of use	**-** 0 C - 40 C
Storage Temperature	-10 C - 60 C
System components	5-Person Headset System with batteries, 1 x Single-Ear Master Headset; 4 x Single-Ear Remote Headset; 8x Multi-Port Charging Base; Case Soft Padded; 5 x Lithium-Polymer Batteries
Warranty	Minimum 12 months

7. Digital photo Camera – 1 PCS.

Digital camera with 4K recording Camera, with high sensitivity 10,2 Megapixel MOS sensor and a Venus Engine processor or equivalent. Dual ISO standard in order to achieve high sensitivity and low noise recording in low light conditions.

SENZOR	
Sensor Type	MOS, 17.3 x 13 mm, 14 bit
Rezolution	11.93 MP (Effective: 10.28 MP)
Lens	
Lens mounth	Micro Four Thirds
Focus Control	
Focus Type	AF Contrast System
Focus Mode	Continuous-Servo AF ©, Flexible (AFF), Manual Focus (M), Single-servo AF (S)
GENERAL	

ISO	Auto, 160-51200 (Extended Mode: 80-204800)
Viewfinder	Viewfinder with real-time OLED display (3,680,000 dots), Eye Point 21 mm, 100% coverage
Display	3.2 inch (8 cm), Touchscreen TFT LCD cu 1.620.000 pixels, 100% coverage
Dust protection system	Da
Supported media	2 x SD/SDHC/SDXC
Reccording supported formats	Still: JPEG si RAW
	Video: PAL/NTSC Multisystem recording
	Video: AVCHD Ver. 2.0, H.264, MOV, MP4, MPEG-4 AVC/H.264
	Audio: AAC, Dolby Digital 2ch, Linear PCM
	Frame rates:
	4096 x 2160p at 23.98, 24, 25, 29.97, 50, 59.94 fps
	3840 x 2160p at 23.98, 24, 25, 29.97, 50, 59.94 fps
	3328 x 2496p at 23.98, 24, 25, 29.97, 50, 59.94 fps
	1920 x 1080p at 23.98, 24, 25, 29.97, 50, 59.94, 120, 240 fps
	10 bit 4K recording 4.2.2 with simultaneous output 10 bit 4.2.2. on HDMI
V-LogL Video reccording	Preinstalled
IN/OUT	USB tip C, USB 3.1 SuperSpeed Gen 1
	HDMI Type A (Full Size)
	External Microphone in / Line in (Stereo mini jack)
	Headphone Output (Stereo mini jack)
	Remote: 2,5 mm pentru telecomanda
	Integrated Stereo microphone and mono speaker
	Wi-Fi: YES
	TC in/out: 1 x BNC
Performance	Burst capacity: [14-bit] / AFS / MF: H: 11 frames / s, M: 6 frames / s (with Live View), L: 2 frames / s (with Live View in real time)) * When using the H-ES12060 lens./AFF/AFC: H: 7 frames / s (with Live View), M: 5 frames / s (with Live View real-time)), L: 2 frames / s (with Live View) * When using the H-ES12060 lens./[up 12 bits] / AFS / MF: H: 12 frames / s , M: 7 frames / s (with Live View), L: 2 frames / s (with Live View) * When using the H-ES12060./AFF/AFC lens : H: 8 frames / s (with Live View), M: 6 frames / s (with Live View), L: 2 frames / s (with Live View real time)) * When using the H-ES12060 lens.
Timer	10 sec, 2 sec
Dimmensions	138.5 mm x 98.1 mm x 87.4 mm
Weight	Maxim 580 g (body only)
	Maxim 660 g (body with battery and one SD)
Externall Microphone XLR connector	DMW-XLR1 – Included
Memory Slots 1and 2	2 x 128 Gb UHS-II / V90 / U3 / Class 10 or equivalent - present
Battery and charger	Included
Warranty	**Minim 24 months**

8. Handheld Stabilizer (Gimbal) – 1 PCS

Handheld Stabilizer (Gimbal), with ergonomic detachable handle, integrated joystick and push buttons, powerful motors with a large 6,5Kg payload, axis-locking system, external power input, remote

control system, Handheld stabilizer include wireless video transmission, professional focus and zoom controller, external battery, included extension arm to fit larger cameras.

Component	Requirement
Number of axes	3-Axis (Pitch, Roll, Yaw)
Rotation range	Yaw (Pan): 360° Pitch (Tilt): 360° Roll: 330° (-255 to 75°)
Load Capacity	0.6 to 6.49 kg
Ports	1 x USB Type-C (Power / Control) Input 1 x Proprietary (25.2 VDC Power) Input
Wireless Protocol	Bluetooth 5.0
Follow focus	Included
Trans mount Image Transmission System Transmitter	Included
Status display	OLED display
Battery	3 x 18650 2600 mAh Battery Runtime 12 Hours Lithium-Ion 9.8 to 11.1 VDC
Power	Operating V 9.8 to 25.2 VDC Operating Current 360 to 5400 mA (Maximum)
Operating Temperature	-10 to 45°C
Mounting	9 x 1/4"-20 Female
Dimensions	346 x 344 x 98 mm
Accessory clamp - smartphone	included
Weight	2.47 kg
Warranty	Minimum 12 months

9. Camera Lens SET – 1 SET - Micro Four Thirds

- MF 24mm T1.5 VDSLR MK2 MFT super wide-angle lens, T1,5-T22, 24 mm focal length, 13 elements in 12 groups, including 2x ASP, 4x ED, closest focusing distance 25 cm, length 121.9 mm, weight 636.0 g, focus throw 139°, aperture 48°, filter thread 77 mm.
- MF 35mm T1.5 VDSLR MK2 MFT wide angle lens, T1,5-T22, 35 mm focal length, 12 elements in 10 groups, including 1x ASP, 2x HR, closest focusing distance 30 cm, length 136.3 mm, weight 772.0 g, focus throw 146°, aperture 48°, filter thread 77 mm.
- MF 50mm T1.5 VDSLR MK2 MFT normal lens, T1,5-T22, 50 mm focal length, 9 elements in 6 groups, including 1x ASP, 1x H-ASP, closest focusing distance 45 cm, length 99.5 mm, weight 563.8 g, focus throw 150°, aperture 48°, filter thread 77 mm.
- MF 85mm T1.5 VDSLR MK2 MFT portrait lens, T1,5-T22, 85 mm focal length, 9 elements in 7 groups, including 1x ASP, closest focusing distance 110 cm, length 99.5 mm, weight 600.0 g, focus throw 140°, aperture 48°, filter thread 72 mm.

  Iris with 9 rounded blades.
  Gear rims for focus and aperture are positioned identically in order to easy use a follow focus system.

MF 24/35/50/85 MK2 VDSLR, consisting of:

- 1x super wide angle
- 1x wide angle
- 1x normal
- 1x portrait
  each of which comes with:
- 1x Lens Hood (removable)
- 2x Protective Caps (front and back)
- 1x Storage Bag
-

The four lenses will be delivered in an outdoor protective case dust proof and shockproof, with appropriate foam insert.

Warranty – Minimum 12 months

10. Panoramic Chroma Key Background – 2 PCS

Portable Chroma Key FX Background Kit Green with a 4mx2,9m usable surface includes three ultra-fast assembly aluminum frames, one clip on Chroma Key Green cover, four hinge clips, two tensioning bars and one soft carrying bag.

Specifications

Component	Requirement
Weight	Max 11 Kg
Horizontal dimension	4m
Vertical dimension	2.9m
Fabric Material	Synthetic
Color	Chroma green
Type	Solid Color
Frame	Aluminum with elastic cord inside
Tension bar	2 pcs
Accessories	Mounting accessories Extension fabric(strip) for seamless connecting 2 backgrounds Transport bag
Warranty	Minimum 12 months

VII. <u>Lot 7</u>

The technical specifications that indicate a certain origin, source, production, special procedure, production or commercial brand, patent, production license, *shall only be mentioned for the purpose of identifying the type of product,* and shall NOT impact the selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent».

1. **Professional PTZ camera – 5 PCS**

The professional PTZ camera shall have concurrent HDMI, 3G-SDI, USB 2.0 and IP stream ethernet outputs. The camera should be enabled with with NewTek's high-efficient IP technology NDI®| HX.

The PTZ camera allows the move to an all-IP infrastructure even for mobile applications. With IP deployment on existing networks all cameras detected within your network become directly available for use without complex configuration. Video, audio, control and power all with PoE connecting the - NDI -HX enabled camera to hundreds of systems, devices and applications that support NDI.

Lens	High-quality glass lens, 20x optical zoom and 55.2° horizontal field of view
Low light	YES - High SNR CMOS combined with digital noise reduction for a clear picture even under very low light conditions
Native resolution	1920x1080P60
IP- Features	The camera can be powered using PoE (802.3af) and can be accessed by web GUI, controlled by VISCA over IP/Onvif and stream the video
DUAL low latency IP-Stream with NDI HX	H265, H264, optional SRT and MJPEG compression at a bitrate up to 40Mbit enabling Full HD video stream by ultra-low latency over RTSP, RTMP, UDP, Unicast, Multicast and NDI®| HX support
Simultaneous Outputs	3G-SDI, HDMI, USB 2.0(1080p30) and IP.
Control	VISCA, Pelco-D/P via RS232, RS485, IP (VISCA, NDI®| HX), Onvif or IR. 255 presets with 0.1° accuracy.
Audio embedding	Balanced audio input with embedding into IP stream, SDI and HDMI outputs. Includes configurable audio offset.
Premium Features/Broadcast	SRT streaming, Tally light, configurable Color Matrix with additional License
Camera Specifications	
Video System	- 1920x1080/ 1280x720 p60/ 50/ 30/ 25/ 59.94/ 29.97 i60/ 50/ 59.94
Sensor	- 1/3" CMOS, 2.12mp, 16:9
Shutter	Auto, Manual, 1/25 ~1/10000
Scanning Mode	- Progressive, Interlaced (not over IP)
Zoom/Aperture/Focal length	- x20 Optical glass lens/ F1.8-F11/ 4.4-88.8 mm
Minimal Illumination	- 0.05 LUX
White Ballance	- Auto, Manual, One Push, 2400K-7100K in steps of 100K
Backlight compensation	- supported
Digital Noise	- 2D & 3D DNR

Reduction	
Signal to Noise ratio	>55dB
Horizontal FOV	- wide ~ tele 55.2° ~ 3.2°
Vertical FOV	- wide ~tele 42.1° ~ 2.4°
Horizontal rotation	-170° ~ +170°
Vertical Rotation	-30° ~ +90°
Pan speed range	1.7 ~ 100°/s
Tilt speed range	1.7 ~ 70°/s
H&V image flip	supported
Number of presets	- 255
Preset accuracy	- 0.1 degree
IP features	Video coding standard - H.265 / H.264 / MJPEG H.265 Profiles - main H.264 Profiles - main, base, high Main stream resolution - 1920x1080 / 1280x720 Main stream max frame rate - 60fps Main stream bitrate - 64 ~ 40960 Kbps Sub stream resolution - 320x180 / 320x240 / 640x360 / 1280x720 / 1920x1080 Sub stream max frame rate - 30fps Sub stream bitrate - 64 ~ 40960 Kbps Video bitrate type - Variable, Fixed Support protocols - RTSP, RTMP, ONVIF, SRT, Multicast, Unicast Audio standard - AAC / mp3 / G.711A Audio bitrate - 32, 64, 96, 128 Kbps Audio sample rate - 16, 32, 44.1, 48 kHz Audio line in - balanced audio line in via 5-way Phoenix connector.
Input Output interface specification	
HDMI out	- 1.4
SDI out	- 3G-SDI, SMPTE 425M level B, 8-bit RGB 4:2:2
USB out	- USB 2.0 (max. 1080p30)
Network Interface	- RJ45 100 Mbit
Standard NDI®	- NDI®| HX
Serial Communication	- RS232 mini-DIN-8, RS485 2pin Phoenix
Serial control protocol	- VISCA, PELCO-P, PELCO-D
Input voltage	- 12V
PoE	- PoE 12W (802.3af)
Power consumption	- 12W
Power supply	- 12V2A - included
Operating temperature	-5°C ~ 40°C
Storage temperature	-20°C ~ 60°C
Relative humidity	- 20% ~ 95% non-condensing
Bottom fastening screw thread	- 1/4" 20 UNC
Color	- Black
Dimensions	- 133 x 180 x 149 mm. excl. Connectors
Weight	- 1.5 kg
Power adapter, remote control,	Included

RS232 cable, RS485 2-way Phoenix connector, Balanced Audio Line-In 5-way Phoenix connector	
Warranty	Minimum 36 months

2. **PTZ PRO camera controller – 1 PCS**

The PTZ PRO camera controller shall be equipped with a Hall effect joystick and be able to control the following parameters: Iris, Shutter, Gain, White Balance, Pan, Tilt, Zoom position, memory presets and Cruise Control (record /play a camera movement from A to B).

The controller will have dedicated buttons and knobs for the main settings and actions

The controller must be used with a large variety of PTC cameras by the means of loading the correct control software and be able to control at least 2 camera models from 2 different manufacturer (different command protocols) in the same time.

The controller must be able to use the specific protocol used on the MVI-ONLINE platform.

General Characteristics

Control simultaneously different manufacturer cameras-(protocol)	Present
OLED Display	Present
Dedicated Focus Knob	Present
Illuminated numbered key for camera preset selection	Present x 10
3 axis Hall effect Joystick	Present x 1
Menu selector keys with user banks	Present
RGB backlit for camera selection and labeling	Present
Dedicated navigation keys for paging	Present
PoE - Ethernet interface (IEEE802.3af)	Present
Cruise control	Present
Programable buttons(keys)for controlling multiple devices (smart button)	Present
Dimensions	Minimum LxHxW 258x72x178mm
Power consumption	Maximum 5.9W
Power Supply	12V/1,25A
USB cable for programing	Present
UTP cable	Present

Warranty	Minimum 24 months

VIII. Lot 8

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1. **Mini Working Station – 2 PCS**

Component	Requirement
Chip	M1
Memory	16GB unified memory
Storage	1TB
I/O	2 x Thunderbolt / USB4 2 x USB-A HDMI 2.0 Gigabit / 10GB Ethernet 3.5mm headphone jack
Other	802.11ax Wi-Fi 6 IEEE 802.11a/b/g/n/ac compatible Bluetooth 5.0
Operating System	OSX
Warranty	**Minimum 12 months**

2. **Laptop 16" – 4 PCS**

Component	Requirement
Chip	M1
Chip	2.6GHz 6 core 9th generation Intel Core i7 processor, Turbo Boost up to 4.5GHz / Apple Silicon
Memory	16GB 2666MHz DDR4 onboard memory
Graphics	AMD Radeon Pro 5600M with 8GB of HBM2 memory and automatic graphics switching Intel UHD Graphics 630 / Apple Silicon
Storage	1TB SSD
Display	16" IPS 3072x1920 native 226 ppi 500 nit brightness
Battery	100 Whr battery
Chip	2.6GHz 6 core 9th generation Intel Core i7 processor, Turbo Boost up to 4.5GHz / Apple Silicon
I/O	4 x Thunderbolt 3
Other	802.11ac

	IEEE 802.11a/b/g/n compatible Bluetooth 5.0
I/O	4 x Thunderbolt 3
Warranty	**Minimum 12 months**

3. **Laptop 13" – 2 PCS**

Component	Requirement
Chip	M1
Memory	16GB unified memory
Storage	1TB
Display	13.3" IPS 2560x1600 native 227 ppi 500 nit brightness
Battery	58.2 Whr battery
I/O	2 x Thunderbolt / USB4
Other	802.11ax Wi-Fi 6 IEEE 802.11a/b/g/n/ac compatible Bluetooth 5.0
Chip	M1
Memory	16GB unified memory
Warranty	**Minimum 12 months**

4. **Tablet – 2 PCS**

Component	Requirement
Chip	A14 Bionic
Camera	12 MP wide camera F/1.8 aperture
Video recording	4k – 24fps, 30 fps, 60fps 1080p 30fps, 60fps
Storage	256 GB
Display	10.9" IPS 2360x1640 native 264 ppi 500 nit brightness
Battery	28.6 Whr battery
Operating system	iPadOS/iOS
Warranty	**Minimum 12 months**

IX - Lot 9

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mentioned for the purpose of identifying the type of product, **and shall NOT impact the selection or elimination of certain economic agents or products. These specifications shall be deemed as «or equivalent»**

1 Wirecast PRO License – 2 PCS

Technical specifications

Component	Specifications
Number of inputs	unlimited
Remote guest	7
Video production features	4096 x 3072px max resolution for project and output 5 Main Mixing layers Text, Title, Chroma Key and incorporated transitions Custom transitions and play lists Advanced audio mixer Social media integration Fille pool PTZ Camera Control Pro Audio FX Replay, score boards for sport events Virtual Sets and backgrounds
Output destinations	Unlimited output destinations + unlimited recording channels Virtual camera and virtual microphone Output 1-17 windows - Output multi-viewer SDI/HDMI Output and secondary, NDI – PGM Output Individual channels ISO recording Multichannel audio recording
Operating System	OSX/Windows
Warranty	**Minimum 12 months**

2 Payback PRO Collection IA V6 – 6 PCS

Technical specifications

Parameter	Requirements
Playback Pro IA V6 License	Internet activated License
Warranty	**Minimum 12 months**

3 Office 2019 License – 6 PCS

Technical specifications

Parameter	Requirements
Office 2019 Retail EN License	Electronic delivery Retail License
Version	Home and Business
Operating System	OSX and Windows
Warranty	**Minimum 12 months**

For product delivery, the Tenderer shall take the following into consideration:

a) The submitted technical specifications;
b) The products offered/supplied must be new and unused;
c) The Tender specifications are an integral part of the documentation to be submitted in order to award the contract and shall constitute the entirety of requirements to be used as basis by each economic agent to draft the technical and financial offer;
d) The Tender specifications must comprise technical specifications, as well as instructions concerning the basic rules that must be observed by potential economic agents upon drafting the technical offer to be in line with the requirements of the contracting authority. **The Tenderer must specify the product code and name of the equipment manufacturers included in the offer. A detailed description of the features/performance of the products offered must also be provided.**
e) In case of inconsistencies, the official specifications published by the equipment/software manufacturer (valid on the date of the tender, for the products offered) shall be used as reference, and the content thereof shall prevail any other technical details included in the offer.
f) **All technical and functional features shall be backed by technical sheets, catalog sheets issued by the manufacturer.**
The Tenderer may submit other documents (technical sheets, fliers, catalogs, etc.) to confirm the technical features and performance of the type of product included the offer and any other information, that is not necessarily required as per the Tender specifications but is deemed necessary by the Tenderer.
g) **The requirements set out shall be deemed minimal and mandatory.**

1. REQUIREMENTS ON PRODUCT QUALITY ASSURANCE

The vendor must guarantee that all products provided through contract are new and unused.

The products supplied shall observe the technical requirements set out.

The products supplied must observe the latest standards on energy performance.

Where no such applicable standard or regulation is mentioned, the national and European standards and regulations in force shall apply.

The quality of the products acquired shall be determined by the persons responsible appointed by the buyer.

The quality of the products shall be checked and confirmed, upon delivery, based on the quality and compliance certificate.

Any hidden faults found after reception shall not exonerate the vendor from the obligation to substitute the product in question within 15 working days since such fault was found.

2. PACKAGING REQUIREMENTS

All products shall be presented in the original package provided by their manufacturer.

The Vendor must wrap the products to make sure they withstand, without limitation, rough handling during transport and movement, as well as exposure to extreme temperatures, sun and bad weather during transport and outdoor storage, thus making sure that the products arrive at their final destination in good condition.

All packaging materials used for the products, as well as all materials used to protect the packages (wooden pallets, protection wrap etc.) shall become the property of the buyer.

3. DELIVERY REQUIREMENTS:

a. The products shall be delivered at the registered office of the contracting authority. The products shall be transported by the Vendor inside the locations indicated by the Buyer's representative. Delivery inside the space shall fall under the responsibility of the vendor. Costs related to transport, assembly, rendering into operation, as well as any other costs related to product delivery shall be borne by the vendor.

b. Delivery term: 30 days since the date of signing of the contract by both parties

c. Final reception term: max. 5 days since the date of delivery of the equipment. The assembly and rendering into operation of the equipment must be performed by authorized persons, where needed.

d. Delivery should be accompanied by the following documents, depending on the case:

a) invoice;
b) quality, compliance, warranty certificate;
c) user guide for each product;
d) confirmation of reception drafted by the Vendor and signed by both the Vendor and the Beneficiary;
e) Confirmation of rendering into operation, installation, calibration, testing and programming, drafted following assembly.

Delivery shall be deemed complete once all requirements concerning product reception are met, namely after the assembly and rendering into operation of the products requested.

4. PRODUCT RECEPTION:

The vendor shall ensure the prompt and appropriate delivery of the products, accompanied by the invoice, product quality and compliance certificate, warranty certificate, user guide and reception confirmation form.

Products with damaged packaging, with visible alterations in terms of shape or content or with an appearance that is inconsistent with the product markings shall not be accepted during reception.

Reception shall consist in checking the quantity and quality of the products part of the offer and shall take place at the Beneficiary's main office and will end with the conclusion of a reception confirmation form signed by the representatives of the Vendor and those of the Beneficiary.

If a product is non-compliant with the requirements set out in the proposed offer, the Beneficiary is entitled to reject such product and the Vendor, without changing the price of the contract, must:

i. replace the rejected product, within 15 working days since the buyer's notification;
ii. make all necessary changes to make sure the products/services match the technical specifications, within 15 working days since the buyer's notification.

Once any potential cases of non-compliance are solved, the final quantitative and qualitative reception form shall be concluded and signed by the representatives of the Vendor and of the Beneficiary.

If any faults are found after the reception of the products, the Vendor must replace the respective products within maximum 15 working days.

5. WARRANTY:

The warranty period granted by the Vendor is set out in the Tender specifications for each product.The warranty period shall begin on the date when the products are rendered into operation and received.

The Beneficiary is entitled to notify the Vendor at once, in writing, of any complaint that may arise in connection with the warranty.

Upon receiving such notification, the Vendor must remedy the fault or replace the product within the period agreed upon, with no additional costs for the Beneficiary, at the delivery address. The products which, during the warranty period, replace faulty products shall be covered by a new warranty which shall become effective on the date of product substitution.

If the Vendor, after being notified, fails to remedy the fault during the agreed period, the Beneficiary may take remedial actions at the risks and at the expense of the Vendor, without this impairing any other rights of the Beneficiary awarded by the contract.

During the warranty period, all costs related to remedying of faults shall be incurred by the Vendor (diagnosis, transport, insurance, customs fee, service fee etc.).

6. PAYMENT

In consideration for the products provided, the Vendor shall receive the value of these products, in the bank account indicated in the acquisition contract, by payment order, within

maximum 90 days since the final reception of the products, of the invoices, of the corresponding documents (quality, conformity, warranty certificates) and of the records of reception confirming the quantity and the rendering into operation of the system, signed by both parties with no objection – after the delivery and the operation of the products delivered is confirmed.

The contract value shall be paid through Requests for reimbursement and Requests for payment, as per GEO 40/2015 on the financial management of EU funds for the program period 2014 - 2020, as subsequently amended and supplemented, and of GD 93/2016 approving the Methodological rules for the implementation of the provisions of GEO 40/2015, as subsequently amended and supplemented.

In case of offers expressed in Eur, the value used for Eur/Ron exchange shall be the InforEuro exchange rate 1 Eur = **4,7552 Ron**, valid on the date of launch of the ROP Guidelines 2.1A posted on the European Commission website (https://ec.europa.eu/info/funding-tenders/how-eu-funding-works/information-contractors-and-beneficiaries/exchange-rate-inforeuro_en).

7. RESPONSIBILITIES OF CONFERENCE SYSTEMS SRL

CONFERENCE SYSTEMS SRL shall guarantee the confidentiality of the contract, shall protect trade secrecy and the tenderer's copyrights.

CONFERENCE SYSTEMS SRL undertakes to acquire, purchase and pay the price agreed upon in the public acquisition contract.

CONFERENCE SYSTEMS SRL undertakes to receive the products within the deadline agreed.

CONFERENCE SYSTEMS SRL undertakes to facilitate the vendor's access to facilities and/or information requested as per the contract and deemed necessary to fulfill the objectives thereof.

Conflict of interests

During the awarding procedure, CONFERENCE SYSTEMS SRL must take all necessary measures to prevent, identify and remedy conflicts of interests, in order to avoid the distortion of competition and ensure a fair treatment for all economic agents.

Conflict of interests means any situation where the staff of CONFERENCE SYSTEMS SRL involved in the awarding procedure or with a power to sway the result thereof, have a direct or indirect financial, economic or other kind of personal interest, that may appear to have compromised their objectivity or autonomy in the awarding procedure context.

Measures

The Vendor shall take all necessary measures to prevent or stop any situation that may compromise the objective and unbiased execution of the *Contract*. Conflicts of interests may occur particularly as a result of economic interests, political preferences or nationality affinities, kinship or any other shared connections or interests. The *Buyer* must be notified in writing at once of any conflict of interests that may occur during the execution of the *Contract.*

8. ORGANIZATION AND METHODOLOGY

The tenderer shall submit its technical offer based on the requirements of the Tender specifications. The technical proposal must be structured so as to facilitate the point-by-point assessment of the answers, in relation to the tender specifications, by the committee nominated to assess tenders. The technical proposal must reflect the fact that the tenderer undertakes all requirements/ obligations set out in the Tender specifications. A detailed description of the features/performance of the products offered must also be provided.

The Tenderer must specify the product code and name of the equipment manufacturers included in the offer. A detailed description of the features/performance of the products offered must also be provided.

9. PRESENTATION OF THE FINANCIAL OFFER

Estimated value per product must not be exceeded.

The document though which the economic agent expresses the will to legally engage in a contractual relationship with the contracting authority is the Form of Tender. The Form of Tender comprises the price, which shall remain fixed for the entire duration of the contract. The Form of Tender shall also comprise all expenses incurred to execute the contract object. The offered price shall comprise all products requested. Partial offers shall not be accepted. The offer submitted must contain details in terms of price per unit for each product requested. The offer must also contain a total price, with and without VAT, expressed in Ron. The price cannot be modified.

Offers may be submitted for one or several lots. All product prices shall be expressed in double-digits numbers, without VAT, and shall remain fixed for the entire duration of the contract.

The offer shall remain valid for 60 days and shall be fixed and binding in terms of content throughout the entire period of validity.

In case of offers expressed in Eur, the value used for Eur/Ron exchange shall be the InforEuro exchange rate 1 Eur = **4,7552 Ron**, valid on the date of launch of the ROP Guidelines 2.1A, posted on the European Commission website (https://ec.europa.eu/info/funding-tenders/how-eu-funding-works/information-contractors-and-beneficiaries/exchange-rate-inforeuro_en).

Drafted by