

Technical Specifications*[This table shall be completed by the Tenderer in columns 2, 3, 4, 6, 7, and by the Contracting Authority in columns 1 and 5.]*

Procurement Procedure No.: ocds-b3wdp1-MD-1755094527752 dated 16.09.2025
Object of the Procurement: Audiovisual system for debriefing and simulation for the training of medical personnel

Description of goods/Services	Model/Type	Country of origin	Manufacturer/Supplier	Technical specifications required by the contracting authority	Technical specifications proposed by the tenderer	Applicable Standards / References
1	2	3	4	5	6	7
<i>Annex no. 1</i> Lot No. 1 Audiovisual Debriefing and Simulation System for Medical Personnel Training Description of the premises and the software 1. Technical framework conditions 1.1 Preliminary remarks The subject of the tender is the delivery, installation and commissioning of the system described below, including all components. All specialist soldering and patching work, the assembly of the plug connections, internal cabling, the power sub-distribution of the system as well as all consumables and fastening materials necessary for the legally compliant operational suitability of the system components are included in the subject matter of the tender and are therefore to be provided by the contractor. The signal supply lines to the plant room laid in the suspended ceiling are provided by the customer and must be agreed with the electrical planner. All cables used in the visible area must be white; this only does not apply if there is a deviating specification. In addition, the quality and design of all cables used must correspond to the state of the art. Furthermore, all cables required for the subject of this tender must be halogen-free. The system components must be configured and arranged according to user requirements. In addition, all system components must be labeled according to user requirements. Furthermore, all system components must be secured in accordance with the applicable regulations. In addition, the Contractor must provide its services with the care of a specialist in accordance with the generally recognized rules of technology, in						In accordance with SIA RSAP

compliance with all applicable laws and regulations, all relevant standards and technical guidelines, the safety regulations and in compliance with all conditions required by the authorities.

1.2 Description Audiovisual recording and debriefing system for simulation training

The PMSI National Center for Prehospital Emergency Medical Assistance is planning to set up Emergency, Disaster and Crisis Medicine Training Center in which simulation training focusing on communication and assessment will be carried out. An audiovisual recording and debriefing system is to be purchased for this purpose. This must be modular and expandable to allow for future expansion. Part of the modular expandability is the ability to seamlessly combine mobile A/V simulation systems with the permanently installed system.

The hardware and software must be coordinated with each other. The software developed for planning, controlling, recording, and debriefing simulations in the healthcare sector must be state of the art and guarantee scope for future developments. All components must be perfectly coordinated and implemented in the corresponding rooms.

The system that is the subject of this order comprises **6 simulation rooms, 5 control rooms, 3 debriefing rooms and a technical/server room.** The integrated system shall include all equipment and software necessary to fully equip the following premises (see room plans) in accordance with the requirements and functions described in this service book. The system will be fully implemented and managed by the successful provider who will ensure the seamless integration of the proposed solution in relation to the requirements and premises.

All rooms of the Center must be used simultaneously, the simulation training or exam must be filmed, viewed live and played back for debriefing.

1.2.1 Simulation rooms

The simulation rooms are to be equipped with IP cameras, microphones and loudspeakers. In addition, a screen should be provided for the display of media files.

Voice quality is an important criterion for the audio system. This should be clearly understandable to the best of our ability. All room microphones must transmit their signals via the Dante network protocol (<https://www.audinate.com>) and must be implemented in a central, professional digital audio optimization system. The audio signals must therefore be enhanced by a digital audio DSP with functions such as Acoustic Echo Cancellation (avoiding echo or feedback of the voice-to-room), Background Noise Compensation and Automated Gain Control before they are recorded or streamed.

Simulation rooms

Room 030 Sală: simulatoare electronice (41 m²)

Room 104 Sală: simulator traumă, adult, pediatrie, naștere (22 m²)

Room 106 Sală: simulator „ambulanță” (37 m²)

Room 116 Sală: simulator traumă, adult, pediatrie, naștere (40 m²)

Room 129 Sală: simulator „dispecerat” (25 m²)

Room 132 Sală: simulator „ambulanță” (34 m²)

1.2.2 Control rooms

In the control rooms, users can view and control the video and audio signal via control software and start and stop the scenario recordings. A comment function makes it possible to add a unique time stamp to observations, comment on them and find them again later in the debriefing. Ideally, the control software is operated via 2 screens with touch input. However, conventional operation via keyboard and mouse must also be possible.

Tablets should be provided as a mobile solution for inserting time stamps and comments or filling in checklists. Ideally, these are also used to control debriefing.

Push-to-talk microphones must be provided for communication in the various rooms. These should enable the following communication variants:

- Voice to Room (permanently installed loudspeakers in all simulation rooms)

It must be possible to select all output devices from all five control rooms. Ideally, only one microphone is required for this.

A recording device via HDMI or video grabber should be provided for the integration of external video sources (e.g. patient vital monitor). In addition, other I/O interfaces should enable the integration of other devices (e.g. via UDP).

Control rooms

Room 031 Încăpere IT - Control Room 1 (11 m²)

Room 105 Încăpere IT - Dual Control Room 2 (8 m²)

Room 115 Birou operator IT - Control Room 3 (12 m²)

Room 129 Încăpere IT - Control Room 4 (5 m²)

Room 131 Încăpere IT - Control Room 5 (8 m²)

1.2.3 Debriefing rooms

A large-screen TV is planned in each debriefing room to display live streams during the scenario and video recordings during debriefings.

As already mentioned, the debriefing software should ideally be controlled via a tablet. The debriefing is based on the timestamps set during the recording and the notes. The timestamps set should only be visible on the tablet for control purposes, but not on the debriefing screen. The video should only be played back if it has been started on the tablet.

The video must be played back directly from the software. Manually searching for the video in the recording folder in the file structure of the recording computer is not permitted.

Debriefing rooms

Room 130 Sală: brifing 1 (21 m²)

Room 117 Sală: brifing 2 (19 m²)

Room 103 Sală: brifing 3 (26 m²)

1.2.4 Technical room/IT room

Servers, IT center etc. are to be located in room 114 (16 m²) to minimize disruption (noise, heat dissipation).

Technical room/IT room

Room 114: Technical room (16 m²)

1.3. Usecase

1.3.1 Preparation

The simulation room is checked in preparation for simulation training. The viewing angles of the cameras are checked for this. Ideally, a live stream is available on a tablet or smartphone for this purpose.

1.3.2 Simulation training

During the simulation, the participants work through a scenario played out by actors. Instructors and observers are not in the same room in order to make the situation as realistic as possible. Control and observation are carried out from the control room or the debriefing room.

The live transmission usually includes several video streams from different angles or from other playback devices (e.g. surveillance monitor).

The cameras are controlled from the control room. In addition, instructions are given to various audio devices (voice to room).

All audio and video signals that were recorded, as well as the time stamps and annotations that were created during the recording, are saved for immediate playback during the debriefing or archived long-term for the documentation of examinations. Ideally, the annotation can be assigned to an instructor.

1.3.3 Follow-up

The debriefing takes place directly after editing the scenario in the debriefing room. The entire video is not shown, but only selected sequences. This requires direct access to the timestamps and comments in the debriefing software. During the debriefing, the group uses the video to identify and discuss good and less good solutions. This provides optimal support for learning through the AV system.

2. Technical specifications

2.1 Central server cabinet

The Center has a technical room in which a server cabinet in 19" format may need to be installed. The required network and audio technology must be installed in this.

- Multiple servers can be installed. The particular specification will depend on the requirements of the provider and must be powerful enough to easily manage all the tasks required for the overall operation of the AV system. The servers must be able to record all cameras in the system simultaneously and maintain a central database. The dedicated server shall be located in a dedicated storage room at the simulation center. It must be possible to connect to the facility's network. In this case, hardware support is also the responsibility of the provider.

- If installed on a dedicated server, the server system must store up to 5000 hours of video recordings and have a RAID 6 configuration or similar. For long-term storage, a backup storage system may be provided by the facility.
- a central audio DSP system with professional acoustic echo cancellation (AEC), background noise compensation, automatic gain control and equalizer for all microphones in the care lab.
- all network switches (PoE or PoE+) for the proper operation of the system
- All additional devices required for full system operation can be placed in the server room.

All cabling (network connections terminated at the patch panel) are provided by the contracting authority.

2.2 Simulation rooms

Each of the following simulation rooms:

- 104: simulator traumă, adult, pediatrie, naștere (22 m²)
- 106: simulator „ambulanță” (37 m²)
- 116: simulator traumă, adult, pediatrie, naștere (40 m²)
- 129: simulator „dispecerat” (25 m²)
- 132: simulator „ambulanță” (34 m²)

is to be equipped with the following components:

- 1 pc. IP camera for fixed installation, FullHD quality; 2.5x optical zoom and autofocus; control via software, ceiling mounting
- 1 pc. PTZ IP camera for fixed installation, FullHD quality; 10x optical zoom and autofocus; control via software, ceiling mounting
- 1 pc. Patient-monitor capture device for capturing the video signal from vital monitors with video-out
- 1 pc. Professional microphone; mounted in or on the ceiling
- 1 pc. Professional loudspeaker with sufficient volume for clear instructions from the control room; ceiling mounting
- 1 pc. All-in-One PC with 24" touchscreen display for media playback PC (media screen).

- 030: simulators electronice (41 m²)

This room includes a slightly extended configuration:

- 2 pcs. IP camera for fixed installation, FullHD quality; 2.5x optical zoom and autofocus; control via software, ceiling mounting
- 4 pcs. PTZ IP camera for fixed installation, FullHD quality; 10x optical zoom and autofocus; control via software, ceiling mounting
- 1 pc. Patient-monitor capture device for capturing the video signal from vital monitors with video-out
- 2 pcs. Professional microphone; mounted in or on the ceiling
- 2 pcs. Professional loudspeaker with sufficient volume for clear instructions from the control room; ceiling mounting
- 1 pc. All-in-One PC with 24" touchscreen display for media playback PC (media screen).
- 1 pc. Portable wireless WiFi camera, FullHD, point-of-view perspective, minimum 3 hours battery life

2.3 Control Rooms

Control Rooms 031, 115, 129, 131

The following control rooms have identical configurations:

- 031: Control Room 1 (11 m²)
- 115: Control Room 3 (12 m²)
- 129: Control Room 4 (5 m²)
- 131: Control Room 5 (8 m²)

Each room must include:

- 1 pc. Control PC, high-performance, mini form factor
 - 2 pcs. Monitors, 24" or larger with touch-functionality, keyboard and mouse
 - 1 pc. Conference microphone, control station with 2 channels
 - 1 pair Active desktop loudspeakers
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- 105: Dual Control Room 2 (8 m²)

This room requires:

- 2 pcs. Control PC, high-performance, mini form factor
- 4 pcs. Monitors, 24" or larger, with keyboard and mouse
- 2 pcs. Conference microphone, control station with 2 channels
- 4 pcs. Headphones for operator monitoring
- 2 pcs. Amplifier for headphones to connect multiple headphones to one PC
- 2 pairs Active desktop loudspeakers

2.4 Debriefing Rooms

Debriefing Rooms 103, 117, 130

Each of the following debriefing rooms requires the same configuration:

- 130: Briefing Room 1 (21 m²)
- 117: Briefing Room 2 (19 m²)
- 103: Briefing Room 3 (26 m²)

Required components per room:

- 1 pc. Debriefing PC system, mini format, capable of fulfilling all media and debriefing operations
- 1 pc. Remote control tablet for managing live transmissions and debriefing playback
- 1 pc. Sound bar, wall-mounted
- 1 pc. Professional display (rated for 24/7), minimum 75", 4K resolution, wall-mounted

2.5 Network and Infrastructure Requirements

- WiFi coverage must be ensured in all simulation rooms, control rooms, and debriefing rooms. The wireless network must support stable operation of mobile and tablet-based AV control and video playback across the entire AV system.
- A central AV server must be provided to handle recording, streaming, and media playback functionality.
- An audio DSP (digital signal processor) is required for central audio signal management and routing.
- All required network switches (PoE and/or standard) for AV signal distribution and network connectivity must be provided and installed in the designated server room.

3. Functional and software requirements

3.1 User accounts and security roles

Users must be able to log into the system with their access data and have access to the videos according to their assigned security roles. Administrators must be able to create different access data for users and assign different security roles. A possibility of authentication via LDAP protocol, as well as single sign-on via Microsoft 365 (SAML or OAuth.) to integrate the system into an existing user login system is desired.

3.2 Preparation of the scenarios

The software must offer the option of preparing and editing scenario templates and uploading media for them. A scenario template can contain the following:

- Various media types (images, videos, PDF documents), which can be displayed via the media screen in the simulation rooms.
- Audio files that can be recorded via the voice-to-room to output a wide variety of ambient sounds.
- Checklists that can be used by teachers for assessment.
- Different types of symbols for bookmarks that can be used for commenting in the respective scenario.

3.3 Control and recording software

- The control software must be simple and intuitive to operate. Operation via a touchscreen is desirable.
- The latency of the live transmission of all video streams must be as low as possible - less than 0.3 seconds required.
- Room Audio must be time synchronized with video streams.
- All video sources (cameras and video grabbers) connected to the system must be accessible via the control software. The number of possible video sources must not be restricted on the software side in order to enable future expansion of the system.
- Option to control the cameras (moving, zooming, focusing) directly from the software without additional external hardware (e.g. joystick).
- Option to combine the video sources into several logically connected views to enable simultaneous viewing of the scene from several

angles and also to display the data of any surveillance monitor. It must be possible to name and save these views individually. It must also be possible to arrange the individual video streams in different layout patterns (e.g. quad-split, 1 large and 3 small videos, picture-in-picture, etc.).

- The control software must display a live stream of all video feeds of the currently activated view.
- System must record metadata (e.g. teacher, participants, date, time, etc.). Ideally, this is done via unique IDs of the persons involved.
- Starting and ending a recording must be possible using buttons in the software. When recording is activated, all activated audio and video feeds of the current view must be recorded. Each video feed must be recorded separately and be at least 1080p HD with a frame rate of 25 frames per second or higher. The software must be able to record videos from several rooms simultaneously.
- It must be possible to broadcast the ongoing recording live to one or more rooms. The option of a live stream via MS Teams is ideal. The live transmission may only play the video views and the synchronized audio, but not the readings and annotations made by the teacher during the simulation.
- Teachers must be able to mark and comment on events during the recording. This should be done by tapping/clicking the relevant symbol on the user interface and setting a time marker. These time markers are visible in a timeline or chronological marker list. It must be possible to add comments to the events via keyboard input.
- During the simulation, the electronic checklists in the control software must be able to be filled in and receive at least three different statuses (e.g. not fulfilled, partially fulfilled, fully fulfilled)
- It must be possible to control the sensitivity (volume) for all microphones individually in the software. It must be possible to activate and deactivate the microphones individually.
- The voice-to-room and voice-to-patient audio tracks must be recorded directly from the microphone in the control room.
- Ideally, the media screens in the simulation rooms and the associated debriefing rooms are controlled via the control software. The teacher must be able to select images, videos or PDF documents from the system's media database and activate and deactivate their display on the media screens.

3.4 Marking and annotating via tablets

It should also be possible to set timestamps and comments using tablets or other mobile devices. It should also be possible to complete checklists on a mobile device. These recordings should be provided with the ID of the respective person and included in the timeline or the chronological marker list of the recording. This option should function simultaneously with annotation in the control room.

3.5 Live viewing and debriefing software

The software installed on the PCs in the debriefing rooms must support the display of live streams from each simulation room and enable the playback of videos for the purpose of video-based debriefing. The recorded videos must be available for video debriefing immediately after the end of the recording. It must also be possible to start the recording of the next scenario in the control room while the previous scenario is being discussed in the debriefing room.

The software package for the debriefing ideally consists of two parts. On the one hand, this is the playback software for the recorded videos, which are played on the screen of the debriefing room via a PC installed there. On the other hand, there is a tablet or other mobile device that can be used to control the debriefing.

The teacher must be able to open the recorded video with the video player, select the respective sequences via the time stamps set during the recording and start the video 10 seconds before the time stamp. The time stamps and comments are displayed on the mobile device for control purposes. The display on the screen is not necessary; if present, it must be possible to deactivate it.

The video is displayed in the view as it was set during recording. However, it must be possible to play back individual video feeds in full-screen mode.

The files that were displayed on the media screen during the simulation must also be able to be displayed during the debriefing.

3.6 Browser-based access

In addition to the access options to the software (control, debriefing), access to the stored recordings must also be guaranteed via browser-based access (including user authentication). These must be searchable and filterable according to various characteristics (e.g. date, participants, ID, scenario, etc.). If the security role of the logged-in user allows it, it must be possible to edit metadata and delete videos. The browser-based interface must also offer an export function for individual video files containing all recorded audio and video streams. The exported video must be in a resolution of at least 1080p and in a standard format (e.g. mp4) and must be able to be re-encoded. The recording archive should be accessible to all authorized computers in the facility's network.

Ideally, scenarios can also be created and edited via browser-based access to the control software. It should also be possible to upload and provide media files to the media archive via the browser.

4. Planning, installation and commissioning

The offer must include the costs of planning, delivery, configuration, and commissioning of all audiovisual equipment. The installation must be carried out in accordance with the best industry standards and norms applicable at the installation site.

Complete documentation must be provided:

- Professional CAD room plans with the mapping of all equipment
- Block diagrams of entire system and all components
- Detailed cable pulling plans for the system

Network cabling and audio cabling between the rooms is not to be provided. Star-shaped CAT7 network cabling is provided between the central server cabinet and all network devices (cameras, computers) in the care laboratory. Star-shaped audio cabling between the central server cabinet and the individual microphones and loudspeakers in the various rooms is also provided.

Once the audio components have been installed, the speakers and microphones must be individually adjusted and levelled to the room conditions. This includes

- Loudness/Volume equalization (same volume in all rooms)

- Echo cancelation
- Filtering of static background noises
- Dynamic optimization via EQ and compressors

5. Training

The offer must include suitable training packages (at least two full days of on-site training) for both the technical and educational staff.

6. Warranty

The supplier shall provide a minimum warranty of 2 years for all equipment and installations, as follows:

- **In the first year of the warranty:** replacement of defective equipment and installations.
- **In the following warranty years:** repair of equipment and installations. If repair is not possible, the equipment and installations shall be replaced.

All replaced equipment and installations shall be new.

7. Maintenance and support

The supplier must provide a maintenance and support package for a period of 5 years to ensure the continuous operation and integrity of the system.

This includes:

- Hardware and software support during business hours (Monday to Thursday 8-17h CET, Friday 8-15h CET), available by e-mail and telephone in English
- Remote maintenance of the software via the Internet (Teamviewer or similar).
- Software updates at least once a year

8. Privacy policy

Due to the highly sensitive nature of the audio and video data processed, the system must comply with Emergency, Disaster and Crisis Medicine Training Center's privacy policy. The data protection guidelines are intended to ensure that sensitive information remains within the protected network and that the risk of unauthorized disclosure or unauthorized access to personal data is minimized.

The following guidelines must be observed:

The processing and storage of personal data, in particular audio and video recordings, may only take place on servers and computers in the local network of the Emergency, Disaster and Crisis Medicine Training Center. The storage of personal data on external servers or computers outside the network is not permitted. The rules for the processing and storage of data include the transmission of audio and video recordings between mobile and stationary systems. This means that the transfer of data may and must only be possible in the local closed network without an internet connection.

Annex no. 2						
Technical Specifications						
Description of goods/Services	Model/Type	Country of origin	Manufacturer/Supplier	Technical specifications required by the contracting authority	Technical specifications proposed by the tenderer	Applicable Standards / References
Sistem audiovizual de debriefing și simulare pentru instruirea personalului medical	AXIS P3265-V Network Camera	Poland	Axis	SIMULATION ROOMS Room 030 Sală: simulatoare electronice (41 m²) IP-Camera, FullHD, 2.5x Optical Zoom, Dome Format Type: Fixed dome camera for indoor surveillance Functions: min. pan, tilt, rotate Housing: min. IP52 and IK10 certified Resolution: min. 2 MP FullHD 1920x1080 Optical Zoom: min. 2.5x Frame Rate: min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz; min. without WDR 50/60 frames per second at 50/60Hz Adjustable Camera Angle: min. +/- 180° pan min. +/- 75° tilt min. +/- 175° rotate Memory: min. 1024 MB RAM min. 8192 MB Flash Video Compression: min. H.264, H.265, Motion JPEG Video Streaming: min. multiple individually configurable video streams in H.264, H.265, and Motion JPEG Adjustable frame rate and bandwidth Low-latency mode Multi-view min. up to 2 individually cropped view areas at full frame rate Image Settings: min. saturation, contrast, brightness, sharpness, forensic min. WDR up to 120 dB depending on the scene min. white balance min. image rotation, mirroring min. dynamic text and image overlay Network Protocols: min. IPv4, IPv6, USGv6, ICMPv4, ICMPv6 Network Security: min. IEEE 802.1X, IEEE 802.1AR, Network Time Security min. IP address filterings	Type: Fixed dome camera for indoor surveillance Functions: min. pan, tilt, rotate Housing: min. IP52 and IK10 certified Resolution: min. 2 MP FullHD 1920x1080 Optical Zoom: min. 2.5x Frame Rate: min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz; min. without WDR 50/60 frames per second at 50/60Hz Adjustable Camera Angle: min. +/- 180° pan min. +/- 75° tilt min. +/- 175° rotate Memory: min. 1024 MB RAM min. 8192 MB Flash Video Compression: min. H.264, H.265, Motion JPEG Video Streaming: min. multiple individually configurable video streams in H.264, H.265, and Motion JPEG Adjustable frame rate and bandwidth Low-latency mode Multi-view min. up to 2 individually cropped view areas at full frame rate Image Settings: min. saturation, contrast, brightness, sharpness, forensic min. WDR up to 120 dB depending on the scene min. white balance min. image rotation, mirroring Interfaces: min. 1x RJ45 min. 4-pin terminal block 2.5mm min. audio 4-pin connector block 2.5mm for audio input and audio output: min. input for external microphone System Integration: min. open API for software integration:	In accordance with SIA RSAP

					Support for SIP (Session Initiation Protocol) for integration into VoIP systems, peer-to-peer or SIP (PBX) Analytics Function: incl. analytics function, detection of object classes such as people, and detection of scenarios such as objects in the area, dwell time in the area Power Supply / Power: min. PoE IEEE 802.3af / IEEE 802.3at max. 5.5W Weight: max. 700g Mounting: incl. mounting bracket with holes for junction box, as well as for wall or ceiling mount	
	AXIS M5526-E PTZ Network Camera	Austria/ Cambodia	Axis	PTZ IP-Camera, FullHD, 10x optical zoom, Dome Format Type: PTZ dome camera for indoor surveillance Housing:IP66, NEMA 4X and/or IK09 certified Resolution:min. 2 MP FullHD 1920x1080 Optical Zoom:min. 10x Frame Rate:min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz min. without WDR 50/60 frames per second at 50/60Hz Pan/Tilt:min. 360° endless min. 90° Memory:min. 512 MB RAM min. 256 MB Flash Video Compression:min. H.264, Motion JPEG Video Streaming:min. multiple individually configurable video streams in H.264 and Motion JPEG Image Settings:min. saturation, contrast, brightness, sharpness, forensic min. white balance min. image freeze during PTZ Network Protocols:min. IPv4, IPv6, USGv6, HTTP Network Security:min. IEEE 802.1X, brute-force protection, password protection min. IP address filtering Interfaces:min. 1x RJ45 min. 6-pin connection block with spring-loaded terminals for 4 configurable inputs/outputs System Integration:min. open API for software integration Analytics Function:incl. analytics function Power Supply / Power:min. PoE IEEE 802.3af / IEEE 802.3at	Type: PTZ dome camera for indoor surveillance Housing:IP66, NEMA 4X and/or IK09 certified Resolution:min. 2 MP FullHD 1920x1080 Optical Zoom:min. 10x Frame Rate:min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz min. without WDR 50/60 frames per second at 50/60Hz Pan/Tilt:min. 360° endless min. 90° Memory:min. 512 MB RAM min. 256 MB Flash Video Compression:min. H.264, Motion JPEG Video Streaming:min. multiple individually configurable video streams in H.264 and Motion JPEG Image Settings:min. saturation, contrast, brightness, sharpness, forensic min. white balance min. image freeze during PTZ Network Protocols:min. IPv4, IPv6, USGv6, HTTP Network Security:min. IEEE 802.1X, brute-force protection, password protection min. IP address filtering Interfaces:min. 1x RJ45 min. 6-pin connection block with spring-loaded terminals for 4 configurable inputs/outputs	

				max. 14 W Weight:max. 1.3 kg Mounting:incl. mounting bracket or accessories, as well as for wall or ceiling mount Sustainability:PVC-free Control:Via software	System Integration:min. open API for software integration Analytics Function:incl. analytics function Power Supply / Power:min. PoE IEEE 802.3af / IEEE 802.3at max. 14 W Weight:max. 1.3 kg Mounting:incl. mounting bracket or accessories, as well as for wall or ceiling mount Sustainability:PVC-free Control:Via software	
	Drift X3 POV Action Camera	Austria/ China	Drift	Wireless Headcam (POV), Full-HD Type:Wireless Camera – Wearable (headband style) Resolution:min. 1920×1080 at 30 fps Lens Type:min. 120° wide-angle Water Resistance:min. IPX4 Connectivity:min. Bluetooth 4.0 and Wi-Fi Microphone:Built-in, with noise reduction Sensor Type:4MP CMOS Weight:max. 100 g Battery:min. 3000 mAh rechargeable Li-Ion Storage:e.g. Micro SD, SDHC, SDXC, up to 256 GB File Format:MP4 (H.264)	Type:Wireless Camera – Wearable (headband style) Resolution:min. 1920×1080 at 30 fps Lens Type:min. 120° wide-angle Water Resistance:min. IPX4 Connectivity:min. Bluetooth 4.0 and Wi-Fi Microphone:Built-in, with noise reduction Sensor Type:4MP CMOS Weight:max. 100 g Battery:min. 3000 mAh rechargeable Li-Ion Storage:e.g. Micro SD, SDHC, SDXC, up to 256 GB File Format:MP4 (H.264)	
	TBS DE124- HDMI Video Encoder- Decoder	Austria/ China	TBS	HDMI Patient monitor Capture device, PoE Tip:HDMI Type:HDMI Video Grabber Video Input:HDMI 1.4 Input Resolution:1920x1080P_50/60Hz; 1920x1080I_50/60Hz; 1280x720P 50/60Hz; 720x576; 640x480 etc. Output Resolution:1920x1080P@60fps; 1680x1050; 1280x720; 1024x576; 850x480; 720x576; 720x480; 640x480; 480x360; 360x240; auto; custom etc. Encoding:H.264 Baseline, H.264 Main, H.264 High, H.265 Main Bitrate:0.5 Mbps–20 Mbps Bitrate Control:CBR, VBR, AVBR, FIXQP Protocol:NDI@ HX, HTTP, HLS, RTSP, RTP/UDP Unicast/Multicast, RTMP (RTMPS) Audio Input:HDMI embedded, Line-in (3.5 mm jack) Encoding:AAC, MP3, MPEG2, PCMA Sampling Rate:16K, 32K, 44.1K, 48K Sampling Accuracy:16 Bit Bitrate:32 Kbit/s – 256 Kbit/s	Type:HDMI Video Grabber Video Input:HDMI 1.4 Input Resolution:1920x1080P_50/60Hz; 1920x1080I_50/60Hz; 1280x720P 50/60Hz; 720x576; 640x480 etc. Output Resolution:1920x1080P@60fps; 1680x1050; 1280x720; 1024x576; 850x480; 720x576; 720x480; 640x480; 480x360; 360x240; auto; custom etc. Encoding:H.264 Baseline, H.264 Main, H.264 High, H.265 Main Bitrate:0.5 Mbps–20 Mbps Bitrate Control:CBR, VBR, AVBR, FIXQP Protocol:NDI@ HX, HTTP, HLS, RTSP, RTP/UDP Unicast/Multicast, RTMP (RTMPS) Audio Input:HDMI embedded, Line-in (3.5 mm jack) Encoding:AAC, MP3, MPEG2, PCMA	

				Network Stream IN Video: H.264 Baseline, Main, High Level 4.2; H.265 Main, Level 4.1 Audio: MPEG2, MP3, AAC Protocol: NDI® HX Stream, HTTP, HLS, RTSP, RTP, UDP, RTMP (pull), SRT Connections: 1x HDMI IN 1x HDMI OUT 1x Audio IN 1x Audio OUT 1x USB 2.0 1x Ethernet RJ45 1000BASE-T Power Supply: Power over Ethernet Max. Power Consumption: 6 Watts Dimensions: 10 x 6 x 3.2 cm	Sampling Rate: 16K, 32K, 44.1K, 48K Sampling Accuracy: 16 Bit Bitrate: 32 Kbit/s – 256 Kbit/s Network Stream IN Video: H.264 Baseline, Main, High Level 4.2; H.265 Main, Level 4.1 Audio: MPEG2, MP3, AAC Protocol: NDI® HX Stream, HTTP, HLS, RTSP, RTP, UDP, RTMP (pull), SRT Connections: 1x HDMI IN 1x HDMI OUT 1x Audio IN 1x Audio OUT 1x USB 2.0 1x Ethernet RJ45 1000BASE-T Power Supply: Power over Ethernet Max. Power Consumption: 6 Watts Dimensions: 10 x 6 x 3.2 cm	
	Audio-Technica ATND8734a w/Dante	Austria/Japan	Audio-Technica	Room microphone, PoE Type: Room Microphone Consisting of the following three components: – MZH goosenecks – Microphone module – Dante converter Type: MZH Gooseneck Color: Black or white Diameter: min. 6 mm Length: min. 400 mm Weight: max. 130 g Type: Microphone Module Type: Permanently polarized condenser microphone heads Durable metal housing, non-reflective surface Color: Black or white Frequency Range: min. 40 to 2000 Hz Acoustic Operating Principle: Pressure gradient transducer Polar Pattern: Cardioid Power Supply: via MZH goosenecks Dimensions: approx. diameter 12 x 18 mm (reference value) Weight: max. 10 g Dante Converter: The device must be fully compatible with Dante. Type: Microphone Input to Dante	Type: Room Microphone Consisting of the following three components: – MZH goosenecks – Microphone module – Dante converter Type: MZH Gooseneck Color: Black or white Diameter: min. 6 mm Length: min. 400 mm Weight: max. 130 g Type: Microphone Module Type: Permanently polarized condenser microphone heads Durable metal housing, non-reflective surface Color: Black or white Frequency Range: min. 40 to 2000 Hz Acoustic Operating Principle: Pressure gradient transducer Polar Pattern: Cardioid Power Supply: via MZH goosenecks Dimensions: approx. diameter 12 x 18 mm (reference value) Weight: max. 10 g Dante Converter:	

				Connection: min. 1 x balanced microphone input on locking XLR socket Fine Gain Control: min. rotary potentiometer for fine microphone gain adjustment Coarse Gain Control: min. switch for coarse microphone gain Power Supply: via PoE 802.3af Max. Power Consumption: 16 W Weight: max. 300 g	The device must be fully compatible with Dante. Type:Microphone Input to Dante Connection: min. 1 x balanced microphone input on locking XLR socket Fine Gain Control: min. rotary potentiometer for fine microphone gain adjustment Coarse Gain Control: min. switch for coarse microphone gain Power Supply: via PoE 802.3af Max. Power Consumption: 16 W Weight: max. 300 g.	
	Shure MXNW-C	Austria/China	Shure	Ceiling Speaker PoE Type: Active 2-way ceiling loudspeaker with integrated Dante® module Power:min. 30 W amplifier Drivers:20 cm (8") woofer with fiberglass cone, 2.5 cm (1") dome tweeter Decoding:16/24/32 Bit Sample Rates:44.1 / 48 / 88.2 / 96 kHz Power Supply:PoE (Power over Ethernet) Housing:Plastic frame and metal grille Ceiling Thickness:up to 4 cm Cut-out Diameter:max Ø 240 mm Mounting Depth:min. 225 mm incl. space required for network connection	Type: Active 2-way ceiling loudspeaker with integrated Dante® module Power:min. 30 W amplifier Drivers:20 cm (8") woofer with fiberglass cone, 2.5 cm (1") dome tweeter Decoding:16/24/32 Bit Sample Rates:44.1 / 48 / 88.2 / 96 kHz Power Supply:PoE (Power over Ethernet) Housing:Plastic frame and metal grille Ceiling Thickness:up to 4 cm Cut-out Diameter:max Ø 240 mm Mounting Depth:min. 225 mm incl. space required for network connection	
	TERRA all-in-one PC 2420HA Greenline, 24" Touch Display	Germany	Terra	Media Screen AiO-PC with Touchscreen 24"Dimensiuni Type:All-in-One PC with monitor arm Display Size:min. 23.8" or 24" Display Features:Touchscreen with capacitive multitouch, min. 10 touch points Brightness: min. 250 cd/m² Response Time: max. 8 ms CPU / Processor:min. 6 cores min. 12 threads min. 2.5 GHz base clock min. 18 MB cache Graphics Support:min. 4096×2304 @ 60 Hz (4K) via HDMI 2.0 min. 4096×2304 @ 60 Hz (4K) via DisplayPort 1.4 Operating System:min. Windows 11 Professional	Type:All-in-One PC with monitor arm Display Size:min. 23.8" or 24" Display Features:Touchscreen with capacitive multitouch, min. 10 touch points Brightness: min. 250 cd/m² Response Time: max. 8 ms CPU / Processor:min. 6 cores min. 12 threads min. 2.5 GHz base clock min. 18 MB cache Graphics Support:min. 4096×2304 @ 60 Hz (4K) via HDMI 2.0 min. 4096×2304 @ 60 Hz (4K) via DisplayPort 1.4 Operating System:min. Windows 11 Professional Memory (RAM):min. 1×16 GB DDR5	

				Memory (RAM):min. 1×16 GB DDR5 min. 2 memory slots Upgradeable to min. 64 GB Storage:min. 1 TB SSD (M.2 PCIe) Optical Drive:No optical drive Ports & Interfaces (min.): – 2× USB 3.2 Gen 1 – 2× USB 3.2 Gen 2 Type-A – 2× USB 2.0 – 1× HDMI 2.0 – 1× DisplayPort 1.2 – 1× RJ45 – 1× Line in/out – 1× DC-in Wireless Connectivity: min. Wi-Fi 6 (802.11ax) Bluetooth min. version 5.0 Audio / Speakers:min. 6W total power (stereo) Ergonomics:Adjustable with tilt and pivot functionality Power Consumption:Max. input power: 120 W	min. 2 memory slots Upgradeable to min. 64 GB Storage:min. 1 TB SSD (M.2 PCIe) Optical Drive:No optical drive Ports & Interfaces (min.): – 2× USB 3.2 Gen 1 – 2× USB 3.2 Gen 2 Type-A – 2× USB 2.0 – 1× HDMI 2.0 – 1× DisplayPort 1.2 – 1× RJ45 – 1× Line in/out – 1× DC-in Wireless Connectivity: min. Wi-Fi 6 (802.11ax) Bluetooth min. version 5.0 Audio / Speakers:min. 6W total power (stereo) Ergonomics:Adjustable with tilt and pivot functionality Power Consumption:Max. input power: 120 W	
	AXIS P3265-V Network Camera	Poland	Axis	Rooms 104, 106, 116,129, 132 IP-Camera, FullHD, 2.5x Optical Zoom, Dome Format Type: Fixed dome camera for indoor surveillance Functions: min. pan, tilt, rotate Housing: min. IP52 and IK10 certified Resolution: min. 2 MP FullHD 1920x1080 Optical Zoom: min. 2.5x Frame Rate: min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz; min. without WDR 50/60 frames per second at 50/60Hz Adjustable Camera Angle: min. +/- 180° pan min. +/- 75° tilt min. +/- 175° rotate Memory: min. 1024 MB RAM min. 8192 MB Flash Video Compression: min. H.264, H.265, Motion JPEG Video Streaming: min. multiple individually configurable video streams in H.264, H.265, and Motion JPEG Adjustable frame rate and bandwidth Low-latency mode Multi-view min. up to 2 individually cropped view areas at full frame rate Image Settings: min. saturation, contrast, brightness, sharpness, forensic min. WDR up to 120 dB depending on the scene	Type: Fixed dome camera for indoor surveillance Functions: min. pan, tilt, rotate Housing: min. IP52 and IK10 certified Resolution: min. 2 MP FullHD 1920x1080 Optical Zoom: min. 2.5x Frame Rate: min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz; min. without WDR 50/60 frames per second at 50/60Hz Adjustable Camera Angle: min. +/- 180° pan min. +/- 75° tilt min. +/- 175° rotate Memory: min. 1024 MB RAM min. 8192 MB Flash Video Compression: min. H.264, H.265, Motion JPEG Video Streaming: min. multiple individually configurable video streams in H.264, H.265, and Motion JPEG Adjustable frame rate and bandwidth Low-latency mode Multi-view min. up to 2 individually cropped view areas at full	

				min. white balance min. image rotation, mirroring min. dynamic text and image overlay Network Protocols: min. IPv4, IPv6, USGv6, ICMPv4, ICMPv6 Network Security: min. IEEE 802.1X, IEEE 802.1AR, Network Time Security min. IP address filtering Interfaces: min. 1x RJ45 min. 4-pin terminal block 2.5mm min. audio 4-pin connector block 2.5mm for audio input and audio output: min. input for external microphone System Integration: min. open API for software integration: Support for SIP (Session Initiation Protocol) for integration into VoIP systems, peer-to-peer or SIP (PBX) Analytics Function: incl. analytics function, detection of object classes such as people, and detection of scenarios such as objects in the area, dwell time in the area Power Supply / Power: min. PoE IEEE 802.3af / IEEE 802.3at max. 5.5W Weight: max. 700g Mounting: incl. mounting bracket with holes for junction box, as well as for wall or ceiling mount	frame rate Image Settings: min. saturation, contrast, brightness, sharpness, forensic min. WDR up to 120 dB depending on the scene min. white balance min. image rotation, mirroring min. dynamic text and image overlay Network Protocols: min. IPv4, IPv6, USGv6, ICMPv4, ICMPv6 Network Security: min. IEEE 802.1X, IEEE 802.1AR, Network Time Security min. IP address filtering Interfaces: min. 1x RJ45 min. 4-pin terminal block 2.5mm min. audio 4-pin connector block 2.5mm for audio input and audio output: min. input for external microphone System Integration: min. open API for software integration: Support for SIP (Session Initiation Protocol) for integration into VoIP systems, peer-to-peer or SIP (PBX) Analytics Function: incl. analytics function, detection of object classes such as people, and detection of scenarios such as objects in the area, dwell time in the area Power Supply / Power: min. PoE IEEE 802.3af / IEEE 802.3at max. 5.5W Weight: max. 700g Mounting: incl. mounting bracket with holes for junction box, as well as for wall or ceiling mount	
	AXIS M556-E PTZ Network Camera	Austria/ Cambodia	Axis	PTZ IP-Camera, FullHD, 10x optical zoom, Dome Format Type: PTZ dome camera for indoor surveillance Housing:IP66, NEMA 4X and/or IK09 certified Resolution:min. 2 MP FullHD 1920x1080 Optical Zoom:min. 10x	Type: PTZ dome camera for indoor surveillance Housing:IP66, NEMA 4X and/or IK09 certified Resolution:min. 2 MP FullHD 1920x1080 Optical Zoom:min. 10x	

				Frame Rate:min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz min. without WDR 50/60 frames per second at 50/60Hz Pan/Tilt:min. 360° endless min. 90° Memory:min. 512 MB RAM min. 256 MB Flash Video Compression:min. H.264, Motion JPEG Video Streaming:min. multiple individually configurable video streams in H.264 and Motion JPEG Image Settings:min. saturation, contrast, brightness, sharpness, forensic min. white balance min. image freeze during PTZ Network Protocols:min. IPv4, IPv6, USGv6, HTTP Network Security:min. IEEE 802.1X, brute-force protection, password protection min. IP address filtering Interfaces:min. 1x RJ45 min. 6-pin connection block with spring-loaded terminals for 4 configurable inputs/outputs System Integration:min. open API for software integration Analytics Function:incl. analytics function Power Supply / Power:min. PoE IEEE 802.3af / IEEE 802.3at max. 14 W Weight:max. 1.3 kg Mounting:incl. mounting bracket or accessories, as well as for wall or ceiling mount Sustainability:PVC-free Control:Via software	Frame Rate:min. with WDR (Wide Dynamic Range) 25/30 frames per second at 50/60Hz min. without WDR 50/60 frames per second at 50/60Hz Pan/Tilt:min. 360° endless min. 90° Memory:min. 512 MB RAM min. 256 MB Flash Video Compression:min. H.264, Motion JPEG Video Streaming:min. multiple individually configurable video streams in H.264 and Motion JPEG Image Settings:min. saturation, contrast, brightness, sharpness, forensic min. white balance min. image freeze during PTZ Network Protocols:min. IPv4, IPv6, USGv6, HTTP Network Security:min. IEEE 802.1X, brute-force protection, password protection min. IP address filtering Interfaces:min. 1x RJ45 min. 6-pin connection block with spring-loaded terminals for 4 configurable inputs/outputs System Integration:min. open API for software integration Analytics Function:incl. analytics function Power Supply / Power:min. PoE IEEE 802.3af / IEEE 802.3at max. 14 W Weight:max. 1.3 kg Mounting:incl. mounting bracket or accessories, as well as for wall or ceiling mount Sustainability:PVC-free Control:Via software	
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	TBS DE124-HDMI Video Encoder-Decoder	Austria/China	TBS	HDMI Patient monitor Capture device, PoE Tip:HDMI Type:HDMI Video Grabber Video Input:HDMI 1.4 Input Resolution:1920x1080P_50/60Hz; 1920x1080I_50/60Hz; 1280x720P 50/60Hz; 720x576; 640x480 etc. Output Resolution:1920x1080P@60fps; 1680x1050; 1280x720; 1024x576; 850x480; 720x576; 720x480; 640x480; 480x360; 360x240; auto; custom etc. Encoding:H.264 Baseline, H.264 Main, H.264 High, H.265 Main Bitrate:0.5 Mbps–20 Mbps Bitrate Control:CBR, VBR, AVBR, FIXQP Protocol:NDI® HX, HTTP, HLS, RTSP, RTP/UDP Unicast/Multicast, RTMP (RTMPS) Audio Input:HDMI embedded, Line-in (3.5 mm jack) Encoding:AAC, MP3, MPEG2, PCMA Sampling Rate:16K, 32K, 44.1K, 48K Sampling Accuracy:16 Bit Bitrate:32 Kbit/s – 256 Kbit/s Network Stream IN Video: H.264 Baseline, Main, High Level 4.2; H.265 Main, Level 4.1 Audio: MPEG2, MP3, AAC Protocol: NDI® HX Stream, HTTP, HLS, RTSP, RTP, UDP, RTMP (pull), SRT Connections:1x HDMI IN 1x HDMI OUT 1x Audio IN 1x Audio OUT 1x USB 2.0 1x Ethernet RJ45 1000BASE-T Power Supply:Power over Ethernet Max. Power Consumption:6 Watts Dimensions:10 x 6 x 3.2 cm	Type:HDMI Video Grabber Video Input:HDMI 1.4 Input Resolution:1920x1080P_50/60Hz; 1920x1080I_50/60Hz; 1280x720P 50/60Hz; 720x576; 640x480 etc. Output Resolution:1920x1080P@60fps; 1680x1050; 1280x720; 1024x576; 850x480; 720x576; 720x480; 480x360; 360x240; auto; custom etc. Encoding:H.264 Baseline, H.264 Main, H.264 High, H.265 Main Bitrate:0.5 Mbps–20 Mbps Bitrate Control:CBR, VBR, AVBR, FIXQP Protocol:NDI® HX, HTTP, HLS, RTSP, RTP/UDP Unicast/Multicast, RTMP (RTMPS) Audio Input:HDMI embedded, Line-in (3.5 mm jack) Encoding:AAC, MP3, MPEG2, PCMA Sampling Rate:16K, 32K, 44.1K, 48K Sampling Accuracy:16 Bit Bitrate:32 Kbit/s – 256 Kbit/s Network Stream IN Video: H.264 Baseline, Main, High Level 4.2; H.265 Main, Level 4.1 Audio: MPEG2, MP3, AAC Protocol: NDI® HX Stream, HTTP, HLS, RTSP, RTP, UDP, RTMP (pull), SRT Connections:1x HDMI IN 1x HDMI OUT 1x Audio IN 1x Audio OUT 1x USB 2.0 1x Ethernet RJ45 1000BASE-T Power Supply:Power over Ethernet	
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					Max. Power Consumption:6 Watts Dimensions:10 x 6 x 3.2 cm	
	Audio-Technica ATND8734a w/Dante	Austria/Japan	Audio-Technica	Room microphone, PoE Type:Room Microphone Consisting of the following three components: – MZH goosenecks – Microphone module – Dante converter Type:MZH Gooseneck Color: Black or white Diameter: min. 6 mm Length: min. 400 mm Weight: max. 130 g Type:Microphone Module Type: Permanently polarized condenser microphone heads Durable metal housing, non-reflective surface Color: Black or white Frequency Range: min. 40 to 2000 Hz Acoustic Operating Principle: Pressure gradient transducer Polar Pattern: Cardioid Power Supply: via MZH goosenecks Dimensions: approx. diameter 12 x 18 mm (reference value) Weight: max. 10 g Dante Converter: The device must be fully compatible with Dante. Type:Microphone Input to Dante Connection: min. 1 x balanced microphone input on locking XLR socket Fine Gain Control: min. rotary potentiometer for fine microphone gain adjustment Coarse Gain Control: min. switch for coarse microphone gain Power Supply: via PoE 802.3af Max. Power Consumption: 16 W Weight: max. 300 g	Type:Room Microphone Consisting of the following three components: – MZH goosenecks – Microphone module – Dante converter Type:MZH Gooseneck Color: Black or white Diameter: min. 6 mm Length: min. 400 mm Weight: max. 130 g Type:Microphone Module Type: Permanently polarized condenser microphone heads Durable metal housing, non-reflective surface Color: Black or white Frequency Range: min. 40 to 2000 Hz Acoustic Operating Principle: Pressure gradient transducer Polar Pattern: Cardioid Power Supply: via MZH goosenecks Dimensions: approx. diameter 12 x 18 mm (reference value) Weight: max. 10 g Dante Converter: The device must be fully compatible with Dante. Type:Microphone Input to Dante Connection: min. 1 x balanced microphone input on locking XLR socket Fine Gain Control: min. rotary potentiometer for fine microphone gain adjustment Coarse Gain Control: min. switch for coarse microphone gain Power Supply: via PoE 802.3af Max. Power Consumption: 16 W Weight: max. 300 g.	
	Shure MXNW-C	Austria/China	Shure	Ceiling Speaker PoE Type: Active 2-way ceiling loudspeaker with integrated Dante® module Power:min. 30 W amplifier	Type: Active 2-way ceiling loudspeaker with integrated Dante® module Power:min. 30 W amplifier	

				Drivers:20 cm (8") woofer with fiberglass cone, 2.5 cm (1") dome tweeter Decoding:16/24/32 Bit Sample Rates:44.1 / 48 / 88.2 / 96 kHz Power Supply:PoE (Power over Ethernet) Housing:Plastic frame and metal grille Ceiling Thickness:up to 4 cm Cut-out Diameter:max Ø 240 mm Mounting Depth:min. 225 mm incl. space required for network connection	Drivers:20 cm (8") woofer with fiberglass cone, 2.5 cm (1") dome tweeter Decoding:16/24/32 Bit Sample Rates:44.1 / 48 / 88.2 / 96 kHz Power Supply:PoE (Power over Ethernet) Housing:Plastic frame and metal grille Ceiling Thickness:up to 4 cm Cut-out Diameter:max Ø 240 mm Mounting Depth:min. 225 mm incl. space required for network connection	
	TERRA all-in-one PC 2420HA Greenline, 24" Touch Display	Germany	Terra	Media Screen AiO-PC with Touchscreen 24" Type:All-in-One PC with monitor arm Display Size:min. 23.8" or 24" Display Features:Touchscreen with capacitive multitouch, min. 10 touch points Brightness: min. 250 cd/m² Response Time: max. 8 ms CPU / Processor:min. 6 cores min. 12 threads min. 2.5 GHz base clock min. 18 MB cache Graphics Support:min. 4096×2304 @ 60 Hz (4K) via HDMI 2.0 min. 4096×2304 @ 60 Hz (4K) via DisplayPort 1.4 Operating System:min. Windows 11 Professional Memory (RAM):min. 1×16 GB DDR5 min. 2 memory slots Upgradeable to min. 64 GB Storage:min. 1 TB SSD (M.2 PCIe) Optical Drive:No optical drive Ports & Interfaces (min.): – 2× USB 3.2 Gen 1 – 2× USB 3.2 Gen 2 Type-A – 2× USB 2.0 – 1× HDMI 2.0 – 1× DisplayPort 1.2 – 1× RJ45 – 1× Line in/out – 1× DC-in Wireless Connectivity: min. Wi-Fi 6 (802.11ax) Bluetooth min. version 5.0 Audio / Speakers:min. 6W total power (stereo)	Type:All-in-One PC with monitor arm Display Size:min. 23.8" or 24" Display Features:Touchscreen with capacitive multitouch, min. 10 touch points Brightness: min. 250 cd/m² Response Time: max. 8 ms CPU / Processor:min. 6 cores min. 12 threads min. 2.5 GHz base clock min. 18 MB cache Graphics Support:min. 4096×2304 @ 60 Hz (4K) via HDMI 2.0 min. 4096×2304 @ 60 Hz (4K) via DisplayPort 1.4 Operating System:min. Windows 11 Professional Memory (RAM):min. 1×16 GB DDR5 min. 2 memory slots Upgradeable to min. 64 GB Storage:min. 1 TB SSD (M.2 PCIe) Optical Drive:No optical drive Ports & Interfaces (min.): – 2× USB 3.2 Gen 1 – 2× USB 3.2 Gen 2 Type-A – 2× USB 2.0 – 1× HDMI 2.0 – 1× DisplayPort 1.2 – 1× RJ45 – 1× Line in/out – 1× DC-in Wireless Connectivity: min. Wi-Fi 6 (802.11ax) Bluetooth min. version 5.0 Audio / Speakers:min. 6W total power (stereo)	

				Ergonomics:Adjustable with tilt and pivot functionality Power Consumption:Max. input power: 120 W	Ergonomics:Adjustable with tilt and pivot functionality Power Consumption:Max. input power: 120 W	
	TERRA PC-Mini 6000V6 SILENT BTO + Monitors + Cherry Keyboard	Germany	Terra	Control Rooms Rooms: 031, 115, 129, 131 Mini PC , 2x FullHD Touchscreen 24" Monitors, Mouse and Keyboard (Keyboard LAYOUT), wireless Type:Mini PC min. 16 GB DDR4 RAM Business Micro/Mini Format Series min. Intel® Core™ i5-1340P processor (12M Cache, up to 4.60 GHz) Intel Iris Xe Graphics Graphics Interfaces: min. 2x HDMI 2.1 TMDS compatible, 2x DP 1.4a via Type-C Support for up to 4 displays min. 1 x 500 GB SSD Operating System: min. Windows 11 Pro Type:Monitor Design: Edge-to-edge glass Screen Size: 23.8" (60.5 cm) Panel Technology: IPS Resolution: 1920 x 1080 (Full HD) Aspect Ratio: 16:9 Brightness: 400 cd/m² (360 cd/m² with touch panel) Transmittance: 90% Contrast Ratio: 1000:1 Response Time (GTG): 5 ms Viewing Angle: 178°/178° Color Support: 16.7 million, 8-bit Horizontal Frequency: 30 – 83 kHz Active Area (H x W): 527 x 296.5 mm Pixel Pitch: 0.274 mm Housing Color: Black, matte Type:Wireless Keyboard and Mouse Set Manufacturer: Wireless mouse and keyboard must be from the same manufacturer Number of Mouse Buttons: min. 6 Color: Black or white Connectivity: selectable via Bluetooth or 2.4 GHz wireless Operating System: compatible with min. Windows 8 or higher up to Windows 11	Type:Mini PC min. 16 GB DDR4 RAM Business Micro/Mini Format Series min. Intel® Core™ i5-1340P processor (12M Cache, up to 4.60 GHz) Intel Iris Xe Graphics Graphics Interfaces: min. 2x HDMI 2.1 TMDS compatible, 2x DP 1.4a via Type-C Support for up to 4 displays min. 1 x 500 GB SSD Operating System: min. Windows 11 Pro Type:Monitor Design: Edge-to-edge glass Screen Size: 23.8" (60.5 cm) Panel Technology: IPS Resolution: 1920 x 1080 (Full HD) Aspect Ratio: 16:9 Brightness: 400 cd/m² (360 cd/m² with touch panel) Transmittance: 90% Contrast Ratio: 1000:1 Response Time (GTG): 5 ms Viewing Angle: 178°/178° Color Support: 16.7 million, 8-bit Horizontal Frequency: 30 – 83 kHz Active Area (H x W): 527 x 296.5 mm Pixel Pitch: 0.274 mm Housing Color: Black, matte Type:Wireless Keyboard and Mouse Set Manufacturer: Wireless mouse and keyboard must be from the same manufacturer Number of Mouse Buttons: min. 6 Color: Black or white Connectivity: selectable via Bluetooth or 2.4 GHz wireless Operating System: compatible with min. Windows 8 or higher up to Windows 11 Additional Specifications: AES-128 encryption for mouse and keyboard Batteries: min. rechargeable lithium batteries in mouse and	

				Additional Specifications: AES-128 encryption for mouse and keyboard Batteries: min. rechargeable lithium batteries in mouse and keyboard; rechargeable via USB ports Status Indicators: min. for low battery and charging status Accessories: min. incl. nano USB receiver for wireless operation; incl. tilt stand	keyboard; rechargeable via USB ports Status Indicators: min. for low battery and charging status Accessories: min. incl. nano USB receiver for wireless operation; incl. tilt stand	
	TERRA PC-Mini 6000V6 SILENT BTO + Monitors + Cherry Keyboard	Austria	SIMStation	Push-to-Talk Gooseneck Microphone, 2 Channels, PoE Type: Push-to-Talk Gooseneck Microphone Number of Buttons: min. 2 illuminated buttons with optical feedback, hold function via double-click Call Destination Buttons: min. 2 illuminated call destination buttons (PTT) with optical feedback Call Hold Function: hold function via double-click Call Destination ID: transmitted via DTMF tone on channel 2 Microphone Capsule: dynamic microphone capsule with unidirectional polar pattern Frequency Response: min. 80 Hz – 12 kHz Power Supply: PoE Class 1; max. 4 W Network Protocol: Dante Number of Audio Channels: min. 2 Channel 1: audio Channel 2: DTMF call destination transmission Dimensions (W x D): max. 125 x 175 mm Gooseneck Length: min. 300 mm, max. 330 mm	Type: Push-to-Talk Gooseneck Microphone Number of Buttons: min. 2 illuminated buttons with optical feedback, hold function via double-click Call Destination Buttons: min. 2 illuminated call destination buttons (PTT) with optical feedback Call Hold Function: hold function via double-click Call Destination ID: transmitted via DTMF tone on channel 2 Microphone Capsule: dynamic microphone capsule with unidirectional polar pattern Frequency Response: min. 80 Hz – 12 kHz Power Supply: PoE Class 1; max. 4 W Network Protocol: Dante Number of Audio Channels: min. 2 Channel 1: audio Channel 2: DTMF call destination transmission Dimensions (W x D): max. 125 x 175 mm Gooseneck Length: min. 300 mm, max. 330 mm	
	PreSonus ERIS E3.5	China	PreSonus	Active Stereo speakers (Pair) with line out for headphones Type: Stereo Active Speaker Controls: min. acoustic controls for treble and bass Inputs/Outputs: min. balanced 6.35 mm TRS jack inputs min. unbalanced stereo RCA and 3.5 mm jack inputs min. integrated stereo headphone amplifier with 3.5 mm output jack Protection Circuits: min. RF shielding min. output current limiter min. overheat protection circuit Energy Saving Mode: incl. power-save mode Accessories: incl. speaker cable incl. stereo cable 3.5" TRS jack to RCA incl. 3.5 mm TRS to 3.5 mm TRS	Type: Stereo Active Speaker Controls: min. acoustic controls for treble and bass Inputs/Outputs: min. balanced 6.35 mm TRS jack inputs min. unbalanced stereo RCA and 3.5 mm jack inputs min. integrated stereo headphone amplifier with 3.5 mm output jack Protection Circuits: min. RF shielding min. output current limiter min. overheat protection circuit Energy Saving Mode: incl. power-save mode Accessories: incl. speaker cable	

					incl. stereo cable 3.5" TRS jack to RCA incl. 3.5 mm TRS to 3.5 mm TRS	
	TERRA PC-Mini 6000V6 SILENT BTO + Monitors + Cherry Keyboard	Germany	Terra	Room 105 Încăpere IT - Dual Control Room 2 (8 m²) Mini PC , 2x FullHD Touchscreen 24" Monitors, Mouse and Keyboard (Keyboard LAYOUT), wireless Type:Mini PC min. 16 GB DDR4 RAM Business Micro/Mini Format Series min. Intel® Core™ i5-1340P processor (12M Cache, up to 4.60 GHz) Intel Iris Xe Graphics Graphics Interfaces: min. 2x HDMI 2.1 TMDS compatible, 2x DP 1.4a via Type-C Support for up to 4 displays min. 1 x 500 GB SSD Operating System: min. Windows 11 Pro Type:Monitor Design: Edge-to-edge glass Screen Size: 23.8" (60.5 cm) Panel Technology: IPS Resolution: 1920 x 1080 (Full HD) Aspect Ratio: 16:9 Brightness: 400 cd/m² (360 cd/m² with touch panel) Transmittance: 90% Contrast Ratio: 1000:1 Response Time (GTG): 5 ms Viewing Angle: 178°/178° Color Support: 16.7 million, 8-bit Horizontal Frequency: 30 – 83 kHz Active Area (H x W): 527 x 296.5 mm Pixel Pitch: 0.274 mm Housing Color: Black, matte Type:Wireless Keyboard and Mouse Set Manufacturer: Wireless mouse and keyboard must be from the same manufacturer Number of Mouse Buttons: min. 6 Color: Black or white Connectivity: selectable via Bluetooth or 2.4 GHz wireless	Type:Mini PC min. 16 GB DDR4 RAM Business Micro/Mini Format Series min. Intel® Core™ i5-1340P processor (12M Cache, up to 4.60 GHz) Intel Iris Xe Graphics Graphics Interfaces: min. 2x HDMI 2.1 TMDS compatible, 2x DP 1.4a via Type-C Support for up to 4 displays min. 1 x 500 GB SSD Operating System: min. Windows 11 Pro Type:Monitor Design: Edge-to-edge glass Screen Size: 23.8" (60.5 cm) Panel Technology: IPS Resolution: 1920 x 1080 (Full HD) Aspect Ratio: 16:9 Brightness: 400 cd/m² (360 cd/m² with touch panel) Transmittance: 90% Contrast Ratio: 1000:1 Response Time (GTG): 5 ms Viewing Angle: 178°/178° Color Support: 16.7 million, 8-bit Horizontal Frequency: 30 – 83 kHz Active Area (H x W): 527 x 296.5 mm Pixel Pitch: 0.274 mm Housing Color: Black, matte Type:Wireless Keyboard and Mouse Set Manufacturer: Wireless mouse and keyboard must be from the same manufacturer Number of Mouse Buttons: min. 6 Color: Black or white Connectivity: selectable via Bluetooth or 2.4 GHz wireless	

				Operating System: compatible with min. Windows 8 or higher up to Windows 11 Additional Specifications: AES-128 encryption for mouse and keyboard Batteries: min. rechargeable lithium batteries in mouse and keyboard; rechargeable via USB ports Status Indicators: min. for low battery and charging status Accessories: min. incl. nano USB receiver for wireless operation; incl. tilt stand	Operating System: compatible with min. Windows 8 or higher up to Windows 11 Additional Specifications: AES-128 encryption for mouse and keyboard Batteries: min. rechargeable lithium batteries in mouse and keyboard; rechargeable via USB ports Status Indicators: min. for low battery and charging status Accessories: min. incl. nano USB receiver for wireless operation; incl. tilt stand	
	SIMStation ENT 2- Tasten DANTE Mic	Austria	SIMStation	Push-to-Talk Gooseneck Microphone, 2 Channels, PoE Type: Push-to-Talk Gooseneck Microphone Number of Buttons: min. 2 illuminated buttons with optical feedback, hold function via double-click Call Destination Buttons: min. 2 illuminated call destination buttons (PTT) with optical feedback Call Hold Function: hold function via double-click Call Destination ID: transmitted via DTMF tone on channel 2 Microphone Capsule: dynamic microphone capsule with unidirectional polar pattern Frequency Response: min. 80 Hz – 12 kHz Power Supply: PoE Class 1; max. 4 W Network Protocol: Dante Number of Audio Channels: min. 2 Channel 1: audio Channel 2: DTMF call destination transmission Dimensions (W x D): max. 125 x 175 mm Gooseneck Length: min. 300 mm, max. 330 mm	Type: Push-to-Talk Gooseneck Microphone Number of Buttons: min. 2 illuminated buttons with optical feedback, hold function via double-click Call Destination Buttons: min. 2 illuminated call destination buttons (PTT) with optical feedback Call Hold Function: hold function via double-click Call Destination ID: transmitted via DTMF tone on channel 2 Microphone Capsule: dynamic microphone capsule with unidirectional polar pattern Frequency Response: min. 80 Hz – 12 kHz Power Supply: PoE Class 1; max. 4 W Network Protocol: Dante Number of Audio Channels: min. 2 Channel 1: audio Channel 2: DTMF call destination transmission Dimensions (W x D): max. 125 x 175 mm Gooseneck Length: min. 300 mm, max. 330 mm	
	Sennheiser HD 25 Plus	Romania	Sennheiser	Overear headphones Type:HiFi stereo headphones	Type:HiFi stereo headphones Design:Closed-back construction Voice Coil:Aluminum	

	HiFi Stereo Headphones			Design: Closed-back construction Voice Coil: Aluminum Headband: Adjustable/spreadable Cable Routing: Single-sided Ear Cups: Rotatable for single-ear listening Weight: max. 150 g Scope of Delivery (min.): – Coiled cable – Carrying pouch – Additional pair of ear pads – Straight cable, min. 1.5 m – Screwable 3.5 mm to 6.3 mm jack adapter	Headband: Adjustable/spreadable Cable Routing: Single-sided Ear Cups: Rotatable for single-ear listening Weight: max. 150 g Scope of Delivery (min.): – Coiled cable – Carrying pouch – Additional pair of ear pads – Straight cable, min. 1.5 m – Screwable 3.5 mm to 6.3 mm jack adapter	
	Sasmon QH4 Headphone Amp	China/Taiwan – information provided per unit by label	Samson	Amplifier for up to four headphones Type: 4-channel stereo headphone distribution amplifier Headphone Outputs: min. 4× independent 1/4" (6.35 mm) stereo headphone outputs Each channel with individual volume control Inputs: min. 2× balanced 1/4" (6.35 mm) stereo input connectors min. 1× stereo 1/8" (3.5 mm) auxiliary input Additional Features: – Master mute function – Mono-summing switch – 1× stereo 1/8" (3.5 mm) auxiliary output	Type: 4-channel stereo headphone distribution amplifier Headphone Outputs: min. 4× independent 1/4" (6.35 mm) stereo headphone outputs Each channel with individual volume control Inputs: min. 2× balanced 1/4" (6.35 mm) stereo input connectors min. 1× stereo 1/8" (3.5 mm) auxiliary input Additional Features: – Master mute function – Mono-summing switch – 1× stereo 1/8" (3.5 mm) auxiliary output	
	PreSonus ERIS E3.5	China	PreSonus	Active Stereo speakers (Pair) with line out for headphones Type: Stereo Active Speaker Controls: min. acoustic controls for treble and bass Inputs/Outputs: min. balanced 6.35 mm TRS jack inputs min. unbalanced stereo RCA and 3.5 mm jack inputs min. integrated stereo headphone amplifier with 3.5 mm output jack Protection Circuits: min. RF shielding min. output current limiter min. overheat protection circuit Energy Saving Mode: incl. power-save mode Accessories: incl. speaker cable incl. stereo cable 3.5" TRS jack to RCA incl. 3.5 mm TRS to 3.5 mm TRS	Type: Stereo Active Speaker Controls: min. acoustic controls for treble and bass Inputs/Outputs: min. balanced 6.35 mm TRS jack inputs min. unbalanced stereo RCA and 3.5 mm jack inputs min. integrated stereo headphone amplifier with 3.5 mm output jack Protection Circuits: min. RF shielding min. output current limiter min. overheat protection circuit Energy Saving Mode: incl. power-save mode Accessories: incl. speaker cable incl. stereo cable 3.5" TRS jack to RCA incl. 3.5 mm TRS to 3.5 mm TRS	

	TERRA PC-Mini 6000V6 SILENT BTO	Germany	Terra	Debriefing Rooms Rooms: 103, 117, 130 Debriefing Mini-PC Case type: Mini PC RAM: minimum 16 GB, DDR4 Form factor: Business Micro/Mini Format Series Processor (CPU): minimum 12 cores, minimum 16 threads, cache memory: minimum 12 MB Video interface: minimum 2 × HDMI 2.1 (TMDS compatible); minimum 2 × DisplayPort 1.4a via Type-C Support: up to 4 simultaneous displays Storage: minimum 1 × 500 GB SSD Operating system: minimum Windows 11 Professional	Case type: Mini PC RAM: minimum 16 GB, DDR4 Form factor: Business Micro/Mini Format Series Processor (CPU): minimum 12 cores, minimum 16 threads, cache memory: minimum 12 MB Video interface: minimum 2 × HDMI 2.1 (TMDS compatible); minimum 2 × DisplayPort 1.4a via Type-C Support: up to 4 simultaneous displays Storage: minimum 1 × 500 GB SSD Operating system: minimum Windows 11 Professional	
	Microsoft Surface Pro 10 U5	Austria/ Vietnam/ China – can differ for the different lots	Microsoft	Windows Tablet, 10.5" Type: Tablet PC Display: 10.5" Resolution: 1920x1280, 3:2 aspect ratio, 220 ppi Refresh Rate: 60 Hz Other Features: Multi-touch, 350 cd/m² brightness, digitizer, glass (Corning Gorilla Glass 3), 1500:1 contrast ratio, approx. 76.57% screen-to-body ratio (calculated) CPU: Intel N200, 0C+4c/4T, 1.00–3.70 GHz, 6 MiB + 2 MiB cache, 6W TDP, codename "Alder Lake-N" (Gracemont, Intel 7) RAM: 8 GB LPDDR5 (soldered) Graphics: Intel UHD Graphics (iGPU), 2Xe / 32EU / 256SP, 0.75 GHz, architecture "Xe-LP / Gen 12.2" (Alder Lake GT1) Ports: 1x USB-C 3.1 with DisplayPort (10 Gb/s, power input), 1x 3.5 mm audio jack, 1x microSD (microSDXC) Wireless: Wi-Fi 6 (802.11a/b/g/n/ac/ax), Bluetooth 5.1, NFC Authentication: TPM 2.0 Camera: 2 MP (front), 8 MP (rear) Battery: Li-ion, 12.5 h runtime Special Features: Accelerometer, hall sensor, gyroscope, ambient light sensor, kickstand, docking connector (SurfaceConnect) Weight: max. 521 g Dimensions: max. 245 x 8.3 x 175 mm (W × H × D) Color: Grey (back), Black (front) Type: Hardcase With hand strap Weight: max. 300 g	Type: Tablet PC Display: 10.5" Resolution: 1920x1280, 3:2 aspect ratio, 220 ppi Refresh Rate: 60 Hz Other Features: Multi-touch, 350 cd/m² brightness, digitizer, glass (Corning Gorilla Glass 3), 1500:1 contrast ratio, approx. 76.57% screen-to-body ratio (calculated) CPU: Intel N200, 0C+4c/4T, 1.00–3.70 GHz, 6 MiB + 2 MiB cache, 6W TDP, codename "Alder Lake-N" (Gracemont, Intel 7) RAM: 8 GB LPDDR5 (soldered) Graphics: Intel UHD Graphics (iGPU), 2Xe / 32EU / 256SP, 0.75 GHz, architecture "Xe-LP / Gen 12.2" (Alder Lake GT1) Ports: 1x USB-C 3.1 with DisplayPort (10 Gb/s, power input), 1x 3.5 mm audio jack, 1x microSD (microSDXC) Wireless: Wi-Fi 6 (802.11a/b/g/n/ac/ax), Bluetooth 5.1, NFC Authentication: TPM 2.0 Camera: 2 MP (front), 8 MP (rear) Battery: Li-ion, 12.5 h runtime Special Features: Accelerometer, hall sensor, gyroscope,	

					ambient light sensor, kickstand, docking connector (SurfaceConnect) Weight: max. 521 g Dimensions: max. 245 x 8.3 x 175 mm (W × H × D) Color: Grey (back), Black (front) Type: Hardcase With hand strap Weight: max. 300 g Length: max. 26 cm Width: max. 20 cm Depth: max. 2 cm	
	JBL PSB-1 Professional Soundbar	China	JBL	Soundbar for TV Type:Soundbar Frequency Range (-10 dB):in. 42 Hz – 20 kHz Frequency Response (±3 dB):min. 56 Hz – 20 kHz Max. Peak SPL (0 dBV):min. 90 dB-SPL @ 1 m (0 dBV input, max volume, one channel) Inputs: min. 2× RCA (Left & Right) Nominal Input Sensitivity:–10 dBV for 85 dB-SPL @ 1 m (max volume) HF Driver Size:min. 2× 19 mm (0.75") soft-dome tweeters (one per channel) LF Driver Size:min. 4× 51 mm (2.0") woofers (two per channel) Amplifier Power:min. 20 W per channel, Class D Enclosure Material:Injection-molded ABS Finish:Black Mounting/Installation:Incl. two brackets for desk/table or wall mounting (Installation diagrams in manual) Power Supply:Input: 100–240 VAC, 50/60 Hz, 1.5 A Sleep mode: max. 0.25 W @ 100 VAC, 0.36 W @ 240 VAC Dimensions (H × W × D):max. 90 × 900 × 65 mm (3.54 × 35.4 × 2.55 in) Weight:max. 1.8 kg (4.0 lbs)	Type:Soundbar Frequency Range (-10 dB):in. 42 Hz – 20 kHz Frequency Response (±3 dB):min. 56 Hz – 20 kHz Max. Peak SPL (0 dBV):min. 90 dB-SPL @ 1 m (0 dBV input, max volume, one channel) Inputs: min. 2× RCA (Left & Right) Nominal Input Sensitivity:–10 dBV for 85 dB-SPL @ 1 m (max volume) HF Driver Size:min. 2× 19 mm (0.75") soft-dome tweeters (one per channel) LF Driver Size:min. 4× 51 mm (2.0") woofers (two per channel) Amplifier Power:min. 20 W per channel, Class D Enclosure Material:Injection-molded ABS Finish:Black Mounting/Installation:Incl. two brackets for desk/table or wall mounting (Installation diagrams in manual) Power Supply:Input: 100–240 VAC, 50/60 Hz, 1.5 A Sleep mode: max. 0.25 W @ 100 VAC, 0.36 W @ 240 VAC Dimensions (H × W × D):max. 90 × 900 × 65 mm (3.54 × 35.4 × 2.55 in) Weight:max. 1.8 kg (4.0 lbs)	
	Legamaster DIS-7510 EU 75"	China	Legamaster	Professional display 75", 4k incl. wall mount Type: Professional Display Display Size: min. 75"	Type: Professional Display Display Size: min. 75" Display Technology: LCD (IPS)	

				Display Technology: LCD (IPS) Backlight: Direct LED Resolution: min. 3840 × 2160 px (4K Ultra HD) Brightness: min. 450 cd/m² Contrast Ratio: min. 4000:1 static, min. 10000:1 dynamic Aspect Ratio: 16:9 Refresh Rate: min. 60 Hz Response Time: max. 6.5 ms Viewing Angle: min. 178° horizontal / 178° vertical Display Control: IR remote control, Ethernet, RS-232C Lifespan: min. 50,000 hours Operation Time: min. 18/7 Orientation: Landscape and portrait supported Surface Treatment: Anti-glare HDMI Inputs: min. 2× HDMI 2.0 Type-A HDMI Outputs: min. 1× HDMI 2.0 Type-A USB Ports: min. 1× USB 2.0 Type-A, min. 1× USB 3.0 Type-A, min. 1× USB 2.0 Type-C (DP 1.2 65W) Ethernet: min. 1× RJ-45 Audio Outputs: min. 1× 3.5 mm jack, min. 1× Mini-TOSLINK Serial Interface: RS-232 CPU: ARM Cortex-A55 or better GPU: Mali G51 MP2 or better RAM: min. 4 GB Storage: min. 32 GB Operating System: Android 11 or newer Speakers: Integrated, min. 2× 10 W Wired Network: min. 10BASE-T / 100BASE-T / 1000BASE-T Wi-Fi: min. Wi-Fi 6 (802.11ax), backward compatible Bluetooth: min. Version 5.2 Power Supply: 100–240 V AC, 50/60 Hz Standby Power Consumption: max. 0.5 W Energy Efficiency Class: min. A Operating Temp: 0°C to +40°C Storage Temp: –20°C to +60°C Humidity (Operating/Storage): 10% – 90% (non-condensing) VESA Mounting Pattern: min. 400 × 200 mm	Backlight: Direct LED Resolution: min. 3840 × 2160 px (4K Ultra HD) Brightness: min. 450 cd/m² Contrast Ratio: min. 4000:1 static, min. 10000:1 dynamic Aspect Ratio: 16:9 Refresh Rate: min. 60 Hz Response Time: max. 6.5 ms Viewing Angle: min. 178° horizontal / 178° vertical Display Control: IR remote control, Ethernet, RS-232C Lifespan: min. 50,000 hours Operation Time: min. 18/7 Orientation: Landscape and portrait supported Surface Treatment: Anti-glare HDMI Inputs: min. 2× HDMI 2.0 Type-A HDMI Outputs: min. 1× HDMI 2.0 Type-A USB Ports: min. 1× USB 2.0 Type-A, min. 1× USB 3.0 Type-A, min. 1× USB 2.0 Type-C (DP 1.2 65W) Ethernet: min. 1× RJ-45 Audio Outputs: min. 1× 3.5 mm jack, min. 1× Mini-TOSLINK Serial Interface: RS-232 CPU: ARM Cortex-A55 or better GPU: Mali G51 MP2 or better RAM: min. 4 GB Storage: min. 32 GB Operating System: Android 11 or newer Speakers: Integrated, min. 2× 10 W Wired Network: min. 10BASE-T / 100BASE-T / 1000BASE-T Wi-Fi: min. Wi-Fi 6 (802.11ax), backward compatible Bluetooth: min. Version 5.2 Power Supply: 100–240 V AC, 50/60 Hz Standby Power Consumption: max. 0.5 W Energy Efficiency Class: min. A Operating Temp: 0°C to +40°C Storage Temp: –20°C to +60°C Humidity (Operating/Storage): 10% – 90% (non-condensing) VESA Mounting Pattern: min. 400 × 200 mm	
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	Terra Server 3430 G6 4HE	Germany	Terra	Room 114: IT room Industrial Rack-Mount Server Type: Server Rack server with min. 3U height (to support PCIe graphics cards or PCIe Dante cards for future expansion) or tower format server CPU Performance: min. 15,000 PassMark points according to cpubenchmark.net (e.g., Intel Xeon Silver 4210, Intel Xeon E-2236, or AMD EPYC 7262 or newer) RAM: min. 64 GB DDR4 RAM Hardware RAID Controller: Required OS Storage: min. 480 GB SSD in RAID 6 (2x 480 GB SSD) Data Storage: HDD/SATA in RAID 6, min. 20 TB Network: min. 2x 1 Gb LAN ports 1x KVM (IPMI) LAN port, not shared Power Supply: Redundant power supply Operating System: min. Windows Server 2025	Type: Server Rack server with min. 3U height (to support PCIe graphics cards or PCIe Dante cards for future expansion) or tower format server CPU Performance: min. 15,000 PassMark points according to cpubenchmark.net (e.g., Intel Xeon Silver 4210, Intel Xeon E-2236, or AMD EPYC 7262 or newer) RAM: min. 64 GB DDR4 RAM Hardware RAID Controller: Required OS Storage: min. 480 GB SSD in RAID 6 (2x 480 GB SSD) Data Storage: HDD/SATA in RAID 6, min. 20 TB Network: min. 2x 1 Gb LAN ports 1x KVM (IPMI) LAN port, not shared Power Supply: Redundant power supply Operating System: min. Windows Server 2025	
	Tesira Server IO	USA	BiAmp	Professional Audio DSP, Dante Type: Audio Processor General: Height: max. 133 mm Width: max. 483 mm Depth: max. 432 mm Weight: max. 8.2 kg Power Supply: Power Consumption: max. 150 W (100~240 VAC, 50/60 Hz) Phantom Power: +48 VDC (7 mA per input) Audio: Input Impedance (balanced): 8 k Ω Input Gain Range (in 6 dB steps): 0 – 66 dB Max. Input Level: +24 dBu Output Impedance (balanced): 200 Ω Max. Output Level: +24 dBu	Type: Audio Processor General: Height: max. 133 mm Width: max. 483 mm Depth: max. 432 mm Weight: max. 8.2 kg Power Supply: Power Consumption: max. 150 W (100~240 VAC, 50/60 Hz) Phantom Power: +48 VDC (7 mA per input) Audio: Input Impedance (balanced): 8 k Ω Input Gain Range (in 6 dB steps): 0 – 66 dB Max. Input Level: +24 dBu Output Impedance (balanced): 200 Ω	

				THD+N (20 Hz–20 kHz at +4 dBu): +0 / -0.25 dB EIN (20 Hz–20 kHz, 0 dB): > 108 dB Crosstalk (channel-to-channel at 1 kHz): @ 0 dB gain, +4 dBu input: < -85 dB @ 54 dB gain, -50 dBu input: < -75 dB Sampling Rate: 48 kHz A/D Converter: 24-bit Dante: Supported Certified Solutions: TAA Compliance: TAA-compliant	Max. Output Level: +24 dBu THD+N (20 Hz–20 kHz at +4 dBu): +0 / -0.25 dB EIN (20 Hz–20 kHz, 0 dB): > 108 dB Crosstalk (channel-to-channel at 1 kHz): @ 0 dB gain, +4 dBu input: < -85 dB @ 54 dB gain, -50 dBu input: < -75 dB Sampling Rate: 48 kHz A/D Converter: 24-bit Dante: Supported Certified Solutions: TAA Compliance: TAA-compliant	
	FS S3400-24T4SP24-PortSwitch 370W10Gbit L2FullyManagedPoE+	Asia Global Warehouse/China	FS	PoE Switches, 24 + 4 Ports Type: Managed PoE Switch 24+4 switch with 24x 10/100/1000BASE-T RJ45 ports and 4x 1G RJ45/SFP combo ports Performance: Total number of IPv4 routes: 128 Switching Capacity: 56 Gbps MAC Address Table: 8K Forwarding Rate: 42 Mpps ARP Table: 384 RAM: 128 MB Packet Buffer: 0.5 MB Power: Input Voltage: 100–240 VAC, 50–60 Hz Output Voltage: 48 VDC Max. Power Consumption: 370 W / 20 W PoE Standard: IEEE 802.3af/at Power Supply: 1 built-in Power Budget: min. 370 W Cooling: Number of Fans: 3 built-in Environment: Operating Temperature: 0 °C to 45 °C (32 °F to 113 °F) Storage Temperature: -40 °C to 70 °C (-40 °F to 158 °F) Physical: Footprint: 1U Mounting Options: Rackmount Product Material: Metal Dimensions (H x W x D): max. 45 x 440 x 208 mm (1.77" x 17.32" x 8.19")	Type: Managed PoE Switch 24+4 switch with 24x 10/100/1000BASE-T RJ45 ports and 4x 1G RJ45/SFP combo ports Performance: Total number of IPv4 routes: 128 Switching Capacity: 56 Gbps MAC Address Table: 8K Forwarding Rate: 42 Mpps ARP Table: 384 RAM: 128 MB Packet Buffer: 0.5 MB Power: Input Voltage: 100–240 VAC, 50–60 Hz Output Voltage: 48 VDC Max. Power Consumption: 370 W / 20 W PoE Standard: IEEE 802.3af/at Power Supply: 1 built-in Power Budget: min. 370 W Cooling: Number of Fans: 3 built-in Environment: Operating Temperature: 0 °C to 45 °C (32 °F to 113 °F) Storage Temperature: -40 °C to 70 °C (-40 °F to 158 °F) Physical: Footprint: 1U Mounting Options: Rackmount Product Material: Metal Dimensions (H x W x D): max. 45 x 440 x 208 mm (1.77"x 17.32" x 8.19")	

	Digitus 19" Cabinet 26HE Glassdoor T800	China	Digitus	Server Rack for all components Type: Server rack Rack type: Network cabinet Product material: Glass, steel Package contents: 2 keys, screws, brush strips, side panels, front door, rear door, 2 pairs of adjustable mounting rails Rack size: 48.3 cm (19") Height (rack units): 26U Depth: 80 cm Width: 60 cm Height: 134.2 cm Color: Black	Type: Server rack Rack type: Network cabinet Product material: Glass, steel Package contents: 2 keys, screws, brush strips, side panels, front door, rear door, 2 pairs of adjustable mounting rails Rack size: 48.3 cm (19") Height (rack units): 26U Depth: 80 cm Width: 60 cm Height: 134.2 cm Color: Black	
	Ubiquiti U7 Pro - Wireless Access Point WiFi 7	China	Ubiquiti	WiFi Infrastruktüre for all rooms Type: Access Point(s) Dimensions: max. Ø206 x 46 mm Weight: max. 680 g Housing Material: Polycarbonate, metal Mounting Material: Stainless steel, galvanized steel Network Interface: 1/2.5 GbE RJ45 Management Interface: Ethernet Power Supply: PoE+, UniFi PoE switch Voltage Range: 44–57V DC Max. Power Consumption: 21W Max. Transmit Power: 2.4 GHz – 22 dBm; 5 GHz – 26 dBm; 6 GHz – 23 dBm MIMO: 2x2 (DL/UL MU-MIMO) for all bands Max. Data Rate: 2.4 GHz – 688 Mbps; 5 GHz – 4.3 Gbps; 6 GHz – 5.7 Gbps Antenna Gain: 2.4 GHz – 4 dBi; 5 GHz – 6 dBi; 6 GHz – 5.8 dBi LEDs: White/Blue Button: Factory Reset Mounting: Wall/ceiling (included) Operating Temperature: -30 to 60°C Operating Humidity: 5 to 95% non-condensing Certifications: CE, FCC, IC WiFi Standards: 802.11a/b/g/n/ac/ax/be (WiFi 6/6E, WiFi 7) Security: WPA-PSK, WPA-Enterprise (WPA/WPA2/WPA3/PPSK) BSSID: 8 per radio VLAN: 802.1Q QoS: User-based speed limit Guest Isolation: Supported	Type: Access Point(s) Dimensions: max. Ø206 x 46 mm Weight: max. 680 g Housing Material: Polycarbonate, metal Mounting Material: Stainless steel, galvanized steel Network Interface: 1/2.5 GbE RJ45 Management Interface: Ethernet Power Supply: PoE+, UniFi PoE switch Voltage Range: 44–57V DC Max. Power Consumption: 21W Max. Transmit Power: 2.4 GHz – 22 dBm; 5 GHz – 26 dBm; 6 GHz – 23 dBm MIMO: 2x2 (DL/UL MU-MIMO) for all bands Max. Data Rate: 2.4 GHz – 688 Mbps; 5 GHz – 4.3 Gbps; 6 GHz – 5.7 Gbps Antenna Gain: 2.4 GHz – 4 dBi; 5 GHz – 6 dBi; 6 GHz – 5.8 dBi LEDs: White/Blue Button: Factory Reset Mounting: Wall/ceiling (included) Operating Temperature: -30 to 60°C Operating Humidity: 5 to 95% non-condensing Certifications: CE, FCC, IC WiFi Standards: 802.11a/b/g/n/ac/ax/be (WiFi 6/6E, WiFi 7) Security: WPA-PSK, WPA-Enterprise	

					(WPA/WPA2/WPA3/PPSK) BSSID: 8 per radio VLAN: 802.1Q QoS: User-based speed limit Guest Isolation: Supported	
				Software Software licenses for system (lifetime licenses) According to specifications Annex No.1; 2 and 3	According to specifications Annex No.1; 2 and 3	
				Implementation (One-Time) Sistem implementation According to specifications Annex No.1; 2 and 3	According to specifications Annex No.1; 2 and 3	
				Customer-specific documentation According to specifications Annex No.1; 2 and 3	According to specifications Annex No.1; 2 and 3	
				On-site customer training According to specifications Annex No.1; 2 and 3	According to specifications Annex No.1; 2 and 3	
				X	X	
TOTAL	X	X	X	X	X	X

Software Requirements

Instruction**S**

The tenderer must complete all the fields marked in yellow.

Name of bidder

SIMStation GmbH

ID	Requirements		* Yes/No	Comments (optional)
*The bidder must indicate in these fields whether the product offered fulfils the requirement described. The answer options are Yes/No and the tenderer must select the correct option from the menu for each requirement.				
1. MUST-MEET CRITERIA GENERAL		Cat .	*Yes/No	Comments (optional)
1.1	The software must be user-friendly, as well as simple and intuitive to use. The software has a uniform user interface for all system controls (PC, tablets). The user interface is optimised for its core functions for operation via touchscreen, i.e. without a mouse and keyboard.	A	Yes	The software is designed with a uniform, intuitive interface across PC and tablets, optimized for touchscreen use to ensure simple and user-friendly operation without relying on mouse or keyboard.
1.2	The software must be available in English, Moldovan, and Russian. If the software is not currently	A	Yes	The software is designed with a uniform, intuitive interface across PC and tablets, optimized for

	translated into these languages, it must include tools at no extra cost to add additional languages.			touchscreen use to ensure simple and user-friendly operation without relying on mouse or keyboard.	
1.3	The software can be run on third-party devices (PCs) using the current version of the Google Chrome browser.	A	Yes	The software is designed with a uniform, intuitive interface across PC and tablets, optimized for touchscreen use to ensure simple and user-friendly operation without relying on mouse or keyboard.	
1.4	The software is specifically designed for the control, recording, live broadcasting, debriefing, as well as archiving of simulation and skills training, which is connected and compatible with the required hardware to form a complete system.	A	Yes		
1.5	In the software, individual user accounts can be created. Each person who can log into the system is assigned a security role with appropriate permissions, such as administrators, technicians, instructors, and students. The creation of users and the assignment of security roles can be performed by administrators.	A	Yes	The software supports individual user accounts with role-based permissions such as administrators, technicians, instructors, students, standardized patients. Administrators can easily manage user creation and role assignments.	
1.6	All data is transmitted over the network encrypted according to the state of the art.	A	Yes		
1.7	The solution must not require an internet connection for the core functions (control, recording, live broadcasting and debriefing of audio-video).	A	Yes	The core functions (control, recording, live broadcasting, and debriefing of audio-video) operate fully without requiring an internet connection.	

1.8	The videos must be stored on a local server on premise (not in the cloud) and the software must have user-configurable automatic deletion functions of recordings and metadata.	A	Yes	All videos are stored securely on a local on-premise server. The software provides user-configurable settings for automatic deletion of recordings and metadata.
1.9	The software can be used simultaneously in all simulation rooms, debriefing rooms and control rooms without restrictions (e.g. unlimited number of trainings, debriefings at one time)	A	Yes	The software supports unrestricted simultaneous use across all simulation, debriefing, and control rooms, allowing an unlimited number of trainings and debriefings to run in parallel.
1.10	The installed cameras and all other video sources can be flexibly assigned in the user interface from all control rooms from corresponding simulation rooms. Simulations can be started and controlled from each control room in all simulation rooms. The control includes starting and stopping the recording, creating annotations, as well as transmitting live audio and media to and from the corresponding simulation room.	A	Yes	Cameras and video sources can be flexibly assigned via the user interface from any control room, with full functionality to start/stop recordings, create annotations, and manage live audio and media transmission with the corresponding simulation rooms.
1.11	The number of possible video and audio sources is not limited by the software.	A	Yes	The software imposes no limitations on the number of video and audio sources that can be integrated and managed within the system.
1.12	The control software can display a live stream of up to 9 video feeds, each in Full HD resolution (1920x1080p) in the recording view.	A	Yes	Yes, the control software can display up to 9 simultaneous Full HD (1920×1080p) live video streams in the recording view with no quality degradation during streaming.

1.13	The integration of IP cameras, as well as external video sources (via HDMI-In, video grabber) is possible	A	Yes	Yes, the integration of IP cameras as well as external video sources (via HDMI-In or video grabber) is possible, enabling seamless connection with any patient simulator or simulated/real medical device that provides a video output.
1.14	The video sources can be combined into several individually adaptable and logically connected views (layouts) (at least single frame, quad split, picture in picture)	A	Yes	
1.15	The cameras (moving, zooming, focusing) can be controlled directly in the software without additional hardware (e.g. joystick). Control is done by clicking directly on the image and not by a separate controller in the software.	A	Yes	
1.16	When recording is enabled, all enabled audio and video feeds of the current view are recorded at a resolution of at least 1080p at 25 frames per second or higher	A	Yes	
1.17	In addition to playing the video in the selected layout that was set during recording, individual video feeds can be played both live and when the recording is played back in fullscreen mode	A	Yes	Yes, in addition to playing the video in the selected layout set during recording, individual video feeds can be played both live and during playback in fullscreen mode, which is highly useful for review and debriefing.
1.18	All audio signals are processed via a digital audio DSP (Digital Signal Processor) with Acoustic Echo Cancelling, Background Noise Compensation, Automated Gain	A	Yes	In a healthcare simulation environment, having all audio signals processed by a digital DSP with acoustic echo cancelling, background noise compensation and automatic gain control is extremely useful because it ensures crystal-clear, intelligible communication

	Control. As a result, there are no echo effects (the room announcements that are output in the simulation room are not listened back in the control room, but are filtered out digitally. Continuous background noise, e.g. from ventilation, is filtered out and mechanisms to improve speech intelligibility are configured on the DSP. The software communicates directly with the DSP to route the sound signals out of and into the right rooms.			between control rooms, debriefing areas and simulation rooms, and a clear capture of conversations between team members collaborating while working on the same case or scenario. This means announcements made into the simulation room do not feed back into the control room audio, distracting ventilation or equipment noise is automatically removed, and speech levels are normalized so trainers and participants can focus on the scenario. It allows instructors to clearly monitor and record what is said, and gives students a realistic experience without technical artifacts - which is essential for effective training, patient-safety drills and post-scenario debriefings.	
1.19	Mixing multiple audio inputs and outputs is possible directly in the software without additional hardware	A	Yes	Mixing multiple audio inputs and outputs directly in the software without additional hardware is a unique feature of SIMStation, enabling effortless control of audio gains.	
1.20	The sensitivity (volume) of the microphones can be controlled in the software in each control room without additional hardware	A	Yes	The sensitivity (volume) of the microphones can be controlled directly in the software in each control room without additional hardware, which is very important in interdisciplinary trainings with multiple participants. Because people naturally speak at different volumes, this feature ensures consistent audibility and clear understanding of what was said, which is essential for accurate evaluation and effective feedback.	
1.21	The audio and video tracks must be in sync. The latency of transmitting audio and video tracks from the simulation rooms to the control and debriefing rooms is a maximum of 0.3 seconds.	A	Yes		

1.22	The input of audio files into the simulation room via the ceiling speakers (e.g. announcements, background noise) is possible without additional hardware in the control room. Audio files can be played either in a loop or once. The volume of the audio files being played can be controlled in the software during the scenario.	A	Yes	The input of audio files into the simulation room via the ceiling speakers (e.g. announcements, background noise) is possible without additional hardware in the control room. Audio files can be played either in a loop or once, and their volume can be controlled in the software during the scenario, making realistic ambient noises such as ambulance sirens possible.
1.23	The software has a dedicated debriefing function. The time stamps ("annotations") can be selected directly. The playback of the recording starts at least 5 seconds before the time of the selected time marker.	A	Yes	
1.24	Playback of the recording during the debriefing is possible directly from the software no later than 30 seconds after the end of the recording	A	Yes	
1.25	The recording can be started and stopped by means of a button in the software without additional hardware	A	Yes	
1.26	An annotation function with unique timestamps in the recording and user identification is available in the software. Multiple users on multiple devices can annotate for the same scenario at the same time. The annotations are collected	A	Yes	An annotation function with unique timestamps in the recording and user identification is available in the software. Multiple users on multiple devices can annotate for the same scenario at the same time. Annotations with a defined duration — such as CPR or administration of medication — are also possible.

	in debriefing mode and displayed in a filterable way for each user.				
1.27	Bookmarks and annotations can be displayed as a chronological list or in a timeline in both the director's software and the debriefing software	A	Yes		
1.28	Electronic checklists must be able to be completed in the control room software. The minimum requirement is simple checklists with a yes/no criterion.	A	Yes		
1.29	In addition to the control room, a live broadcast of the current recording is also possible in one or more other rooms. The live broadcast to other rooms can be easily started and ended in the software from the control room.	A	Yes	Yes, facilitators in the control room can precisely define which (if not all) camera streams are displayed on the viewing stations. The same applies to audio: individual audio feeds captured in the simulation room can be selectively broadcasted or muted for the viewers.	
1.30	This live transmission of the current recording to other rooms exclusively in the control room only reproduces the video streams and synchronized audio tracks, but not the annotations that are created	A	Yes		
1.31	The start (recording) of the next scenario can take place in parallel with the debriefing of the previous scenario without any problems	A	Yes		
1.32	The software has a built-in media database. The media can be played back from the control room on a screen specially installed in	A	Yes		

	the simulation room, but also on a tablet during the debriefing after selection. Media in common image and video formats (jpg, png, mp4), but also PDF and PowerPoint (pptx) files must be playable. If a medium is displayed during a scenario, a bookmark with a timestamp is created for it - so that the time at which this medium was shown is later visible in the debriefing and the medium can be called up again in the debriefing by clicking on the bookmark.				
1.33	Access to the administration area of the software, including the archive of recordings, is possible from any computer in the same network using a browser, protected by access data	A	Yes		
1.34	The archive database can be searched and filtered using a wide variety of metadata (at least instructor, actor/simulator, participants, date, time, scenario)	A	Yes		
1.35	Editing metadata and deleting recordings is possible with an appropriate security role	A	Yes		
1.36	A download/export function of the individual video files in a common format (z.B. mp4), in a resolution of 1080p at 25 frames per second or higher, is available. Only users	A	Yes		

	with appropriate permission can use this feature.				
1.37	Participants, instructors and, if necessary, acting patients can be assigned to each recording before, during and after the end of the recording	A	Yes		
1.38	The software is installed as an on-site installation on the servers and computers included in the purchase	A	Yes		
1.39	The software is updated regularly (at least 2 times a year) with security and performance updates	A	Yes		
1.40	The software is prepared for remote support. If necessary, the manufacturer's support can directly access all devices via the Internet to provide optimal and fast support.	A	Yes		
2. SHOULD-MEET CRITERIA - AUDIO		Cat .	*Yes/No	Comments (optional)	
2.1	The system records all audio sources separately from video sources as audio files. This means that the audio is not encoded into the video via the camera, but completely separated as separate audio files, so that they can be played back or edited separately later	C	Yes	Recording all audio sources separately from video sources as individual audio files is crucial because it gives full flexibility for playback, analysis, and editing after the simulation. Instructors can isolate specific microphones or rooms to hear exactly what was said, adjust levels independently, or create clean clips for evaluation and teaching without being tied to a single mixed soundtrack on the video. It allows targeted review of communication skills, alarms, or team interactions during debriefing.	

2.2	The sensitivity (the recording volume) of all microphones can be controlled in the software for each microphone individually before and during recording	B	Yes		
2.3	For each audio source, the software can be controlled separately during recording whether it should be (1) recorded, (2) listened to in the control room, and (3) heard in the live broadcast in the Audience Room	B	Yes		
2.4	With a Push-to-talk gooseneck table microphone in the control room, several buttons can be used to speak (1) "Voice-to-Room" to the simulation room, (2) to a separate "Voice of Patient" speaker and (3) to a wireless in-ear system via several buttons. The volume of these audio tracks can be controlled in the software. The audio tracks of "Voice-to-Room" and "Voice-of-Patient" are integrated directly from the microphone through the software into the live broadcast and recording (and not via the recording via the room microphone in the simulation room).	B	Yes		
2.5	In a scenario library, matching (background) sounds can be uploaded to the software in MP3 format and assigned. These can	C	Yes		

	be played during the simulation via the speakers in the simulation room with the possibility of automatic replay (loop) for background noise. The software can be used to determine whether and how loud the background noise should be heard in the simulation room, but also in the recording and live broadcast. The system's DSP is programmed in such a way that recorded background noise in the simulation room is digitally filtered out of the recording so that the communication of the participants in the recording remains optimally intelligible.				
3. MUST-MEET CRITERIA - VIDEO		Cat .	*Yes/No	Comments (optional)	
3.1	In the control room software, any number of views can be defined, in which up to 9 camera streams or HDMI encoder streams can be assigned. The layout of the streams can be done in different selectable layouts, e.g.: single video, quad split with four videos, 1 large and several small videos, picture-in-picture. With Picture-in-Picture, the level of transparency and location of the small video stream can be configured.	B	Yes		

	Different of these layouts can be created for each room. Each view can be saved with its own name				
3.2	The control room software is optimized for one monitor, but especially for display on two monitors. When using two monitors, one monitor is used to display the video streams, and the other monitor is used for control and annotation functions	B	Yes	The control room software is optimized for one monitor, but especially for display on two monitors. When using two monitors, one monitor is used to display the video streams and the other monitor is used for control and annotation functions. At any time, even while recording, you can seamlessly switch between rooms and/or stream layouts, making multi-room scenarios possible. The associated audio inputs and outputs (microphones and speakers) are automatically switched when changing rooms, so that the right sound is always heard with the right image, and touch-screen monitors are also used for even faster and more intuitive operation.	
3.3	At any time, even while recording, you can seamlessly switch between rooms and/or stream layouts. This makes multi-room scenarios possible. The associated audio inputs and outputs (microphones and speakers) are automatically switched when changing rooms, so that the right sound is always heard with the right image	B	Yes		
3.4	For each camera, at least four pre-saved positions can be configured by users in the software, which can then be approached with one click	C	Yes		

3.5	Each video stream can be zoomed in in two stages (up to full-screen mode) in the recording view in the control room	B	Yes		
4. SHOULD-MEET CRITERIA - AUDIENCE ROOM		Cat .	*Yes/No	Comments (optional)	
4.1	In the control room software, it is possible to control whether and in which rooms a live broadcast should take place. The live broadcast can be started or stopped at any time before, during and after recording by pressing a button in the Regisraum software. It is also possible to start only one live broadcast (without recording).	B	Yes		
4.2	The live broadcast is automatically started when a recording starts, if a live broadcast room has previously been assigned in the software for the scenario. The live broadcast is automatically stopped when a recording is stopped.	B	Yes		
4.3	In the control room software, the layout and composition of the video streams can be controlled specifically for the live broadcast. For example, only 2 camera streams can be shown in the live broadcast, while four camera streams appear in the control room and in the recording.	C	Yes		

4.4	If a medium (e.g. image or video) is displayed on a screen in the simulation room, this medium is also displayed in the live broadcast in the Audience Room. If the Audience Room has only one screen, the media will be displayed for between 10-20 seconds instead of the video stream. If the Audience Room has two screens, the media will be displayed on the second screen without any time limit, while the live video broadcast will run on the first screen	B	Yes		
4.5	Formattable texts for the scenario (e.g. briefing, clinical vignette) can be entered in the control room software, which are displayed on the screen in the live broadcast room by clicking on the screen. The display can take place before, during or after the recording, controllable by the control room software	C	Yes		
5. SHOULD-MEET CRITERIA - DEBRIEFING		Cat .	*Yes/No	Comments (optional)	
5.1	The system has a dedicated debriefing application, which is controlled via a tablet. The videos themselves are not played on the tablet, but on a separate screen in the debriefing room ("debriefing	B	Yes	The system has a dedicated debriefing application, which is controlled via a tablet. The videos themselves are not played on the tablet but on a separate screen in the debriefing room ("debriefing player"), whose media playback is controlled by the tablet. This is a unique	

	player"), the media playback of which is controlled by the tablet.			feature of SIMStation that makes debriefing streamlined and very easy.	
5.2	On the screen of the debriefing player, on which all participants view the videos, no annotations or other comments by the instructors are displayed. These can only be found on the tax tablet of the debriefing person	B	Yes		
5.3	The annotations and checklist entries of the recording are displayed on the tablet in a list or timeline. When the user clicks on an event (bookmark, annotation or checklist entry), the video jumps to a point in time 5-15 seconds (exact lead time period can be set in the software) before the time of the respective annotation entry and can be played from there.	B	Yes		
5.4	The volume of playback of the debriefing player can be controlled from the debriefing tablet	C	Yes		
5.5	A control tablet is not tied to a specific room and can be used in any debriefing room. Before the start of the debriefing, the debriefing room and screen on which the debriefing is to take	B	Yes		

	place can be selected on the control tablet.				
5.6	Before the debriefing session, the planned debriefing duration can be set on the control tablet. The control tablet visually alerts the debriefer when the pre-set time has elapsed.	C	Yes		
5.7	The tablet has all the necessary video control functions (start, pause, stop, manual forward and rewind). By operating these functions, the videos are promptly controlled on the debriefing player.	B	Yes		
5.8	The arrangement of the videos (split-screen, single video) can be controlled by the tablet during video playback.	C	Yes		
5.9	The screen on which the videos are played always automatically switches to dark when no video is played, so as not to draw the attention of the participants to the screen during the discussion phases in the debriefing.	B	Yes		
5.10	The debriefing application on the tablet allows you to show the media stored in the media library of the simulation scenario on the debriefing player.	B	Yes		
5.11	A media and document database can be accessed via the control tablet to access general	C	Yes	The debriefing tablet can control every aspect of the debriefing: it manages video and audio feeds and also allows sharing and navigating presentations or	

	presentation and learning materials on the Debriefing Player screen. For documents in PowerPoint or PDF format, the software on the tablet acts as a remote control for scrolling back and forth.			documents (PowerPoint, PDF) on the Debriefing Player screen.	
6. SHOULD-MEET CRITERIA ANNOTATIONS, ASSESSMENTS, EXAMS		Cat .	*Yes/No	Comments (optional)	
6.1	The software has an extensive, intuitive bookmarking and annotation module. By clicking on ready-made buttons with icons, bookmarks can be created in the control room software. There are different buttons available (at least 3 icons for neutral, good and bad events)	B	Yes		
6.2	There is a library with at least 40 icons for communication-related or medical-professional events, which can be used as buttons for creating bookmarks depending on the scenario.	C	Yes		
6.3	For each bookmark created by clicking on an icon, a free text can also be entered as an annotation during recording.	B	Yes		

6.4	Both individual events (marking a specific point in time) and longer-lasting events (e.g. phase from the beginning to the end of resuscitation) can be recorded by the bookmark and annotation system. For continuous events, the event duration is automatically calculated and stored in the annotation text	B	Yes	The system records both single events and continuous phases with automatic timing for duration annotations, and these duration annotations can run in parallel while individual events are bookmarked simultaneously. This allows evaluators to precisely define and analyze the exact sequence of actions during the scenario.
6.5	Checklist entries can be evaluated not only in terms of yes/no status, but also on a freely definable three- to n-level (max. 10) scale.	B	Yes	
6.6	Complex checklists and assessment forms with single-choice, multiple-choice, open-ended question and comment fields for each question can be created and completed electronically in the system.	C	Yes	
6.7	The software must allow the definition of competency categories (e.g., clinical skills, communication, etc.) for each exam question. It should also support assigning different weightings to each category (e.g., 30% clinical skills, 70% communication) to reflect the specific focus and importance of each competency in the assessment.	A	Yes	

6.8	Assessment forms can be configured with scoring functionality for exams. The system is capable of generating evaluations based on the completed assessments and allows for the export of these evaluations	A	Yes		
6.9	Questions items can be marked as critical (K.O.) items. If a K.O. question item is failed the entire exam is automatically rated as unsuccessful, regardless of performance on other questions or the overall score.	A	Yes		
6.10	Questions and notes can be formatted using text styling options such as bold and italics to highlight key information or clarify specific instructions. Additionally, images can be embedded, displayed as thumbnails that can be enlarged to full screen with a click for detailed viewing. T	B	Yes		
6.11	The software allows exam flows to be configured with at least two mandatory phases: "Student Ready" and "Encounter." Additionally, optional phases such as "Pre-Encounter" and "Post-Encounter" can be defined and included in the exam flow as needed.	A	Yes		

6.12	For each exam flow, the length of each phase can be configured, and sounds can be set to play at specific times (e.g., play a "gong" sound at the start of the encounter phase).	B	Yes		
6.13	Examiners have the ability to view the clinical vignette presented to students during the "Student Ready" phase	C	Yes		
6.14	Before and during exams, an overview can be opened that displays the status of each exam station, examiner, student, and simulated patient. This overview is also accessible on mobile devices such as laptops and tablets.	B	Yes		
6.15	The software supports the use of "floor screens" that guide students to their assigned exam stations and display the current exam phase, helping to ensure smooth transitions and efficient navigation during the examination process.	C	Yes		
6.17	In addition to the control room software, all bookmarking, annotation, checklist and assessment functions can also be recorded simultaneously by other users using tablets. The system stores which user has created which entries and also displays this meta information in the	B	Yes		

	recording archive and in the debriefing application.				
7. MUST-MEET CRITERIA TRAIN THE TRAINER		Cat .	*Yes/No	Discription (Optional)	
7.1	In order to train new instructors, it is possible to load previously recorded videos into the control room software instead of live video, so that the operation of the software and the creation of bookmarks and annotations can be practiced. It is not apparent to users that these are recordings.	C	Yes		
8. MUST-MEET CRITERIA RECORDING ARCHIVE		Cat .	*Yes/No	Discription (Optional)	
8.1	In the archive, subsequent annotations, completion of checklists and evaluations with scoring are possible	B	Yes		
8.2	Recordings can be exported as rendered video, which combines all video streams and audio tracks, and transferred to an external storage medium.	B	Yes		
8.3	The video and audio tracks can also be exported as individual raw data for post-processing in video editing programs.	C	Yes		
8.4	Periods can be set for the automatic deletion of recordings (e.g.: 12/24/36 hours, 100 days).	B	Yes		

	Certain recordings can be locked in the archive so that they are not deleted by automatic deletion.				
8.5	It is possible to add metadata such as names, locations or names of the participants (before, during, and after the training) to the recordings of the simulation session in the archive.	B	Yes		
9. SHOULD-MEET CRITERIA ADMIN		Cat .	*Yes/No	Comments (optional)	
9.1	The software has a scenario designer module in which the templates for exercise scenarios can be configured with all descriptions, the media and teaching materials to be destroyed, the appropriate bookmark icons and sound files.	B	Yes	The software has a scenario designer module where templates for exercise scenarios can be configured with all descriptions, media and teaching materials, bookmark icons and sound files. The scenario templates match international standards for simulation scenarios — including patient data, scenario description, learning objectives, participant roles, expected actions, timings, and evaluation criteria.	
9.2	The software has a comprehensive scheduling module that can be used to plan exercises, book rooms, and assign all participants and instructors. The scheduling module has a calendar function and is able to send personalized invitations to attendees via email.	C	Yes		
9.3	The software has extensive media databases to manage all required images, videos, presentations and teaching materials that are used in the operation of the software	B	Yes		

9.4	The software has a module for creating checklists, surveys and evaluation sheets, which can be used to create even complex electronic forms.	C	Yes		
9.5	The system offers a wide range of options for editing and managing user rights, e.g. via an Access Control List (ACL)	B	Yes		
9.6	It is possible to connect the system to an LDAP server (e.g. Active Directory) and use this interface for user authentication.	C	Yes		
9.7	Alternatively, it is also possible to configure the system with a Shibboleth interface for user authentication.	C	Yes		
9.8	A separate administrator account allows you to edit all the settings of the software.	B	Yes		
Signed: Vienna, 06/09/2025 Name and Surname: Joachim Hilbrand Position/Title: Chief Executive Officer (CEO) Tenderer: SIMStation GmbH Address: 1030, Vienna, Barichgasse 38, Austria					

Price Specifications

[[This table shall be completed by the Tenderer in columns 5, 6, 7, 8, and 11 if necessary, and by the Contracting Authority in columns 1, 2, 3, 4, 9, and 10]

	Procurement Procedure Number ocds-b3wdp1-MD-1755094527752 dated 16.09.2025
	Object of Procurement: Audiovisual system for debriefing and simulation for the training of medical personnel

CPV Code	Description of Goods/Services	Unit of Measurement	Quantity	Unit Price (Excl. VAT)	Unit Price (Incl. VAT)	Total Price (Excl. VAT)	Total Price (Incl. VAT)	Delivery Date / Lead Time	Budget Classification / IBAN	Discount %
1	2	3	4	5	6	7	8	9	10	11
38970000-5	Lot No. 1: Audio-video debriefing simulator for medical staff training									
	IP-Camera, FullHD, 2.5x Optical Zoom, Dome Format	pcs	2	1069,2	1283,04	2138,40	2566,08		In accordance with SIA RSAP	1%
	PTZ IP-Camera, FullHD, 10x optical zoom, Dome Format	pcs	4	1675,00	2010,00	6700,00	8040,00			1%
	Wireless Headcam (POV), Full-HD	pcs	1	513,00	615,60	513,00	615,60			1%
	HDMI Patient monitor Capture device, PoE	pcs	2	1115,00	1338,00	2230,00	2676,00			1%
	Room microphone, PoE	pcs	2	906,00	1087,20	1812,00	2174,40			1%
	Ceiling Speaker PoE	pcs	2	723,00	876,60	1446,00	1735,20			1%
	Media Screen AiO-PC with Touchscreen 24"	pcs	1	2179,00	2614,80	2179,00	2614,80			1%

	Professional display 75", 4k incl. wall mount	pcs	3	1793,00	2151,60	5379,00	6454,80			1%
	Industrial Rack-Mount Server	pcs	1	7342,00	8810,40	7342,00	8810,40			1%
	Professional Audio DSP, Dante	pcs	1	17743,00	21291,60	17743,00	21291,60			1%
	PoE Switches, 24 + 4 Ports	pcs	4	1184,00	1420,80	4736,00	5683,20			1%
	Server Rack for all components	pcs	1	824,00	988,80	824,00	988,80			1%
	WiFi Infrastruktur for all rooms	pcs	5	282,00	338,40	1410,00	1692,00			1%
	Software licenses for system (lifetime licenses)	pcs	1	76869,00	76869,00	76869,00	76869,00			10%
	Sistem implementation	pcs	1	131881,00	131881,00	131881,00	131881,00			0%
	Customer-specific documentation	pcs	64	120,00	120,00	7680,00	7680,00			0%
	On-site customer training	h	2	1600,00	1600,00	3200,00	3200,00			0%
TOTAL						352418,40 Euro	378976,08 Euro	X	X	X

Signed: Vienna, 06/09/2025 Name and Surname: Joachim Hilbrand Position/Title: Chief Executive Officer (CEO)
Tenderer: SIMStation GmbH Address: 1030, Vienna, Barichgasse 38, Austria
