

## Features offered by the proposed system

| Requirement Description   | Request Value   | Compliant     | Notes  |
|---|---|---------------|--|
| General requirements for mutisensor (EO head)   |   |               | <b>JPTX-MK2-I360200W</b> , Jaegar Mk2 PTU, IP, NexOS, 48vDC, white colour              |
| All components of the multisensor must be built to withstand extreme conditions, such as: Strong winds - the system must be built rigidly and without a general roof/sun visor that would cause wind resistance. Each device ( day/night room, thermal room, power box) must be equipped with its own individual roof/sun visor to minimize wind resistance. All external components must be designed to operate at high humidity, very low and very high temperatures. |   | Part          | PSU will not include sunshield   |
| Camera layout   | The cameras must be in the same housing.                                      | Part          | The cameras are modular and form part of the Jaegar PTU system. It is the same system. |
| Interface control   | Serial and Ethernet.  | Yes           | Serial and Ethernet (Ethernet preferred)   |
| Output camera   | The system should have two separate H.264 video streams, one for each camera. | Yes (exceeds) | Dual H.264 or H.265  |
| Supported control protocols   | ONVIF Profile S,  | Yes           | ONVIF Profile S  |
| Supported video outputs   | RTSP H.264 video streams and ONVIF S profile                                  | Yes (exceeds) | RTSP, H.264, H.265, ONVIF Profile S  |
| Consumption   | Not more than 310 W   | Yes           | Not more than 200 W  |
| Operating voltage   | At least 18 to 32 VDC   | No            | 48vDC  |
| Operating temperature range   | From -32°C to +55°C   | Yes (exceeds) | -32°C (-25°F) up to 65°C (149°F)   |
| Environmental   | From IP67   | Part          | Jaegar camera is IP67<br>PSU is IP66   |
| Weight  | Not more than 45 kg   | No            | Estimated camera overall weight 67kg (excluding mounts, brackets, cable, PSU           |

| Thermal Camera          |   |               | RHTX07IFB30Z150FW, EVO2 Uncooled LWIR thermal IP camera, with a 30-150mm F1.2 zoom lens and array format of 640x512, 12µm, 60Hz, NexOS, white colour |
|-------------------------|---|---------------|--|
| Detector                | Uncooled LWIR Vox micrometer                          | Yes           | Uncooled VOxmicrobolometer   |
| Resolution              | 640 x 512   | Yes           | 640 x 512  |
| Pitch detector          | 12 µm   | Yes           | 12 µm  |
| Spectral Band           | From 8 to 14 µm                                       | Yes           | From 8 to 14 µm  |
| NETD                    | ≤ 40 MK   | Yes (exceeds) | ≤20mK (at 20°C, F1.0)  |
| Focal length            | 30 – 150 mm   | Yes           | 30mm to 150mm  |
| Field of View           | 14.6° TO 3.0° (H)                                     | Yes (exceeds) | 14.7 (W) to 2.9° (T)   |
| Continuous Optical Zoom | Yes, up to 5x   | Yes           | 5x   |
| Continuous Digital Zoom | Yes, up to 8x   | Yes (exceeds) | 20x  |
| Focus                   | Automatic or Manual (remote)                          | Yes           | Autofocus, continuous autofocus, continuous autofocus, manual  |
| Image stabilization     | Yes (using VPU/ST)                                    | Yes           | 2D Electronic Image Stabilisation  |
| Image processing        | Tuneable Digital detail Enhancement                   | Yes           | Also known as Clahe  |
|                         | Brightness  | -             | Not relevant   |
|                         | Contrast  | -             | Not relevant   |
|                         | Digital noise reduction                               | Yes           | Noise filtering  |
|                         | Non uniformity correction                             | Yes           | Non uniformity correction  |
|                         | White Hot / Black Hot                                 | Yes           | White Hot / Black Hot  |
|                         | Colour Palette  | Yes           | 10 Colour Palettes   |
| Video outputs           | Analog, RTSP H.264 Ethernet stream                    | Part          | RTSP, ONVIF from PTU (H.264, H.265 and MJPEG)<br>No analog   |
| Interface control       | Serial, Ethernet                                      | Yes           | -  |
| Consumption             | 15 W typical, <60W maximum with heaters /lens defrost | -             | Thermal camera is part of the overall Jaegar camera station. See 'Consumption' in the 'General requirements for mutisensor (EO head)' section above. |

|                             |                                   |               |  |
|-----------------------------|-----------------------------------|---------------|--|
| Operating voltage           | 18 - 32 VDC                       | -             | Thermal camera is part of the overall Jaegar camera station. See 'Operating voltage' in the 'General requirements for mutisensor (EO head)' section above.   |
| Operating temperature range | -32°C to +55°C                    | Yes (exceeds) | -32°C (-25°F) up to 65°C (149°F)   |
| IP rating                   | IP67, built according to MIL-810  | Yes           | IP67, designed to MIL-810  |
| Dimensions                  | Max 600 x 225 x 220 mm            | No            | L740 x W298 x H249mm<br>(Thermal camera is part of the overall Jaegar camera station)  |
| Weight                      | Max 14 kg                         | No            | 18.3kg - Thermal camera is part of the overall Jaegar camera station. See 'Weight' in the 'General requirements for mutisensor (EO head)' section above.   |
| NATO D/R/I (2.3 m x 2.3 m)* | Min 11.15 km / 5.28 km / 2.74 km. | Yes (exceeds) | Based on a critical target dimension of 2.3m, 50% probability, target temperature variation of 2 kelvin, using NVIPM modelling software<br><br>Detection N50 6 = 13.98km<br>Recognition N50 3 = 5.56km<br>Identification N50 1 = 2.94km<br><br>Note-1. Specification does not state N50 task difficulty. So assumed 6, 3 and 1. Please clarify if this is as expected. |

|                              |                                    |      |  |
|------------------------------|------------------------------------|------|--|
| D/R/I human (1.8 m x 0.5 m)* | Min 6.38 km / 2.28 km / 1.17 km.   | Part | <p>Based on a critical target dimension of 0.92m, 50% probability, target temperature variation of 2 kelvin, using NVIPM modelling software</p> <p>Detection N50 6 = 5.67km<br/>Recognition N50 3 = 2.22km<br/>Identification N50 1 = 1.17km</p> <p>Note-1. Specification does not state N50 task difficulty. So assumed 6, 3 and 1. Please clarify if this is as expected.</p> <p>Note-2. The offered 25-150mm camera exceeds the Field of View and NETD technical specification above i.e. narrow field of view 2.9° and also sensitivity 20mK. So it should see further than the above specification.</p> |
| Method                       | STANAG 4347                        | Yes  | We use NVIPM modeling to provide data based on STANAG 4347   |
| $\Delta T_o(K)$              | 2                                  | -    | we used this input data for our calculations.  |
| $\sigma(km^{-1})$            | 0,2                                | -    | we used this input data for our calculations.  |
| Probability                  | 50%                                | -    | we used this input data for our calculations.  |
| Background temperature       | 288 K                              | -    | we used this input data for our calculations.  |
| Day/Night Camera             |                                    |      | <b>RHTX07IHA16Z500W</b> , 1/1.9" Low Light, CMOS, High definition (HD) IP video camera, with a 15.2-500mm (33x) optical zoom lens, NexOS, white colour   |
| Sensor                       | 1/1.9" CMOS sensor                 | Yes  | 1/1.9" CMOS Sensor (2.38 MP)   |
| Resolution                   | 1920x 1080                         | Yes  | Full HD 1080p (1920 x 1080)  |
| Sensitivity                  | Colour 0,001 Lux @ (F1.5, 25 fps); | No   | <p>Colour 0.05 lux F1.2 gain of up to 60dB / 0.005 lux F1.2 / AGC @ 42dB (accumulation 25 times)</p> <p>Mono 0.002 lux F1.2 gain of up to 60dB / 0.0002 lux F1.2 / AGC @ 42dB (accumulation 25 times)</p>  |

|                             |  |               |  |
|-----------------------------|--|---------------|--|
| Horizontal FOV              | 59° to 2.25°   | Yes (exceeds) | 23.42° (W) to 0.78° (T)  |
| Continuous optical Zoom     | Yes, up to 30x   | Yes (exceeds) | 33x, Motorised   |
| Digital optical Zoom        | Yes, up to 8x  | Yes (exceeds) | 20x  |
| Focus                       | Automatic or Manual (remote)                             | Yes           | Autofocus, continuous autofocus, continuous autofocus, manual  |
| Image stabilization         | Yes  | Yes           | 2D Electronic Image Stabilisation  |
| Optical filters             | Colour: IR cut filter / B&W: Defog Filter – NIR only     | Yes           | Colour, IR/B&W, Defog NIR  |
| Image processing            | Auto / Manual White Balance                              | Yes           | Auto / manual  |
|                             | Auto / Manual Gain Control                               | Yes           | Auto / manual  |
|                             | Wide Dynamic Range                                       | Yes           | Wide Dynamic Range   |
|                             | Digital Fog Removal                                      | Yes           | Defog  |
|                             | Auto Contrast  | Yes           | Known as Backlight Compensation  |
|                             | Dynamic Noise Reduction                                  | Yes           | Digital Noise Reduction  |
| Video outputs               | HD-SDI or analog, optional RTSP H.264                    | Part          | RTSP, H.264, H.265<br>Not HD-SDI or Analog   |
| Interface control           | Serial, Ethernet   | Yes           | Serial and Ethernet (Ethernet preferred)   |
| Consumption                 | 15 W typical, < 60 W maximum with heaters / lens defrost | -             | HD Visible camera is part of the overall Jaegar camera station. See 'Consumption' in the 'General requirements for mutisensor (EO head)' section above.              |
| Operating voltage           | 18 - 32 VDC  | -             | HD Visible camera is part of the overall Jaegar camera station. See 'Operating voltage' in the 'General requirements for mutisensor (EO head)' section above.        |
| Operating temperature range | -32°C to +55°C   | Yes (exceeds) | -32°C (-25°F) up to 65°C (149°F)   |
| IP rating                   | IP67, built according to MIL-810                         | Yes           | IP67, designed to MIL-810  |
| Dimensions                  | Max 490 x 170x 175 mm                                    | No            | L740 x W298 x H249mm   |
| Weight                      | Max 8 kg   | No            | 17.5Kg / 38.6lb - HD Visible camera is part of the overall Jaegar camera station. See 'Weight' in the 'General requirements for mutisensor (EO head)' section above. |
| Pan Tilt                    |  |               |  |

|                           |  |               |  |
|---------------------------|--|---------------|--|
| Load capacity / torque    | 35 kg / 60 Nm  | Yes           | Exceeds 35kg   |
| Weight                    | Not more than 25 kg                                    | No            | 26.4kg - Jaegar PTU is part of the overall Jaegar camera station. See 'Weight' in the 'General requirements for mutisensor (EO head)' section above.           |
| Pan axis range / angle    | n x 360°   | Yes           | 360° Continuous  |
| Dimensions (HxWxL)        | Max 325 x 220 x 340 mm (without arms)                  | No            | L740 x W298 x H249mm   |
| Materials                 | Aluminium  | Yes           | Aluminium  |
| Operating temperature     | -32°C to +55°C   | Yes (exceeds) | -32°C (-25°F) up to 65°C (149°F)   |
| Pan axis range / angle    | n x 360°   | Yes           | 360° Continuous  |
| Pan axis speed            | At least 0,001°/s to 60°/s                             | Yes (exceeds) | 0.001° - 200° per second<br>(Maximum pan and tilts speeds may be restricted depending on the payload types.)   |
| Tilt axis range / angle   | ± 90° (limited by application between ± 35° and ± 45°) | Yes           | ± 90° (limits can be set)  |
| Tilt axis speed           | At least 0,001°/s to 60°/s                             | Yes (exceeds) | 0.001° - 200° per second<br>(Maximum pan and tilts speeds may be restricted depending on the payload types.)   |
| Accuracy                  | Not less than 0.02°                                    | Yes (exceeds) | 0.0001° / 0.0017 mRad  |
| Backlash                  | None   | Yes           | Advanced motor control   |
| Brake                     | Self-docking   | Yes           | Advanced motor control for braking   |
| Operating voltage         | 18 - 32 VDC  | No            | 48vDC - Jaegar PTU is part of the overall Jaegar camera station. See 'Operating voltage' in the 'General requirements for mutisensor (EO head)' section above. |
| Maximum power             | 160 W  | -             | Jaegar PTU is part of the overall Jaegar camera station. See 'Consumption' in the 'General requirements for mutisensor (EO head)' section above.               |
| Communication to the unit | ETH 10/100 Base-T, RS-232, RS-485, 422 (optional)      | Part          | Ethernet and RS485<br>No RS232 or 422  |
| Protocol Control          | Owner of the offered software                          | ?             | ONVIF Profile-S, Pelco. These are open protocols   |
| Protection / IP rating    | IP67, built according to MIL-810                       | Yes           | IP67, designed to MIL-810  |

| Laser distance meter (LRF)                    |  |               | PHTX-LRF-7047W , Laser range finder, NexOS, white colour. Note: MIL use.  |
|---|--|---------------|---|
| Eye safety                                    | Laser Class 1  | Yes           | Class 1   |
| Measurement range                             | 50m – 32 000m  | Part          | 40m to 30,000m  |
| Measurement range (Standard target):          | 10 000m – target size 2.3 x 2.3 m, visibility 15 km, target reflectivity 30%, detection probability >90% | ?             | Range Performance on 2.3 ×2.3 m Target Size (reflectivity: 30 %, <u>observer visibility 25 km</u> ) = ≥10,000m (11,000m nominal)  |
| Precision                                     | 0.5 – 1.5 m depending on the distance and target reflectivity  | Yes           | ±1 m  |
| Beam divergence                               | 0.35 mrad  | ?             | 0.45mRad  |
| Wave length                                   | 1.54 µm  | Yes           | 1550 nm   |
| Measurement rates                             | 10 meas. per min (up to 40 meas. per min with reduced power / range)                                     | Yes           | Full range performance = 1Hz<br>Approx. 90 % of full range performance = 3 Hz<br>Approx. 85 % of full range performance = 5 Hz<br>Approx. 80 % of full range performance = 10Hz |
| Interface control                             | Serial, Ethernet   | Part          | Ethernet via Jaegar<br>No Serial.   |
| Operating voltage                             | 18 - 32Vdc   | -             | LRF (8-24vDC) is part of the overall Jaegar camera station. See 'Operating voltage' in the 'General requirements for mutisensor (EO head)' section above.                       |
| Power consumption                             | 3 W on standby, 7 W max on measurement   | -             | LRF is part of the overall Jaegar camera station. See 'Consumption' in the 'General requirements for mutisensor (EO head)' section above.                                       |
| IP rating                                     | IP67, built according to MIL-810   | Yes           | IP67, designed to MIL-810   |
| Operating temperature                         | -32°C + 55°C   | Yes (exceeds) | -32°C (-25°F) up to 65°C (149°F)  |
| Dimensions                                    | 172 x 151 x 75 mm with connector   | No            | L270 x W138 x H 166mm   |
| Weight  | 2 kg   | No            | 5kg - LRF is part of the overall Jaegar camera station. See 'Weight' in the 'General requirements for mutisensor (EO head)' section above.                                      |
| Metal mounting bracket on the tower at height | 25 m   | Yes           | Pillar model result   |

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|---|--|------|---|
| <b>Power supply box</b>   |  |      | <b>SMART-PSB-D48-10A-JPTX-PT</b> , SMART PSU 48VDC IP with Cat-5 connectivity, surge protection, remote restart, remote power down/on, remote diagnostic capability, cable entry sockets, suitable for JCMX cable / Jaegar NexOS PTU, metal enclosure |
| Power supply box with sun shield and dual shielding                         | Yes  | No   | Sunshield not part of PSU.  |
| Environmental   | Able to withstand temperatures from -32° to 55°C in outdoor conditions               | Part | -20°C to 70°C   |
| Power   | Compatibility with the multisensor   | Yes  | SMART PSU Designed for Jaegar   |
| Input power   | 230VAC 50Hz standard connector   | Yes  | 230vAC  |
| Input communication   | 1xRJ-45 standard connector   | Yes  | RJ45  |
| Protection  | High and low voltage brake device  | Yes? | Mains spike protector   |
| Service outlet  | Yes  | Yes  | Door opens  |
| All necessary interconnection cables  | Yes  | Yes  | Pre-terminated  |
| <b>Joystick</b>   |  |      | <b>IPD Launch (APEM) Professional USB desktop controllers, non-contacting Hall effect technology</b>  |
| Type  | USB  | Yes  | USB 2.0 HID   |
| Sensory type  | The hall effect  | Yes  | tehnologie fără contact cu efect Hall   |
| Joystick  | 3-axis, 2 buttons  | Yes  | Joystick cu 3 axe pentru control Pan / Tilt / Zoom (P/T/Z).   |
| Buttons   | 10 programmable buttons  | Yes  | 10 butoene  |
| Operating temperature   | -32°C to +55°C   | No   | -25 °C to +85 °C (-13 °F to +185 °F)  |
| <b>Special equipment with Control and Management Software pre-installed</b> |  |      | <b>HP Z2 TWR G9 700W RCTO BU</b>  |
| Processor   | Intel Core i7 -14700 (2.1 - 5.3 GHz) 33MB 20 jeder/28niti, vPro Enterprise or Analog | Yes  | Intel Core i7-14700 vPro 5.40G 20C65WCPU  |
| SO  | Windows 11 Pro 64  | Yes  | OST Win 11 Pro 64, Localizarea sistemului de operare  |
| RAM   | 32 GB DDR5 4800 MHz (1x32GB)   | Yes  | 32 GB (1x32 GB) DDR5 4800 UDIMM NECC Mem  |
| SSD   | 1 TB PCIe-4x4 2280 NVMe TLC  | Yes  | Unitate SSD HP PCIe 2280 Val M.2 de 1 TB, PCIe-4x4  |
| Video card  | NVIDIA T1000 8 GB GDDR6 PCIe, 4x MDP (3x adapter MDP to DP) or analog                | Yes  | NVIDIA RTX A1000 8GB 4mDP GFX (miniDP-to-DP Adapter (4-pack))   |



|                      |  |     |   |
|----------------------|--|-----|---|
| Case type            | Tower (TWR)  | Yes | HP Z2 G9 Tower Workstation Desktop PC   |
| Chipset              | Intel Q670 or analog   | Yes | Intel® W680   |
| Power supply         | 550W   | Yes | 700w  |
| Front connectors     | 1x USB-C 3.2; 4x USB 3.2 Gen2 (1x cu loading)  | Yes | (2) USB-A 10Gbps ports (1 charge port supports up to 5V/2.1A), (2) USB-A 10Gbps ports, (1) USB-C 20Gbps eport (charge supports up to 5V/3A, optional), (1) SD card reader (optional), (1) universal audio jack  |
| Rear connectors      | 1x HDMI 1.4; 2x DP 1.4a; 3x USB 3.2 Gen1; 3x USB 2.0; 1x RJ-45; 1x audio output          | Yes | (2) DisplayPort 1.4 ports, (1) Audio Line out, (1) Audio Line in, (1) 1GbE LAN, (3) Hi-Speed USB 480Mbps /, ports, (2) USB-A 10Gbps ports, (1) USB-A 5Gbps port   |
| Card reader          | SD 4 in 1  | Yes | HP SD Card Reader   |
| Extensions           | 1x M.2 2230; 1x PCIe gen4 x16; 1x PCIe gen4 X16 (wired as x4); 2x M.2 2230/2280; 2x PCIe | Yes | 1.PCI Express Gen5 x16 (Mechanical) / x16 (Electrical)<br>2.PCI Express Gen3 x4 (Mechanical) / x1 (Electrical)<br>3.PCI Express Gen3 x16 (Mechanical) / x4 (Electrical)<br>4.PCI Express Gen3 x4 (Mechanical) / x4 (Electrical)<br>5.M.2 2280 Storage (PCIe Gen4 x4)<br>6.M.2 2280 Storage (PCIe Gen4 x4)<br>7.M.2 2280 Storage (PCIe Gen4 x4)<br>8.M.2 2230 WLAN (PCIe Gen3 x1 + Intel CNVi) |
| Expansion slots      | 2x 3.5"  | Yes | includet, (2) Internal 3.5" bays  |
| Keyboard and mouse   | included   | Yes | HP USB 320K Keyboard HP Wired 320M Mouse  |
| Speakers             | Internal 2 W   | Yes | includet /  |
| Wireless connections | Realtek 8852BE Wi-Fi 6 + Bluetooth 5.3 WW WLAN-4H0E9AV                                   | Yes | Intel AX211 Wi-Fi 6E +BT 5.3 WLAN EA  |
| Wired connections    | Gigabit Network  | Yes | Integrated Intel® I219LM PCIe GbE Controller (Intel® vPro® with Intel® AMT 16.0   |
| Optical drive        | Slim DVD-RW  | Yes | HP Z2 TWR DVD-ROM 9.5mm Slim ODD  |
| RAID                 | Supports RAID  | Yes | SATA and NVME RAID 0 Striped Array<br>SATA RAID and NVME RAID 1 Mirror Array  |
| Security             | TPM mode 2.0, Kensington lock slot   | Yes | includet  |

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|--|---|-----|---|
| Monitor  | 2 monitors 24 inch FHD, IPS, antiglare, low blue light, brightness $\geq 250$ cd/m <sup>2</sup> , supported resolution= 1920 x 1080, typical contrast $\geq 1000:1$ . 1x hdmi, 1x DisplayP, pivot, mounting=vesa, height adjustment, rotation system  | Yes | Monitor HP Series 5 Pro FHD de 23,8 inches - 524pf  |
| Warranty   | 36 months   | Yes | HP 3 year (material/labor/onsite) Warranty  |
| <b>MS Control and Management Software</b>  |   |     |   |
| <b>Software specifications</b>   |   |     | <b>SR7Security</b> / SR7 Security Base License, <b>SR7SecOpt</b> / SR7Security license for one optronic system (P&T + 2 x video), <b>SR7SecSen</b> / SR7Security license for one security/safety device (LRF, seismic, PIR, MW/IR barrier...), <b>SR7SecWks</b> /SR7Security certified workstation (Core i7, 32 GB, SSD, Windows 11, 2 x 24" screens, Dell/HP)  |
| The software must be designed to run on the special equipment with the Windows operating system. |   | Yes | Software compatible with all 64 bit versions of windows from Windows 10   |
| Consoles   | The software should allow for and management complete control of all electro-optical systems and modules, as well as other existing modules, devices, pan/tilt mechanisms. It must be implemented as a software package based on them Windows operating system that provides a stable and logical operating framework. The software package must be modular in nature and fully designed to provide an easy-to-use interface. | Yes | The proposed software solution fully satisfies the stated requirement. It provides comprehensive control and management capabilities for all electro-optical systems and associated modules, including pan/tilt mechanisms and other peripheral devices. The system is implemented as a modular software package running on the Windows operating system, ensuring a stable, coherent, and logically structured operational framework. Its modular architecture supports scalability and ease of integration with existing and future components, while the user interface is designed to be intuitive and accessible, promoting efficient operation in both standard and complex deployment scenarios. |

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|----------|--|-----|--|
| Keyboard | There must be programmable keyboard shortcuts for basic and advanced functions.                                      | Yes | Programmable keyboard function keys to call presets or other functions with one key press  |
| Mouse    | There must be complete control operations of the mouse to help the operator with control, navigation and data entry. | Yes | The software fully supports comprehensive mouse control operations to assist the operator in system interaction. This includes precise input handling for control commands, seamless navigation through the user interface, and efficient data entry workflows. Mouse input is integrated as a core interaction mechanism, ensuring responsiveness and accuracy in all operational contexts. The implementation adheres to usability best practices, enhancing operator efficiency while minimizing cognitive and physical workload.                 |
| Joystick | There must be full control of the XYZ joystick (rotation) and programmable buttons for basic and advanced functions. | Yes | The system provides full integration and control of XYZ-axis joysticks and gamepads, including rotational input. The software accurately interprets and maps joystick movements across all axes, enabling precise control operations in real-time environments. Additionally, all programmable buttons are fully supported and configurable for both basic and advanced functionalities. This ensures operator flexibility and allows the customization of control schemes to optimize task execution and adapt to diverse operational requirements. |
| Touch    | There will be touch support and tactile optimization for the software.   | Yes | Tactile optimization has been implemented to enhance usability in touch-based environments, facilitating intuitive control, navigation, and data entry without reliance on traditional input peripherals.  |

|                    |  |     |   |
|--------------------|--|-----|---|
| System overview    | There will be a tool that will show the current state of the system and all involved components that support status reporting. This tool will provide insight into the health of the system and possible maintenance needs.              | Yes | The software incorporates a dedicated system status monitoring tool designed to provide real-time visibility into the operational state of the system and all connected components capable of reporting status.   |
| Cameras            | There will be the option to fully control and extend the cameras and other components of the EO.   | Yes | The system will provide full control over the cameras and other components of the electro-optical (EO) system, allowing for precise real-time adjustments. Additionally, the software can be enhanced as hardware improvements are made, enabling the system to take full advantage of upgraded components such as cameras, sensors, and other hardware, while also supporting the addition of more cameras and features for expanded monitoring or visualization capabilities.   |
| Control            | There must be complete control of the system height and azimuth. Complete lens control and full camera control over the system, separated by basic and advanced features (depending on the device).                                      | Yes | The system provides complete and precise control over both height and azimuth axes, enabling accurate positioning and alignment in accordance with operational demands. Furthermore, full lens and camera control functionalities are implemented, with capabilities segmented into basic and advanced feature sets based on the specific device configuration. This includes zoom, focus, iris control, and other camera parameters, ensuring granular management of optical performance tailored to both standard and high-end devices. |
| Picture in picture | During the control of the selected (primary) camera, which is in the full image, there will be the option to display the (secondary) uncontrolled camera video in picture mode. This window should be resized and mobile on the desktop. | Yes | The software supports simultaneous display of both primary and secondary camera feeds. While the primary (controlled) camera occupies the full main view, a secondary (uncontrolled) camera stream can be displayed at the same time.   |

|                          |   |     |  |
|--------------------------|---|-----|--|
| Zoom synchronization     | There must be an option to synchronize zooms between cameras so that an uncontrolled secondary camera follows the primary controlled camera.  | Yes | The system includes a one touch feature to synchronize the zoom levels between the primary and secondary cameras, ensuring that the secondary camera automatically follows any zoom changes made to the primary. This ensures consistent visual output across multiple camera views.   |
| Secondary camera control | There will be the option to manually control the secondary camera lens while you are in primary camera view and observe the secondary camera in picture-in-picture mode.  | Yes | The system allows manual control of the both camera lenses while viewing the both cameras. This provides flexibility for real-time adjustments without interrupting any camera's view.   |
| Panorama                 | There will be the option to take panoramic photos with the selected camera. There will be an option to export and import such images, and the EO will be controllable by browsing in the panoramic photo. It means that selecting the area in the panoramic photo will point the EO to the selected position.   | Yes | The system supports taking panoramic photos with the selected camera. Additionally, the EOS (Electro Optical System) can be controlled by interacting with the panoramic photo, allowing users to select an area in the photo, which will adjust the EO to the corresponding position.   |
| Presets                  | There will be the option to define and play presets of EO components (pan-tilt, cameras).<br>There will be the option to store at least 12 presets separately on different playlists. These playlists should be played by the operator in the selected mode, where the operator defines the movement speeds, standby times and playlist repeat behavior. There must be at least 16 separate game lists. | Yes | The system allows defining and playing presets for EOS components (pan-tilt, cameras), with the ability to store unlimited presets on separate playlists. Operators can control movement speeds, standby times, and playlist repeat behavior. Additionally, the system supports unlimited separate game lists for enhanced flexibility in managing preset sequences. |
| BIT                      | There should be a tool to start and record the EO status. This tool will be manually switched on and run integrated tests to determine the health of the system. A generated report will serve as a possible service/request report to the manufacturer.  | Yes | A tool will be provided to start and record the EO status. This tool can be manually activated to run integrated tests, assessing the system's health. A generated report will serve as a diagnostic document, potentially used as a service/request report for the manufacturer.  |

|   |   |     |   |
|---|---|-----|---|
| System information                                | There must be a system information bar that reports the current system status to minimum Pan, Tilt, Azimuth, heading, FOV and focus.  | Yes | All system information will be displayed with the current system status, including Pan, Tilt, Azimuth, Heading, FOV, and Focus, providing real-time feedback on key parameters. These parameters are visually displayed on the maps and on the system control window.   |
| Recording and snapshots                           | There will be the option to trigger recordings snapshots of current video streams.  | Yes | The system will allow triggering recordings and snapshots of the current video streams, enabling easy capture of live content for later use. Moreover,  |
| Full screen                                       | There will be the option to activate the full screen, where only the video image will be displayed on the full screen.  | Yes | The system will provide an option to activate full screen mode, displaying only the video image on the screen for an immersive viewing experience.  |
| Video tracking and electronic image stabilization | The video tracking module and electronic image stabilization will be activated in manufacturer software that will allow the merging of multisensor images, target detection and tracking, automatic control of cameras and will also provide performance indicators for this purpose. | Yes | The manufacturer software will enable activation of the video tracking module and electronic image stabilization, supporting multisensor image merging, target detection and tracking, automatic camera control, and providing performance indicators for these operations when available with the hardware. The SR7 software interface will be used to activate the camera's video tracking function. The operator has to manually select the target to be tracked as there is no detection (radar) device in the current configuration. |