**ANNEX 1: SCHEDULE OF REQUIREMENTS**

A comprehensive video monitoring system will help local public authorities to intervene in an efficient and timely manner, providing assistance to citizens in various difficult or emergency situations, such as fires, floods, accidents, health problems or any other natural disaster.

The video monitoring systems developed in the framework of this RFQ23/02771 must offer the possibility of developing existing systems, which are managed from the Video Monitoring Centres located in the Ungheni and Cahul Police Inspectorates, which are to be additionally equipped with appropriate equipment.

The proposed solution should allow the interconnection of existing and new systems by adding video monitoring equipment (installation of new cameras, NVRs, workstations, monitors - all compatible with the existing equipment) and connecting them to the existing data network of the video monitoring system, according to the detailed Execution Projects which are part of this RFQ23/02771.

Also, the developed video monitoring system must offer an alternative interconnection with other third parties through an external access module that will facilitate the transmission of data (image captures and/or video recordings) to third parties (institutions or authorized structures) with which the beneficiary collaborates. The IP cameras and DVR/NVR equipment must comply with the requirements of the SMART City platform, managed by the Ungheni and Cahul Mayoralties, and support API connection via http(s).

The IP cameras will be installed in public spaces related to the specified locations in Cahul and Ungheni municipalities, aimed at covering certain areas of public interest such as intersections, streets, recreational areas, public institutions, waste management platforms, by installing an additional number of video cameras on pillars. The exact locations of the IP cameras installation are indicated in the following Annexes of this RFQ23/02771, as follows:

* LOT1: Annex no. 5
* LOT2: Annex no. 6

Information from the IP cameras will be transmitted and processed in the Video Monitoring Centers located at the Police Inspectorate Offices:

* LOT 1: Police Inspectorate, 20 Nationala Street, Ungheni municipality, Republic of Moldova.
* LOT 2: Police Inspectorate, 28-30, 31 August 1989 Street, Cahul municipality, Republic of Moldova.

The system architecture in both municipalities must be designed modularly to provide a high degree of scalability.

**TECHNICAL SPECIFICATIONS FOR GOODS AND SERVICES FOR UNGHENI MUNICIPALITY (LOT1):**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No** | **Minimum technical requirements** | **Unit** | **Quantity** |
| **1.** | **VIDEO MONITORING CENTER** | | |
| 1.1 | **Video storage server**   * Web User Interface * HDD Slot: min. 16 HDDs * Capacity for each HDD: 10TB or more * Video performance: min. 320-channel * HDD Support: single, RAID (Entreprise Hard Disk) * RAID support (RAID 0, 1, 5, 6, 10, 50,60, JBOD, hotspare) * Support iSCSI volume management * Network: 2 RJ-45 ports (10/100/1000Mbps), ONVIF * Auxiliary interface: USB 2.0, USB 3.0, Com port (RS232), miniSAS port * Power Supply: AC100V-240V * Record Mode: Manual, Continuous, Motion Detection, Alarm * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.2 | **High-Performance Surveillance HDD**:   * Hard drive – Internal 3.5” * Capacity: 10TB * Interface: SATAIII 6Gb/s * Rotational Vibration Sensors: Yes * Internal Data Rate: 180Mb/s * Drive Transfer Data: 600MB/s (external) * Cache: 256Mb * Supports up to 180 TB/yr workload rate * **Compatible with Video storage server in pt. 1.1.**   **Warranty: minimum 2 years** | Pcs. | 16 |
| 1.3 | **Video Management System Server**   * Main Processor: 64-bit 4 core CPU * Operating System: Linux * Memory: min. 8GB * Network Ports: 4 Ethernet Ports (10/100/1000Mbps) * USB Port: 4 × USB 3.0, 2 HDMI, 1 VGA * HDD Storage * For System: Built-in 1× 1T HDD disk (2.5") * For Video & Pictures: Support for 3 HDD disks (2.5") * Video Management * Video: min. 256 Channels * Facial Recognition: 32 Channels * Installation Method: Standard 19" rack installation * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years** | Pcs. | 1 |
| 1.4 | **Software + licenses** (for 52 video surveillance cameras)  Software has to be able to provide event analytics, vehicle detection by category, face detection/crowd detection, stored information analytics, etc. | Set | 1 |
| 1.5 | **Uninterruptible power supply**   * UPS transformer type: Linear-interactive * Number of connectors: 4 * Output connector types: Schuko CEE 7/4 * Output power capacity: 1600 VA * Maximum Load: 900 W * Output Voltage: 230 VInput Voltage: 110~240 VAC   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.6 | **Power Distribution Unit**   * 16A, 200-240V, 50/60Hz * 8 sockets Schuko CEE 7/3, min. 2m cable length   **Warranty: minimum 2 years** | Pcs. | 1 |
| **2.** | **VIDEO WALL** | | |
| 2.1 | **LCD Monitor 49”-55" (16:9)**   * Resolution: 4K UHD (3840 x 2160) * Response Time: ≤ 5 ms. * Backlight: LED * Inputs: HDMI, VGA(D-Sub), USB, Audio, Ethernet * Viewing Angle: 178°/178° (horizontal/vertical) * Mounting Options: VESA * Brightness/Luminance: 350 cd/m2 * Contrast Ratio: 1200:1 * Certifications: CE/FCC * Power Supply: AC100~240V 50/60 Hz * Suitable for continuous 24/7 operation   **Warranty: minimum 2 years** | Pcs. | 4 |
| 2.2 | HDMI Cable DP to HDMI or HDMI to HDMI 10.0m | Pcs. | 4 |
| 2.3 | Wall Mountfor 55" Flat Screen/LED/4K Monitor, VESA compatible | Pcs. | 4 |
| 2.4 | **Computer for Operator**   * Processor: min 14 total cores, performance-core base frequency 2.5-4.8 GHz or similar, production - no earlier than Q1 2023. * Motherboard: ATX form factor, support: Slot M2 PCIe Gen4 x4 (64 Gb/s), RAID( 0,1,5,10), min 4x DIMM memory slots, USB Type-C, HDMI port, Cooler with min 66CFM, 120mm, 220W, 600g * RAM: 32GB DDR5 5600MHZ, SSD: 1TB NVMe 3DTLC PCIe 4.0x4 R/W: 7000/5100MB/s * Video card: memory – min 4 GB DDR6, min. 1 DP, 1HDMI output ports. * Network interface: 1 x 2.5 Gbps RJ-45. * Power supply source: min 700W, 80+ Gold certification, semi-modular or fully modular * PC Case Fan 120x120 min 66CFM * Case ATX, USB 3.0 * Wireless keyboard/mouse – Eng/Ro/Ru layout. * Operating system: MS Windows 11 Pro 64-bit.   **Warranty: minimum 2 years.** | Pcs. | 2 |
| 2.5 | **Monitor for Operator’ PC**   * Minimum 27” * Brightness/Luminance: 350 cd/m2, Viewing angle: 178°/178° (horizontal/vertical). Screen resolution: 2560x1440. * Response Time: ≤ 5 Ms. * Eye protection functions. * Interfaces: HDMI, VGA. * Certifications: CE/FCC * Power Supply: AC100~240V 50/60 Hz. * Suitable for continuous 24/7 operation.   **Warranty: minimum 2 years.** | Pcs. | 2 |
| 2.6 | **Uninterruptible power supply**   * UPS transformer type: Linear-interactive * Output power capacity : 800 VA * Maximum load : 480 W * Input voltage : 170~280 VAC * Number of connectors : 2 Sockets * Output connector types: Schuko CEE 7/3 | Pcs. | 2 |
| 2.7 | Software for video wall | Set | 1 |
| 2.8 | **Video wall controller**   * Multiple signal sources support (VGA, DVI, HDMI, DP, etc.) * Up to 3840 × 2160@30 Hz resolution for HDMI and DP signal inputs * Decoding: H.264 and H.265 compression standard to display 2-ch@8.0 MP, 2-ch@6.0 MP, 2-ch@5.0 MP, 8-ch@1080p, 16-ch@720p and 32-ch@D1 signals * Lossless output of 60 frames * Compatible with wireless projection * Adjustable LED background color * 1/4/9/16 window division modes support and full-screen switch of the window * Minimum 20 board slots (10 x Input, 10 x Output)   **Warranty: minimum 2 years** | Pcs. | 1 |
| **2.9** | **24-Port Gigabit Switch**   * Ethernet Port 24\*10/100/1000 Base-T * Switching Capacity 48G * Packet Forwarding Rate 35.7Mpps * Packet Buffer Memory 2Mb * MAC Table Size 8K * Exchange Mode Store & forward * Application Humidity 10%~90% * Power AC: 100-240V; 50/60Hz * Working Temperature 0°C~+40°C | **Pcs** | **1** |
| **3.** | **OUTDOOR VIDEO MONITORING SYSTEM** | | |
| 3.1 | **IP Camera** (type 1)   * Camera type: motorized IP PTZ camera * Sensor: CMOS 4 Mp, Size: 1/2.8" * Outdoor PTZ (Pan-Tilt-Zoom) Features: Pan (Rotation): 360° continuous rotation, Tilt (Inclination): Up to 90° * Focal Length: 4.8 mm to 120 mm * Video Compression: H.265+/H.265/H.264+/H.264 * IR distance up to 100 m or more. * Zoom: 25x optical, 16x digital zoom * Micro SD Card Slot: supports 256GB or more * Protection: IP66 Standard or higher * CCTV cyber security built-in * Day/Night Switch: day, night, auto * Surge Protection and Voltage Transient Protection * Support PoE+ * Ethernet: RJ-45 (10/100Base-T). * Working temperature: - 40°C / +65°C * Lightning protection: TVS 6000 V * Conformité Européenne (CE) certification * All mounting materials must be included * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image ( jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years.** | Pcs. | 36 |
| 3.2 | **IP Camera** (type 2 – bullet camera)   * Sensor: Type: CMOS 4 Mp, Size: 1/3" * Focal Length: 2.8 – 6 mm or more * Video Compression: H.265+/H.265/H.264+/H.264, MJPEG * IR distance up to 50 m or more * Iris Type: Fixed focal * Zoom: 16x digital zoom * Resolution: up to 2688x1520 * MicroSD Card Slot: supports up to 256GB or more * Day/Night : Auto(ICR)/Color/B/W * Protection: IP67 * CCTV cyber security built-in * Day/Night Switch: color/B/W/ auto/ * Surge Protection and Voltage Transient Protection * Power Supply: 12Vdc, Poe * Built-in MIC: Yes * Ethernet: RJ-45 (10/100Base-T) * Intelligent detection: Yes * BLC, HLC, 3D DNR * Working Environment: -30°C to +60°C * Casing Metal * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years.** | Pcs. | 16 |
| 3.3 | **24 Port Gigabit Switch**   * Ethernet Ports: 24 x 10/100/1000 Mbps RJ-45 * Switching Capacity: 48Gbps * Packet Forwarding Rate: 35.7 Mpps * MAC Address Table: 8K * Durable metal construction * Lightning protection * Packet Buffer Memory: 2MB * Power: AC: 100-240V; 50/60Hz * Operating Temperature: Typically, 0°C to 40°C * Cooling: Passive cooling design, possibly supplemented with quiet fans * Communication Standard: Compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3az   **Warranty: minimum 2 years.** | Pcs. | 2 |
| 3.4 | **6-Port Cloud Managed Switch with 4-port PoE**   * Ethernet Port up to 250 m long-distance power supply * Ethernet Port: 4\*10/100 Mbps PoE RJ45 * IEEE 802.3at/af/bt standard for PoE ports * Operating Temperature –10 °C to +55 °C * Storage Temperature –40 °C to +70 °C * Switching Capacity min 1.6Gbps * MAC Table Size min 2K * PoE Protocol: Compliant with IEEE802.3af/at, Hi-PoE * Certifications: CE; FCC   **Warranty: minimum 2 years** | Pcs. | 36 |
| 3.5 | **Micro SD Memory Card**   * Capacity: min. 256GB * Read Speed: Up to 95 MB/s * Write Speed: Up to 40 MB/s * Speed Rating: C10/U3/V30 * TBW: up to 50TB * Endurance & Durability: Water-resistant, temperature-proof, shock-proof, X-ray proof, and magnetic-proof. * File System: exFAT   **Warranty: minimum 2 years** | Pcs. | 52 |
| 3.6 | **PoE Extender**   * Supports passive PoE cascade power supply and Ethernet data exchange * Compliant with the IEEE 802.3af/at standard for powering IP cameras * Transmission Distance: transmission distance up to 300m * Ports: 1x RJ45 10/100M for PoE power supply input * 1x RJ45 10/100M to power the IP camera * 1x RJ45 10/100M to power the next extender * Cooperate with High PoE Midspan, able to cascade level 2 PoE Extender, connect to 3 IPC * Internal junction box mounting * Certification: CE, FCC   **Warranty: minimum 2 years** | Pcs. | 36 |
| 3.7 | **5GHz Outdoor Wireless Base Station**   * WLAN Standard: IEEE802.11 a/n * Radio Mode: MIMO 2x2 * Transmit Power: Up to 29 dBm * Wireless N speed up to 300Mbps * Channel Size: 5,10, 20, 40 MHz * Transmission Distance: Up to 5 km * Interface: 10/100 Base-T, RJ45 * Wireless Operating Modes (Access point (auto WDS), access point (TDMA2), access point (TDMA3), station (WDS, TDMA2,TDMA3), station (ARP NAT)) * Network Operating Modes: Bridge, router iPv4, router IPv6 * Management: HTTP(S) GUI, SSH, SNMP read, Telnet * Internal Antenna Frequency Range: 5.1 – 5.9 GHz * Antenna Gain: 18 dBi * Power Supply: 12 - 24 VDC passive PoE * Power Source: 100 – 240V AC * Operating Temperature: -30°C ~ +70°C * Certification: CE, FCC   **Warranty: minimum 2 years** | Pcs. | 4 |
| 3.8 | **5GHz Outdoor Wireless CPE**   * WLAN Standard: IEEE802.11 a/n * Radio Mode: MIMO 2x2 * Transmit Power: Up to 29 dBm * Wireless N speed up to 300Mbps * Channel Size: 5,10, 20, 40 MHz * Transmission Distance: Up to 5 km * Interface: 10/100 Base-T, RJ45 * Wireless Operating Modes (Access point (auto WDS), access point (TDMA2), access point (TDMA3), station (WDS, TDMA2, TDMA3 ), station (ARP NAT)) * Network Operating Modes: Bridge, router iPv4, router IPv6 * Management: HTTP(S) GUI, SSH, SNMP read, Telnet * Antenna Gain: 20 dBi * Power Supply: 12 - 24 VDC passive PoE * Power Source: 100 – 240V AC * Operating Temperature: -30°C ~ +70°C * Certification: CE, FCC   **Warranty: minimum 2 years** | Pcs. | 36 |
| 3.9 | **Telecommunications rack**  19-inch 42U 600x600 | Pcs. | 1 |
| 3.10 | **Distribution box**  Minimum protection IP66  Working temperature: - 40°C / +60°C. | Pcs. | 16 |
|  | **Other supplies** | | |
| - | **Fasteners, connectors, cables, other elements according to the Technical Project.** | | |
|  | **Other services** | | |
| - | **Full video monitoring system installation, commissioning, and training of the Police Inspectorate Operators and of the IT specialists from the Ungheni Mayoralty, responsible for managing the Smart City Platform will be ensured by the Offeror.** | | |
| - | **Offeror will ensure technical support and maintenance of the video monitoring system during 12 (twelve) months after commissioning of the system.** | | |

**TECHNICAL SPECIFICATIONS FOR GOODS AND SERVICES FOR CAHUL MUNICIPALITY (LOT2):**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No** | **Minimum technical requirements** | **Unit** | **Quantity** |
| **1.** | **VIDEO MONITORING CENTER. ACTIVE EQUIPMENT** | | |
| 1.1 | **Telecommunications rack, 19-inch**   * Dimensions 14Ux800x800 * Tempered glass front door * Metal rear door and removable sides, Fan included | Set | 1 |
| 1.2 | **Core Switch**   * Form-factor: 1 or 2U for rack 19” * Minimum 16x SFP+ 10Gbps ports * Minimum 3x 100/1000MB ports RJ-45 * Managed L2/L3 layer with VLAN support * Other ports & supported technologies   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.3 | **Main Router**   * Form-factor: 1 or 2U for rack 19” * Minimum 4x 100/1000MB ports RJ-45 * Minimum 1x SFP+ 10Gbps port * Mandatory protocols & technologies: * Managed switching & routing at L2/L3 with VLAN support * Managed firewall up to L7 with NAT/DNAT support * VPNs technologies & protocols: IPSec, L2TP * Network management: DHCP relay * Other ports, protocols & technologies are optional   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.4 | **Network Video Recorder**   * 64-ch IP Video Input * Codecs: H.265+, H.265, H.264, MPEG4 Decoding * Hard Disks: * Support for up to 10 HDD SATA-III with RAID 0,1,5 (other RAID support are optional) * 10x HDD 10Tb SATA-Ill * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.5 | **UPS 2200VA**   * 2U * 19" rackmount   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.6 | **High-Performance Surveillance HDD**:   * Hard drive – Internal 3.5” * Capacity: 10TB * Interface: SATAIII 6Gb/s * Rotational Vibration Sensors: Yes * Internal Data Rate: 180Mb/s * Drive Transfer Data: 600MB/s (external) * Cache: 256Mb * Supports up to 180 TB/yr workload rate * **Compatible with Network Video Recorder included in pct. 1.4**   **Warranty: minimum 2 years** | Pcs. | 10 |
| 1.7 | **Power Distribution Unit**   * 16A * 200-240V, 50/60Hz * 8 sockets Single Phase * Vertical mounting for rack 19“, EU standard (1U)   **Warranty: minimum 2 years** | Pcs. | 1 |
| 1.8 | **Software + licenses** (for 58 video surveillance cameras).  Software has to be able to provide event analytics, vehicle detection by category, face detection/crowd detection, stored information analytics, etc. | Set | 1 |
| 1.9 | **Transceiver**  1Gbps transceiver, compatible with Core Switch and other switches, including SFP various modules | Pcs. | 40 |
| 1.10 | **ODF Panel, Cross FO for TS 19" 24 ports Cabinet 1 or 2U for rack 19”** | Pcs. | 1 |
| 1.11 | **Computer for Operator**   * Processor: x64 bit, 3GHz, min 12 cores * RAM: 32GB DDR5 * SSD: 1TB NVMe PCIe 4.0 * Video card: memory – min 4 GB DDR5, 2 DP or HDMI output ports, simultaneous displays – min 2 with FullHD resolution * Network interface – 1 x 1 Gbps RJ-45 * Wireless keyboard/mouse – Eng/Ro/Ru layout * Operating system: MS Windows 11 Pro 64-bit   **Warranty: minimum 2 years** | Set | 2 |
| 1.12 | **Monitor for Operator PC**   * Diagonal: minimum 27” * Resolution: minimum Full HD (1080p) 1980x1080 * Response time: ≤ 2 ms (gray-to-gray) * Eye protection function * Ports: 2 x HDMI or DP 1.2 * Suitable for continuous 24/7 operation   **Warranty: minimum 2 years** | Pcs. | 4 |
| **2.** | **VIDEO WALL** | | |
| 2.1 | **LCD display**   * 49-55-inch screen size * LED backlight * 1.2-2.5 mm bezel width * 1920x1080@60 Hz resolution * 178° viewing angle * 8 ms. or better maximum response time * HDMI x1, DVI x1, VGA x1, DP x 1, USB x1 inputs * HDMI x1 or DP x1 video output * VESA * Cables for Video Wall   **Warranty: minimum 2 years** | Pcs. | 4 |
| 2.2 | Display modular bracket for video wall LCDs, VESA compatible | Pcs. | 4 |
| 2.3 | **Video wall controller**   * Multiple signal sources support (VGA, DVI, HDMI, DP, etc.) * Up to 3840 × 2160@30 Hz resolution for HDMI and DP signal inputs * Decoding: H.264 and H.265 compression standard to display 2-ch@8.0 MP, 2-ch@6.0 MP, 2-ch@5.0 MP, 8-ch@1080p, 16-ch@720p and 32-ch@D1 signals * Lossless output of 60 frames * Compatible with wireless projection * Adjustable LED background color * 1/4/9/16 window division modes support and full-screen switch of the window * Minimum 20 board slots (10 x Input, 10 x Output).   **Warranty: minimum 2 years** | Pcs. | 1 |
| 2.4 | HDMI input board: 2 HDMI interfaces | Pcs. | 1 |
| 2.5 | **Video output board**  4 x DVI interface  **Warranty: minimum 2 years** | Pcs. | 1 |
| 2.6 | Software for Video Wall | Set | 1 |
| **3.** | **OUTDOOR VIDEO MONITORING SYSTEM** | | |
| 3.1 | **Distribution cabinet**   * 800x600x300 with padlock * IP65+fixing elements * Thermostat * Built-in fan * Key | Pcs. | 16 |
| 3.2 | **Battery 12V 17A**  **Warranty: minimum 2 years** | Pcs. | 32 |
| 3.3 | **Backup power supply 48V**   * 4A (max 5,5A); * 17Ah battery capacity (4pcs) * Protection against overvoltage, short circuit, battery polarity reversal * RS-485 interface   **Warranty: minimum 2 years** | Pcs. | 16 |
| 3.4 | **4 Port Switch:**   * Minimum 4x 100/1000 Mbps PoE-out ports * Minimum 1x 10 Gbps SFP+ port * Working temperatures -30 / +65 °C * High resistance metal housing * Protection up to 6KV   **Warranty: minimum 2 years** | Pcs. | 8 |
| 3.5 | **8 Port Switch:**   * Minimum 8x 100/1000 Mbps PoE-out ports * Minimum 1x 10 Gbps SFP+ port * Working temperatures -30 / +65 °C * High resistance metal housing * Protection up to 6KV   **Warranty: minimum 2 years** | Pcs. | 8 |
| 3.6 | **IP outdoor video camera:**   * 1/2.8" Progressive Scan CMOS * Color: 0.005 Lux@ (F1.6, AGC ON), * 8MP, lens 2.8, 4,6mm * IR =60m * H.265+/H.265/H.264+/H.264 * Working temperature: -30°C to 60 °C * PoE (802.3af) * CCTV cyber security built-in * IP67 * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** | Pcs. | 58 |
| 3.7 | Junction box for outdoor cameras | Pcs. | 58 |
| 3.8 | ODF Panel, Cross FO for cabinet | Pcs. | 16 |
| 3.9 | Mounting (distribution) box 100x100mm | Pcs. | 7 |
|  | **Supplies:** | | |
| - | **Fasteners, connectors, cable, other elements according to the Technical Project** | | |
|  | **Other services:** | | |
| - | **Full video monitoring system installation, commissioning, and training of the Police Inspectorate Operators and of the IT specialists from the Cahul Mayoralty, responsible for managing the Smart City Platform will be ensured by the Offeror.** | | |
| - | **Offeror will ensure technical support and maintenance of the video monitoring system 12 (twelve) months after commissioning of the system.** | | |

**Delivery Requirements**

|  |  |
| --- | --- |
| **Delivery Requirements** | |
| **Delivery date and time** | Bidder shall deliver and install the goods within up to 90 days after Contract signature. |
| **Delivery Terms (INCOTERMS 2020)** | **LOT 1: DDP 1** - Ungheni Mayoralty  **LOT 2: DDP 2** - Cahul mayoralty |
| **Customs clearance**  **(must be linked to INCOTERM** | Shall be done by:  Supplier/bidder |
| **Exact Address(es) of Delivery Location(s)** | **LOT 1: DDP 1** Ungheni Mayoralty, mun. Ungheni, str. Nationala 7, MD-3600, Republic of Moldova.  **LOT 2: DDP 2** - Cahul mayoralty, mun. Cahul, Piata Independentei 6, MD-3090, Republic of Moldova. |
| **Training on Operations and Maintenance** | Yes, at least 24 working hours training per LOT 1 and 24 working hours for LOT 2 |
| **Warranty Period** | 24 months/ 36 months, according to the technical specifications |
| **After-sales service and local service support requirements** | **Technical support and maintenance of the system during 12 (twelve) months after commissioning of the video monitoring system** |

**ANNEX 2: QUOTATION SUBMISSION FORM**

*Bidders are requested to complete this form, including the Company Profile and Bidder’s Declaration, sign it and return it as part of their quotation along with Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.*

|  |  |  |
| --- | --- | --- |
| Name of Bidder: | Click or tap here to enter text. | |
| RFQ reference: | RfQ 23 / 02771 | Date: Click or tap to enter a date. |

**Company Profile**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item Description** | | **Detail** | | | |
| Legal name of bidder or Lead entity for JVs | | Click or tap here to enter text. | | | |
| Legal Address, City, Country | | Click or tap here to enter text. | | | |
| Website | | Click or tap here to enter text. | | | |
| Year of Registration | | Click or tap here to enter text. | | | |
| Legal structure | | Choose an item. | | | |
| Are you a UNGM registered vendor? | | Yes  No  If yes, insert UNGM Vendor Number | | | |
| Quality Assurance Certification (e.g. ISO 9000 or Equivalent) *(If yes, provide a Copy of the valid Certificate):* | | Yes  No | | | |
| Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? *(If yes, provide a Copy of the valid Certificate):* | | Yes  No | | | |
| Does your Company have a written Statement of its Environmental Policy? *(If yes, provide a Copy)* | | Yes  No | | | |
| Does your organization demonstrate significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies or membership of trade institutions promoting such issues *(If yes, provide a Copy)* | | Yes  No | | | |
| Is your company a member of the UN Global Compact | | Yes  No | | | |
| Bank Information | | Bank Name: Click or tap here to enter text.  Bank Address: Click or tap here to enter text.  IBAN: Click or tap here to enter text.  SWIFT/BIC: Click or tap here to enter text.  Account Currency: Click or tap here to enter text.  Bank Account Number: Click or tap here to enter text. | | | |
| **Previous relevant experience: 2 contracts (in terms of type and volume of goods/works/services) contracts undertaken in the past 3 (three) years** | | | | | |
| **Name of previous contracts** | **Client & Reference Contact Details including e-mail** | | **Contract Value**  ***(insert currency)*** | **Period of activity**  ***(month, year)*** | **Types of activities undertaken** |
|  |  | |  |  |  |
|  |  | |  |  |  |
|  |  | |  |  |  |

**Bidder’s Declaration**

| **Yes** | **No** |  |
| --- | --- | --- |
|  |  | **Requirements and Terms and Conditions:** I/We have read and fully understand the RFQ, including the RFQ Information and Data, Schedule of Requirements, the General Conditions of Contract, and any Special Conditions of Contract. I/we confirm that the Bidder agrees to be bound by them. |
|  |  | I/We confirm that the Bidder has the necessary capacity, capability, and necessary licenses to fully meet or exceed the Requirements and will be available to deliver throughout the relevant Contract period. |
|  |  | **Ethics**: In submitting this Quote I/we warrant that the bidder: has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor; has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the RFQ ;has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer. |
|  |  | I/We confirm to undertake not to engage in proscribed practices, , or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and wehave read the United Nations Supplier Code of Conduct :<https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct> and acknowledge that it provides the minimum standards expected of suppliers to the UN. |
|  |  | **Conflict of interest:** I/We warrant that the bidder has no actual, potential, or perceived Conflict of Interest in submitting this Quote or entering a Contract to deliver the Requirements. Where a Conflict of Interest arises during the RFQ process the bidder will report it immediately to the Procuring Organisation’s Point of Contact. |
|  |  | **Prohibitions and Sanctions:** l/We hereby declare that our firm, ultimate beneficial owners, affiliates or subsidiaries or employees, including any JV/Consortium members or subcontractors or suppliers for any part of the contract is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists and have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. |
|  |  | **Bankruptcy**: l/We have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future. |
|  |  | **Offer Validity Period:** I/We confirm that this Quote, including the price, remains open for acceptance for the Offer Validity. |
|  |  | I/We understand and recognize that you are not bound to accept any Quotation you receive, and wecertify that the goods offered in our Quotation are new and unused. |
|  |  | By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorised by the Organization/s to make this declaration on its/their behalf. |

Signature:

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Date: Click or tap to enter a date.

**ANNEX 3: TECHNICAL AND FINANCIAL OFFER – GOODS**

**LOT1: UNGHENI MAYORALTY**

*Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.*

|  |  |  |
| --- | --- | --- |
| Name of Bidder: | Click or tap here to enter text. | |
| RFQ reference: | RfQ 23 / 02771 | Date: Click or tap to enter a date. |

|  |  |  |
| --- | --- | --- |
| **Currency of the Quotation: USD**  **INCOTERMS: DDP Ungheni** | | |
| **Item No** | **Description** | **Total price** |
| 1 | Full installation and commissioning of the Video Monitoring System in Ungheni **as per Annex 7** |  |
| 2 | Training of the Police Inspectorate Operators and of the IT specialists from the Ungheni Mayoralty, responsible for managing the Smart City Platform |  |
| 3 | Technical support and maintenance of the video monitoring system during 12 (twelve) months after commissioning of the system |  |
| Total Price | |  |
| Other Charges (please specify) | |  |
| **Total Final and All-inclusive Price** | |  |

**Compliance with Requirements**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **You Responses** | | |
| **Yes, we will comply** | **No, we cannot comply** | **If you cannot comply, pls. indicate counter - offer** |
| Minimum Technical Specifications |  |  | Click or tap here to enter text. |
| Delivery Term (INCOTERMS) |  |  | Click or tap here to enter text. |
| Delivery to location |  |  |  |
| Delivery Lead Time |  |  | Click or tap here to enter text. |
| Warranty and After-Sales Requirements |  |  | Click or tap here to enter text. |
| Validity of Quotation |  |  | Click or tap here to enter text. |
| Payment terms: within 30 days after receipt of goods, works and/or services and submission of payment documentation. |  |  | Click or tap here to enter text. |

**Other Information:**

|  |  |
| --- | --- |
| Estimated weight/volume/dimension of the Consignment: | Click or tap here to enter text. |
| Country/ies of Origin:  (*if export licence required this must be submitted if awarded the contract*) | Click or tap here to enter text. |

|  |  |
| --- | --- |
| I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted. | |
| *Exact name and address of company*  Company NameClick or tap here to enter text.  Address: Click or tap here to enter text.  Phone No.: Click or tap here to enter text.  Email Address: Click or tap here to enter text. | Authorized Signature:  Date: Click or tap here to enter text.  Name: Click or tap here to enter text.  Functional Title of Authorised Signatory: Click or tap here to enter text.  Email Address: Click or tap here to enter text. |

**ANNEX 3: TECHNICAL AND FINANCIAL OFFER – GOODS**

**LOT2:** **CAHUL MAYORALTY**

*Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.*

|  |  |  |
| --- | --- | --- |
| Name of Bidder: | Click or tap here to enter text. | |
| RFQ reference: | RfQ 23 / 02771 | Date: Click or tap to enter a date. |

|  |  |  |
| --- | --- | --- |
| **Currency of the Quotation: USD**  **INCOTERMS: DDP Cahul** | | |
| **Item No** | **Description** | **Total price** |
| 1 | Full installation and commissioning of the Video Monitoring System in Cahul **as per Annex 8** |  |
| 2 | Training of the Police Inspectorate Operators and of the IT specialists from the Cahul Mayoralty, responsible for managing the Smart City Platform |  |
| 3 | Technical support and maintenance of the video monitoring system during 12 (twelve) months after commissioning of the system |  |
| Total Price | |  |
| Other Charges (please specify) | |  |
| **Total Final and All-inclusive Price** | |  |

**Compliance with Requirements**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **You Responses** | | |
| **Yes, we will comply** | **No, we cannot comply** | **If you cannot comply, pls. indicate counter - offer** |
| Minimum Technical Specifications |  |  | Click or tap here to enter text. |
| Delivery Term (INCOTERMS) |  |  | Click or tap here to enter text. |
| Delivery to location |  |  |  |
| Delivery Lead Time |  |  | Click or tap here to enter text. |
| Warranty Sand After-Sales Requirements |  |  | Click or tap here to enter text. |
| Validity of Quotation |  |  | Click or tap here to enter text. |
| Payment terms: within 30 days after receipt of goods, works and/or services and submission of payment documentation. |  |  | Click or tap here to enter text. |

**Other Information:**

|  |  |
| --- | --- |
| Estimated weight/volume/dimension of the Consignment: | Click or tap here to enter text. |
| Country/ies of Origin:  (*if export licence required this must be submitted if awarded the contract*) | Click or tap here to enter text. |

|  |  |
| --- | --- |
| I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted. | |
| *Exact name and address of company*  Company NameClick or tap here to enter text.  Address: Click or tap here to enter text.  Phone No.: Click or tap here to enter text.  Email Address: Click or tap here to enter text. | Authorized Signature:  Date: Click or tap here to enter text.  Name: Click or tap here to enter text.  Functional Title of Authorised Signatory: Click or tap here to enter text.  Email Address: Click or tap here to enter text. |

**ANNEX 4: TECHNICAL RESPONSIVENESS TABLE**

**LOT1: UNGHENI MAYORALTY**

*Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form and Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.*

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | Click or tap here to enter text. | | |
| RFQ reference: | RfQ 23 / 02771 | Date: Click or tap to enter a date. |

Bidders shall supplement the information provided in the tables below with detailed description of the offered goods, including design and Technical Data Sheets (including photos).

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Technical requirements (Features at least)** | **Conformity**  (Yes/No) | **Offered Brand, Model and Exact**  **characteristics**  *(Technical characteristics should not be less/worse than those listed in Annex 1: Schedule of Requirements)* |
| **1.** | **VIDEO MONITORING CENTER** | | |
| 1.1 | **Video storage server**   * Web User Interface * HDD Slot: min. 16 HDDs * Capacity for each HDD: 10TB or more * Video performance: min. 320-channel * HDD Support: single, RAID (Entreprise Hard Disk) * RAID support (RAID 0, 1, 5, 6, 10, 50,60, JBOD, hotspare) * Support iSCSI volume management * Network: 2 RJ-45 ports (10/100/1000Mbps), ONVIF * Auxiliary interface: USB 2.0, USB 3.0, Com port (RS232), miniSAS port * Power Supply: AC100V-240V * Record Mode: Manual, Continuous, Motion Detection, Alarm * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** |  |  |
| 1.2 | **High-Performance Surveillance HDD**:   * Hard drive – Internal 3.5” * Capacity: 10TB * Interface: SATAIII 6Gb/s * Rotational Vibration Sensors: Yes * Internal Data Rate: 180Mb/s * Drive Transfer Data: 600MB/s (external) * Cache: 256Mb * Supports up to 180 TB/yr workload rate * **Compatible with Video storage server in pt. 1.1.**   **Warranty: minimum 2 years** |  |  |
| 1.3 | **Video Management System Server**   * Main Processor: 64-bit 4 core CPU * Operating System: Linux * Memory: min. 8GB * Network Ports: 4 Ethernet Ports (10/100/1000Mbps) * USB Port: 4 × USB 3.0, 2 HDMI, 1 VGA * HDD Storage * For System: Built-in 1× 1T HDD disk (2.5") * For Video & Pictures: Support for 3 HDD disks (2.5") * Video Management * Video: min. 256 Channels * Facial Recognition: 32 Channels * Installation Method: Standard 19" rack installation * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years** |  |  |
| 1.4 | **Software + licenses** (for 52 video surveillance cameras)  Software has to be able to provide event analytics, vehicle detection by category, face detection/crowd detection, stored information analytics, etc. |  |  |
| 1.5 | **Uninterruptible power supply**   * UPS transformer type: Linear-interactive * Number of connectors: 4 * Output connector types: Schuko CEE 7/4 * Output power capacity: 1600 VA * Maximum Load: 900 W * Output Voltage: 230 * VInput Voltage: 110~240 VAC   **Warranty: minimum 2 years** |  |  |
| 1.6 | **Power Distribution Unit**   * 16A, 200-240V, 50/60Hz * 8 sockets Schuko CEE 7/3, min. 2m cable length   **Warranty: minimum 2 years** |  |  |
| **2.** | **VIDEO WALL** |  |  |
| 2.1 | **LCD Monitor 49”-55" (16:9)**   * Resolution: 4K UHD (3840 x 2160) * Response Time: ≤ 5 ms. * Backlight: LED * Inputs: HDMI, VGA(D-Sub), USB, Audio, Ethernet * Viewing Angle: 178°/178° (horizontal/vertical) * Mounting Options: VESA * Brightness/Luminance: 350 cd/m2 * Contrast Ratio: 1200:1 * Certifications: CE/FCC * Power Supply: AC100~240V 50/60 Hz * Suitable for continuous 24/7 operation   **Warranty: minimum 2 years** |  |  |
| 2.2 | HDMI Cable DP to HDMI or HDMI to HDMI 10.0m |  |  |
| 2.3 | Wall Mountfor 55" Flat Screen/LED/4K Monitor, VESA compatible |  |  |
| 2.4 | **Computer for Operator**   * Processor: min 14 total cores, performance-core base frequency 2.5-4.8 GHz or similar, production - no earlier than Q1 2023. * Motherboard: ATX form factor, support: Slot M2 PCIe Gen4 x4 (64 Gb/s), RAID( 0,1,5,10), min 4x DIMM memory slots, USB Type-C, HDMI port, Cooler with min 66CFM, 120mm, 220W, 600g * RAM: 32GB DDR5 5600MHZ, SSD: 1TB NVMe 3DTLC PCIe 4.0x4 R/W: 7000/5100MB/s * Video card: memory – min 4 GB DDR6, min. 1 DP, 1HDMI output ports. * Network interface: 1 x 2.5 Gbps RJ-45. * Power supply source: min 700W, 80+ Gold certification, semi-modular or fully modular * PC Case Fan 120x120 min 66CFM * Case ATX, USB 3.0 * Wireless keyboard/mouse – Eng/Ro/Ru layout. * Operating system: MS Windows 11 Pro 64-bit. * **Warranty: minimum 2 years.** |  |  |
| 2.5 | **Monitor for Operator’ PC**   * Minimum 27” * Brightness/Luminance: 350 cd/m2, Viewing angle: 178°/178° (horizontal/vertical). Screen resolution: 2560x1440. * Response Time: ≤ 5 Ms. * Eye protection functions. * Interfaces: HDMI, VGA. * Certifications: CE/FCC * Power Supply: AC100~240V 50/60 Hz. * Suitable for continuous 24/7 operation.   **Warranty: minimum 2 years.** |  |  |
| 2.6 | **Uninterruptible power supply**   * UPS transformer type: Linear-interactive * Output power capacity : 800 VA * Maximum load : 480 W * Input voltage : 170~280 VAC * Number of connectors : 2 Sockets * Output connector types: Schuko CEE 7/3 |  |  |
| 2.7 | Software for video wall |  |  |
| 2.8 | **Video wall controller**   * Multiple signal sources support (VGA, DVI, HDMI, DP, etc.) * Up to 3840 × 2160@30 Hz resolution for HDMI and DP signal inputs * Decoding: H.264 and H.265 compression standard to display 2-ch@8.0 MP, 2-ch@6.0 MP, 2-ch@5.0 MP, 8-ch@1080p, 16-ch@720p and 32-ch@D1 signals * Lossless output of 60 frames * Compatible with wireless projection * Adjustable LED background color * 1/4/9/16 window division modes support and full-screen switch of the window * Minimum 20 board slots (10 x Input, 10 x Output)   **Warranty: minimum 2 years** |  |  |
| **2.9** | **24-Port Gigabit Switch**   * Ethernet Port 24\*10/100/1000 Base-T * Switching Capacity 48G * Packet Forwarding Rate 35.7Mpps * Packet Buffer Memory 2Mb * MAC Table Size 8K * Exchange Mode Store & forward * Application Humidity 10%~90% * Power AC: 100-240V; 50/60Hz * Working Temperature 0°C~+40°C |  |  |
| **3.** | **OUTDOOR VIDEO MONITORING SYSTEM** |  |  |
| 3.1 | **IP Camera** (type 1)   * Camera type: motorized IP PTZ camera * Sensor: CMOS 4 Mp, Size: 1/2.8" * Outdoor PTZ (Pan-Tilt-Zoom) Features: Pan (Rotation): 360° continuous rotation, Tilt (Inclination): Up to 90° * Focal Length: 4.8 mm to 120 mm * Video Compression: H.265+/H.265/H.264+/H.264 * IR distance up to 100 m or more. * Zoom: 25x optical, 16x digital zoom * Micro SD Card Slot: supports 256GB or more * Protection: IP66 Standard or higher * CCTV cyber security built-in * Day/Night Switch: day, night, auto * Surge Protection and Voltage Transient Protection * Support PoE+ * Ethernet: RJ-45 (10/100Base-T). * Working temperature: - 40°C / +65°C * Lightning protection: TVS 6000 V * Conformité Européenne (CE) certification * All mounting materials must be included * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image ( jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years.** |  |  |
| 3.2 | **IP Camera** (type 2 – bullet camera)   * Sensor: Type: CMOS 4 Mp, Size: 1/3" * Focal Length: 2.8 – 6 mm or more * Video Compression: H.265+/H.265/H.264+/H.264, MJPEG * IR distance up to 50 m or more * Iris Type: Fixed focal * Zoom: 16x digital zoom * Resolution: up to 2688x1520 * MicroSD Card Slot: supports up to 256GB or more * Day/Night : Auto(ICR)/Color/B/W * Protection: IP67 * CCTV cyber security built-in * Day/Night Switch: color/B/W/ auto/ * Surge Protection and Voltage Transient Protection * Power Supply: 12Vdc, Poe * Built-in MIC: Yes * Ethernet: RJ-45 (10/100Base-T) * Intelligent detection: Yes * BLC, HLC, 3D DNR * Working Environment: -30°C to +60°C * Casing Metal * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 3 years.** |  |  |
| 3.3 | **24 Port Gigabit Switch**   * Ethernet Ports: 24 x 10/100/1000 Mbps RJ-45 * Switching Capacity: 48Gbps * Packet Forwarding Rate: 35.7 Mpps * MAC Address Table: 8K * Durable metal construction * Lightning protection * Packet Buffer Memory: 2MB * Power: AC: 100-240V; 50/60Hz * Operating Temperature: Typically, 0°C to 40°C * Cooling: Passive cooling design, possibly supplemented with quiet fans * Communication Standard: Compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3az   **Warranty: minimum 2 years.** |  |  |
| 3.4 | **6-Port Cloud Managed Switch with 4-port PoE**   * Ethernet Port up to 250 m long-distance power supply * Ethernet Port: 4\*10/100 Mbps PoE RJ45 * IEEE 802.3at/af/bt standard for PoE ports * Operating Temperature –10 °C to +55 °C * Storage Temperature –40 °C to +70 °C * Switching Capacity min 1.6Gbps * MAC Table Size min 2K * PoE Protocol: Compliant with IEEE802.3af/at, Hi-PoE * Certifications: CE; FCC   **Warranty: minimum 2 years** |  |  |
| 3.5 | **Micro SD Memory Card**   * Capacity: min. 256GB * Read Speed: Up to 95 MB/s * Write Speed: Up to 40 MB/s * Speed Rating: C10/U3/V30 * TBW: up to 50TB * Endurance & Durability: Water-resistant, temperature-proof, shock-proof, X-ray proof, and magnetic-proof. * File System: exFAT   **Warranty: minimum 2 years** |  |  |
| 3.6 | **PoE Extender**   * Supports passive PoE cascade power supply and Ethernet data exchange * Compliant with the IEEE 802.3af/at standard for powering IP cameras * Transmission Distance: transmission distance up to 300m * Ports: 1x RJ45 10/100M for PoE power supply input * 1x RJ45 10/100M to power the IP camera * 1x RJ45 10/100M to power the next extender * Cooperate with High PoE Midspan, able to cascade level 2 PoE Extender, connect to 3 IPC * Internal junction box mounting * Certification: CE, FCC   **Warranty: minimum 2 years** |  |  |
| 3.7 | **5GHz Outdoor Wireless Base Station**   * WLAN Standard: IEEE802.11 a/n * Radio Mode: MIMO 2x2 * Transmit Power: Up to 29 dBm * Wireless N speed up to 300Mbps * Channel Size: 5,10, 20, 40 MHz * Transmission Distance: Up to 5 km * Interface: 10/100 Base-T, RJ45 * Wireless Operating Modes (Access point (auto WDS), access point (TDMA2), access point (TDMA3), station (WDS, TDMA2,TDMA3), station (ARP NAT)) * Network Operating Modes: Bridge, router iPv4, router IPv6 * Management: HTTP(S) GUI, SSH, SNMP read, Telnet * Internal Antenna Frequency Range: 5.1 – 5.9 GHz * Antenna Gain: 18 dBi * Power Supply: 12 - 24 VDC passive PoE * Power Source: 100 – 240V AC * Operating Temperature: -30°C ~ +70°C * Certification: CE, FCC   **Warranty: minimum 2 years** |  |  |
| 3.8 | **5GHz Outdoor Wireless CPE**   * WLAN Standard: IEEE802.11 a/n * Radio Mode: MIMO 2x2 * Transmit Power: Up to 29 dBm * Wireless N speed up to 300Mbps * Channel Size: 5,10, 20, 40 MHz * Transmission Distance: Up to 5 km * Interface: 10/100 Base-T, RJ45 * Wireless Operating Modes (Access point (auto WDS), access point (TDMA2), access point (TDMA3), station (WDS, TDMA2, TDMA3 ), station (ARP NAT)) * Network Operating Modes: Bridge, router iPv4, router IPv6 * Management: HTTP(S) GUI, SSH, SNMP read, Telnet * Antenna Gain: 20 dBi * Power Supply: 12 - 24 VDC passive PoE * Power Source: 100 – 240V AC * Operating Temperature: -30°C ~ +70°C * Certification: CE, FCC   **Warranty: minimum 2 years** |  |  |
| 3.9 | **Telecommunications rack**  19-inch 42U 600x600 |  |  |
| 3.10 | **Distribution box**  Minimum protection IP66  Working temperature: - 40°C / +60°C. |  |  |
|  | **Fasteners, connectors, cable, other elements according to the Technical Project** |  |  |
|  | **Full video monitoring system installation, commissioning, and training of the Police Inspectorate Operators and of the IT specialists from the Cahul Mayoralty, responsible for managing the Smart City Platform will be ensured by the Offeror.** |  |  |
|  | **Offeror will ensure technical support and maintenance of the video monitoring system 12 (twelve) months after commissioning of the system.** |  |  |

|  |  |
| --- | --- |
| I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted. | |
| *Exact name and address of company*  Company NameClick or tap here to enter text.  Address: Click or tap here to enter text.  Phone No.: Click or tap here to enter text.  Email Address: Click or tap here to enter text. | Authorized Signature:  Date: Click or tap here to enter text.  Name: Click or tap here to enter text.  Functional Title of Authorised Signatory: Click or tap here to enter text.  Email Address: Click or tap here to enter text. |

**ANNEX 4: TECHNICAL RESPONSIVENESS TABLE**

**LOT2: CAHUL MAYORALTY**

*Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form and Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.*

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | Click or tap here to enter text. | | |
| RFQ reference: | RfQ 23 / 02771 | Date: Click or tap to enter a date. |

Bidders shall supplement the information provided in the tables below with detailed description of the offered goods, including design and Technical Data Sheets (including photos).

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Technical requirements (Features at least)** | **Conformity**  (Yes/No) | **Offered Brand, Model and Exact**  **characteristics**  *(Technical characteristics should not be less/worse than those listed in Annex 1: Schedule of Requirements)* |
| **1.** | **VIDEO MONITORING CENTER. ACTIVE EQUIPMENT** | | |
| 1.1 | **Telecommunications rack, 19-inch**   * Dimensions 14Ux800x800 * Tempered glass front door * Metal rear door and removable sides, Fan included |  |  |
| 1.2 | **Core Switch**   * Form-factor: 1 or 2U for rack 19” * Minimum 16x SFP+ 10Gbps ports * Minimum 3x 100/1000MB ports RJ-45 * Managed L2/L3 layer with VLAN support * Other ports & supported technologies   **Warranty: minimum 2 years** |  |  |
| 1.3 | **Main Router**   * Form-factor: 1 or 2U for rack 19” * Minimum 4x 100/1000MB ports RJ-45 * Minimum 1x SFP+ 10Gbps port * Mandatory protocols & technologies: * Managed switching & routing at L2/L3 with VLAN support * Managed firewall up to L7 with NAT/DNAT support * VPNs technologies & protocols: IPSec, L2TP * Network management: DHCP relay * Other ports, protocols & technologies are optional   **Warranty: minimum 2 years** |  |  |
| 1.4 | **Network Video Recorder**   * 64-ch IP Video Input * Codecs: H.265+, H.265, H.264, MPEG4 Decoding * Hard Disks: * Support for up to 10 HDD SATA-III with RAID 0,1,5 (other RAID support are optional) * 10x HDD 10Tb SATA-Ill * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** |  |  |
| 1.5 | **UPS 2200VA**   * 2U * 19" rackmount   **Warranty: minimum 2 years** |  |  |
| 1.6 | **High-Performance Surveillance HDD**:   * Hard drive – Internal 3.5” * Capacity: 10TB * Interface: SATAIII 6Gb/s * Rotational Vibration Sensors: Yes * Internal Data Rate: 180Mb/s * Drive Transfer Data: 600MB/s (external) * Cache: 256Mb * Supports up to 180 TB/yr workload rate * **Compatible with Network Video Recorder included in pct. 1.4**   **Warranty: minimum 2 years** |  |  |
| 1.7 | **Power Distribution Unit**   * 16A * 200-240V, 50/60Hz * 8 sockets Single Phase * Vertical mounting for rack 19“, EU standard (1U)   **Warranty: minimum 2 years** |  |  |
| 1.8 | **Software + licenses** (for 58 video surveillance cameras).  Software has to be able to provide event analytics, vehicle detection by category, face detection/crowd detection, stored information analytics, etc. |  |  |
| 1.9 | **Transceiver**  1Gbps transceiver, compatible with Core Switch and other switches, including SFP various modules |  |  |
| 1.10 | **ODF Panel, Cross FO for TS 19" 24 ports Cabinet 1 or 2U for rack 19”** |  |  |
| 1.11 | **Computer for Operator**   * Processor: x64 bit, 3GHz, min 12 cores * RAM: 32GB DDR5 * SSD: 1TB NVMe PCIe 4.0 * Video card: memory – min 4 GB DDR5, 2 DP or HDMI output ports, simultaneous displays – min 2 with FullHD resolution * Network interface – 1 x 1 Gbps RJ-45 * Wireless keyboard/mouse – Eng/Ro/Ru layout * Operating system: MS Windows 11 Pro 64-bit   **Warranty: minimum 2 years** |  |  |
| 1.12 | **Monitor for Operator PC**   * Diagonal: minimum 27” * Resolution: minimum Full HD (1080p) 1980x1080 * Response time: ≤ 2 ms (gray-to-gray) * Eye protection function * Ports: 2 x HDMI or DP 1.2 * Suitable for continuous 24/7 operation   **Warranty: minimum 2 years** |  |  |
| **2.** | **VIDEO WALL** |  |  |
| 2.1 | **LCD display**   * 49-55-inch screen size * LED backlight * 1.2-2.5 mm bezel width * 1920x1080@60 Hz resolution * 178° viewing angle * 8 ms. or better maximum response time * HDMI x1, DVI x1, VGA x1, DP x 1, USB x1 inputs * HDMI x1 or DP x1 video output * VESA * Cables for Video Wall   **Warranty: minimum 2 years** |  |  |
| 2.2 | Display modular bracket for video wall LCDs, VESA compatible |  |  |
| 2.3 | **Video wall controller**   * Multiple signal sources support (VGA, DVI, HDMI, DP, etc.) * Up to 3840 × 2160@30 Hz resolution for HDMI and DP signal inputs * Decoding: H.264 and H.265 compression standard to display 2-ch@8.0 MP, 2-ch@6.0 MP, 2-ch@5.0 MP, 8-ch@1080p, 16-ch@720p and 32-ch@D1 signals * Lossless output of 60 frames * Compatible with wireless projection * Adjustable LED background color * 1/4/9/16 window division modes support and full-screen switch of the window * Minimum 20 board slots (10 x Input, 10 x Output).   **Warranty: minimum 2 years** |  |  |
| 2.4 | HDMI input board: 2 HDMI interfaces |  |  |
| 2.5 | **Video output board**  4 x DVI interface  **Warranty: minimum 2 years** |  |  |
| 2.6 | Software for Video Wall |  |  |
| **3.** | **OUTDOOR VIDEO MONITORING SYSTEM** |  |  |
| 3.1 | **Distribution cabinet**   * 800x600x300 with padlock * IP65+fixing elements * Thermostat * Built-in fan * Key |  |  |
| 3.2 | **Battery 12V 17A**  **Warranty: minimum 2 years** |  |  |
| 3.3 | **Backup power supply 48V**   * 4A (max 5,5A); * 17Ah battery capacity (4pcs) * Protection against overvoltage, short circuit, battery polarity reversal * RS-485 interface   **Warranty: minimum 2 years** |  |  |
| 3.4 | **4 Port Switch:**   * Minimum 4x 100/1000 Mbps PoE-out ports * Minimum 1x 10 Gbps SFP+ port * Working temperatures -30 / +65 °C * High resistance metal housing * Protection up to 6KV   **Warranty: minimum 2 years** |  |  |
| 3.5 | **8 Port Switch:**   * Minimum 8x 100/1000 Mbps PoE-out ports * Minimum 1x 10 Gbps SFP+ port * Working temperatures -30 / +65 °C * High resistance metal housing * Protection up to 6KV   **Warranty: minimum 2 years** |  |  |
| 3.6 | **IP outdoor video camera:**   * 1/2.8" Progressive Scan CMOS * Color: 0.005 Lux@ (F1.6, AGC ON), * 8MP, lens 2.8, 4,6mm * IR =60m * H.265+/H.265/H.264+/H.264 * Working temperature: -30°C to 60 °C * PoE (802.3af) * CCTV cyber security built-in * IP67 * Compatible with INVIPO Smart City Platform (data transmission documented API via HTTP(S)) * Network access to each camera separately (e.g., using communication with the parent video server but keeping format requirements valid) * API endpoints: * Static image (jpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/1/picture * Video stream (mjpeg format), i.e. http://{ip\_address}:{port}/ISAPI/Streaming/channels/2/httpPreview   **Warranty: minimum 2 years** |  |  |
| 3.7 | Junction box for outdoor cameras |  |  |
| 3.8 | ODF Panel, Cross FO for cabinet |  |  |
| 3.9 | Mounting (distribution) box 100x100mm |  |  |
|  | **Fasteners, connectors, cable, other elements according to the Technical Project** |  |  |
|  | **Full video monitoring system installation, commissioning, and training of the Police Inspectorate Operators and of the IT specialists from the Cahul Mayoralty, responsible for managing the Smart City Platform will be ensured by the Offeror.** |  |  |
|  | **Offeror will ensure technical support and maintenance of the video monitoring system 12 (twelve) months after commissioning of the system.** |  |  |

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| I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted. | |
| *Exact name and address of company*  Company NameClick or tap here to enter text.  Address: Click or tap here to enter text.  Phone No.: Click or tap here to enter text.  Email Address: Click or tap here to enter text. | Authorized Signature:  Date: Click or tap here to enter text.  Name: Click or tap here to enter text.  Functional Title of Authorised Signatory: Click or tap here to enter text.  Email Address: Click or tap here to enter text. |