



**Our Ref:** .....

**Date:** 12<sup>th</sup> February 2026.

**TENDER FOR THE SUPPLY, INSTALLATION, TESTING, AND COMMISSIONING OF CCTV SURVEILLANCE SYSTEM AT NGERE TEA FACTORY COMPANY LIMITED.**

This tender invites sealed bids from prequalified and competent security system installers for the design, supply, installation, testing, and commissioning of a complete IP-based CCTV Surveillance System.

**1. Background and Objective**

The objective of this tender is to procure and install a comprehensive surveillance system to enhance security, monitoring, operational oversight, and asset protection.

**2. i. Scope of Work**

The contractor shall design, supply, install, test, and commission a complete CCTV and surveillance system for the factory premises. The system must provide comprehensive coverage of production areas, warehouses, the weighbridge, the main gate, and administrative offices. It shall include ANPR functionality for vehicle monitoring, centralized recording, and high-resolution monitoring displays.

The contractor shall design, supply, install, configure, test, and commission a complete CCTV system including:

- IP Bullet Cameras- 41 in number as per the specifications below
- IP Dome Cameras- 7 in number as per the specifications below
- PTZ Cameras – 2 in number as per the specifications below
- ANPR (Automatic Number Plate Recognition) Cameras – weighbridge and main gate (optimized for license plate recognition, integrated IR, motorized varifocal lens, searchable vehicle database).
- 64-Channel Network Video Recorder (NVR)
- PoE Switches and Network Infrastructure
- Fiber optic backbone (where applicable)
- Power backup system (UPS/Inverter)
- Monitoring displays
- Structured cabling and accessories

**ii .Deliverables**

**• Cameras-Model HIKVision**

- Bullet cameras (IP67, metal housing, IR up to 80 m, resolution up to 2688 × 1520, smart detection features).
- Dome cameras (IP67, IK10 vandal resistant, IR up to 30 m, resolution up to 2688× 1520).

- ANPR (Automatic Number Plate Recognition) cameras for weighbridge and main gate (optimized for license plate recognition, integrated IR, motorized varifocal lens, searchable vehicle database).
- All cameras must be **serviceable models** with guaranteed spare parts availability.
  - **Network Video Recorder (NVR)**
    - 64-channel IP input.
    - Recording resolution up to 12 MP.
    - RAID0/1/5/6/10 support.
    - Storage capacity: **50 TB, upgradable to 100 TB.**
    - Interfaces: 8 SATA + 1 eSATA, each HDD up to 10 TB.
  - **Network Infrastructure**
    - PoE switches (24-port Gigabit PoE × 2).
    - Shielded CAT6A cabling and fiber optic backbone.
    - 22U network cabinet for NVR, switches, UPS.
  - **Power Backup**
    - 5kVA inverter/UPS system with 100AH batteries.
    - Minimum 2-hour backup without mains power.
  - **Monitoring Displays**
    - **3 units of 75-inches, 4K UHD monitors** with swivel mounting brackets.

### iii. Technical Requirements

- **Video Compression:** H.265/H.264 with smart codecs (H.265+/H.264+).
- **Smart Features:** Line crossing, intrusion detection, unattended baggage, object removal, face detection, scene change detection.
- **Network Protocols:** TCP/IP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, SNMP, IPv6
- **Security:** HTTPS encryption, 802.1X authentication, watermarking, IP filtering.
- **Integration:** ONVIF compliance for interoperability.
- **Operating Conditions:** -30 °C to +60 °C, humidity ≤ 95% non-condensing.

**iv. Maintenance Contract**

- a. **Preventive Maintenance:** Quarterly inspections, cleaning, firmware updates.
- b. **Corrective Maintenance:** On-call support with 24–48 hr response time.
- c. **Spare Parts:** Availability guaranteed for all installed models.
- d. **Annual Audit:** Performance review, reporting, and optimization recommendations.
- e. **Training:** End-user training for factory security staff.

**v. Compliance Requirements**

- a. All equipment must be **factory-grade**, designed for continuous operation.
- b. Cameras and NVR must be **serviceable models** with local support.
- c. System must comply with **international standards** (ONVIF, IEEE PoE, RAID).
- d. Contractor must provide **as-built documentation** and warranty certificates.

**vi. Evaluation Criteria**

- a. Technical compliance with specifications.
- b. Proven experience in factory surveillance installations.
- c. Availability of local service and spare parts.
- d. Competitive pricing and warranty terms.

**3. Camera Schedule (As per Survey Report)-The Bidders MUST quote based on the following proposed no. of cameras and installation location as stated; All the specifications stated (under 4-Technical specifications) must be met.**

|     | <b>LOCATION</b>       | <b>TYPE</b> | <b>QUANTITY</b> |
|-----|-----------------------|-------------|-----------------|
| 1.0 | Outside Dispatch Area | Bullet      | 1               |
| 2.0 | Inside Dispatch Area  | Bullet      | 1               |
| 3.0 | Packing Area          | Bullet      | 1               |
| 4.0 | Sorting Area          | Bullet      | 1               |
| 5.0 | CFU Area              | Bullet      | 1               |

|      |   |        |   |
|------|---|--------|---|
| 6.0  | Factory Workshop inside                                     | Dome   | 1 |
| 7.0  | Factory Store inside  | Dome   | 1 |
| 8.0  | CTC near bank A   | Bullet | 1 |
| 9.0  | CTC A-D (mounted outside QC )                               | Bullet | 1 |
| 10.0 | Near CTC A(mounted on wall to face factory offices entrance | Bullet | 1 |
| 11.0 | CFU Area( to be mounted facing factory workshop)            | Bullet | 1 |
| 12.0 | Factory Offices corridor(mounted outside pm office)         | Bullet | 1 |
| 13.0 | Inside PM office(to monitor server room & Safe)             | Dome   | 1 |
| 14.0 | Inside Quality Control room                                 | Dome   | 1 |
| 15.0 | Main Factory offices entrance corridor                      | Bullet | 1 |
| 16.0 | Factory pathway(mounted near transfer conveyor)             | Bullet | 1 |
| 17.0 | Withering Deck 3 right side                                 | Bullet | 1 |
| 18.0 | Withering Deck 3 Left side                                  | Bullet | 1 |
| 19.0 | Withering Deck 2 right side                                 | Bullet | 1 |
| 20.0 | Withering Deck 2 Left side                                  | Bullet | 1 |
| 21.0 | Withering Deck 1 right side                                 | Bullet | 1 |
| 22.0 | Withering Deck 1 left side                                  | Bullet | 1 |
| 23.0 | Offloading GI Reception Right side                          | Bullet | 1 |
| 24.0 | Offloading GI Reception Left side                           | Bullet | 1 |
| 25.0 | AWM(mounted facing Power panels & entrance)                 | Bullet | 1 |
| 26.0 | AWM(between the 2 machines) facing entrance                 | Bullet | 1 |
| 27.0 | Orthodox offloading bay                                     | Bullet | 1 |
| 28.0 | Inside Orthodox Quality Control room                        | Dome   | 1 |
| 29.0 | Othodox rolling section                                     | Bullet | 1 |
| 30.0 | Orthodox Sorting  | Bullet | 1 |

|      |   |        |   |
|------|---|--------|---|
| 31.0 | Orthodox Drying   | Bullet | 1 |
| 32.0 | Orthodox Dispatch   | Bullet | 1 |
| 33.0 | Orthodox inside Dispatch(facing dispatch door)                                | Bullet | 1 |
| 34.0 | Othodox offices entrance(mounted outside)                                     | Bullet | 1 |
| 35.0 | Generator room Inside facing power distribution panel                         | Bullet | 1 |
| 36.0 | Boiler section facing makeup & sedementation tanks                            | Bullet | 1 |
| 37.0 | Boiler section facing all boilers feeding                                     | Bullet | 1 |
| 38.0 | Weighbridge office inside   | Dome   | 1 |
| 39.0 | Weighbridge platform(mounted on boiler roof                                   | Bullet | 1 |
| 40.0 | Main gate(mounted on pole to face main gate)                                  | Bullet | 1 |
| 41.0 | Trucks parking near dispatch area   | PTZ    | 1 |
| 42.0 | Fuel pump   | Bullet | 1 |
| 43.0 | Firewood sheds(mounted at extreme end facing factory side)                    | Bullet | 1 |
| 44.0 | Motor vehicle workshop Inside   | Dome   | 1 |
| 45.0 | Motor vehicle workshop Outside-mounted on roof(facing leafbase & admin block) | PTZ    | 1 |
| 46.0 | Admin block(mounted on kitchen wall)  | Bullet | 1 |
| 47.0 | Behind Admin block facing main gate(mounted on pole)                          | Bullet | 1 |
| 48.0 | Behind Factory building(mounted on Abolution block)                           | Bullet | 1 |
| 49.0 | Pallet area & value addition dispatch(mounted on abolution block)             | Bullet | 1 |
| 50.0 | Value Addition section Inside facing dispatch door                            | Bullet | 1 |

|                      |    |
|----------------------|----|
| TOTAL NO. OF CAMERAS | 50 |
| BULLET               | 41 |
| DOME                 | 7  |
| PTZ                  | 2  |

#### 4. Technical Specifications

All equipment supplied must meet or exceed the following minimum specifications:

##### I. BULLET CAMERAS

|                         |   |
|-------------------------|---|
| Image Sensor            | 1/2.5" Progressive Scan CMOS  |
| Min. Illumination       | Color: 0.008 lux @(F1.2, AGC ON), 0.014 lux @(F1.6, AGC ON), 0 lux with IR  |
| Shutter Speed           | 1/3 s to 1/100,000 s  |
| Slow Shutter            | Yes   |
| Day & Night             | IR Cut Filter   |
| Digital Noise Reduction | 3D DNR  |
| WDR                     | 120dB   |
| 3-Axis Adjustment       | Pan: 0° to 360°, tilt: 0° to 100°, rotate: 0° to 360°   |
| <b><i>Lens</i></b>      |   |
| Focal Length            | 2.8, 4, 6, 8, 12 mm   |
| Aperture                | F1.6  |
| Focus                   | Fixed   |
| FOV                     | 2.8 mm, horizontal FOV: 109°, vertical FOV: 60°, diagonal FOV: 131°<br>4 mm, horizontal FOV: 88°, vertical FOV: 46°, diagonal FOV: 105°<br>6 mm, horizontal FOV: 53°, vertical FOV: 30°, diagonal FOV: 61°<br>8 mm, horizontal FOV: 41°, vertical FOV: 23°, diagonal FOV: 48°<br>12 mm, horizontal FOV: 25°, vertical FOV: 14°, diagonal FOV: 29° |
| Lens Mount              | M12   |
| <b><i>IR</i></b>        |   |
| IR Range                | I5: Up to 50 m<br>I8: Up to 80 m  |

|                                    |   |
|------------------------------------|---|
| Wavelength                         | 850nm   |
| <b><i>Compression Standard</i></b> |   |
| Video Compression                  | Main stream: H.265/H.264<br>Sub-stream: H.265/H.264/MJPEG<br>Third stream: H.265/H.264  |
| H.264 Type                         | Main Profile/High Profile   |
| H.264+                             | Main stream supports  |
| H.265 Type                         | Main Profile  |
| H.265+                             | Main stream supports  |
| Video Bit Rate                     | 32 Kbps to 16 Mbps  |
| <b><i>Smart Feature-set</i></b>    |   |
| Smart Event                        | Line crossing detection, intrusion detection, unattended baggage detection, object removal detection, face detection, scene change detection  |
| Basic Event                        | Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error)  |
| Linkage Method                     | Trigger recording: memory card, network storage, pre-record and post-record<br>Trigger captured pictures uploading: FTP, HTTP, NAS, Email<br>Trigger notification: HTTP, ISAPI, Email |
| Region of Interest                 | Support 1 fixed region for main stream and sub-stream   |
| <b><i>Image</i></b>                |   |
| Max. Resolution                    | 2688 × 1520   |
| Main Stream                        | 50Hz: 25 fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)<br>60Hz: 30 fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)  |
| Sub-Stream                         | 50Hz: 25 fps (640 × 480, 640 × 360, 320 × 240)<br>60Hz: 30 fps (640 × 480, 640 × 360, 320 × 240)  |
| Third Stream                       | 50Hz: 25 fps (1280 × 720, 640 × 360, 352 × 288)<br>60Hz: 30 fps (1280 × 720, 640 × 360, 352 × 240)  |
| Image Enhancement                  | BLC/3D DNR/HLC  |
| Image Settings                     | Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance adjustable by client software or web browser   |

|                         |   |
|-------------------------|---|
| Target Cropping         | No  |
| SVC                     | H.264 and H.265 encoding support  |
| Day/Night Switch        | Day/Night/Auto/Schedule   |
| <b>Network</b>          |   |
| Network Storage         | Support microSD/SDHC/SDXC card (128G), local storage and NAS (NFS,SMB/CIFS), ANR  |
| Protocols               | TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS   |
| General Function        | Anti-flicker, three streams, heartbeat, mirror, privacy masks, password reset via e-mail, pixel counter, HTTP listening   |
| API                     | ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK   |
| Security                | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS 1.2, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, TLS1.2 |
| Simultaneous Live View  | Up to 6 channels  |
| User/Host               | Up to 32 users<br>3 levels: Administrator, Operator and User  |
| Client                  | iVMS-4200, Hik-Connect, Hik-Central   |
| Web Browser             | Plug-in required live view: IE8+<br>Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Safari 11+<br>Local Service: Chrome 41.0+, Firefox 30.0+   |
| <b>Interface</b>        |   |
| Communication Interface | 1 RJ45 10M/100M self-adaptive Ethernet port   |
| On-board storage        | Built-in microSD/SDHC/SDXC slot, up to 128 GB   |
| Reset Button            | Yes   |
| <b>General</b>          |   |
| Operating Conditions    | -30 °C to +60 °C (-22 °F to +140 °F), humidity 95% or less (non-condensing)   |
| Web Client Language     | 32 languages<br>English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French,  |

|                               |   |
|-------------------------------|---|
|                               | Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil) |
| Power Supply                  | 12 VDC $\pm$ 25%, $\Phi$ 5.5 mm coaxial plug power<br>PoE(802.3af, class 3)   |
| Power Consumption and Current | I5:<br>12 VDC, 0.7 A, max. 7.5 W<br>PoE (802.3af, 36V to 57V), 0.3 A to 0.1 A, max. 9.5 W<br>I8:<br>12 VDC, 1 A, max: 11.5 W<br>PoE (802.3af, 36V to 57V), 0.4 A to 0.2 A, max. 12.9 W                                      |
| Protection Level              | IP67  |
| Material                      | Metal   |

## II. DOME CAMERAS

|                         |  |
|-------------------------|--|
| image Sensor            | 1/2.5" Progressive Scan CMOS   |
| Min. Illumination       | Color: 0.008 lux @(F1.2, AGC ON), 0 lux with IR<br>Color: 0.014 lux @(F1.6, AGC ON), 0 lux with IR   |
| Shutter Speed           | 1/3 s to 1/100,000 s   |
| Slow Shutter            | Yes  |
| Day & Night             | IR Cut Filter  |
| Digital Noise Reduction | 3D DNR   |
| WDR                     | 120dB  |
| 3-Axis Adjustment       | Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°   |
| <b><i>Lens</i></b>      |  |
| Focal Length            | 2.8 mm   |
| Aperture                | F1.6   |
| Focus                   | Fixed  |
| FOV                     | 2.8 mm, horizontal FOV: 109°, vertical FOV: 60°, diagonal FOV: 131°<br>4 mm, horizontal FOV: 88°, vertical FOV: 46°, diagonal FOV: 105°<br>6 mm, horizontal FOV: 53°, vertical FOV: 30°, diagonal FOV: 61° |

|                                    |  |
|------------------------------------|--|
|                                    | 8 mm, horizontal FOV: 41°, vertical FOV: 23°, diagonal FOV: 48°<br>12 mm, horizontal FOV: 25°, vertical FOV: 14°, diagonal FOV: 29°  |
| Lens Mount                         | M12  |
| <b><i>IR</i></b>                   |  |
| IR Range                           | Up to 30 m   |
| Wavelength                         | 850nm  |
| <b><i>Compression Standard</i></b> |  |
| Video Compression                  | Main stream: H.265/H.264<br>Sub-stream: H.265/H.264/MJPEG<br>Third stream: H.265/H.264   |
| H.264 Type                         | Main Profile/High Profile  |
| H.264+                             | Main stream supports   |
| H.265 Type                         | Main Profile   |
| H.265+                             | Main stream supports   |
| Video Bit Rate                     | 32 Kbps to 16 Mbps   |
| Audio Compression (-S model)       | G.711/G.722.1/G.726/MP2L2/PCM/MP3  |
| Audio Bit Rate (-S model)          | 64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/8Kbps-320Kbps(MP3)   |
| <b><i>Smart Feature-set</i></b>    |  |
| Smart Event                        | Line crossing detection, intrusion detection, unattended baggage detection, object removal detection, face detection, scene change detection   |
| Basic Event                        | Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error)   |
| Linkage Method                     | Trigger recording: memory card, network storage, pre-record and post-record<br>Trigger captured pictures uploading: FTP, HTTP, NAS, Email<br>Trigger notification: HTTP, ISAPI, alarm output (-S), Email |
| Region of Interest                 | Support 1 fixed region for main stream and sub-stream  |
| <b><i>Image</i></b>                |  |
| Max. Resolution                    | 2688 × 1520  |

|                        |   |
|------------------------|---|
| Main Stream            | 50Hz: 25 fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)<br>60Hz: 30 fps (2688 × 1520, 2304 × 1296, 1920 × 1080, 1280 × 720)  |
| Sub-Stream             | 50Hz: 25 fps (640 × 480, 640 × 360, 320 × 240)<br>60Hz: 30 fps (640 × 480, 640 × 360, 320 × 240)  |
| Third Stream           | 50Hz: 25 fps (1280 × 720, 640 × 360, 352 × 288)<br>60Hz: 30 fps (1280 × 720, 640 × 360, 352 × 240)  |
| Image Enhancement      | BLC/3D DNR/HLC  |
| Image Setting          | Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance adjustable by client software or web browser   |
| SVC                    | H.264 and H.265 encoding support  |
| Day/Night Switch       | Day/Night/Auto/Schedule/Triggered by Alarm In (-S)  |
| <b>Network</b>         |   |
| Network Storage        | Support microSD/SDHC/SDXC card (128G), local storage and NAS (NFS,SMB/CIFS), ANR  |
| Protocols              | TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS   |
| General Function       | Anti-flicker, three streams, heartbeat, mirror, privacy masks, password reset via e-mail, pixel counter, HTTP listening   |
| API                    | ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK   |
| Security               | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS 1.2, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, TLS1.2 |
| Simultaneous Live View | Up to 6 channels  |
| User/Host              | Up to 32 users<br>3 levels: Administrator, Operator and User  |
| Client                 | iVMS-4200, Hik-Connect, Hik-Central   |
| Web Browser            | Plug-in required live view: IE8+<br>Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Safari 11+<br>Local Service: Chrome 41.0+, Firefox 30.0+   |
| <b>Interface</b>       |   |

|                               |  |
|-------------------------------|--|
| Audio (-S model)              | 1 input (line in/mic in), 1 output, mono sound, terminal block   |
| Alarm (-S model)              | 1 input, 1 output (max. 12 VDC, 30 mA), terminal block   |
| Video Output                  | No   |
| Communication Interface       | 1 RJ45 10M/100M self-adaptive Ethernet port  |
| On-board storage              | Built-in microSD/SDHC/SDXC slot, up to 128 GB  |
| Reset Button                  | Yes  |
| <b>Audio (-S model)</b>       |  |
| Environment Noise Filtering   | Yes  |
| Audio Sampling Rate           | 8kHz/16kHz/32kHz/44.1kHz/48kHz   |
| <b>General</b>                |  |
| Operating Conditions          | -30 °C to +60 °C (-22 °F to +140 °F), humidity 95% or less (non-condensing)  |
| Web Client Language           | 32 languages<br>English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil) |
| Power Supply                  | 12 VDC $\pm$ 25%, $\Phi$ 5.5 mm coaxial plug power<br>PoE(802.3af, class 3)  |
| Power Consumption and Current | 12 VDC, 0.5 A, max. 6 W<br>PoE (802.3af, 36V to 57V), 0.2 A to 0.1 A, max. 7.5 W   |

Unit: mm(inch)

|                  |                                     |
|------------------|-------------------------------------|
| Protection Level | IP67, IK10                          |
| Material         | Camera body: metal, bubble: plastic |

## NETWORK VIDEO RECORDER (NVR)

The network video Recorder shall be a 64 Channel System with at least the following Specifications:

|                                      |   |   |
|--------------------------------------|---|---|
| <b>Video/Audio input</b>             | <b>IP video input</b>   | Up to 12 MP resolution  |
| <b>Two-way audio</b>                 | 1-ch, RCA (2.0 V <sub>p-p</sub> , 1 k Ω)  |   |
| <b>Network</b>                       | <b>Incoming bandwidth</b>   | 320 Mbps;   |
|                                      |   | or 200 Mbps (when RAID is enabled)  |
| <b>Outgoing bandwidth</b>            | 256 Mbps, or 200 Mbps (when RAID is enabled)  |   |
| <b>Remote connection</b>             | 128   |   |
| <b>Video/Audio output</b>            | <b>Recording resolution</b>   | 12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF      |
| <b>CVBS output (Optional)</b>        | 1-ch, BNC (1.0 V <sub>p-p</sub> , 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480  |   |
| <b>VGA1 /HDMI1 output resolution</b> | HDMI1: 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz |   |
|                                      | VGA1: 2K (2560 × 1440)/60Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz  |   |
| <b>VGA2 /HDMI2 output resolution</b> | 1920 × 1080p/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz   |   |
| <b>Audio output</b>                  | 2-ch, RCA (2.0V <sub>p-p</sub> , 1 KΩ)  |   |
| <b>Decoding</b>                      | <b>Decoding format</b>  | H.265/H.265+/H.264/H.264+/MPEG4   |
|                                      |   |   |
| <b>Synchronous playback</b>          | 8-ch  | 16-ch   |
| <b>Capability</b>                    | 2-ch @ 12 MP (20fps) / 4-ch @ 8 MP (25fps) / 8-ch @ 4MP (30fps) / 16-ch @ 1080p (30fps)   |   |
| <b>Network management</b>            | <b>Network protocols</b>  | TCP/IP, DHCP, H HTTPS ik-Connect, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™ |

|  |   |  |
|--|---|--|
| <b>Hard disk</b>                       | <b>SATA</b>                                       | 8 SATA interfaces  |
| <b>eSATA</b>                           | 1 eSATA interface                                 |  |
| <b>Capacity</b>                        | Up to 10TB capacity for each HDD                  |  |
| <b>Disk array</b>                      | <b>Array type</b>                                 | RAID0, RAID1, RAID5, RAID6, RAID10                         |
| <b>Number of arrays</b>                | 4   |  |
| <b>external interface</b>              | <b>Network interface</b>                          | 2, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface |
| <b>Serial interface</b>                | RS-232; RS-485; Keyboard                          |  |
| <b>USB interface</b>                   | Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0 |  |
| <b>Alarm in/out</b>                    | 16/4  |  |
| <b>General</b>                         | <b>Power supply</b>                               | 100 to 240 VAC, 50 to 60 Hz                                |
| <b>Max. Power</b>                      | 200 W   |  |
| <b>Consumption (without hard disk)</b> | ≤ 30 W  |  |

### NETWORK SWITCH SPECIFICATIONS

| <b>Network Parameters</b> |   |   |   |
|---------------------------|---|---|---|
| Port Number               | 4 x gigabit PoE ports, and 1 x gigabit RJ45 port                | 16 x gigabit PoE ports, 1 x gigabit RJ45 port, and 1 x gigabit SFP fiber optical port | 24 x gigabit PoE ports, 1 x gigabit RJ45 port, and 1 x gigabit SFP fiber optical port |
| Port Type                 | RJ45 port, full duplex, MDI/MDI-X adaptive                      |   |   |
| Standards                 | IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z |   |   |
| Forwarding Mode           | Store-and-forward switching                                     |   |   |
| Mac Address Table         | 2K  | 8K  |   |
| Switching Capacity        | 10 Gbps   | 36 Gbps   | 56 Gbps   |

|   |  |               |               |
|---|--|---------------|---------------|
| Packet Forwarding Rate                        | 7.44 Mbps  | 26.784 Mpps   | 38.688 Mbps   |
| Internal Cache                                | 1 Mbits  | 4.1 Mbits     |               |
| <b>PoE Power Supply</b>                       |  |               |               |
| PoE Standard                                  | IEEE 802.3af, IEEE 802.3at   |               |               |
| PoE Power Pin                                 | Support 4-core power supply, and Ethernet cable 1/2/3/6 provide power supply |               |               |
| PoE Port                                      | Ports 1 to 4   | Ports 1 to 16 | Ports 1 to 24 |
| Maximum Port Power                            | 30 W   |               |               |
| PoE Power Budget                              | 60 W   | 230 W         | 370 W         |
| Maximum Power Consumption                     | 65 W   | 250 W         | 400 W         |
| <b>General</b>                                |  |               |               |
| Shell   | Metal material   |               |               |
| Weight  | 6.35 lbs (2.88 kg)   |               |               |
| Dimensions (L x H x D)                        | 17.3" x 1.7" x 8.7" (440 mm x 44 mm x 220.8 mm)                              |               |               |
| Operating Temperature                         | 32° F to 104° F (0° C to 40° C)  |               |               |
| Storage Temperature                           | -40° F to 185° F (-40° C to 85° C)   |               |               |
| Operating Humidity                            | 5% to 95% (no condensation)  |               |               |
| Storage Humidity                              | 5% to 95% (no condensation)  |               |               |
| Power Supply                                  | 100 to 240 VAC, maximum 6.5 A  |               |               |
| Storage HDD                                   | 8TB *4   |               |               |
| LG HD Monitor 75" c/w Swivel Mounting Bracket | 3 Monitor(s)   |               |               |
| Power inverter/Smart UPS                      | Inverter/UPS 5kva  |               |               |

|   |  |  |  |
|---|--|--|--|
| System complete with 100AH Batteries (2Hrs standby time with no KPLC Mains power) |  |  |  |
| Network Cabinet (for NVR, switch, UPS)  | Cabinet 22 U   |  |  |
| POE Switches 2  | 24 PORT GIGA POE *2  |  |  |
| Cabling   | Shielded CAT6A and Fiber Optic to connect Buildings/Premises |  |  |

### 5. Installation & Commissioning Requirements

- All installations shall follow structured cabling standards isolated from the existing LAN system.
- Proper labeling and cable management is mandatory.
- As-built documentation must be provided.
- User training shall be conducted upon commissioning.

### 6. Maintenance & Warranty

- Minimum 12-month warranty on all equipment and workmanship.
- Quarterly preventive maintenance.
- 24–48 hour corrective response time.
- Availability of spare parts locally.

### 7. Tender Submission Requirements

All Tender documents can be downloaded from the company's website [www.ngere.ktdateas.com](http://www.ngere.ktdateas.com)

And submit payment of a **Non-Refundable fee of Kshs. 5,000** per copy/Category payable to (**Family Bank Account Name: Ngere Tea Factory Co Ltd FUM Account Account Number:005000050660**).

**Prospective suppliers must submit one copy** of the complete documents and other requested information to reach: -

**The Factory Unit Manager,  
Ngere Tea Factory Company Limited,  
P.O.BOX 1118-01000  
Thika, Kenya.**

And be deposited in the Tender Box provided at the entrance to the Main Administration Box to be received on or before **24<sup>th</sup> February 2026 at 10:00 am**. Tender documents will be opened promptly after closing. Bidders or their representatives are welcome to attend the opening session at the **Board Room**.

The Registration Application should be prepared and submitted in a plain sealed envelope clearly marked

## **FORM PQ-1 SUBMISSION DOCUMENTATION**

### **All prospective candidates/ firms MUST provide:**

- (a) A copy of the Certificate of Business Registration OR Incorporation.
- (b) Tax compliance Certificate/ Exemption Certificate from Kenya Revenue Authority  
**(Failure to produce this certificate to prove compliance will lead to automatic disqualification, thus no further evaluation of your application).**
- (c) Copies of PIN Certificates of firm/Company/Individual.
- (d) Bank references and attach a copy of the firm's last recent audited Accounts for the previous one (1) year or certified financial statements for the last Six (6) Months.
- (e) Capacity Statement; CV, academic and professional certificates, latest dealership letters in area of trade.
- (f) Statement to indicate a willingness to provide goods and services on credit
- (g) CR12 certificate dated not later than 6 months
- (h) Certificates from affiliated Professional Bodies/Associations, Where the Nature of Supply or Service is applicable /Specific to your line of Business e.g. EPRA, NCA, IATA, REREC,NEMA registration. Accompanied by current annual practicing licenses.
- (i) Copy of Official stamped Bank Slip issued.(Mandatory)

**FORM PQ-2: PRE-QUALIFICATION DATA**

You are advised that it is a serious offence to give false information on this form.

**GENERAL BUSINESS INFORMATION**

Official Trading Name (As Registered):.....  
.....

KRA PIN:  
.....  
..

Office Physical Location:  
.....  
...

Street/Road:  
.....

Postal Address &Postal Code:  
.....

City: ..... Country:.....  
...

Telephone No.:  
.....

Nature of Business:  
.....  
.....

Current Trade License Number: ..... Expiry Date:.....

Maximum Value of business you can handle at any one time, Kes.....

**CONTACT PERSON DETAILS**

a) Name: ..... b) Title:  
.....

c) Cellphone No.: .....d) Email address:  
.....

***NOTE: The email address provided herein will be used when sending requests for quotations and LPOs, payments follow-ups etc.***

**BANK DETAILS**

Bank Code:

.....

Bank Name:

.....

...

Bank Branch Code:

.....

Bank Branch Name:

.....

Bank Account Name:

.....

...

Bank Account Number:

.....

Swift Code:

.....

...

**ORGANIZATION AND BUSINESS INFORMATION**

Managing Director or Designate:

.....

Telephone No:

.....

Email Address:

.....

...

**CONFIDENTIAL BUSINESS QUESTIONNAIRE**

To be completed as applicable.

**PART (A) –Sole Proprietor**

Name:

.....

...

Nationality: ..... Country of Origin:

.....

ID/Passport Number:

.....

**PART (B) –Partnership**

| No | Name | Nationality | ID/Passport Number | Shares |
|----|------|-------------|--------------------|--------|
| 1. |      |             |                    |        |
| 2. |      |             |                    |        |
| 3. |      |             |                    |        |
| 4. |      |             |                    |        |
| 5. |      |             |                    |        |

**PART (C) –Registered Companies**

Private or Public:

State the nominal and issue capital of the company

Nominal Kes.....Issue

Kes.....

Give details of all directors as follows:

| No | Name | Nationality | ID/Passport Number | Shares |
|----|------|-------------|--------------------|--------|
| 1. |      |             |                    |        |
| 2. |      |             |                    |        |
| 3. |      |             |                    |        |
| 4. |      |             |                    |        |
| 5. |      |             |                    |        |

*If Kenyan Citizen, indicate under Citizenship Details whether by Birth, Naturalization or Registration.*

Date: .....

Signature & Stamp of Tender: .....

**FORM PQ-3: PERSONNEL INFORMATION**

**SUPERVISOR**

Name:

.....  
...

Academic Qualification:

.....

Professional Qualification:

.....

Length of service with contractor or supplier position held:

.....

**PROPOSED TECHNICAL PERSONNEL AND DESIGNATION**

(a)

.....

(b)

.....

(c)

.....

(d)

.....

(e)

.....

(f)

.....

(g)

.....

A brief statement of supply and service delivery method the supplier plans to use to execute the contract.....

.....

.....

...

.....

.....

...

.....  
...  
.....  
...  
.....  
...

**FORM PQ-4: FINANCIAL POSITION DETAILS**

**4.1** Attach a copy of the firm's last recent audited Accounts for the previous one (1) year or certified financial statements for the last Six (6) Months giving a summary of assets and current liabilities/or any other financial support.

**FORM PQ-5: PAST EXPERIENCE**

**NAMES OF APPLICANTS, OTHER CLIENTS, AND VALUES OF CONTRACT/ORDERS  
IN THE LAST TWO YEARS *(Please attach LPOs that support the information provided)***

**1.**

Name of 1<sup>st</sup> client  
(organization).....  
...

Address of client  
(organization).....  
.....

Name of the contact person at the client  
(Organization).....

Telephone no. of  
client.....

Value of  
contract.....  
...

Duration of  
contract.....  
...

**2.**

Name of 2<sup>nd</sup> client (organization)  
.....

Address of client (organization).....

Name of the contact person at the client  
(organization).....

Telephone no. of  
client.....  
.....

Value of  
contract.....

Duration of contract  
(Date).....  
...

**3.**

Name of 3<sup>rd</sup> Client  
(organization).....  
.....

Address of client  
(organization).....  
....

Name of the contact person at the client  
(organization).....

Telephone no. of  
client.....

Value of  
contract.....  
...

Duration of contract  
(Date).....  
...

**FORM PQ-6: SWORN STATEMENT**

Having studied the tender information for the above project we/I hereby state:

- a) The information furnished in our application is accurate to the best of my/our knowledge.
- b) If we are qualified, we acknowledge that this grants me/us the right to participate in due time in submitting a tender or quotation based on provisions in the tender or quotation documents to follow.
- c) We/I have enclosed all the documents and information required for the pre-qualification evaluation.

Date.....  
...

Applicant's  
Name.....  
...

Represented  
by.....

Signature.....  
...

Designation.....  
...

(Full name and designation of the person signing and stamp or seal.)

**FORM PQ-7: LITIGATION HISTORY**

Provide any litigation or arbitration history resulting from any contractual obligation. If none state so.

## **FORM PQ-8: LIST OF ONGOING CONTRACTS/ PROJECTS (GOODS, SERVICES)**

List and provide evidence of three recent ongoing contracts/projects in the last TWO (2) years.

### **9. Evaluation Criteria**

The evaluation shall be conducted using a Quality and Cost Based Selection (QCBS) method:

- Technical Compliance – 40%
- Experience & Capacity – 20%
- Warranty & Support – 10%
- Financial Proposal – 30%

### **10. Award of Contract**

The contract shall be awarded to the bidder achieving the highest combined technical and financial score, subject to Board and Management approval.

### **11. Confidentiality**

All information contained in this tender document is confidential and shall not be disclosed without written authorization.