Notice Inviting e-Tender

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Supply and Commissioning of Arthroscopy Machine for IPGME&R and SSKM Hospital
(Submission of Bid through *online*)
2nd call of Bid Reference No.: WBMSCL/NIT-560/2022,(Schedule-I&II); dated-07.12.2022

Bid Reference No.: WBMSCL/NIT-009/2023	Dated-06.01.2023

Amendment-I
REVISED TECHNICAL SPECIFICATION

Schedule-I
4K Arthroscopic Camera System with Monitor and backup with attachments (High End)

4K Camera System

Camera Control Unit:

- System must have 4k UHD Camera Console, inbuilt / separate LED Light source & - LAN enabled image management system with recording via USB port along with recording in APP through in built wifi / LAN.
- Camera resolution must be 3840*2160 (native) 4k
- Shutter speed should be 1/60 second through 1/10,000 second or more shutter speed (60 Hz)
- It should have 4k Series digital interface (4k-SDI): Four serial digital interface (HD-SDI) with 4:2:2 component digital video output on BNC / HDMI / DP connector.
- It should have HD Series digital interface (HD-SDI): One serial digital interface (HD-SDI) with 4:2:2 component digital video output on BNC / HDMI / DP connector
- USB Storage must accommodate 1 TB or more sized storage device, Class 10/Huss Speed Class 1// UHS (Ultra High Speed). FAT32 or more NTFS formatted.

- USB Output Two USB type A connectors; provides USB-compatible connection to flash or hard drives.
- Standby button option should be available.
- Standby Illumination option should be available.
- Multiple white balance option – white balance can be done by console head / App remote access.
- LED Light source with life span of 30k hours,
- LED Light source with control options on Camera head and remote access / App remote access.
- IMS console must have built in wifi / LAN for connectivity of App and printer
- Video Accessory controls Two mini-phono connectors (3.5mm)
- Fuse Type F10AH250V;V and I rating: 250V, 10A;
- Temperature: Transport and Storage should be mentioned.
- Humidity: Transport and Storage should be mentioned.
- Atmospheric pressure: Transport Storage should be mentioned (no condensation is allowed)
- Altitude: 3000 meters maximum
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Camera Head:

- Camera head should have 4k, 3 chip MOS video sensor technology
- Camera head should provided minimum 6 different custom button setting on minimum 3 camera head button
- Camera head should be autoclavable and / or soak able
- Camera Control Function – should be able to change camera setting by console, Camera Head and / or App
- Camera head cable should be minimum 10 feet long
- Camera head weight should be mentioned.
- Must have transport shock and vibration compliance with ISTA 3A
- Video Field Rate 60 Hz
- Must have c-mount autoclavable and / or soak able coupler with more than 16 mm coupler length opt for 4mm scopes
- Must have digital zoom
- Video Data Transmission High-Speed, low-voltage differential serial (LVDS), digital transmission via 12-foot camera cable
- Video Output Format Full UHD 2160p, 100% compatible with SMPTE ST-425-5 when used with the CCU
- Temperature: Transport and Storage should be mentioned.
- Humidity: Transport and Storage should be mentioned.
- Atmospheric pressure: Transport Storage should be mentioned (no condensation is allowed)
- Altitude: 3000 meters maximum

4K Monitor:

- Monitor should have resolution 3840*2160 pixel or more
- Monitor should support picture size (Diagonal) 30 inches or more.
- Monitor should support effective picture size 698.0 x 368.1 mm (27 $^1/_2$ x 14 $^1/_2$ inches)
- Monitor should support pixel pitch 0.1704 x 0.1704 mm
- Monitor should have aspect ratio of 16:09 or more
- Monitor should have Pixel Efficiency should be mentioned
- Monitor should have LED backlight; LCD with IPS Panel Technology
- Monitor should have Luminnance (Panel Specification) of 770 cd/m^2 (typical)
- Monitor should have Contrast Ratio of 1450 : 1 or more
- Monitor should support Approx.1.073 billion colors
- Monitor should have Viewing Angle (Panel Specification) of 89°/89°/89°/89° (typical)
- Monitor should have Gamma1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight
- Monitor should have HDMI (x 1) (HDCP 1.4 correspondence) Input
- Monitor should have Input DVI-D (x 1) (HDCP 1.4 correspondence) TMDS single link
- Monitor should have SDI Input: 3G/HD/SD-SDI and BNC / HDMI / DP (x 5)
- Monitor should have DC Input XLR-type 3-pin (male) (x 1),   26 V DC (output impedance 0.005 ohms or less)
- Monitor should have Serial Remote LAN D-sub 9-pin (RS-232C)(xl), RJ-45(x1) (Ethernet,10BASE-T/100BASE-TX)
- Monitor should have DVI-D (x 1) when HDCP disabling Output
- Monitor should have SDI Output BNC / HDMI / DP (x 5)
- Monitor should have DC 5 V/12 V Output 5 V Output (x 1), 8 W; 12 V Output (x 1) 20 W max
- Monitor Power Consumption: LCD monitor: Approx. 180 W (max.)
- Monitor Dimensions: 753.8 x 456.4 x 69.3 mm (Slimmest D 28mm) (29 $^3/_4$ x 18 x 2 $^3/_4$ inches)
- Monitor Mass should be mentioned
- Monitor should be supplied with below accessories: 0 AC adaptor: AC-300MD (1)
    - AC power cord (1)
    - Instructions for Use (CD-ROM) (1)
    - Abridged edition of Instructions for Use (1)
    - AC power plug holder (2)
    - Instructions for Use of the AC adaptor (1)
    - Service Contact List (1)
    - M4 x 0.12 mm Screw (4)
- Storage/Transport Humidity should be mentioned
- Operating Humidity should be mentioned (no condensation)
- Operating/Storage/Transport   Pressure should be mentioned
- Storage/Transport Temperature should be mentioned
- Operating Temperature should be mentioned

- **App Specification (optional)**

- App must be able to do below listed functions
- Create new patient
- Create new procedure, view list of procedure
- Make necessary changes to camera head buttons
- Click picture and record video remotely
- Create annotations – voice, Text & graphical
- Applications must be able to control camera console and camera head programming
- Print images from app
- Create PDF of surgical pictures
- Email pictures directly from app device
- Email surgical video directly from app device
- Save pictures and video in through Wi-Fi enabled CCU
- Storage Configuration Minimum: 8GB

Typical: 16GB

- Media Objects Definitions Main Camera Input:

Images Image Size: 1920X1080 jpeg encoded

File: ~1MB 16 images is -16MB

Encoding: JPEG 97 Quality

Videos Video Size: 1920X1080 H.264/Mp4 encoding (Apple Compliant mpa files)

Capture Rate: ~1.2MB per second thus 100 Second Video file size is ~125MB

Encoding: 30 FPS/10 Mbits/sec;

Intraframe rate: 5

Room Camera Images PAL

Image Size: 720x576 jpeg encoded

File Size: ~125KB . Encoding:]PEG 97 Quality Videos PAL

Video Size: 720x576 H.264/Mp4 encoding (Apple Compliant mp4 files) Capture Rate: - 720MB per second thus 100 Second Video file size is -72MB Encoding: 30 FPS/6 Mbits/sec: Intraframe rate: 5

Images NTSC

Image Size: 720x480 jpeg encoded

File Size: ~125KB Encoding: JPEG 97 Quality Videos NTSC

Video Size: 720X480 H.264/Mp4 encoding (Apple Compliant mpq files) Capture Rate: - 750KB per second thus 100 Second Video file size is -75MB Encoding: 30 FPS/6 Mbits/sec:

Intraframe rate: 5

Transfer Rates* Transfer rates to/from Tablet is ~2MB/Second

125MB Video transfer from USB to Tablet: 60 seconds

300MB Patient Folder from Tablet to USB: 150 seconds

Calculation for Maximum Number of Media Objects: Pre-Connect: 4GB Reserved:

2GB to keep free

2GB in application/OS

Main Video Input /Gigabyte of Storage:

800 Seconds Video/ Gigabyte Storage

1000 Images / Gigabyte of Storage

Room Video Input:

1300 Seconds Video / Gigabyte Storage

10000 Images /Gigabyte Storage

Printing Air Print T is required.

Certification

Whole system should be USFDA and EU CE(4 DIGIT) / UK Cert approved.

<u>Note</u>: Whole system should be compatible with the existing Arthroscopy Machine.