

REPUBLIC OF KENYA



GOVERNMENT OF MAKUENI COUNTY



DEPARTMENT OF HEALTH SERVICES
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ADDENDUM

The County Government of Makueni through the department of Health Services wishes to issue an addendum to the tender hereunder;

S.No	TENDER REF NUMBER	TENDER NAME	ADDENDUM NAME	ADDENDUM DATE	TENDER CLOSING DATE
1	1664421/2024/2025	Supply, delivery, installation & commissioning of potable X-Ray machine at Matiliku Sub County hospital	REVISED SPECIFICATIONS	22 ND OCT 2024	28 th OCTOBER 2024

Interested and eligible service providers may download updated tender documents from County Government Website www.makueni.go.ke or the IFMIS supplier portal: <http://supplier.treasury.go.ke> free of charge.

Completed tender documents **MUST** be submitted through IFMIS SUPPLIER PORTAL: <http://supplier.treasury.go.ke> so as to be received on or before Monday 28th October 2024 at 10:00AM. The system will automatically lock out at the time and date of tender closing as indicated in the IFMIS portal.

Dr. Kiio S. Ndolo
Chief Officer – Health Services

Portable X-ray Technical Specification

	Flat Panel Detector
•	The Digital Detector should be wired cum wireless Flat Panel Detector (FPD) of Size 17”x17” or more.
•	The detector Scintillator material should be made up of Cesium Iodide and sensor with appropriate technology.
•	Flat Panel Detector (FPD with TFT technology) The detector should be water/dust resistance with minimum IP55 standard or higher.
•	The detectors should be capable of doing out of bucky radiography and also Lateral supine Radiography must be possible.
•	The detectors should have high DQE of 65% @ 0 Ip/mm and 50% @ 1 Ip/mm or more.
•	The detectors should have a minimum spatial resolution of 3.6 lp/mm or more
•	Detector array Size: Should be a minimum of 3K x 3K pixels or higher.
•	Pixel pitch: Up to 140 microns or less
•	A to D conversion: 16 bits.
•	The detectors offered should be light in weight with less than 4 kgs, enabling ease of use for operations and easy positioning at the time of out of bucky exposures.
•	Images pre-viewing should be available in about less than 5 secs after exposure and the cycle time should be less than 10 seconds.
•	Detectors offered should be capable of handling 150 or more exposures or 6 hours of operation in single full charge. Detector should have facility to use 2 batteries at a time to increase back-up
•	Offered detectors should have load bearing capacity of 180 kgs or more.
•	Detector should have on board storage of 100 images or more
•	<u>Processing server/workstation: laptop required</u>
•	<u>Digital Workstation</u> : should be based on the latest high-speed processor of at least 64 bit. The processor should be quad-core or better with with minimum 8 GB RAM and 1 TB HDD along with i5 processor.
•	Monitor, at least 15” or more.
•	Process of identification should be ready for interface with existing hospital information system (HIS) or Radiology information system (RIS) in DICOM (DMWL) protocols
•	This server must provide display of acquired images with greater details of demographics, like patient/study listing for easy access
•	This server must provide full amount of post processing features like geometric corrections, window/level, algorithms, annotations such as markers, predefined text, drawing lines and geometric shapes, multi scale images contrast amplification, measuring distances and angles and determining leg length differences shuttering histograms, zoom, gray scale reversal, edge enhancement, noise reduction, indicate gray scale saturation level, latitude reduction
•	This terminal must provide a full-fledged DICOM printing, should be able to print multiple formats (more than 4) of a patient study, print a true size
•	Should be able to send DICOM images to a DICOM viewing station.
•	Should have facility to view acquired images on any mobile devices in real time.

•	Should be provided with stitching function as standard
•	Should provide AI function for chest along with the console software as standard
•	Detector should be USFDA and European CE approved
	Inkjet Printer
•	Acceptable film size: 13" x 17"/A3, 10" x 12"/A4, & 8" x 10"
•	Online film size: One film size online out of which all film sizes can be changed by just changing the film packet and not the whole tray.
•	DICOM Compatible printing software should be provided

X-ray Technical Specification

Portable system

mA Output 2mA to 5mA

Kv Output 50kV to 70kV

Exposure time 0.03-2.00sec

mAs 0.06mAs-10mAs

Collimator material ABS - outer case

Lead - Inside to prevent radiation leakage

Mirror - To reflect LED light

LED

LED heatsink

Little bit of steel material to hold above parts

Focal spot 0.3mm

Inherent Filter 0.5mm

Anode Heat Storage Capacity 7000 joules

LED console 7 inches inbuilt touch screen should have the access of console software to operate

Battery 22.2V (polymer lithium ion) 2200mAh

Battery backup 120

exposures on full charge

Charging time 2 hours