

Procurement of Illumina MiSeq i100 Next-Generation Sequencing Platform for National Public Health Genomic Surveillance Strengthening

Introduction and overview

The Eastern Mediterranean Public Health Network (EMPHNET) invites qualified suppliers to submit sealed bids for the supply, delivery, installation, and commissioning of laboratory equipment and consumables to strengthen national public health laboratory and genomic surveillance capacity at the National Institute of Health (NIH), in accordance with the specifications, terms, and conditions outlined in this bidding document.

The aim is to strengthen respiratory infections genomic surveillance, improve diagnostic accuracy, and enable timely detection and response to emerging and reemerging public health threats in Pakistan.

Country: Islamabad, Pakistan

Requirements and Specifications: Listed below

Bid Proposal Submission Receipt Deadline: May 22, 2026 – June 4, 2026 – 23:59

Implementation and Follow-Up: Commencing month after contract signing (to be fully completed by July/August 2026)

Please be aware that the deadline for submitting bid is official and they must be received at EMPHNET before the specified date mentioned above.

Please read the specifications, terms/conditions and the additional notes carefully

Scope of Work (Technical Specifications)

The selected vendor will be responsible for:

- Supplying the required equipment (as per the specifications), including installation and calibration.
- Providing all associated sequencing kits, reagents and consumables required for initial operation.
- Delivering equipment to Pakistan NIH - Islamabad.
- Ensuring warranty coverage, user training and after-sales technical support in coordination with EMPHNET and the NIH.

Specifications, quantities and relevant details - found below

1. Sequencing Technology	
Chemistry	XLEAP-SBS™ (Sequencing-by-Synthesis) — fastest, most robust, highest-quality SBS chemistry to date
Error Rate	< 0.1% (random errors only; no systematic indel bias)
Base Call Accuracy	> Q30 (99.9% accuracy; error rate 1 in 1,000 bases)
2. Sequencing Performance	
Flow Cells Supported	5 million (5M) and 25 million (25M) clusters per flow cell
Read Lengths	Single-end 1×100 bp • Paired-end 2×150 bp • Paired-end 2×300 bp (maximum)
Maximum Output	Up to 15 Gb per run (2×150 bp, 25M flow cell)
Maximum Reads	Up to 50 million paired-end reads per run (25M flow cell)
Q30 Score — 2×150 bp	≥90% bases above Q30
Q30 Score — 2×300 bp	≥85% bases above Q30
3. Run Speed & Workflow	
Fastest Run Time	4 hours (1×100 bp, 5M flow cell) — same-shift results possible
Maximum Run Time	~14 hours (2×300 bp, 25M flow cell)
Run Setup Time	Library loading in 3 simple steps in under 20 minutes
Demultiplexing	Index-first sequencing — real-time sample preview during run (default mode)
4. Onboard Data Analysis	
Secondary Analysis	DRAGEN™ (hardware-accelerated) pipelines — onboard, included at no extra cost
Results Turnaround	Secondary analysis results in 2 hours or less for most applications
Cloud Integration	BaseSpace™ Sequence Hub • Illumina Connected Analytics (optional)
5. Instrument Hardware & Physical Requirements	

Onboard Computer	128 GB DDR4 RAM • 2 TB NVMe SSD • Oracle Linux 9 operating system
Display	Full-HD integrated touchscreen monitor
Dimensions (W×D×H)	40.2 × 44.8 × 47.3 cm
Weight	36.0 kg (dry, without reagents)
Power Supply	100–240 VAC • 50/60 Hz • 300 W • Single phase
Operating Temperature	15–30°C (maximum change: < 2°C per hour)
Reagent Storage	Room temperature — no cold-chain infrastructure required
Network Bandwidth	50 Mb/s (BaseSpace Sequence Hub uploads) • 5 Mb/s (instrument operational data)
6. Safety, Compliance & Sustainability	
Product Safety	NRTL certified to IEC 61010-1 • CE marked • FCC/IC approved
Packaging Waste	85% reduction in packaging waste compared to the original MiSeq System
Carbon Footprint	35% reduction in total carbon footprint vs. previous generation

Terms and conditions

1. Supply includes installation at the specified site by EMPHNET.
2. Offers should be received in English language only.
3. The contractor is required to visit the site and inspect it within one week of receiving the purchase order to prepare the site according to the necessary requirements.
4. The contractor is obliged to conduct necessary and sufficient training - for operating and using the machine at the specified site.
5. The contractor commits to providing free maintenance for the machine, including all consumable and damaged/defected spare parts and everything necessary for the machine's operation, for a period of 2 years from the date of receiving the devices.
6. The contractor is required to provide an original copy of the operation manuals upon equipment delivery and an original (or electronic) copy of the maintenance manuals.
7. The contractor commits that the delivery period of the equipment will not exceed two months from the date of receiving the purchase order.
8. The contractor commits to affixing labels indicating the name and address of the local agent (phone, fax).
9. The contractor commits to providing new (100%) equipment and the latest models from the manufacturing company, stating the manufacturing date, and ensuring that production has not been discontinued upon receiving the purchase order.
10. During the free maintenance period, the contractor commits to responding to service requests by phone, supported by fax and email, within (24) hours.
11. The contractor commits to repairing the machine and returning it to service within (48) hours from the date of reporting the malfunction, and otherwise, the contractor commits to replacing the faulty machine with a new, working machine of the same specifications and quality level or better.
12. For referral purposes, it is required that a local agent for the manufacturing company be available with an engineering team qualified and trained by the manufacturing company to maintain the machines, along with providing names of the team and their technical experiences and original (or certified) training certificates in the field of the machines supplied. This condition is considered essential for referral purposes.
13. The contractor commits to specifying the manufacturer, country of origin, and place of manufacture, as well as providing a copy of the certificate of origin upon request and affixing a non-removable thermal label indicating the country of manufacture (Made in...).
14. In case of updates on the equipment regarding hardware and software, the contractor commits to providing them free of charge for the operational lifetime (or the duration of the agreement or contract); whichever longer of the two terms; of the machines requiring such updates, and the contractor commits to providing all related data periodically and promptly upon approval by the manufacturing company.
15. The contractor commits to providing an original or certified copy of relevant CE MARK or FDA APPROVAL certificates upon receipt.
16. Submission of the company's registration documents.
17. The contractor commits to providing a performance bond worth 10% of the referral value in the form of a certified bank check.
18. EMPHNET reserves the right to cancel, withdraw, or reject any bid or offer without providing any reasons. Including its right to withdraw/cancel the bid itself.
19. EMPHNET is not obliged to select the lowest price, nor is it obliged to select any of the bidders without providing any reasons.
20. All transactions related to the bid and subsequent relationship with the successful bidder (including during negotiation stages) shall be subject to the prevailing laws of the Hashemite Kingdom of Jordan, and the Jordanian courts (Amman First Instance Court/Palace of Justice) shall have jurisdiction to settle any disputes arising thereof.

Additional notes:

- **Interested vendors are kindly requested to submit their sealed bids either in person to EMPHNET HQ office in Amman, Jordan, or electronically via email.**

Email: procurement@emphnet.net

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