

GeoMx[®]—NGS Site Readiness Checklist

The purpose of this document is to ensure your site is prepared for the installation of and training on your new GeoMx Digital Spatial Profiler and that you are additionally prepared for its integration with your Illumina NGS platform. This form shall be completed, signed, and emailed to ServiceCoordinator@nanoString.com prior to scheduling your installation.

For any questions regarding this checklist, please contact your local sales person or email questions to GeoMxSupport@nanoString.com.

SITE INFORMATION	
Institution Name	
Customer Name	
Street Address	
City, State/Province, Zip/Postal Code	
Country	
Telephone:	
Contact Name:	
E-mail:	

GeoMx Installation Site Requirements:	
Instrument Dimensions (W x D x H): Actual: 30" x 29" x 24"/76 cm x 73 cm x 61 cm	
Clearance: Front: 11"; 28 cm Back: 3"; 8 cm Height: 12"; 30 cm Left Side: 3"; 8 cm Right Side: 3"; 8 cm	
Workspace Dimensions: Required: 60" x 30" x 36"/152cm x 76cm x 91cm Recommended: 72" x 30" x 36"/182cm x 76cm x 91cm	
Room Temperature: Required: 18–28°C	
Room Humidity: Required: 30%–80% Relative Humidity, non-condensing	
Power Source: Required: 100–240 VAC 50/60 Hz, 440 VA	
Table weight tolerance: 220 lb/100 kg	
Table Stability: Isolated from large sources of vibration	

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Infrastructure Requirements:	
Access to Leica Biosystems BOND RX Autostainer (optional)	
Access to MAX or FLEX nCounter® System (Serial No.:)	
Access to SPRINT Profiler System (Serial No.:)	
Access to Illumina sequencer (see NGS requirements table, below)	

IT Requirements:	
Access to 1 Gigabit (GB) Ethernet	
Connection to a local network to allow instrument access via web browser (Chrome, TCP ports 80 and 443)	
Connection to a remote SMB file share (outbound UDP 137 and 138, TCP 139 and 445) with sufficient space to store all scan images (approximately 20 Gigabytes (GB)/scan)	
Client computer(s) (Windows or MacOS) with Google Chrome web browser for remote ROI selection and data analysis	
Internet access to allow for remote support and software updates	
Ensure http://secure.logmeinrescue.com:443 and http://secure.logmeinrescue.com:80 are whitelisted on your network. <i>Logmein</i> is used to provide secure remote support.	
Data Analysis: Separate GeoMx Off-Instrument Server for DA processing (optional), meeting below specifications: Windows 2019 Server with Hyper-V enabled HTTPS (Port 443) open inbound CPU: Intel processor with 64-bit support, 3.40 GHz or faster, 4 cores Memory: 64GB DDR4 OS SSD: 512GB Main Storage HD: ≥2TB See NGS IT requirements, below	

NGS Requirements:	
Wet Lab: Separation of areas throughout the workflow is important to prevent contamination during the downstream library preparation. Area #1 - High concentration probe handling – dedicated location with designated pipettes and clean environment best practices Area #2 - Pre-PCR clean environment – dedicated location to set up PCR reactions with designated pipettes and clean environment best practices for PCR Area #3 - Post-PCR environment – dedicated location for PCR purification	
Sequencing: Illumina sequencing – access to NextSeq 550 or NextSeq 2000 or higher capacity	
NGS-site specific IT requirements (if applicable): NGS readout assays requires that the GeoMx system is connected to a network. If it is not possible to connect the system to the institutional network, a segregated network can be deployed (see Cybersecurity Guidelines for additional details).	

NGS Requirements:			
<p>NGS data processing (DND) system requirements: There are two components to the GeoMx Pipeline, the Graphical User Interface (GUI) and the Pipeline which processes the files. There is an installer specific to each Operating System supported for the GUI and each Operating System supported for the Pipeline.</p>			
User Interface	OS	CPU	Memory (GB)
Windows (GUI/CLI)	Windows 10	Intel Core i5-4750 3.20 GHz	16
Linux (CLI)	Linux Ubuntu 18.04	AMD Phenom 8650 2.30 MHz	32
Mac (GUI/CLI)	MacOS Catalina V.10.15.5	Intel Core i5 2.60 GHz	8
AWS batch (CLI), AWS t2.micro instance	AWS Linux 2	vCPU 1	1
<p>If running locally (12 FASTQ files or fewer):</p> <p>For Apple OS:</p> <ul style="list-style-type: none"> • Macbook pro with a CPU at 1.4 GHz processor or better • 8GB RAM <p>For Windows OS:</p> <ul style="list-style-type: none"> • Intel® Core™ i5-8350U @ 1.70GHZ 1.90 GHz • 16 GB RAM • 64-bit Operating System, x64-based processor <p>If running GeoMx pipeline on a Linux server or AWS instance (larger experiments):</p> <p>Linux server:</p> <ul style="list-style-type: none"> • OS: Ubuntu 18 and up • 32GB RAM • 300GB storage • CPU: Intel(R) Xeon(R) Gold 6248 CPU @2.5GHz, hot add enabled • Open SSH installed and enabled. <p>AWS instance:</p> <ul style="list-style-type: none"> • Platform: x64 system • RAM: 1GB (OS requirements) for CLI, 2GB for GUI + CLI • CPU: OS: Ubuntu 18 and up, standard Amazon t3.xlarge • Main storage: 20GB (DND app + OS requirements) 			

NGS Requirements:	
<ul style="list-style-type: none"> File storage: dataset size x 10 GB 	

Required Equipment, Materials, and Reagents:
<p>For a full list of necessary items, as well as vendors and part numbers, refer to the Equipment, Materials, and Reagents (EMR) list appropriate for your analyte (protein or RNA), slide preparation (Leica autostainer or manual), and readout platform (nCounter or NGS) at https://www.nanostring.com/geomx-online-user-manual.</p>

CUSTOMER SIGNATURE LOG

The signature below from the customer indicates that the site requirements have been met and they are ready to accept delivery of the GeoMx DSP Instrument.

Printed Name	Signature	Function/Title	Date

Please scan and email a signed copy of this checklist to ServiceCoordinator@nanostring.com.