Frequently Asked Questions About Local Run Manager with Illumina Desktop Sequencers— Research Use Only Version

Local Run Manager delivers easy, streamlined functionality for Illumina desktop sequencing systems.

Introduction

Local Run Manager (LRM) is an easy-to-use data management and analysis software for Illumina desktop sequencers. It provides a range of analysis tools for automated data analysis and generates comprehensive PDF reports for a wide range of applications, such as amplicon sequencing, targeted sequencing, small RNA sequencing, and more. With LRM, both expert and novice users can harness the power of next-generation sequencing (NGS) right from their own lab. Here we address some of the most common questions regarding LRM.

Sequencing systems and LRM

Which sequencing instrument does LRM support?
Currently, onboard analysis with LRM v1.3 is available for the MiSeq™ System.

Can I install LRM separately from the sequencing system?
LRM v2 is available for installation off-instrument on a separate computer and is compatible with sequencing data from the iSeq™ 100, MiSeq, MiSeq™, and NextSeq™ Systems.

Are LRM v1.3 and v2 analysis modules cross-compatible with each other?
No, analysis modules for LRM v1.3 (also known as LRM for the MiSeq System) cannot be installed with LRM v2. Similarly, analysis modules for LRM v2 cannot be installed with LRM v1.3.

🔗 Click here to see the analysis modules compatible with LRM v1.3.

🔗 Click here to see the analysis modules compatible with LRM v2.

Can I use LRM to manage sequencing runs across multiple Illumina sequencing systems?
No, each installation of LRM can only be used to manage sequencing runs for a single sequencing system. However, the Illumina BaseSpace Sequence Hub™ provides fleet management capabilities that can support any number of connected Illumina sequencing systems.

How many users can be on the same instance of LRM simultaneously?
This is network-dependent. LRM can support at least 5–10 users simultaneously.

Run setup and management with LRM

How does LRM compare to Illumina Experiment Manager and MiSeq Reporter?
For existing users of Illumina software, LRM provides a familiar experience that incorporates the sequencing experiment setup capabilities of Illumina Experiment Manager and automated data analysis of MiSeq Reporter into a single, integrated solution.

Can runs be deleted?
Starting with LRM v2, runs can be deleted through the software. However, metadata about each sequenced run will permanently be retained in the LRM database.

Can custom library prep kits be deleted?
Starting with LRM v2, custom library prep kits can be deleted from the system. However, custom library prep kits cannot be deleted when using LRM for the MiSeq System.

Does LRM support custom or third-party library prep kits and index sequences?
Yes, LRM allows you to import a tab-separated values (TSV) file for library prep kit definitions, describing your custom or third-party library prep kit or index sequences.

🔗 More information can be found under the "Library Prep Kits > Add a Library Prep Kit" section of the LRM software guide.

🔗 A library prep kit definition file template can also be found on the LRM support page.

Can I edit a custom library prep kit that has already been uploaded to LRM?
Starting with LRM v2, custom library prep kits can be edited by uploading a custom kit file using the same name as the custom kit you wish to edit. However, custom library prep kits cannot be edited using LRM for the MiniSeq System.

Data analysis with LRM

Can I import previous sequencing runs to be analyzed by LRM?
Yes, importing previously sequenced runs is supported in LRM starting with version 1.3.1. This feature can be used to requeue runs that failed to automatically start analysis or to reanalyze sequencing data with different workflows and settings.

Can LRM be used for run monitoring only?
No, sequencing runs set up through LRM must be planned with an accompanying analysis.

What modules are preinstalled with LRM for the MiniSeq System?
When installing the sequencing system, your Illumina Field Application Scientist (FAS) or Field Service Engineer (FSE) will install all the latest available analysis modules for LRM for the MiniSeq System.

What types of analysis modules are available on LRM for the MiniSeq System?
Currently, the following analysis modules are available for LRM for the MiniSeq System:
- Amplicon v1.0
- Amplicon DS v1.0
- DNA Enrichment v1.0
- GenerateFASTQ v1.0
- Resequencing v1.0
- RNA Fusion v1.0
- Small RNA v1.0
- Targeted RNA v1.0
- TruSight™ Tumor 15 v1.1

What types of analysis modules are available on LRM v2?
Currently, the following analysis modules are available for LRM v2:
- DNA Amplicon v1.0
- RNA Amplicon v1.0
- DNA Enrichment v1.0
- GenerateFASTQ v1.0

How do I analyze my AmpliSeq™ for Illumina assay sequencing data generated from a MiniSeq System?
Currently, the DNA Amplicon and RNA Amplicon analysis modules are only available for LRM v2, and not LRM for the MiniSeq System. To analyze your AmpliSeq for Illumina sequencing data generated from a MiniSeq System, you may install LRM v2 and the DNA Amplicon and/or RNA Amplicon analysis modules on a separate computer and import your sequencing data for analysis. Alternatively, the BaseSpace DNA Amplicon and RNA Amplicon Apps may be used for analysis in BaseSpace Sequence Hub.

Can I analyze my AmpliSeq for Illumina DNA assay sequencing data with the Amplicon analysis module?
No, the AmpliSeq for Illumina DNA assays can only be analyzed using the DNA Amplicon analysis module for LRM v2.

Can I analyze my AmpliSeq for Illumina RNA assay sequencing data with the Amplicon analysis module?
No, the AmpliSeq for Illumina RNA assays can only be analyzed using the RNA Amplicon analysis module for LRM v2.

When new modules or updates are available, does an Illumina FAS or FSE need to perform the update/install?
No, beyond the initial setup, users can independently install new modules and updates.

All new modules and module updates are available for download from the LRM support page.

LRM does not have an analysis module available for the type of experiment I'm trying to run. What are my options?
The list of available apps in BaseSpace Sequence Hub is rapidly growing and frequently updated with more analysis options to fit your informatics needs. BaseSpace Sequence Hub also supports the development of private custom apps.

Click here to see the full list of apps available at BaseSpace Sequence Hub.

Click here to learn more about building custom apps in BaseSpace Sequence Hub.

Am I required to use LRM?
While LRM is installed on all MiniSeq Systems by default, users have the option to connect to BaseSpace Sequence Hub to set up sequencing runs and analyze data. The MiniSeq System can also be configured to run in standalone mode and only generate raw sequence data.

When does automatic onboard analysis begin with LRM for MiniSeq?
Analysis begins immediately after real-time analysis (RTA) finishes and the RTAComplete.txt file is generated. This file can be found in the top-level directory of the run folder (D:\Illumina\MiniSeqOutput\<Run Folder Name>\RTAComplete.txt). RTA will finish at about the same time as sequencing.

Is a sample sheet still generated? When?
Yes. A sample sheet is generated at the start of analysis by LRM and can be found in the run folder (D:\Illumina\MiniSeqOutput\<Run Folder Name>\Alignment_1\<timestamp>\SampleSheetUsed.csv). The sample sheet cannot be uploaded directly back into Local Run Manager.

How long does analysis take?
Analysis takes 45 minutes to 5 hours depending on the module, number of samples, library size, parameters selected, and other factors such as analysis system resources.

Administration setting with LRM

Does LRM have a user management system?
Yes, LRM includes a user management system that requires all users to create an account and login before using the software. Starting with LRM v2, the user management system may be disabled by an admin account.

Does LRM have an audit trail?
Yes, LRM tracks all actions performed by every user in an audit trail that is reviewable by admin accounts.

I've locked myself out of my account. What should I do?
Any admin account can unlock your account. To do so, go into "user management" and view locked out users indicated by a red padlock symbol. Click "edit", and a box will pop up with the ability to "unlock user" at the top. If that is not an option, call Illumina Technical Support (1-800-809-4566, Option #3).

Who can unlock runs?
Any admin user can unlock runs.

Learn more

To learn more about the MiniSeq System, visit www.illumina.com/systems/sequencing-platforms/miniseq.html.

To learn more about the BaseSpace platform, visit www.illumina.com/products/by-type/informatics-products/basespace-sequence-hub.html.

To learn more about MiniSeq System Applications, visit www.illumina.com/systems/sequencing-platforms/miniseq/applications.html.

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