

**Title: Local Run Manager Assembly Analysis Module v2.1 Customer
Release Notes**

**Local Run Manager
Assembly Analysis Module v2.1
Customer Release Notes**

April 1, 2025

Introduction

These Release Notes detail notable items for the Local Run Manager Assembly Analysis Module v2.1 release.

Please note that the Assembly Analysis Module 2.1 requires Local Run Manager Framework v3.0 or higher.

For more information on module version compatibility per instrument platform, refer to Local Run Manager Module Selector (<https://customprotocolselector.illumina.com/selectors/LRM-module-selector/Content/Source/FrontPages/LRM-module-selector.htm>).

For more information about this analysis module and how to use it, refer to the Local Run Manager Assembly Analysis Module Workflow Guide, available from the Illumina Local Run Manager Support Page, Documentation & Literature (http://support.illumina.com/sequencing/sequencing_software/local-run-manager/documentation.html).

NEW FEATURES:

- HTML files will be available in the Alignment folder of the output directory.
- Added support for a new Library Kit with a new Index Kit and existing Index Kits:

Library Prep Kit	Index Kits
Illumina Microbial Amplicon Prep (New)	Ilmn UD Indexes LT (New) Ilmn DNA-RNA UD Indexes SetA Tagmentation (New) Ilmn DNA-RNA UD Indexes SetB Tagmentation (New) Ilmn DNA-RNA UD Indexes SetC Tagmentation (New) Ilmn DNA-RNA UD Indexes SetD Tagmentation (New) Ilmn DNA-RNA UD Indexes SetABCD Tagmentation (New) IDT-Ilmn DNA-RNA UD Indexes SetA Tagmentation IDT-Ilmn DNA-RNA UD Indexes SetB Tagmentation IDT-Ilmn DNA-RNA UD Indexes SetC Tagmentation IDT-Ilmn DNA-RNA UD Indexes SetD Tagmentation IDT-Ilmn DNA-RNA UD Indexes SetABCD Tagmentation

- Removed the following End-of-Life Library Prep Kits:
 - Nextera Mate Pair
 - TruSeq DNA Exome Enrichment
- Updated the following Library Prep Kit with new Index Kits & existing Index Kits and removed End-of-Life Index Kits:

Library Prep Kit	Index Kits
Illumina DNA Prep	Ilmn UD Indexes LT (New)

	<p>Ilmn DNA-RNA UD Indexes SetA Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetB Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetC Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetD Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetABCD Tagmentation (New)</p> <p>Nextera DNA CD Indexes - 96 Indexes Plated</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetA Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetB Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetC Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetD Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetABCD Tagmentation</p> <p>Nextera DNA CD Indexes - 24 Indexes Tubed (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A B C D - 384 Indexes (Removed)</p>
<p>Nextera XT</p>	<p>Ilmn UD Indexes LT (New)</p> <p>Ilmn DNA-RNA UD Indexes SetA Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetB Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetC Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetD Tagmentation (New)</p> <p>Ilmn DNA-RNA UD Indexes SetABCD Tagmentation(New)</p> <p>Nextera XT Index Kit - 24 Indexes 96 Samples</p> <p>Nextera XT Index Kit v2 Set A</p> <p>Nextera XT Index Kit v2 Set B</p> <p>Nextera XT Index Kit v2 Set C</p> <p>Nextera XT Index Kit v2 Set D</p> <p>Nextera XT Index Kit v2 Set A B C D</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetA Tagmentation (New)</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetB Tagmentation (New)</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetC Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetD Tagmentation</p> <p>IDT-Ilmn DNA-RNA UD Indexes SetABCD Tagmentation (New)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set B - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A B C D - 384 Indexes (Removed)</p>
<p>TruSeq Stranded mRNA</p>	<p>IDT-ILMN TruSeq RNA UD Indexes v2 - 96 Indexes</p>

	<p>TruSeq RNA Single Indexes Set A B</p> <p>TruSeq RNA Single Indexes Set A</p> <p>TruSeq RNA Single Indexes Set B</p> <p>TruSeq RNA CD Indexes 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set B - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A B C D - 384 Indexes (Removed)</p> <p>IDT-ILMN TruSeq RNA UD Indexes - 24 Indexes (Removed)</p> <p>IDT-ILMN TruSeq RNA UD Indexes - 96 Indexes (Removed)</p>
<p>TruSeq Stranded Total RNA</p>	<p>IDT-ILMN TruSeq RNA UD Indexes v2 - 96 Indexes</p> <p>TruSeq RNA Single Indexes Set A B</p> <p>TruSeq RNA Single Indexes Set A</p> <p>TruSeq RNA Single Indexes Set B</p> <p>TruSeq RNA CD Indexes 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set B - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A B C D - 384 Indexes (Removed)</p> <p>IDT-ILMN TruSeq RNA UD Indexes - 24 Indexes (Removed)</p> <p>IDT-ILMN TruSeq RNA UD Indexes - 96 Indexes (Removed)</p>
<p>TruSeq DNA PCR-Free</p>	<p>IDT-ILMN TruSeq DNA UD Indexes v2 - 96 Indexes</p> <p>IDT-ILMN TruSeq DNA UD Indexes - 24 Indexes (Removed)</p> <p>IDT-ILMN TruSeq DNA UD Indexes - 96 Indexes (Removed)</p> <p>TruSeq DNA CD Indexes - 96 indexes (Removed)</p> <p>TruSeq DNA Single Indexes Set A B (Removed)</p> <p>TruSeq DNA Single Indexes Set A (Removed)</p> <p>TruSeq DNA Single Indexes Set B (Removed)</p>
<p>TruSeq Nano DNA</p>	<p>IDT-ILMN TruSeq DNA UD Indexes v2 - 96 Indexes</p> <p>IDT-ILMN Nextera DNA UD Indexes Set A - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set B - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes (Removed)</p> <p>IDT-ILMN Nextera DNA UD Indexes Sets A B C D - 384 Indexes (Removed)</p> <p>IDT-ILMN TruSeq DNA UD Indexes - 24 Indexes (Removed)</p> <p>IDT-ILMN TruSeq DNA UD Indexes - 96 Indexes (Removed)</p>

	<p>TruSeq DNA CD Indexes - 96 indexes (Removed)</p> <p>TruSeq DNA Single Indexes Set A B (Removed)</p> <p>TruSeq DNA Single Indexes Set A (Removed)</p> <p>TruSeq DNA Single Indexes Set B (Removed)</p>
--	--

FIXED ISSUES:

- Fixed the discrepancy of the FASTQ data generation.
- Fixed an issue where the Sample table grid was not aligned with the Sample Number column when higher sample numbers were added. This issue is fixed on Local Run Manager Framework v3.2 or higher.
- Fixed an issue where Adapter trimming settings were not saving on the LRM UI.
- Fixed an issue where tooltip icons are missing for each Module-Specific setting on LRM 4.2(with Chromium v114.0.5735.199).
- Fixed an issue where Custom Primers were not updated in the Local Run Manager run if they were updated in the Control Software.

KNOWN ISSUES:

- When importing a sample sheet into the MiSeq Control Software (MCS), an unclear error message may be displayed. Check your sample sheet for the potential errors listed below if you encounter an error.
 - Common cause of errors include:
 - Formatting problems, such as issues in the Data section
 - Missing or incorrect headers
 - Examples of error messages and causes:
 - "Sample Sheet missing sample IDs. Kit Ilmn DNA-RNA UD Indexes SetABCD Tagmentation does not allow 0 indexes"
 - This error is most likely caused by formatting issues in the Data section.
 - "Unable to find the module that matches provided name(s). Module might not be installed or was deleted."
 - This error is most likely caused by either the Workflow in the Header section being empty or invalid, or a missing header section altogether.

Please refer to the sample sheet template available in the LRM Module Selector to help prevent errors.
- During Module update, library prep kits that were no longer supported still persist. Workaround in previous release notes is not applicable.

- If the Local Run Manager Analysis Service is restarted, this could cause a running analysis to crash. Analysis can be requeued if this happens.

OTHER:

- When using a custom kit, you must always enter your i5 indexes in forward orientation.
 - Local Run Manager will automatically reverse complement the i5 indexes when writing the sample sheet used for analysis on the NextSeq, iSeq, and MiniSeq.
 - Local Run Manager will not reverse complement i5 indexes on the MiSeq.
- BuildFASTQ v2.5.56.27 is used for BCL to FASTQ conversion in the Assembly Analysis Module.

PREVIOUS RELEASE NOTES

ASSEMBLY ANALYSIS MODULE v2.0

Introduction

These Release Notes detail notable items for the Local Run Manager Assembly Analysis Module v2.0 release.

Please note that the Assembly Analysis Module 2.0 requires Local Run Manager Framework v3.0 or higher and is not compatible with Local Run Manager Framework v2.0 or lower. For more information on module version compatibility per instrument platform, refer to [Local Run Manager Module Selector](#).

For more information about this analysis module and how to use it, refer to the Local Run Manager Assembly Analysis Module Workflow Guide, available from the Illumina Local Run Manager Support Page, Documentation & Literature.

http://support.illumina.com/sequencing/sequencing_software/local-run-manager/documentation.html

NEW FEATURES:

- Illumina Library Prep Kits (LPK) and Index Adapter Kits (IAK) are decoupled.
 - Users now able to choose both the LPK and IAK options from Local Run Manager interface.

- Sample sheet export from Local Run Manager will now include the Index Kits field aside from the Library Prep Kits.
- Added support for custom Library Prep Kits and Index Kits.
- Added UMI Anchor Kit toggle for applicable Index Kits.
- Added separate directories for Illumina Library Prep Kits and Index Kits.
- Renamed Library Prep Kit Nextera DNA Flex as Illumina DNA Prep and updated corresponding Index Kits.

Library Prep Kit	Index Kits
Illumina DNA Prep	Nextera DNA CD Indexes - 24 Indexes Tubed
	Nextera DNA CD Indexes - 96 Indexes Plated
	IDT-ILMN Nextera DNA UD Indexes Set C - 96 Indexes
	IDT-ILMN Nextera DNA UD Indexes Set D - 96 Indexes
	IDT-ILMN Nextera DNA UD Indexes Set A B C D - 384 Indexes
	IDT-Ilmn DNA-RNA UD Indexes SetA Tagmentation
	IDT-Ilmn DNA-RNA UD Indexes SetB Tagmentation
	IDT-Ilmn DNA-RNA UD Indexes SetC Tagmentation
	IDT-Ilmn DNA-RNA UD Indexes SetD Tagmentation
	IDT-Ilmn DNA-RNA UD Indexes SetABCD Tagmentation

- Added two Index Kits to Nextera XT Library Prep Kit.
 - IDT-Ilmn DNA-RNA UD Indexes SetC Tagmentation
 - IDT-Ilmn DNA-RNA UD Indexes SetD Tagmentation
- Added and updated two Index Kits to TruSeq DNA & RNA Library Prep Kits.
 - IDT-ILMN TruSeq DNA UD Indexes v2 - 96 Indexes
 - IDT-ILMN TruSeq RNA UD Indexes v2 - 96 Indexes

- Replaced Indexes UDI0015, UDI0016, UDI0055, UDI0056 with new v2 Indexes UDI0015v2, UDI0016v2, UDI0055v2, UDI0056v2
- Added Custom Primers use warning when applicable on the interface.
- Removed Show Index Name/Sequence option when the Library Prep Kit is set to Custom.
- Compatibility check with Local Run Manager Framework v3.0 only.
- Windows 10 integration updates.

FIXED ISSUES:

When the user selects certain library prep kits, like Nextera DNA, the I7 and I5 index fields are now marked as required fields.

Fixed issue where Samples Output Sheet and Results page were at an incorrect order.

KNOWN ISSUES:

When importing sample sheet into the MiSeq Control Software (MCS), unclear error message might be displayed. Check sample sheet if error is seen.

- Common issues include formatting, ensure headers are specified, ensure Workflow field is exactly as Local Run Manager interface displays, etc.

Sample table grid are not aligned with the Sample Number column as higher sample number are added.

During Module update, library prep kits that were no longer supported still persist. To update Library Prep Kit list, follow below steps.

1. Uninstall previous module (if any)
2. Uninstall current module
3. Uninstall all components of LRM including Postgres
4. Re-install LRM
5. Re-install current module

Custom Primers don't update in the Local Run Manager run if they are updated in the Control Software.

If the Local Run Manager Analysis Service is restarted, this could cause a running analysis to crash. Analysis can be requeued if this happens.

OTHER:

When using a custom kit, you must always enter your i5 indexes in forward orientation. Local Run Manager will automatically reverse complement the i5 indexes when writing the sample sheet used for analysis in the NextSeq, iSeq, and MiniSeq. Local Run Manager will not reverse complement i5 indexes in the MiSeq.

BuildFASTQ v2.5.56 is used for BCL to FASTQ conversion in the Assembly Analysis Module.

ASSEMBLY ANALYSIS MODULE v1.0

DOCUMENT NUMBER 1000000061269 VERSION 00

NEW FEATURES:

- Initial release

DEFECT REPAIRS:

- N/A

KNOWN ISSUES:

When the user selects certain library prep kits, like Nextera DNA, the I7 and I5 index fields will not be marked as required fields.

Custom Primers don't update in the Local Run Manager run if they are updated in the Control Software.

If the Local Run Manager Analysis Service is restarted, this could cause a running analysis to crash.

OTHER:

When using a custom kit, you must always enter your i5 indexes in the MiSeq or forward orientation. Local Run Manager will automatically reverse complement the indexes when writing the sample sheet used for analysis.

Release History

Revision	Release Reference	Originator	Description of Change
00	CN 1080876	Nanda Myaing	Initial Release for Assembly Analysis Module v2.0

Revision	Release Reference	Originator	Description of Change
01	CN 1120788	Yan Hui Hew	<ul style="list-style-type: none"> - Incorporated the Generic Document template rev03 - Added a new section for Assembly Analysis Module v2.1 - Moved the previous version of Assembly Analysis Module v2.0 under "Previous Release Notes"