



MISEQ FGX FORENSIC GENOMICS SOLUTION SOFTWARE RELEASE NOTES

MiSeq FGx Control Software 1.3

ForenSeq Universal Analysis Software 1.3

For MiSeq FGx Forensic Genomics Solution Software

November 27, 2018

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Introduction

These release notes describe notes on the software and known issues of software components of the MiSeq FGx Forensic Genomics Software Package for the v1.3 update.

These release notes are meant to describe the bug fixes and features included with each software package. Additional detail on the individual software is provided in the MiSeq FGx® Sequencer Reference Guide (Document #VD2018006) and the ForenSeq® Universal Analysis Software Guide (Document #VD2018007).

ForenSeq Universal Analysis Software v1.3.6897 patches the v1.3.6767 version of the software. The patched software doesn't require an update to the MiSeq FGx Control Software and is compatible with MiSeq FGx Control Software v1.3.0.

MiSeq FGx Control Software v1.3.0

The MiSeq FGx Control Software v1.3.0 includes the following components and versions:

MiSeq FGx Control Software	1.3.0
BaseSpace Broker	2.9.2.15
MiSeq Reporter	2.5.1.3
Real-Time Analysis (RTA)	1.18.54
Recipes	3.0.10
Genomes	1.1.0
ForenSeq Universal Analysis Software Service Broker	1.0.15063.0844

New Features

- The MiSeq FGx Reagent Micro Kit is enabled for Forensic Genomics sequencing runs.
- The MiSeq FGx Reagent Kit and MiSeq FGx Reagent Micro Kit are enabled for Research Use Only sequencing runs.

Defect Repairs

- The sequencing kit is now checked for compatibility upon closing the reagent door.
- Updated the camera image capture routines to be more robust and efficient.
- Resolved an issue when booting the MiSeq FGx system with multiple SSDs installed with different drive speeds.
- Addressed an issue where a run wouldn't generate images.
- The quality score calculations for long, dual indexed Research Use Only runs are correctly calculated for the last cycles.
- The camera focus routine was updated for robustness and optimized for cycle time throughput.
- The wash timer now correctly calculates the time interval for a required standby wash. Fixed wash timer issue causing erroneous standby wash message.
- The chiller temperature and status are now checked during sequencing runs.
- The image capture routine during sequencing correctly identifies images during execution.

Known Defects

- None

Additional Notes

- None

ForenSeq Universal Analysis Software v1.3.6767

The ForenSeq Universal Analysis Software includes the following components and versions:

ForenSeq Universal Analysis Software	1.3.6767
Management Services	1.3.6767
Analysis Services	1.3.6767
Web Services	1.3.6740
Analysis Worker	1.0.15119

New Features

- System and user-initiated events, such as analysis completion or genotype alteration, are recorded. The visibility of the history can be enabled or disabled by an administrator.
- Sample reports include a worksheet detailing the logged event history for the sample, when the visibility is enabled by an administrator.
- Comments can be added to an analysis, sample, or locus by a user when the visibility of history information is enabled by an administrator.
- A toggle was added to the Define Content page of the maintenance area to indicate if sample history information should be available in the application or reports.
- A Run Management page was added to the maintenance area to manage data export and data import processes.
- Run, project, and sample data can be exported to a file for storage or import to another system.
- Run, project, and sample data can be imported from a previously exported file.
- Run, project, and sample data can be removed from the system as part of the data export process.
- A CODIS cmf file v3.3 can be generated for a single sample result.
- A CODIS cmf file v3.3 can be generated for any number of sample results inside a given project.
- A CODIS Report Defaults page was added to the maintenance area to allow definition of default parameters used with CODIS report generation.
- Run creation supports the MiSeq FGx Micro Reagent Kit with micro flow cell for lower sample number runs.
- Sequence results including the flanking region that can be enabled by an administrator. These results are generated for every sample in an analysis and reported in an Excel format.
- A toggle was added to the Analysis Values page of the maintenance area to indicate if flanking region reports should be generated for an analysis.
- The dashboard has been reorganized with Runs, Projects, and Samples available on separate tabs.
- Sample results can be retrieved through search by using the Sample tab of the dashboard.
- Report formatting for Excel reports has been improved to address printer formatting issues.
- Updated the database backup scripts to support multiple versions of the database engine to ensure successful backups.

Defect Repairs

- The stacked bar chart for alleles in the STR locus details tooltip puts typed alleles on top.
- The table in the STR locus details tooltip displays the entire repeat sequence in one line.
- Session timeout handling has been improved to issue a single notification of a timeout at the login screen.

- The list of runs on the dashboard page loads more efficiently for systems with many runs.

Known Defects

- None

Additional Notes

- Logos and URLs have been updated with Verogen information.

ForenSeq Universal Analysis Software v1.3.6897

The ForenSeq Universal Analysis Software release includes the following components and versions:

ForenSeq Universal Analysis Software	1.3.6897
Management Services	1.3.6897
Analysis Services	1.3.6897
Web Services	1.3.6887
Analysis Worker	1.0.15119

New Features

- The error handling and reporting mechanisms of the previous version were updated.

Defect Repairs

- Export data package creation was patched to more robustly perform package creation. In the previous version, when attempting to archive all samples, projects, and analyses for a given run, the archive process fails and an error ("Unable to archive data. Refer to ForenSeq Universal Analysis Software User Guide for troubleshooting help.") will be shown as the status of the export. This error occurs after the data package is created and while UAS is attempting to delete the run data from the system. The archive package was complete and unaffected, but the run was not removed from the system.
- Flanking region report generation was patched to account for a rare error case. In the previous version, when the overall amplicon size is smaller than the software expected for an STR locus, the software will be unable to complete the report generation of the flanking region and the entire analysis will fail.

Known Defects

- None

Additional Notes

- It is recommended that less than 1000 individual sample results are maintained for each project. Projects with large numbers of sample results will impact performance of the system for analyses and data exports.



Version History

Version	Date	Description of Change
A	Jun 2018	Initial Version
B	Nov 2018	<p>Added ForenSeq Universal Analysis Software v1.3.6897 release For the ForenSeq Universal Analysis Software v1.3.6767 release,</p> <ul style="list-style-type: none">• Updated the version numbers of the software components• Included a description of changes to backup scripts