

Torrent Suite™ Software 5.22

Release Notes

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Revision History

Revision	Date	Description
B	12 May 2026	New release notes for Torrent Suite™ Software 5.22.1
A (Early Access)	18 March 2026	New release notes for Early Access version of Torrent Suite™ Software 5.22.1

Release Notes Overview

Release notes for Torrent Suite™ Software 5.22.1 describes known issues and fixed issues in specific software versions and in the instrument control software.

- Ion GeneStudio S5™ Sequencer
- Ion GeneStudio S5™ Prime Sequencer
- Ion GeneStudio S5™ Plus Sequencer
- Ion Chef™ Instrument

New features in Torrent Suite™ Software 5.22.1

Support for new cancer types

New cancer types are available in Torrent Suite™ Software 5.22. These cancer types have been updated since Torrent Suite™ Software 5.18.

Required upgrades for the Ubuntu operating system

You must upgrade to Ubuntu 22.04 operating system on your Ion Torrent™ Server to run Torrent Suite™ Software 5.22 and to ensure compliance with cybersecurity standards. The application software framework for the operating system is upgraded to improve security. Contact your FSE for more information about operating system upgrades.

Security updates for plugin framework

All system-installed plugins are upgraded to use Python 3 programming language. If you have plugins that you have created for use in Torrent Suite Software, you must upgrade the plugins to be compatible with the Python 3 language.

RunTransfer and AssemblySpades plugins are no longer supported

The RunTransfer and AssemblySpades plugins, which were previously system-installed plugins for Torrent Suite Software, are no longer available in Torrent Suite Software 5.22.

Setting for proxy settings

A new optional setting on the Ion GeneStudio S5™ Sequencer, Ion GeneStudio S5™ Prime Sequencer and Ion GeneStudio S5™ Plus Sequencer enables proxy settings. Contact your IT administrator for information on how to set up proxy settings.

New CaseID sample attribute

A new optional sample attribute named CaseID has been added to Torrent Support™ Software. The setting expands the sample attributes to allow a user to add a CaseID in addition to a SampleID. Multiple SampleIDs can be associated with a single CaseID.

Updated TMAP input argument

A TMAP input argument, "-o" is now set to "-o 1" to improve processing time for Planned Run templates that use the Ion 560™ chip. This change improves processing times for sequencing runs that use the Ion 560™ chip.

New features for the Ion Chef™ Instrument control software

Password change required for instruments after software upgrade

After you upgrade to Torrent Suite Software 5.22, the password for the Ion Torrent Server is changed. Therefore, users must change the password for any instrument that is connected to the upgraded Ion Torrent™ Server.

PCR plate frame detection now included in the Ion Chef instrument control software

Instructions were added to the Ion Chef™ instrument control software to help ensure that the PCR plate frame is installed prior to use. The instrument camera scans to verify that the part is installed prior to starting the Ion Chef™ instrument. The PCR plate frame is included in all Ion Chef™ instrument supply kits (Ion 510™ & Ion 520™ & Ion 530™ Kit – Chef (A34019), Ion 510™ & Ion 520™ & Ion 530™ Kit – Chef (A34461), Ion 540™ Kit-Chef (A30011), Ion 550™ Kit—Chef (A34541) and Ion 560™ Kit—Chef (A56411).

The software detection function of the plate frame installation coincides with the detection for the foil plate barcode. If either the PCR plate frame or barcode for the foil plate is missing, or not detected, you will see a warning on the instrument screen that indicates one of the parts is not installed. If you receive this warning, verify that the PCR plate frame and/or foil frame are installed, then cancel or click **Continue**, as appropriate. For more information, see the user guide for the Ion Chef™ kit consumables and supplies that you use.

Expiration date detection now available for all Ion Chef instrument kits

The expiration detection for chips and cartridges in the Ion Chef instrument control software, which was previously available for 550 chips, is expanded to now detect expiration date detection for all Ion Chef instrument kits (Ion 510™ & Ion 520™ & Ion 530™ Kit – Chef (A34019), Ion 510™ & Ion 520™ & Ion 530™ Kit – Chef (A34461), Ion 540™ Kit-Chef (A30011), Ion 550™ Kit—Chef (A34541) and Ion 560™ Kit—Chef (A56411).

If an expiration date has passed when a kit is used, a message is shown on the Ion Chef™ instrument with details about which consumable is expired and the expiration dates of each consumable. The instrument software shows options to either proceed or cancel the instrument run, as needed.

New toggle switch to enable remote access for enhanced security

The Ion Chef™ instrument control software now includes a toggle switch to temporarily enable remote access. By using this feature, you can temporarily enable remote access when needed, such as during troubleshooting with support engineers.

Support for use of 560 chips

The 560 chip is now available as a selection when you set up planned runs for the Ion GeneStudio™ S5 Prime System or the Ion GeneStudio™ S5 Plus System in Torrent Suite Software. The Ion GeneStudio™ S5 Prime System can complete analyses for up to two 560 chips each day, and the Ion GeneStudio™ S5 Plus System can complete analyses for one 560 chip per day.

For more information about turnaround time and capacity for the 560 Chip, see [Ion GeneStudio System Models | Thermo Fisher Scientific - US](#).

Support for reuse of the Ion 560™ Chef Reagents and Ion 560™ Chef Solutions cartridges in the Ion 560™ Kit

To provide more workflow flexibility, the Ion 560™ Chef Reagents and Ion 560™ Chef Solutions cartridges in the Ion 560™ Kit – Chef are now configured for both standard dual-chip templating runs, and single-chip templating runs. The Ion 560™ Chef Reagents and Ion 560™ Chef Solutions cartridges can be reused in a second single-chip templating run if the second run is performed within 8 days of the first run. This feature was first made available for the Ion 550™ Kit.

For more information about the use of servers in an Ion Mesh configuration with the Ion 550™ Kit or Ion 560™ Kit, refer to the user guides for the Ion 550™ Kit and Ion 560™ Kit.

Fixed Issues in Torrent Suite™ Software 5.22.1

Ion S5™ Calibration Standard (A27988) and Ion S5™ ExT Calibration Standard (A30738) kits base calling analysis issue

An issue in Torrent Suite™ Software 5.18 and 5.18.1 when Ion S5™ Calibration Standard (A27988) and Ion S5™ ExT Calibration Standard (A30738) kits were used that caused the basecalling phase of a sequencing run to crash if the option **Enable Calibration Standard** was selected from the **Base Calibration Mode** drop-down list in the **Kits** tab. This issue is fixed in Torrent Suite™ Software 5.22.1.

RAID information not properly updated in the user interface

On the T560 server, the RAID Info section in the Services tab showed the logical volumes Status as “unknown” and size as “0”, although the RAID functions and the status of the individual drives of the RAID continued to work properly. This issue is fixed in Torrent Suite™ Software 5.22.1.

MSI On-Chip Control Type is improved for use with an Ion 550™ Chip or an Ion 560™ Chip

When you add samples to a Planned Run for use with an Ion 560™ Chip or an Ion 550 Chip, you can now add only one sample as MSI On-Chip Control Type. If you add more than one sample as MSI On-Chip Control Type, you will get an error message. This issue is fixed in Torrent Suite™ Software 5.22.1.

Analyses stalled for sequencing runs with large number of samples with the Ion 560™ Chip

Analyses for sequencing runs that use large number of samples with the Ion 560™ Chip. The issue was due to a setting for the samtools program which caused high memory usage. This issue is fixed in Torrent Suite™ Software 5.22.1.

Incomplete data management processes are automatically retried

Data management processes for deleting and archiving runs stalled when services were interrupted. This issue is fixed in Torrent Suite™ Software 5.22.1. If a deletion task is incomplete for 24 hours is automatically retried. If a deletion or archive task is incomplete, the status for the data management task is set to Error and the administrator can retry the task manually.

Known Issues in Torrent Suite™ Software 5.22.1

ALERT in Torrent Suite™ Software Home tab for LAN connection setups

If your instruments are connected to the Ion Torrent™ Server through a local area network (LAN), the following alert banner may be shown on the **Home** tab:

ALERT system services are down: isc-dhcp-server. Please contact your system administrator for assistance.

You can close and disregard this message.

Rebooting of Ion Torrent™ Server for direct connection setups

If your instruments are connected to the Ion Torrent™ Server directly and you need to reboot the server and instruments, ensure that the instruments are connected and have power turned on before you reboot the Ion Torrent™ Server.

Enhanced security in Torrent Suite™ Software requires secure Ion Torrent™ Server address

When you upgrade to Torrent Suite™ Software 5.22.1, if you use a GeneStudio™ S5 or GeneStudio™ S5 Plus instrument and the Torrent Suite™ Software URL address that you use in the browser includes a URL prefix that is not secure (http://), the browser will open an Apache default web page, instead of opening Torrent Suite™ Software.

This might occur if you have a bookmark in the browser, or go to the server URL using the browser history. To prevent this issue, the first time you sign into Torrent Suite™ Software 5.22.1, be sure to enter the complete URL for the Torrent Server that includes a secure https://: prefix. For example, https://<servername>. Then, update any browser bookmarks used to open the software.

Important information for Torrent Suite™ Software 5.22.1

Periodic password changes are required after upgrade to Torrent Suite Software 5.22.1. Torrent Suite™ Software requires all users to periodically change their passwords after a software upgrade from Torrent Suite™ Software 5.18 to 5.22.1. The software requires that all passwords be changed immediately after upgrade, then every 90 days thereafter.

Discontinuation of Ion Torrent™ Personal Genome Machine™ and Ion Proton™ System

With the discontinuation of manufacture and sale of Ion Torrent™ Personal Genome Machine™ (Cat No. 4462921) and Ion Proton™ System (Cat No. 4476610), Torrent Suite™ Software 5.14 is the last software release that can be used with an Ion PGM™ System or Ion Proton™ System.

IMPORTANT! You can maintain the instrument connections and continue to view Ion PGM™ System or Ion Proton™ System data and run results from earlier versions of Torrent Suite™ Software. However, you cannot use the Ion Torrent™ Server to create new planned runs and templates for the Ion PGM™ System or Ion Proton™ System, or to run those instruments.

Upgrade Torrent Suite™ Software 5.22.1

To upgrade to Torrent Suite Software 5.22, contact your Field Support Engineer (FSE).

Verify the software update on the Ion Torrent™ Server

To verify that the Ion Torrent™ Server is running Torrent Suite™ Software 5.22.1, click **(Settings) > About** in the Torrent Suite™ Software and review the version number.

Update the instrument software

To update the instrument control software, see the user guide for the Ion Torrent™ instrument in use.

Package and version information

After upgrading an instrument to Torrent Suite Software 5.22, you can verify that the software on the Ion GeneStudio S5™ instrument or Ion Chef™ System is updated. To verify that the instrument control software is updated, view software package numbers in the instrument control software screen.

Release Date	2026
Release Version	5.22.1

Software package versions in Torrent Suite™ Software 5.22.1

Software package versions for Torrent Suite™ Software and system-installed plugins.

Update Package	Version
Torrent Suite	5.22.1
Package	Version
ion-analysis	5.22.1-1
ion-dbreports	5.22.1-1
ion-django	5.22.0-1
ion-gpu	5.22.1-1
ion-pipeline	5.22.1-1
ion-referencelibrary	2.2.0
ion-publishers	5.22.1-1
ion-rsmts	5.22.0-1
ion-sampleddata	1.2.0-1
ion-torrentpy	5.22.1-1
ion-torrentr	5.22.1-1
ion-tsconfig	5.22.1-1
ion-plugins	5.22.13-1
ion-chefupdates	5.22.0

ion-s5updates	5.22.1
Plugin	Version
ion-plugin-ampliseqna	5.22.0.9
ion-plugin-coverageanalysis	5.22.0.8
ion-plugin-dataexport	5.22.0.4
ion-plugin-erccanalysis	5.22.0.2
ion-plugin-fieldsupport	5.22.0.4
ion-plugin-fileexporter	5.22.1.3
ion-plugin-filterduplicates	5.22.0.3
ion-plugin-immuneresponserna	5.22.0.3
ion-plugin-ionreporteruploader	5.22.0.47
ion-plugin-molecularcoverageanalysis	5.22.0.10
ion-plugin-pgxanalysis	5.22.0.2
ion-plugin-sampleid	5.22.0.8
ion-plugin-variantcaller	5.22.0.12

Ion Chef™ Instrument control software

Software package versions shown on the Ion Chef™ instrument screen after upgrade.

Software version	Version
Ion Chef™ instrument	5.22.0
Package	Version
UI	16-00-18
IS	4011
Scripts	4012
GM	23
OS	78
TsLink	8.0.2

Instrument control software: Ion GeneStudio S5™ instruments

Software package versions shown on Ion Torrent™ S5™ instrument screens after upgrade.

Software version	Version
Ion GeneStudio S5™ instruments: <ul style="list-style-type: none">• Ion GeneStudio S5™ Sequencer• Ion GeneStudio S5™ Prime Sequencer• Ion GeneStudio S5™ Plus Sequencer	5.22.1
Update Package	Version
LiveView	3444
RsmAgent	45
RaptorScripts	132
Analysis	5.22.0-1
ReaderFpga	2d40010e/2340010e
ValveFpga	e012
kernel	5.15.0-60-generic
DataCollect	4444

Software version	Version
Ion GeneStudio S5™ instruments: <ul style="list-style-type: none"> • Ion GeneStudio S5™ Sequencer • Ion GeneStudio S5™ Prime Sequencer • Ion GeneStudio S5™ Plus Sequencer 	5.22.1
Update Package	Version
Graphics	165
OIA	52200
RfidMgr	36
GPU SW	5.22.0-1
OS	2204

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