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Release Notes

247 IC Firmware version 5.51 • January 2024

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1   Introduction

The Thermo 247 Instrument Controller (TDS5) (247IC) is a dedicated network device which acts as the connection point between your chromatography instruments and your Enterprise Thermo Scientific Chromatography Data System (CDS).

Using an optimized version of the Microsoft Windows^{TM} operating system and running the Instrument Control software components of Thermo Scientific^{TM} Chromeleon^{TM} CDS or Thermo Scientific Atlas^{TM} CDS, the 247 IC manages all communication between your instruments, and your CDS, including status updates, instrument method download, workbook queues, and buffering and transfer of acquired chromatography data. Deploying your CDS instrument control on a 247IC ensures you have a standardized hardware and software platform for every instrument controller in your system, and can reduce the time, effort and cost involved in the installation, configuration, and validation of your system.

The TDS5 model of 247 Instrument Controller is the latest version of this device and is designed to be ultra - secure, highly-reliable, and low-maintenance, to keep your instruments operable 24 hours a day, 7 days a week.

2   Introducing the new TDS 5.51 Firmware

The Thermo 247 Instrument Controller (TDS5) is a dedicated network acquisition device designed exclusively for Thermo Scientific CDS software. It uses an optimized version of Windows as its operating system, referred to as the 247IC "firmware". This firmware has been designed and built by Thermo Fisher Scientific specifically for the 247IC, for use with Thermo Scientific Chromatography Data System software.   By using a standardized firmware, the 247IC ensures consistent implementation of your CDS software, and provides you with the assurance that the hardware, firmware and software controlling your instruments have all been rigorously tested in combination by Thermo Fisher Scientific.

This document announces the release of the latest version of Firmware for the 247 Instrument Controller. This new firmware, version number TDS5.51, is built on the Microsoft Windows 10 IoT Enterprise, version 21H2 and takes advantage of several new features in Windows 10 to form the most secure and most reliable version of 247IC firmware yet available.

Every aspect of the 247IC hardware and firmware has been designed with security in mind. The 247IC uses a layered approach to security, making use of a range of different security features to provide a comprehensive overall security package and ensuring that the 247IC is considerably better protected against all the recognized types of malware than a standard Windows PC. Please see document "CM7ID_330--Windows 10 247IC security model.doc" in the Chromeleon Enterprise documents for a more detailed description of the security features of the 247IC.

3   Resolved Issues

This chapter describes all issues that have been resolved with the release of TDS 5.51 Firmware. If an issue is not listed here, it has not been resolved with this software update.

The numbers in the first column of the table below refer to the Thermo Fisher Scientific tracking IDs.

ID	Description
331143	Native Image Performance Issues on 247IC: If Austria, Germany, or Switzerland was selected as the region at initial setup, the 247IC would be slow to start up, the issue being worse, the more instrument drivers that were configured.
123716	USB-to-GPIB connector for Chromeleon: It was not possible to use a Keysight USB-to-GPIB connector with the 247IC.
47121	Agilent ICF for Chromeleon: The Agilent ICF driver shipped with Chromeleon 7.3 (version A02.05) cannot be installed onto a 247IC. This is resolved by installing the more recent ICF A.02.06 Update 2 or preferably by using Agilent Drivers for Chromeleon (ADC).

4   Known Limitations

This chapter describes all issues that are known with the TDS 5.51 Firmware.

The numbers in the first column of the table below refer to the Thermo Fisher Scientific tracking IDs.

ID	Description
SCR123448	Atlas Temp folder: Windows 10 introduced a new feature called Storage Sense. This is designed to free up space on your hard drive by deleting files and folders in the Windows Temp folder. In all versions of Atlas before Atlas 8.3 SR6 the Temp folder is used as a temporary cache folder for files used by the DataServer software running on the 247IC. Storage Sense is turned OFF by default on the TDS5.50 firmware but, if the C: drive gets within ~100MB of full capacity, Windows 10 will turn this feature on. The C: drive on a TDS5 model of 247IC is 100GB, and the cached files are relatively small (approx. 5KB/min for 2D data). So the likelihood of the C: drive becoming so full that Windows turns Storage Sense on is very low. If your 247IC becomes disconnected from the network for a long period of time, with queued workbooks which continue to acquire, you should check the Storage Sense setting after the network is restored to ensure that it is still set to OFF. This issue does not occur in Atlas 8.3 SR6, as the temporary cache folder was moved to \Thermo\DS\Cache to remove the potential risk described above. Additionally, the extra on-board memory in the TDS 5 makes this issue very unlikely in Atlas 8.3 SR5.

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