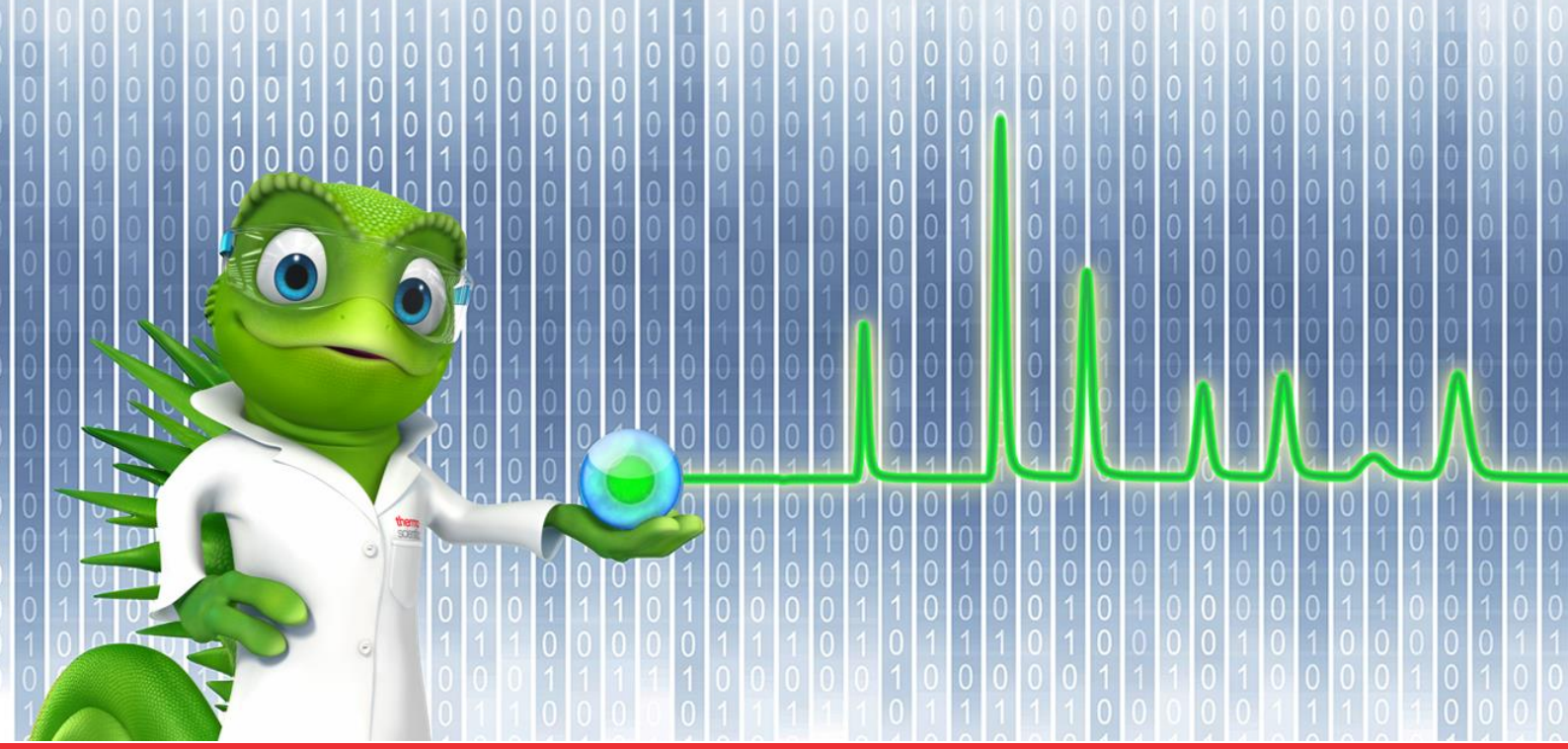

thermoscientific

Supported Operating Systems

Chromeleon 7
Chromatography Data System

Software Version 7.3.1 MUa • August 2022

thermoscientific

Copyright

Copyright © 2009-2022 Thermo Fisher Scientific Inc. All rights reserved.

Trademarks

Agilent is a trademark of Agilent Technologies.

PAL is a registered trademark of CTC Analytics AG.

ERC is a trademark of IDEX Corporation.

Fluke is a trademark of Fluke Corporation.

Gilson and NEBULA are trademarks of Gilson, Inc.

ISCO is a trademark of TELEDYNE ISCO, Inc.

Kontron is a trademark of Kontron AG.

Linear Instruments is a trademark of Linear Instruments Corporation.

Air Server-xr, TD100-xr,UNITY-xr and Kori-xr are trademarks of Markes International Ltd.

PerkinElmer and Clarus are registered trademarks of PerkinElmer Inc.

Polymer Labs and Varian are trademarks of Varian, Inc.

Rheodyne is a trademark of Rheodyne, L.P.

Shimadzu is a trademark of Shimadzu Corporation.

Shodex is a trademark of Showa Denko K.K.

URG and AIM are trademarks of URG, Inc.

Valco and VICI are trademarks of Valco Instruments Co. Inc. and VICI AG International.

ACQUITY and Waters are registered trademarks of Waters Corporation.

All other trademarks are property of Thermo Fisher Scientific Inc. and its subsidiaries.

This document contains links to third party websites that are not under the control of Thermo Fisher Scientific and Thermo Fisher Scientific is not responsible for the content on any linked site. If you access a third party website mentioned in this document, then you do so at your own risk. Thermo Fisher Scientific provides these links only as a convenience, and the inclusion of any link does not imply that Thermo Fisher Scientific endorses or accepts any responsibility for the content on third party sites.

Thermo Fisher Scientific Inc. provides this document to its customers with a product purchase to use in the product operation. The document is copyright protected; any reproduction of the whole or any part of this document is strictly prohibited, except with the written authorization of Thermo Fisher Scientific Inc.

This manual is provided “as is”. The contents of this manual are subject to being changed, without notice, in future revisions.

Thermo Fisher Scientific Inc. makes no representations that this document is complete, accurate, or error-free. Thermo Fisher Scientific Inc. assumes no responsibility and will not be liable for any errors, omissions, damage, or loss that might result from any use of this document, even if the information in the document is followed properly.

This document is not part of any sales contract between Thermo Fisher Scientific Inc. and a purchaser. This document shall in no way govern or modify any Terms and Conditions of Sale. The Terms and Conditions of Sale shall govern all conflicting information between the two documents.

Table of Contents

1 Introduction 4
2 Support Details 5
2.1 General 5
2.1.1 Operating System support 5
2.1.2 Database support 5
2.1.3 Operating system and database releases after Chromeleon release 5
2.2 Supported Operating Systems Per Role 6
2.3 Windows and Database Updates 9

1 Introduction

This document lists the operating systems supported for use with Chromeleon 7.3.1 MUa and the role within Chromeleon for which each operating system can be used.

Note: Changes to this document since the previous release of Chromeleon 7 are highlighted in yellow.

2 Support Details

2.1 General

Chromeleon 7.3.1 MUa is maintenance update of Chromeleon 7.3.1. This update provides resolution of critical and major defects reported in Chromeleon 7.3.1 since its release.

2.1.1 Operating System support

In general Feature Releases are supported on the current version(s) of Windows Desktop, Windows Server, and Citrix available at the beginning of the validation phase of the Chromeleon project.

2.1.2 Database support

In general Feature Releases are supported for use with the latest version, and the most recent update of the previous version, of Microsoft SQL and Oracle databases available at the beginning of the validation phase of the Chromeleon project.

2.1.3 Operating system and database releases after Chromeleon release

After a Chromeleon Feature Release, we continue to monitor new Windows (including Windows KBs) and Database releases. If new versions of Windows, SQL or Oracle are released between Chromeleon Feature Releases, then we will normally aim to test Chromeleon compatibility with those versions within a 6-month period and make an updated announcement about Chromeleon support on those platforms. However, if a subsequent Chromeleon Feature Release (FR+1) is released within that 6-month period, then the new Windows, SQL or Oracle versions will be tested and supported on the subsequent release only.

2.2 Supported Operating Systems Per Role

The following table lists, for each role in Chromeleon, the operating systems supported.

For Enterprise Chromeleon systems, any supported Client operating system(s) can be used in combination with any supported Server operating system(s).

Role	Supported Operating Systems	
Standalone Workstation	Microsoft Windows 11 Pro and Enterprise (64-bit)[5] Microsoft Windows 10 Pro and Enterprise (64-bit)[5] Microsoft Windows 8.1 Professional (64-bit)[6][8]	
Remote Client / Data Processing Client	Microsoft Windows 11 Pro and Enterprise (64-bit)[5] Microsoft Windows 10 Pro and Enterprise (64-bit)[5]	
Thin Client	Microsoft Windows Server 2022 with Terminal Services activated [1] Microsoft Windows Server 2019 with Terminal Services activated[1] Microsoft Windows Server 2019 with Terminal Services activated running Citrix XenApp 7.15[1] Microsoft Windows Server 2016 with Terminal Services activated[1] Microsoft Windows Server 2016 with Terminal Services activated running Citrix XenApp Server 7.15[1] Microsoft Windows Server 2012 R2 (64-bit) with Terminal Services activated[1][12] Microsoft Windows Server 2012 R2 (64-bit) with Terminal Services activated running Citrix XenApp Server 7.6[1] [12]	
IPC / Enterprise Workstation	Microsoft Windows 11 Pro and Enterprise (64-bit)[5] Microsoft Windows 10 Pro and Enterprise (64-bit) [5] Microsoft Windows 8.1 Professional (64-bit)[6][8]	
247 Instrument Controller	Windows 10 LTSC 1809 firmware version TDS5.50 (TDS5)[5]	
Chromeleon Domain Controller	Microsoft Windows Server 2022 [1] Microsoft Windows Server 2019[1] Microsoft Windows Server 2016 [1] Microsoft Windows Server 2012 R2 (64-bit) [1] [12]	
Data Vault Server (Master or Slave)	Microsoft Windows Server 2022 [1] Microsoft Windows Server 2019[1] Microsoft Windows Server 2016[1] Microsoft Windows Server 2012 R2 (64-bit) [1] [12]	
Database Server[2]	Oracle 18c [11] Oracle 19c[11]	Microsoft SQL Server 2017 Microsoft SQL Server 2019
Local database	Oracle not supported for local data vault	Microsoft SQL Server 2014 Express SP3[7] Microsoft SQL Server 2016 Express[7] Microsoft SQL Server 2017 Express[8] Microsoft SQL Server 2019 Express[7]

Raw Data Server	Microsoft Windows Server 2022 [1] Microsoft Windows Server 2019[1] Microsoft Windows Server 2016 [1] Microsoft Windows Server 2012 R2 (64-bit) [1] [12]
.Net Framework[10]	Microsoft .NET Framework 3.5 SP1 Microsoft .NET Framework 4.6.2 Microsoft .NET Framework 4.7 Microsoft .NET Framework 4.8
Virtualisation	Virtualization is supported for the following roles [3]: • Chromeleon Domain Controller • Chromeleon Data Vault Server (load-balanced) • Database Server (Oracle and SQL) • Chromeleon Raw Data Server • Thin Client Remote Client / Data Processing Client
Cloud deployment	Cloud deployment is supported for the following roles [9]: • Chromeleon Domain Controller • Chromeleon Data Vault Server (load-balanced) • Database Server (Oracle and SQL) • Chromeleon Raw Data Server • Thin Client

Notes:

[1] Windows Server 2022, 2019, 2016 and 2012 are supported on both the Standard and Datacenter editions.

[2] If the database is installed on the same machine as the Chromeleon Domain Controller or the Chromeleon Data Vault Server (neither of these configurations is recommended as they cause a potential single-point-of-failure in the Chromeleon system), the database version must be compatible with the Server operating system. Refer to the documentation for your chosen database for more information

[3] Chromeleon has been tested by Thermo Fisher Scientific on a range of virtualization hypervisors. Our findings are that, provided the hypervisor is capable of hosting a virtual machine running one of the Windows versions listed in the table above, it is capable of being used in a Chromeleon system in any of the roles listed in the Virtualization section of the table above. Virtualization is not supported for Workstation or IPC roles as a physical connection to an instrument is required and reliable 'virtualised' instrument connection mechanisms are not fully compatible with real-time operations and usage of multiple communication ports.

[4] With Chromeleon 7, you can only create standard data vaults locally on the hard drive of the PC that runs Chromeleon 7. Standard data vaults are shared in a Chromeleon domain, but the connectivity, performance, and capacity are limited by the SQL Server version

[5] See section 2.2 for further information regarding Windows 10 support

[6] Installation of the Oracle 18c and 19c clients require special instructions. These can be found in the document #460 of the Chromeleon Enterprise documents.

[7] SQL Server Express 2014 SP3 is only supported on Workstation and IPC computers which have previously had Chromeleon 7.2 installed. When Chromeleon 7.3.1 is installed onto a computer which did not previously have Chromeleon 7.2 installed, SQL Server Express 2019 will be installed.

[8] Windows 8.1 is only supported for on Workstation and IPC computers which have previously had Chromeleon 7.2 installed, and thereby have SQL Server Express 2014 SP3 installed (see [6] above). Installations of Chromeleon 7.3.1 on computers running Windows 8.1 without a previous installation of a version of SQL Server Express earlier than 2017 are not supported because SQL Server Express 2017 and later are not supported on Windows 8.1.

[9] Chromeleon has been tested by Thermo Fisher Scientific on Amazon Web Services (AWS) Elastic Cloud Compute (EC2) instances of Windows 2016 Server and Windows 2019 Server. Any other cloud platform which supports the creation of a Windows Server VM running one of the Windows versions listed in the table above is supported for use in a Chromeleon system in any of the roles listed in the Cloud deployment section above. Cloud deployment is not supported for Workstation or IPC roles as a physical connection to an instrument is required and reliable 'virtualised' instrument control connection mechanisms are not fully compatible with real-time operations and usage of multiple connection ports.

[10] The .net framework versions listed in this table are the *minimum* versions required for use with Chromeleon. Each version of Microsoft Windows comes with a version of .net framework already installed. Newer version of Windows will have version(s) of .net which are later than the versions listed in the table. In order to use Chromeleon, you must also ensure that the *minimum* versions of .net listed in the table are installed in addition to any pre-installed versions.

[11] Installation of the Oracle 18c and 19c clients require special instructions. These can be found in the document #460 of the Chromeleon Enterprise documents

[12] Mainstream Microsoft support for Windows 2012 Server R2 ended in 2018. Extended support runs until October 2023. Support in Chromeleon therefore only applies to customers who have purchased a Windows 2012 Server R2 extended support from Microsoft.

2.3 Windows and Database Security Updates

Chromeleon 7.3.1 MUa has been validated for use with the operating systems and databases listed in the previous sections above. Security updates to Windows and other system components are not formally validated.

For optimum security, the installation of the latest Windows and database security updates is generally recommended.

However, security updates are not formally validated against already released versions of Chromeleon, so the possibility of a conflict between Chromeleon releases and these updates cannot be excluded. Therefore, installation and testing of security updates is the responsibility of the respective installation site.

In the event of a compatibility issue when testing a security update, contact your local Thermo Fisher Scientific representative for support. Reasonable efforts to solve such problems will be made, but compatibility with every security update cannot be guaranteed.

2.4 Windows Feature Updates

With Windows 10, Microsoft introduced a semi-annual feature release model. They have stated that each feature release will be supported by Microsoft for approximately 30 months, and that this model will continue with support for at least one version of Windows 10 being provided until 14th October 2025. For details on the feature releases of Windows currently in support by Microsoft, please refer to the Microsoft website.

Thermo Fisher conducts its testing of a Chromeleon CDS release against the latest available feature release of Windows 10 and Windows 11 available at the time of release. We do not formally test against all previous feature releases. As with security updates (see section 2.3), the possibility of a conflict between Chromeleon releases and these Windows feature releases cannot be excluded. Therefore, installation and testing of these Windows feature releases is the responsibility of the respective installation site.

www.thermofisher.com

© 2009-2022 Thermo Fisher Scientific Inc. All rights reserved.

Thermo Fisher Scientific Inc.
168 Third Avenue
Waltham, MA 02451
USA

thermoscientific