Optimize operational efficiency with advanced data management solutions

Eurotherm®

Data Reviewer

Explore your process data anytime, anywhere with easy to use and versatile data management software

eurotherm.com/reviewer

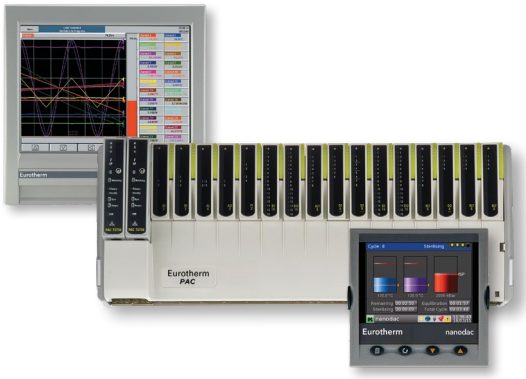
WATLOW®
Powered by Possibility

Making historical data easy to manage optimizes production and data integrity

Eurotherm are specialists in managing critical data and contextual metadata to help meet stringent regulations on the quality, safety and authenticity of manufactured goods.

Eurotherm Data Reviewer is a software application designed for the viewing, analysis and printing of historical data files obtained from Eurotherm data acquisition equipment such as, but not limited to:

- **6000 series paperless graphic recorders**
- **T2750 programmable automation controllers**
- **nanodac™ recorder/controller**



We empower our customers to maintain regulatory compliance and reduce audit costs. Our IIoT ready solution provides a data integrity layer that supports on-premise solutions.

This helps demonstrate compliance for regulatory purposes and enables access of insights into production processes, thereby identifying areas for improvement.

Browser-based single installation

Install the application once on a server and provide remote access to users, thereby removing the need to store and maintain access on multiple PC's.

Find data quickly

Imported data is automatically organized by group and batch. Data can be refined further by changing the date range, searching for recording devices by name/recording group from automatically generated lists, or simply by typing in the name of the device/ record.

Analyze data more effectively with dual cursor mode

A single line cursor, positioned within the chart area, presents process variable details for the visible channels at that point on the timeline. A second vertical cursor can be used to select a data range on which to perform analysis.

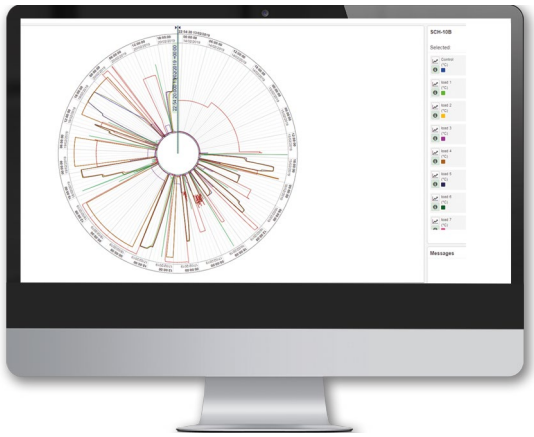
Easily approve data for release

Annotations, such as comments or authorization signatures can be added at any point during analysis. Annotations are subsequently stored alongside the original data for easy retrieval at a later date.

Access data more easily in multiple styles

Data access is easy because historical data can be automatically imported through the use of SFTP/FTP communications from Ethernet enabled devices or directly from an SFTP/FTP server. Data can be viewed in multiple styles:

- Horizontal linear chart
- Circular chart
- CSV export



Circular chart

Eurotherm Data Reviewer allows for circular chart visualization and printing of the data; simply choose the desired revolution, e.g. 1 week. In addition, to aid analysis, the chart can be rotated using the mouse or left/right cursor keys.

Enhanced data integrity

With regulations such as FDA 21CFR part 11, ALCOA+* and AMS2750, data integrity has never been so important for the pharmaceutical, food and heat treatment industries. Eurotherm Data Reviewer provides support for managing user-defined accounts and passwords.

Auditor option provides support for electronic signatures in accordance with FDA 21 CFR Part 11 and Data Integrity ALCOA+ concept.

User management

Simple user management is provided with Eurotherm Data Reviewer. The Foundation edition supports a single user role. Enterprise Edition has four predefined roles, User, Engineer, Quality and Administrator. New users can be assigned to any of these roles. If more flexibility is needed then the Auditor option provides the ability to create multiple roles, where each role can be given a unique set of permissions.

Password management

Eurotherm Data Reviewer provides support for user defined password policy management; the system administrator can define the minimum password length, use of upper and lowercase characters, password aging and re-use rules.

Active Directory support

To reduce the overhead associated with setting up and managing user accounts, Eurotherm Data Reviewer supports Microsoft® Active Directory integration. User accounts and passwords are then managed by Active Directory, rather than Eurotherm Data Reviewer.

Active Directory support offers users:

- Centralized resources and security administration
- Single login for access to global resources
- Simplified resource location

Default access permissions

Roles	User	Quality	Engineer	Admin
CanAccessDatabaseViewDetails				
CanAccessHistoryDownloadUnhFiles				
CanAcknowledge				
CanAddEditDisableUserAccount				
CanAddEditRemovalHttpsCertificates				
CanAddRemoveInstrument				
CanAnnotate				
CanApprouve				
CanCreateCustomGroups				
CanDeleteFilesFolders				
CanDeleteManageDatabase				
CanEditCustomGroups				
CanEditInstrumentDetails				
CanEditOwnPassword				
CanEditPollInterval				
CanEditPrintBatchSettings				
CanEditPrinterConfig				
CanEditUserProfiles				
CanExportToCsv				
CanPrint				
CanRelease				
CanResolve				
CanReview				

Password policy

Password Policy	
Minimum required length	8
Passwords must contain n uppercase digits	1
Passwords must contain n uppercase characters	1
Passwords must contain n lowercase characters	1
Passwords must contain n non-alphanumeric characters	1
User must change password after (days, 0 means never)	60
Wam user of password expiration (days, 0 means never)	0
Passwords cannot be the same as the previous n passwords	5

* How Paper and Electronic Source Data Meet ALCOA+ Elements. According to the FDA, data should meet certain fundamental elements of quality. Whether they're recorded on paper or electronically, source data should be Attributable, Legible, Contemporaneous, Original, and Accurate (ALCOA).

Simplifying compliance with Auditor

The Auditor option for Eurotherm Data Reviewer provides support for Electronic Signatures in accordance with AMS2750, FDA Part 11 and ALCOA+. All user actions can be configured to require signing, or signing and authorization. The ability to sign or authorize is configured on a user-by-user basis and incorporates signature element controls in accordance with FDA 21 CFR Part 11:

- User specific access according to authority level
- Signature element controls — password aging, minimum password length, automatic log-off, automatic disabling and notification of unsuccessful login attempts
- Individual user accounts and passwords

Audit trail

Eurotherm Data Reviewer Enterprise edition includes an Audit Trail. Each time a user logs on, completes an operation or makes a change to the configuration, it is recorded.

The Audit Trail is time-stamped and incorporates the operator details along with the changes made. It is stored with the process data and cannot be modified or removed.

The Auditor option enhances the user management feature by allowing individually customizable access permissions. Users only get access to the areas they need. This feature simplifies operation as dynamic menus only show items the user can access.

If the Auditor option is enabled, the audit log is stored in a tamper-resistant UHH file format readable by Eurotherm Data Reviewer.

Eurotherm were the first to introduce paperless data logging on the 4200 series recorder in 1993 using a proprietary PKD file format.

Since then, Eurotherm has introduced electronic records across a wide range of products. The UHH file format was first introduced in 2000 and remains compatible today. UHH improves the metadata contained within historical data records and Data Reviewer is capable of reading UHH files from any of these devices.

In addition, for validated sites using the Auditor option, a record of changes to the printed chart can also be included as a table in the printed record.

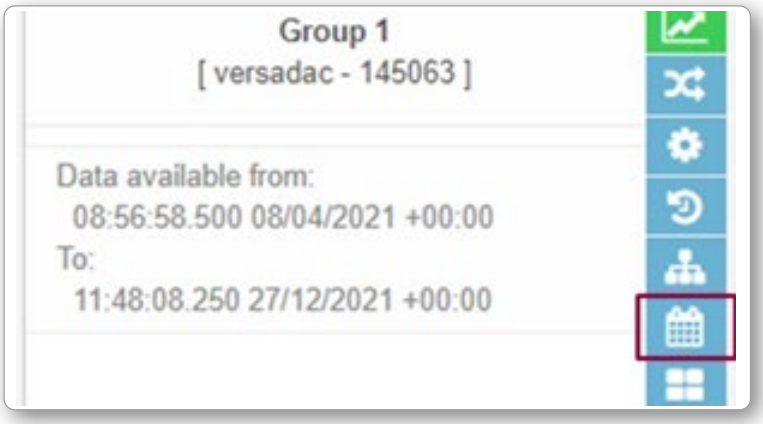
Reports

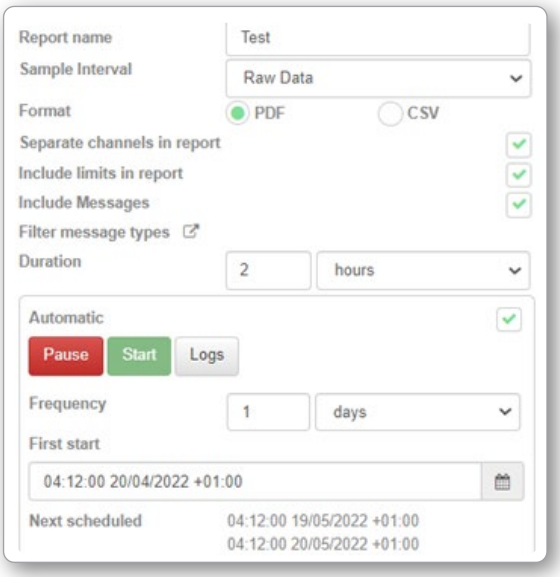
Scheduled reports

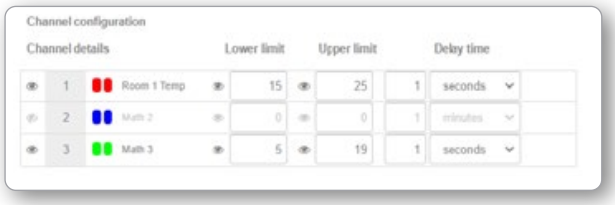
Available with the Enterprise Edition, the scheduled reports option allows users to generate reports manually or automatically in either PDF or CSV format.

For each report the user can define which channels to include, which messages to include, report duration, output format (PDF or CSV) and the frequency at which the report will run (if automatic).

It is also possible to include alarm deviation limits for each channel. The report provides the total number of excursions and total time outside of the specified range. The report can be configured to create a chart/table for each channel or combine all results into a single chart/table.

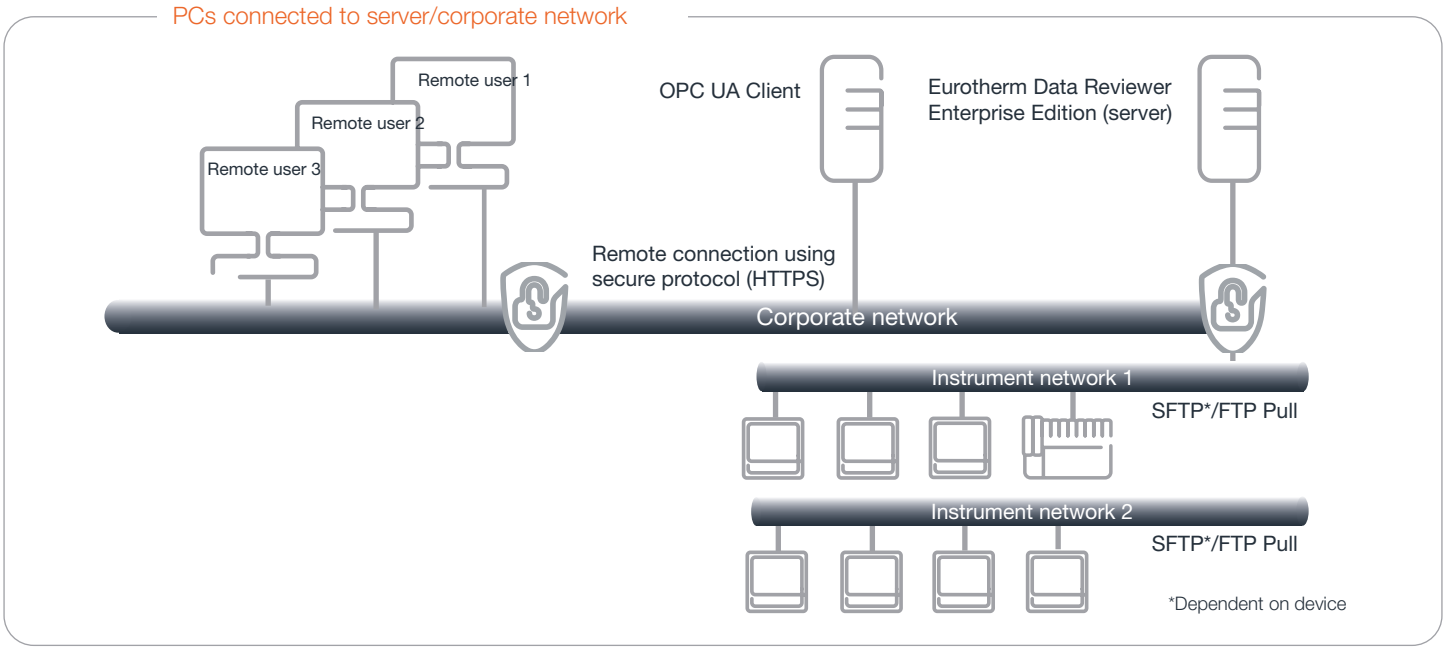






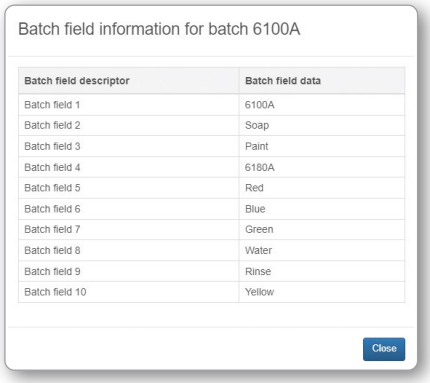
OPC UA (Unified Architecture)

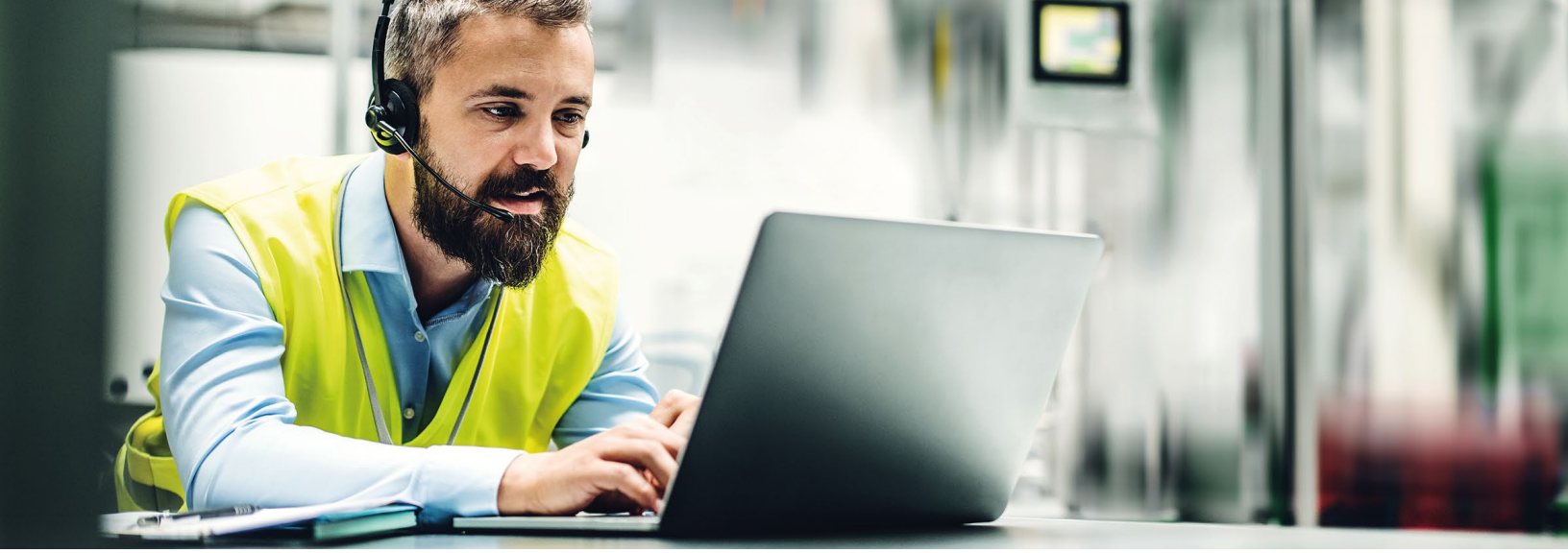
Once enabled, OPC UA clients can connect to Data Reviewer Enterprise Edition and access historical data available in the UHH files extracted from the connected devices, as well as events and notifications generated by the Data Reviewer application. If the Report option is enabled, OPC UA can be used to trigger pre-configured reports.



Batch search

Many industries collate recorded data by batch (cycle or lot number) for traceability, but when producing 40 to 60 batches a day, finding the required batch record for approval, after hours, days or even weeks, can be time consuming. Searching for a batch using any batch field (data or descriptor) can help reduce the time it takes to find the required batch record(s), by returning all batch cards where any of the batch data (batch name, batch field data or descriptor) matches the search criteria.

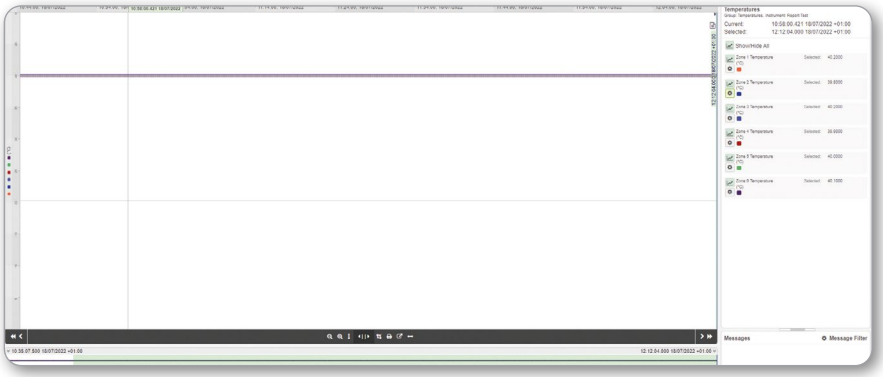




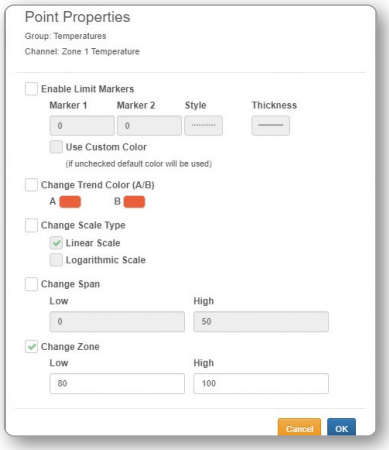
Point properties

This feature allows a number of display parameters (color, span and zone) for the selected point to be modified for a particular group. For example if you have 5 temperatures, all reading 40°C, with a chart range of 0 – 50, the resultant trend will show all traces sitting on top of each other (see image – No point properties applied). The use of point properties for span and zone allows the separation of the traces to improve analysis of the chart (see image – Point properties applied).

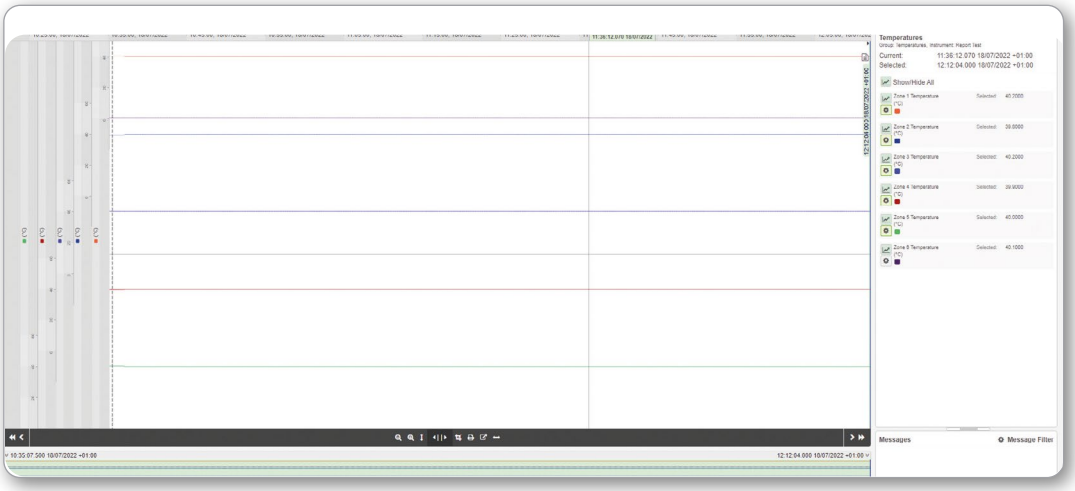
No point properties applied



Point properties popup



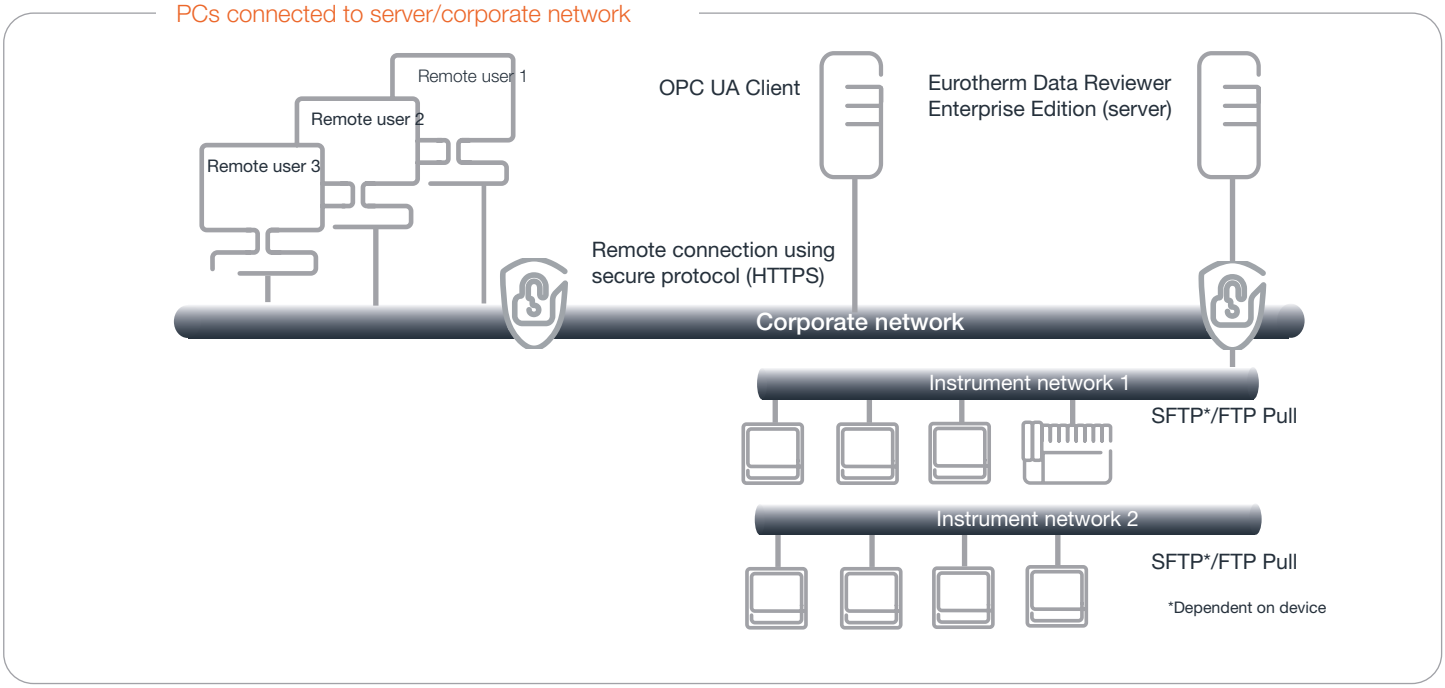
Point properties applied



Foundation Edition versus Enterprise Edition

- Foundation Edition is for small standalone instrument networks and is free to download here: eurotherm.com/reviewer
- Enterprise Edition is a server-based version with unrestricted database size and multi-user access

Enterprise Edition



Foundation Edition

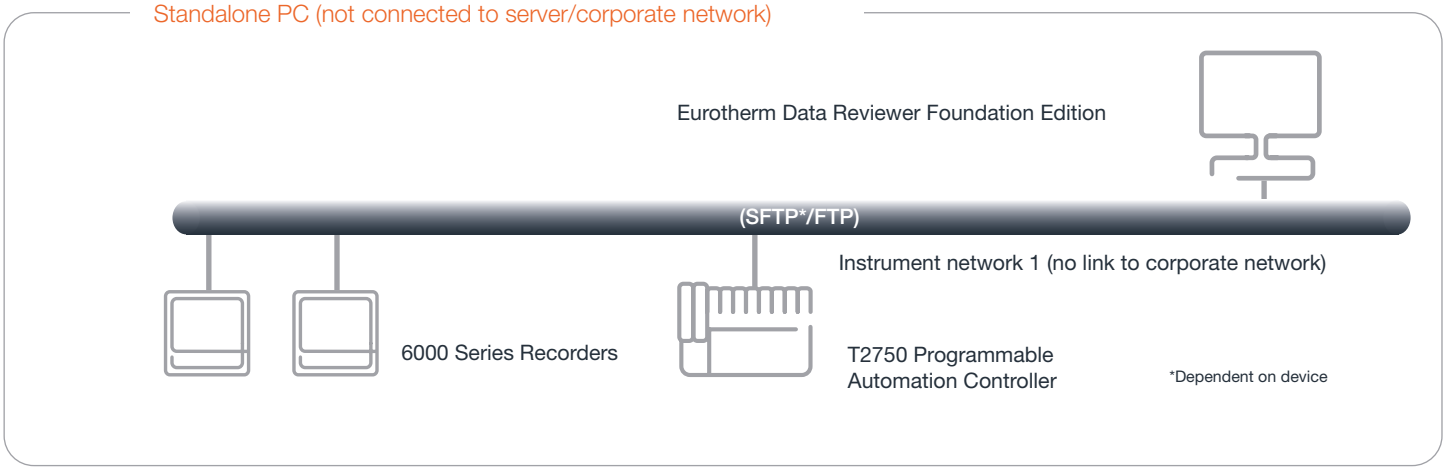


Table 1 - Edition comparison

Features	Foundation	Enterprise
Data conversion tool: support for UHH files generated by Eurotherm devices	●	●
Import data from removable media	●	●
Import data direct from connected devices	●	●
Print all graph data including messages	●	●
Annotate a chart	●	●
Export using CSV	●	●
Automatic transfer and creation of charts	●	●
Circular trend view/print	●	●
Horizontal trend view/print view	●	●
Spreadsheet view/print	●	●
Scheduled Reports (additional license)		●
OPC UA Server (additional license)		●
Auditor (additional license)		●
Active Directory (included in Auditor)		●
Customizable printout		●
Point properties		●
Support for Operations Reporting		●
Multi user support		●
Database management		●
Role management		●
User management		●
View management		●

Table 2 - Database sizing

No. of recording points / recorder	Recording interval (seconds)	Duration	
		20GB	200GB
6	0.125	80 days	2.2 years
6	1	1.7 years	17.2 years
6	10	17.2 years	173 years
12	0.125	40 days	1.1 years
12	1	324 days	8.8 years
12	10	8.8 years	88 years
18	0.125	27 days	270 days
18	1	217 days	5.9 years
18	10	5.9 years	59 years
24	0.125	20 days	200 days
24	1	164 days	4.5 years
24	10	4.5 days	45 years
48	0.125	10 days	100 days
48	1	81 days	2.2 years
48	10	2.2 years	22 years

Database size requirements

In Table 2 on page 10 are some examples of memory duration, which can be used as a guideline for storage requirements for the Enterprise Edition.

Values quoted are per recording device, for example, 20GB of storage space will provide approximately 27 days of storage for a single recording device with 18 points with a 125ms recording interval. If there are 10 recording devices each with 18 points recording at

Eurotherm Data Reviewer Foundation Edition system requirements

	Minimum	Recommended
Operating System	Microsoft® Windows® 10 Microsoft® Windows® 11	Windows® 10 (64-bit, Professional or Enterprise)
Browser	Google Chrome™ 91 or higher or Microsoft Edge	Chrome™ 91 or higher
RAM	8GB	8GB
Processor	2GHz, Intel® Pentium® processor* or equivalent	2GHz, Intel® Pentium® processor or equivalent
Disk Space	60GB of free hard disk space	60GB of free hard disk space

Pentium is a trademark of Intel Corporation or its subsidiaries. **Please consult factory on latest Windows validation*

Eurotherm Data Reviewer Enterprise Edition system requirements

	Minimum	Recommended
Operating system	Microsoft Windows Server® 2012 R2, Windows Server® 2016, Windows Server® 2019 or Windows Server® 2022	Windows Server® 2019
Browser	Chrome™ 91 or higher or Microsoft Edge	Chrome™ 91 or higher
RAM	16GB	32GB
Processor	2.7 GHz, Intel® Core™ i7 processor or equivalent	2.7 GHz, Intel® Core™ i7 processor or equivalent
Disk space	Refer to database size requirements	

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