General Specifications

DAQManager
Data Management Software
for Paperless Recorders

GS 04L47B01-01EN

[Release: R2]

■ Overview

DAQManager is a software program that enables you to manage measured data from Daqstation and MVAdvanced paperless recorders on a PC. Data loaded onto DAQManager can be quickly and easily searched by date/time, tag name, batch name, and other criteria. Channels recorded on different instruments and at different intervals can be displayed in the same trend graph or digital display.

■ General Specifications

● System Requirements

Table PC system requirements

Item	Specification
Operating system (OS)	Windows 7 Home Premium SP1 (32-bit and 64-bit editions), Windows 7 Professional SP1 (32-bit and 64-bit editions), Windows 8.1 Update (32-bit and 64-bit editions), Windows 8.1 Pro Update (32-bit and 64-bit editions), Windows 10 Home (32-bit and 64-bit editions), Windows 10 Pro (32-bit and 64-bit editions)
Processor	Pentium 4, 3 GHz or faster (*1)
Main memory	2 GB more
Hard disk	Approximately 200 MB required for installation, plus additional space for indexing (up to 2 GB per management area) and saving of data files. NTFS(*2) recommended.
Drive	CD-ROM drive
Monitor, display adapter(*3)	A video card that is recommended for the OS and a display that is supported by the OS, has a resolution of 1024 × 768 or higher, and that can show 65,536 colors (16-bit, high color) or more.
Printer(*3)	• Color printer recommended • A4/Letter sized paper or larger

*1: Operation with multi-processor not guaranteed.
*2: NTFS (NT file system) is one of the file systems (hard disk file organization methods) that is compatible with Windows, and features a larger data handling capacity than that of the FAT (File Allocation Table) file system. It is recommended to use DAQManager with a hard disk that has been formatted with NTFS.
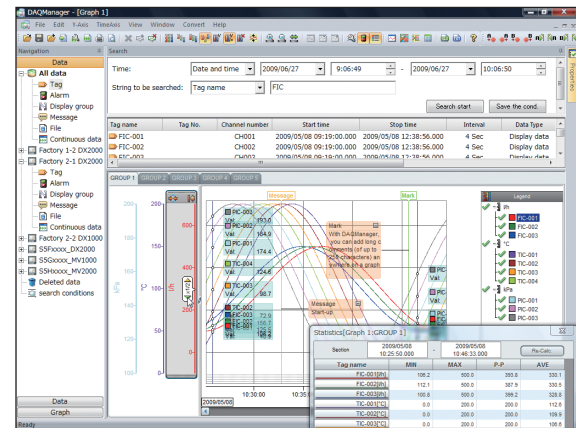*3: Must support the operating system being used.

Figure DAQManager screen

● Supported Models and File Types (Extensions)
Daqstation DXAdvanced DX1000/DX1000N/ DX2000 series (/AS1 option is not supported), DX364: Display data files (.dad), event data files (.dae)
MVAdvanced MV1000/MV2000 series: Display data files (.dad), event data files (.dae)
DAQSTATION DX100/DX200 series: Display data files (.dds), event data files (.dev)
FX100 series: Display data files (.dds), event data files (.dev)

● Display Language
Can be specified during installation. However, for languages other than English, the operating system should be of the same language for normal operation.
Display languages: English, Japanese, Chinese, German, French, Korean, Russian

■ File Management Functions
DAQManager loads measured data from paperless recorders into a "management area" for management. This is called *importing*. Imported data files are indexed with information needed for searching, and then all data are arranged and stored separately by source device. Multiple management areas can be created and utilized separately.

● Management Areas
Max. no. of management areas: 10
Max. no. of importable devices per management area: 300
Max. no. of importable files per management area: Approximately 100,000. (Based on 10 alarm history and message items each per file. The max. index capacity is 2 GB; the number of files decreases as the number of alarms and messages increases.)
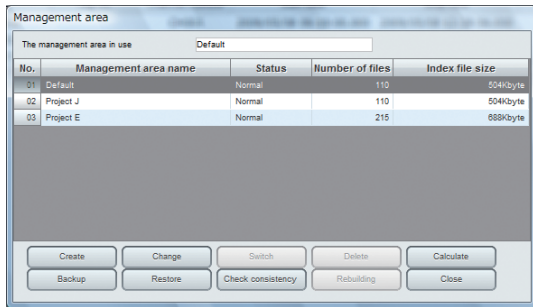Backup function: Able to read/write to and from a specified folder of all data in the management areas.

Figure Management area editing screen

● **Automatic Import**
DAQManager periodically monitors specified folders and automatically imports any files that have not been previously imported (the imported source files are not deleted).
Monitoring intervals: 10 min, 30 min, 1 hour, 6 hours, 8 hours, 12 hours, 24 hours
Max. no. of specifiable folders: 8 (user can specify to include/exclude subfolders)
Automatic conversion: The user can automatically convert the imported data file to an Excel or text file.
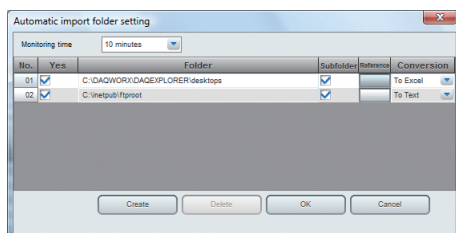

Figure Automatic import setting screen

● **Manual Import**
Files, including files from specified folders and removable media, can be imported manually (the imported source files are not deleted). The user can specify to include/exclude subfolders.
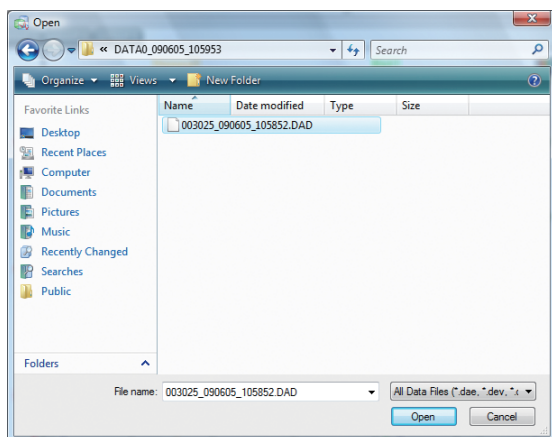

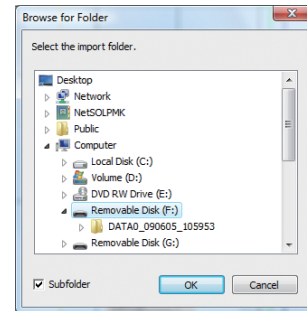**Figure Manual import (file) screen**

Figure Manual import (folder) screen

● **File Export**
Files selected from a file list (see "Data Search Function" in a section below) can be exported to a specified folder (such files still remain in the management area).
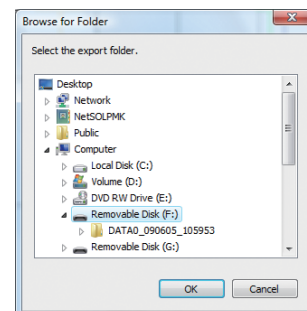

Figure File export screen

● **Deleting Files**
Files selected from a file list (see "Data Search Function" in the next section) can be moved to the Deleted data folder and removed from the group of managed files. The user can select whether to return files in the Deleted data folder to the group of managed files, or completely delete them. Completely deleted files are no longer available for automatic importing. Reimporting is only possible through a manual import.

■ **Data Search Function**
DAQManager can display lists of management information (indices) of imported data. The user can search for desired data within the lists.

● **List Display**
List types: Tag list(*1), alarm list, display group list(*1), message list, file list(*2), continuous data list(*1)
List sources: Data from all devices, or only specified devices
Display limit: Up to 100,000 items
Device names: Arbitrary names can be assigned to distinguish between devices (the serial number is assigned by default)
No. of device name characters: Up to 32 alphanumeric

*1: In the tag, display group, and continuous data lists, data that has been split into multiple files by the recorder's auto save function are recombined and treated as 1 item from memory start to memory stop (or until auto save during continuous recording).
*2: Each of the various files divided and saved by the recorder's auto save function are displayed as individual items in the file list.
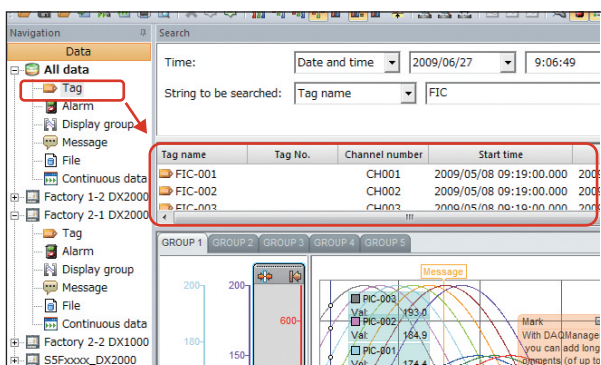
Figure List display (tag list of all devices)

● **List Search**
If the user does not immediately find desired data in the list, the list can be narrowed with a search. The available search criteria differ depending on the type of list displayed.

Table List search specifications

List Type	Search Criteria
Tag list	Time(*1), character string (tag name, tag no., channel number, batch name)
Alarm list	Time(*1), character string (tag name, channel number, batch name), type (High, Low, etc.)
Display group list	Time(*1), character string (display group name, batch name)
Message list	Time(*1), character string (message, input user name, batch name)
File list	Time(*1), character string (file name, batch name)
Continuous data list	Time(*1), character string (batch name, batch comment, batch text)

*1: Specified date/time range, last *n* hours, last *n* days, last *n* months, last *n* years
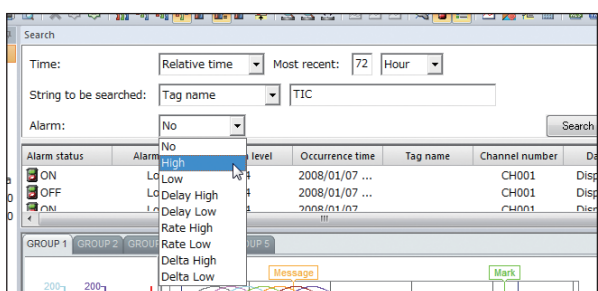

Figure List search (alarm list)

● **Saving Search Criteria**
Search criteria can be saved under a name for future use.
No. of search criteria name characters: Up to 32 alphanumeric

■ Data Display Function
Desired data can be selected from a list and displayed as a trend graph in the graph window. Any graph data that was divided into files by the recorder's auto save function is automatically recombined. Displayed graphs can be converted, printed, and saved for redisplay at a later date.

● **Data Display Methods**
There are three methods for displaying data selected from a list.
Display: Only channels associated with the selected data are displayed in a new window
Display entire file: The entire contents of the file that includes the selected data are displayed in a new window just as they are in the display groups specified on the recorder
Additional display: Only channels associated with the selected data are added to the active window

● **Trend Graph Display**
No. of display groups: Switch display between up to 50 groups per graph window
Display group names: Can be specified/edited
No. of display group name characters: Up to 32 alphanumeric (note that only up to 8 can be displayed in the graph)
Max. no. of displayable channels: 100 can be displayed/added per display group
Channel display: Switch between channel number, tag name, or tag no.
Time axis unit: Absolute time
Time axis display zoom factors: The maximum compression rate varies depending on the measuring period (A maximum of 10,000 pieces of data per pixel can be compressed. E.g.: Maximum compression rate in one-second interval is 7 days/div.)
3 month/div, 1 month/div, 7 days/div, 1 day/div, 12 hr/div, 8 hr/div, 6 hr/div, 4 hr/div, 3 hr/div, 2 hr/div, 1 hr/div, 30 min/div, 10 min/div, 5 min/div, 1 min/div, 30 sec/div, 10 sec/div, 5 sec/div, 1 sec/div, 0.5 sec/div, 0.1 sec/div, 0.05 sec/div
Time axis display position: All data between start and stop can be displayed by scrolling
Time axis range specification: User can specify desired display area by date/time and automatically adjust the zoom and display position (note that the area may not always fit in one screen due to zoom limitations)
Display cases with list display: The maximum number of cases for list display is 100,000. However, Data including 100,000 cases or more are included at the time of search and sorting.
Y-axis grouping function: Channels sharing the same units, or units and scale, can be combined on the y-axis
Y-axis setting: The display scale and display zone in the graph can be changed for each axis
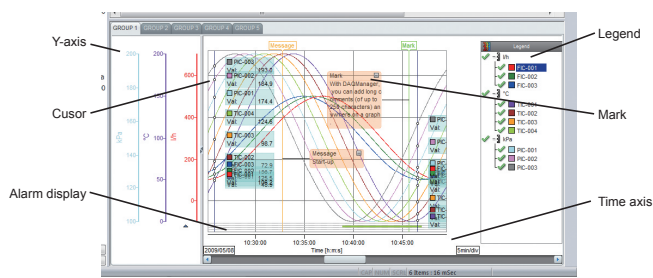
Figure Trend graph

Figure Digital Display

Y-axis display zoom factor: Each axis can be zoomed in (20 ×, 10 ×, 5 ×, or 2 ×) or out (1/2 ×, 1/5 ×, 1/10 ×, or 1/20 ×) using the mouse
Legend: Display by channel order or y-axis grouping, or hide
Alarm display: Alarm statuses can be displayed in bands at the bottom of the trend graph
Cursor function: 2 time axis cursors can be displayed for various uses
Cursor movement: In addition to specifying cursors by dragging, cursors can be jumped to alarm positions, mark/message positions, and start/stop positions.
Mark function: Displays messages entered on the recorder, and enables adding of user comments (marks).
Mark display position: The user can select left or right of the specified mark time, move mark arbitrarily up or down, and turn marks ON and OFF
No. of mark comment characters: Up to 250 alphanumeric characters (note that the number in the "Mark list" below is up to 38)
Mark title: A mark title can be specified for display at the top of the trend graph (however, fixed to "Message" if a message was entered on the recorder)
No. of mark title characters: Up to 60 alphanumeric (note that display at the top of the trend graph is up to 15 characters, and up to 18 characters in the "Mark list" below)
Copy function: The user can copy the displayed screen to the clipboard as image data.

● **Digital Display**
No. of display groups: Switch display between up to 50 groups per graph window
Display group names: Can be specified/edited
No. of display group name characters: Up to 32 alphanumeric (note that only up to 8 can be displayed in the graph)

Max. no. of displayed channels: 100 can be displayed/added per display group
Channel display: Switch between channel number, tag name, or tag no.
Alarm display: Alarm statuses can be displayed
Cursor function: 2 time axis cursors can be displayed for various uses
Copy function: The user can copy the selected range (a maximum of 1,000 rows) to the clipboard as text data.

● **Alarm and Mark List Display**
Alarms or marks (messages) included in the trend graph can be listed in a separate window (the alarm and mark lists are displayed in separate tabs).
Alarm list display items: Status (ON, OFF, ACK), channel number (or tag name or tag no.), level (L1–L4), type (High, Low, etc.), and time
Mark list display items: Time, title, comment, input user name, display group, and operation time

Figure Alarm and mark list displays

● **Cursor Values**

The measured data at the cursor in the trend graph can be displayed in a separate window (dialog box). Display source: Displayed group only

Figure Cursor value display (display data)

●**Statistics**

The results of statistical computation on measured data in the trend graph can be displayed in a separate window (dialog box).
Computed statistics: Max, Min, P-P, Avg.(for event data only)
Computation range: Area between cursors (or all data if cursors not displayed)
Computation source: Displayed group only
Copy function: The user can copy the computation results to the clipboard as text data.

Figure Statistics display (event data)

●**Saving Graphs**

Users can assign names to trend graphs and save them for redisplay at a later date. Before redisplay, if additional data is imported that can be combined with the original data (files divided by the auto save function), that data is combined and included in the redisplay.
No. of graph name characters: Up to 32 alphanumeric
Graph search criteria: Save date/time (specified date/time range, last *n* hours, last *n* days, last *n* months, last *n* years), character string (tag name, group name, mark (title, comment), graph name)

■ **Print Function**

The trend graph, alarm list, and mark list can be printed. On the trend graph, the cursor value display and statistics display can also be printed at the same time.

●**Printing the Trend Graph**

Printed contents: Graph name, user comment (250 alphanumeric characters), cursor values(*1), statistics(*1), trend graph(*2)
Print range: All data, or data between cursors
Color: Color only (software cannot output in black-and-white)
Print source: Displayed group only
Print span: All data/1 page, 1 hr/pg, 8 hr/pg, 12 hr/pg, 24 hr/pg, and arbitrary setting (any of 1 to 1000 hr/pg can be set)
Waveform thickness: 0.25pt, 0.5pt, 1.0pt, 1.5pt, 3.0pt
Print preview: Available

*1: Cursor value display and statistics display can only be printed if their respective windows are displayed. Note that if the vertical height of the cursor value display (approximately 11 or more channels for an A4 landscape page) or of the statistics display (approximately 21 or more channels for an A4 landscape page) occupies over half of the print screen, values/statistics are printed out on a separate page from the trend graph.

*2: Due to width limitations, up to 10 y-axes of the trend graph are printed. Even if 11 or more axes are displayed, they are not printed.
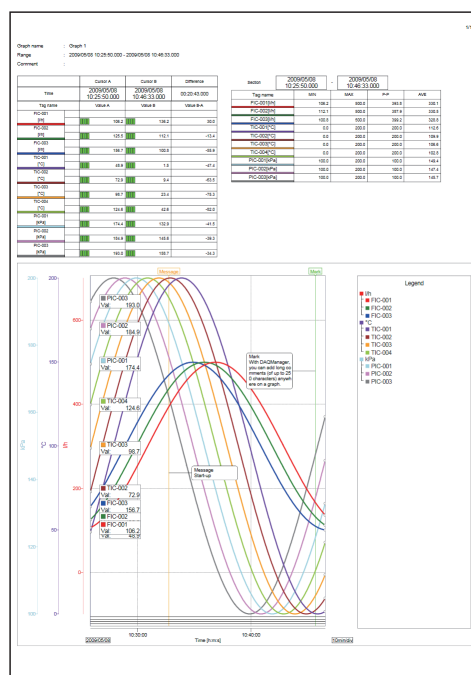

Figure Printing example

●**Printing the Alarm and Mark Lists**

Alarm list printed contents: Status (ON, OFF, ACK), channel number (or tag name or tag no.), level (L1–L4), type (High, Low, etc.), and time

Mark list printed contents: Time, title(*1),
          comment(*2), input user name,
          display group, and operation time
Print range: All data (regardless of the cursor
          state)
Color: Black-and-white
Print source: All groups
Print preview: Available

*1:   A title of up to 18 alphanumeric characters can be printed.
*2:   The number of characters in comments that can be printed is limited by the paper width (approximately 50 alphanumeric characters for an A4 portrait page)

■ Data Conversion Function

● Conversion from a trend graph

Data displayed in a trend graph can be converted to an Excel or text file.

Converted contents (Excel): The digital data(*1),
          alarm list(*2), and mark list(*3) of
          each display group are exported(*4)
          to separate worksheets within the
          same Excel file
Excel format: Excel 97
Converted contents (text): The digital data(*1), alarm
          list(*2), and mark list(*3) of each
          display group are exported(*4) to
          separate text files
Text format: Tab Separated Values
Conversion range: Area between cursors (or all data
          if cursors not displayed)
Conversion source: The range of digital data to
          convert is specified by display group
          numbers 1 to 50
If no value is found: Previous value interpolation, blank

*1:   Graph name, start time, stop time, group name, channel number, tag name, tag no., units, time series data (date, time, fraction of a second, measured data of each channel)
*2:   Status (ON, OFF, ACK), tag name, tag no., channel number, level (L1–L4), type (High, Low, etc.), and time
*3:   Time, title, comment, input user name, display group, and operation time
*4:   If the number of rows after export exceeds 65,536, files are divided every 65,536 rows

Figure Data converted to Excel

● Conversion from File List

The user can convert data files in a file list to Excel or text files.

Excel format: Excel 97
Text format: Tab Separated Values
Data thinning function: Conversion is executed at
          specified intervals

■ Daylight Saving Time and Time Zones

DAQManager can be set up for daylight saving time operation regardless of the daylight saving time setting on the recorder. Note that because time zones are not supported, you should not change the time zone setting on the operating system (data management mismatches can occur).

DST(*1) settings: Do not use DST, use DST setting of
          the OS, set DST

*1:   DST = Daylight saving time

■ Model and Suffix Code

1 license is only valid for 1 PC.

Table DAQManager Model and suffix code

Model	Suffix Code	Description
DXA250		DAQManager
Delivered format	-1	Installation medium: CD-ROM

■ Delivered Format

Delivered in CD-ROM format (or disc-at-once–created CD-R). The license number printed on the license number seal must be input during installation.

Accessories:
    License number seals: 2 (1 of the 2 is affixed
          to the CD-ROM case)
CD-ROM contents: DAQManager software
          installation program, users
          manual(*1)(*2), operation guide(*2)

*1:   User manual languages: English, Japanese and Chinese only
*2:   PDF version 1.5 format; note that Adobe Reader 7.0 or later is required to view

■ Basic Conditions and Individual Contracts at the Time of Purchase

The warranty for this product is defined in the basic conditions and individual contracts at the time of purchase. The individual conditions are as follows.

• **Validation**
  Yokogawa does not guarantee the final outcome of validation work even if there is a defect in the product.
  For the warranty of validation services, please contact the company that performed the validation work.
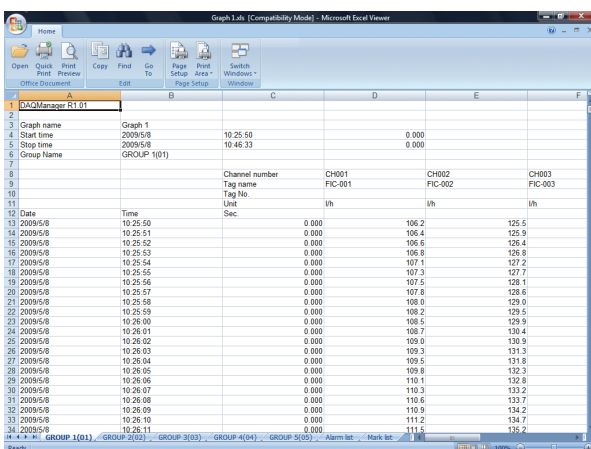
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