

General Specifications

RF10 OpreX Auto Report and File Conversion Software

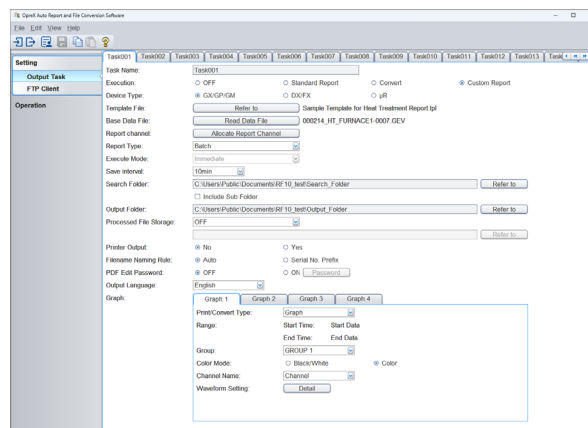
GS 04L63B01-01EN

[Version: R1.01]

Overview

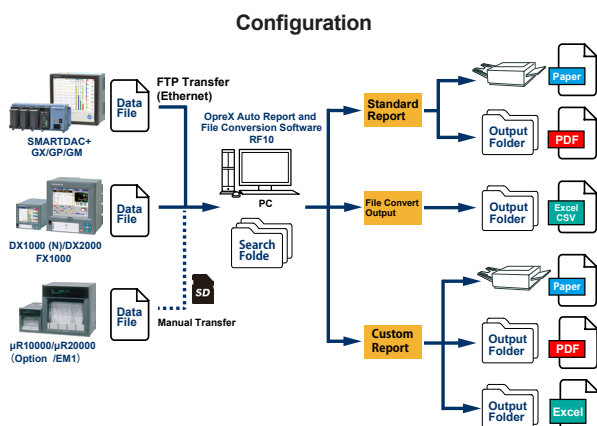
OpreX Auto Report and File Conversion software RF10 (hereinafter referred to as "RF10") can automatically output reports and perform conversion of data files recorded by the SMARTDAC+ series.

- There are three types of execution: "Standard Report", "Convert", and "Custom Report."
 - *Standard Report: Outputs to paper or PDF using RF10's fixed format.*
 - *Convert: Converts binary data files to Excel or CSV format.*
 - *Custom Report: Outputs to paper, PDF, or Excel format based on a user-created template.*
- Report output and file conversion start when the files are placed in a specified folder. The following methods are supported for file placement.
 - External FTP server (e.g. IIS FTP server)
 - FTP client function
 - Manually by the user
- Set up to 200 tasks to output reports and convert files.
- Configure up to 200 FTP client connections.
- The FTP client supports FTPS (Explicit mode). Implicit mode is not supported.
- Audit trails are supported.



Execution and Their Characteristics

		Execution		
		Standard Report	Convert	Custom Report
Overview		Output in RF10's fixed report format	Convert data files to Excel/CSV format and output them	Output reports formatted based on user-created templates
Condition		Immediately, Interval (hour, reference time), Every week (day of week, time), Every month (day, time)	Immediately, Interval (hour, reference time), Every week (day of week, time), Every month (day, time)	Hourly + Daily, Daily + Weekly, Daily + Monthly, Batch, Daily custom, Batch Report (Threshold)
Output template		Cannot be specified	Cannot be specified	Report templates for Excel report files (*.xlsx, *.xlsm), Report templates for PDF report files (*.tpl)
Graph output	Type	Graph, Digital, Circular, Alarm List, Mark List, Operation Log List	—	Graph, Alarm List, Mark List, Operation Log List
	Number of graphs	1 graph/setting	—	Up to 4 graphs/setting
	Items	Specified with Header Item	—	Specified with keyword
	Output channel	Cannot be specified (Specify by data file display group)	—	Max. 200 ch
Output type		Print, PDF	Excel, CSV	Print, PDF, Excel
Number of graph output pages		Multiple pages	—	The number of pages defined in the template



■ Specifications

Item	Description
Execution	Standard report output, File Convert output, Custom report output
Output task settings	Up to 200
Search folder settings	1 per output task (can include subfolders in search)
Output folder settings	1 per output task
Max number of search folders	500 total (including subfolders)
FTP client settings	Up to 200
Number of operation log displays	Up to 5000
Authentication settings	OFF, Password, User Account Number of users: Up to 20
Max number of audit trail entries	Unlimited (depends on storage capacity)

■ Target Models and Target Files

Target models and files for reports and file conversion are shown in the table below.

Model	Target File	Extension
GX10 GP10 GX20 GP20 GM10	Display data	*.GDS
	Display data (/AS)	*.GSD
	Event data	*.GEV
	Event data (/AS)	*.GSE
	Report data	*.GRE
	Manual sampled data	*.GMN
DX1000 DX1000N DX2000 FX1000	Display data	*.DAD
	Display data (/AS)	*.DSD
	Event data	*.DAE
	Event data (/AS)	*.DSE
	Report data	*.DAR
	Manual sample data	*.DAM
μR10000 ¹ μR20000 ¹	Event data	*.RXE

¹ Requires an SD memory card (/EM1 option).

File Type and Execution

Target File	Execution		
	Standard Report	Convert	Custom Report
Display data	Yes	Yes	Yes
Event data	Yes	Yes	Yes
Report data	Yes	—	—
Manual sample data	Yes	—	—

■ Function

□ Report Output and File Convert Function

Output Task

Register and manage output settings. When the target file is placed in the search folder, RF10 creates a report or converts the file according to the registered task, and saves the result in the output folder. You can register up to 200 output tasks.

Search Folder (Input)

This is the folder to search for data files used to create reports and convert files. You can include subfolders in searches.

Output Folder

This is the destination folder for created reports and converted files. If "include subfolders" is specified, the output files are saved in the same folder structure as under the search folder.

Processed File Storage

You can copy or move data files to the specified folder after the output is completed.

Adding a Serial Number to Output File Name

You can set whether to add the serial number of the target model to the beginning of the output file name.

For Standard Report and Convert:

• File Name

Addition	File Name
No	Data file name_ Output target name_XX
Yes	Serial No._Data file name_ Output target name_XX

XX: Serial number from 01

• Output Target Name:

Output Type	Output Target Name
Graph	GRAPH
Sheet (Digital)	SHEET
Circular	CIRCLE
Alarm	ALARM
Mark	MARK
Operation Log	OPERATE
Report (Hourly)	REPORT_HOUR
Report (Daily)	REPORT_DAY
Report (Weekly)	REPORT_WEEK
Report (Monthly)	REPORT_MONTH
Report (Batch)	REPORT_BATCH
Report (Daily Custom)	REPORT_CUSTOM
Report (Free)	REPORT_FREE
Report (all display)	REPORT_ALL
Report (COLUMN BAR)	REPORT_INTEG
Data Convert	DATA
Statistics	STAT

For Custom Reports:

• File Name

Addition	File Name
No	YYYYMMDDHHMMSS_XX
Yes	Serial No._YYYYMMDDHHMMSS_XX

XX: Serial number from 01

YYYYMMDDHHMMSS: Year, month, day, hour, minute, second

PDF Editing Restrictions

You can automatically set a password to restrict editing of the output PDF report. This password restricts editing only; it is not the password for opening the PDF.

Output Language

English, Japanese, Simplified Chinese, Traditional Chinese, French, German, Russian, Korean, Italian

Channel Name

You can set the channel display type.

- Type: Channel, Tag No., Tag comment

Header Item

When configuring standard reports and conversion, you can select the items to include in the header.

Item

Basic Info.	Batch Info.	Signature Info.
File Name	Batch No.	Signature 1
Process Type	Lot No.	Signature 2
Device Type	Comment 1	Signature 3
Serial No.	Comment 2	Signature 1 Comment
File Message	Comment 3	Signature 2 Comment
Time Correct	Title 1	Signature 3 Comment
Starting Cond.	Title 2	
Dividing Cond.	Title 3	
Meas Ch.	Title 4	
Math Ch.	Title 5	
Comm Ch.	Title 6	
Ext. Ch.	Title 7	
Data Count	Title 8	
Sampling Int.	Title 9	
Start Time	Title 10	
End Time	Title 11	
Trigger Time	Title 12	
Trigger No.	Title 13	
Damage Check	Title 14	
Started by	Title 15	
Stopped by	Title 16	
Calibration Corrected Ch.	Title 17	
Management No./ Comment	Title 18	

Basic Info.	Batch Info.	Signature Info.
	Title 19	
	Title 20	
	Title 21	
	Title 22	
	Title 23	
	Title 24	

Statistics

You can show or hide statistics. Applies to both standard reports and conversion.

Execution

• Standard Report

Output in RF10's fixed report format ¹

- ¹ Equivalent to the print format of Universal Viewer, which is the standard software of the SAMRTDAC+ series.

Output Information

Graph, Digital, Circular, Alarm List, Mark List, Operation Log List (Does not support image marks or control system logs.)

Output Format

Paper, PDF ¹

- ¹ Microsoft Print to PDF is the only virtual printer supported for PDF output.

Execute Mode

You can choose an execute mode of Immediate ¹, Interval, Every Week, or Every Month.

- ¹ When the file type is Report Data or Manual Sample Data, only [Immediate] can be selected.

Execute Mode	Settings
Immediate	—
Interval	Time (1 hour/2 hours/3 hours/4 hours/6 hours/8 hours/12 hours/24 hours), Reference Time
Every Week	Day of Week, Time
Every Month	Date, Time

Range (File Kind: Display Data and Event Data Only)

You can set the range of data to output. What you can set depends on the execute mode.

Execute Mode	Settings
Immediate	All, Specify Time
Interval	Start Time, End Time
Every Week	
Every Month	

Printer

You can select a destination printer from those registered on your PC.

Color Mode

Black/White, Color

Group Select

You can specify up to 60 groups.

Page Combination

When outputting to PDF, you can combine the individual PDF files from each output into a single file.

• Convert

Converts the data file to Excel/CSV format and outputs it.

Output Target

Data File, Alarm List, Mark List, Operation Log List
(Does not support image marks or control system logs.)

Output Format

Excel, CSV

Execute Mode

You can choose an execute mode of Immediate, Interval, Every Week, or Every Month.

Execute Mode	Settings
Immediate	–
Interval	Time (1 hour/2 hours/3 hours/4 hours/6 hours/8 hours/12 hours/24 hours), Reference Time
Every Week	Day of Week, Time
Every Month	Date, Time

Range

You can set the range of data to be output. What you can set depends on the execute mode.

Execute Mode	Range
Immediate	All, Specify Time
Interval	Start Time, End Time
Every Week	Start day of week • Time, End day of week • Time
Every Month	Start date • Time, Stop End date • Time

Step

If the conversion is digital, data can be thinned.
Step: 1 to 32000000

• Custom Report

Outputs the report formatted based on a user-created template.

Output

Outputs the contents according to the template

Output Format

Paper, PDF, Excel

Template

File Type

- Print/PDF: .tpl
- Excel: .xlsx, .xlsm

Base Data File

By loading a data file, you can view the channels in the file as candidates for report channel selection.

Report channel

You can assign report channels (R001–R200) and set the integration unit.

Report Type

You can selected from Hourly + Daily, Daily + Weekly, Daily + Monthly, Batch, Daily custom, Batch Report (Threshold)

Execute Mode

The execute mode differs depending on the type of report.

Report Type	Settings
Hourly + Daily	Everyday (fixed), Time
Daily + Weekly	Every Week (fixed), Day of week, Time
Daily + Monthly	Every Month (fixed), Day, Time
Batch	–
Daily custom	Interval (fixed), Time, Reference Time
Batch Report (Threshold)	Comparison Value (Channel/Tag No./Tag Comment), Starting Condition (threshold, Up/Down), Ending Condition (threshold, Up/Down)

Save interval

When the report type is Batch or Batch Report (Threshold), you can set the frequency at which data is recorded as digital values in the report.

- Save interval: 1min/2min/3min/4min/5min/10min/15min/30min/1hour

Printer Output

For print/PDF output templates (*.tpl), you can select whether to output the report to a printer.

Graph

You can arrange the chart according to the layout defined in the template. Up to 40 graphs can be configured in one template. The contents of each graph can be selected from the following four items.

- Graph
- Alarm List
- Mark List
- Operation Log List

Operation

Auto Operation

- Automatically starts the selected output task and outputs continuously according to the task settings.
- You can view the operational log of all tasks or a specified task. A maximum of 5000 operational logs can be displayed. In excess of 5000, old logs are deleted to make room for new ones.

Description

Item	Description
Operation Log	Time, Task No., Task Name, Log Detailed Info.

Manual

- Specify the output task and target file, then output only once.

FTP Client Function

You can connect to the FTP server ¹ of the recorder and retrieve files. You can set up to 200 connections. In Automatic mode, the target folder is continuously monitored every 10 minutes, and new files are automatically retrieved if there are any. In Only at PC Startup mode, files with the specified acquisition period are acquired only once upon PC startup.

- ¹ Operation is not guaranteed for connections other than the recorder.

Settings

- Execute Mode: Auto, Only at PC Startup
- Host Name/IP Address: Up to 255 characters
- Initial Port No.: 21
- Acquisition Folder: Internal (/MEM0/DATA/), External (/DRV0/), Custom
- Encryption (FTPS): OFF, SSL/TLS
You can turn Certificate Confirmation on or off. Explicit mode is supported. Implicit mode is not supported.
- Authentication: User Name, Password
- Data Session: Only PASV mode is supported.
- Save Folder Path: Up to 255 characters
If the recorder multi-batch function is enabled, a subfolder is created for each batch.
- File kind: Display Data, Event Data, Report File, Manual File
- Acquisition Period: 1 Week, 1 Month, 2 Months (Execute Mode: Only at PC Startup)

Operation

Auto Operation/Only at PC Startup

- Execute the operation of the selected FTP client settings.
- Allows you to view the operational logs for all FTP clients or a specified FTP client. A maximum of 5000 operational logs can be displayed. In excess of 5000, old logs are deleted to make room for new ones.

Description

Item	Description
Operation Log	Time, FTP client No., FTP client name, Log detail Info.

Manual

- You can manually retrieve files by selecting FTP client settings and specifying the files you want to retrieve from the file list of the connected recorder.

Audit Trail View

RF10 operation history and configuration changes are recorded as an audit trail. Operational logs and error information are also centrally managed in the same audit trail. The recorded audit trail can be searched and filtered.

Description

- No., Time, User Name, Management No., Task Name, Type, Log, Comment, Detailed Info

Detailed Information

Type	Item	Detailed Info
System	Service Started	Computer Name
Security	Login Successful	—
	Login Failed	—
	User Invalid	—
	Authentication Method Changed	Authentication Method
	User Added	User name
	User Deleted	
	Password Initialized	
	Password Changed	
Settings	Settings Saved	Setting serial No.
	Settings Difference	Currently configured serial number Past configured serial number
	Settings Exported	Setting serial No. Output file name File size Hash value
	Settings Imported	Setting serial No. Input file name File size Hash value
Task Execution	Execution Started	—
	Execution Failed	—
	Execution Stopped	—
	Manual Execution Successful	Task name Target file full path
	Manual Execution Failed	Task name Target file full path

Continued on next page

Type	Item	Detailed Info
FTP Client Execution	Execution Started	Client No.
	Execution Failed	
	Execution Stopped	
	Manual Execution Successful	
	Manual Execution Failed	
	File Acquisition Successful	File name
	File Acquisition Failed	
	Some Files Acquired Successfully	
Audit Trail	Comment ON	—
	Comment OFF	—
	Output Successful	RF10 Serial No. Task name Setting Serial No. Input file name Output file name File size Hash value
	Output Failed	RF10 Serial No. Task name Setting Serial No. Input file name File size Hash value
	Export	File name File size Hash value
	View Audit Trail	—

Export

You can export the contents of the audit trail in CSV format.

Common Functions

Automatic File Retrieval

The FTP server or FTP client function allows you to retrieve data files.

Authentication Function

You can restrict who can use RF10 by authenticating with a password or user account.

- Authentication Methods: Off, Password, User Account
- Login: Login with password or user account
- Scope of operation with authentication method:

Authentication Method	Certificate Settings	User Management	Setting Change	Operation
OFF	Yes	No	Yes	Yes
Password	Yes	No	Yes	Yes
User account				
Administrator	Yes	Yes	Yes	Yes
User	No	No	Yes	Yes

User Management (User Account)

You can manage users when the authentication method is User Account.

- Number of registered users: 20
- User Level: Administrator, User
- Account: User Name, User ID, Password

User No.	User Level	User Name	User ID	Password
01	Administrator			Initialize
02				Initialize
03				Initialize
04				Initialize
05				Initialize
06				Initialize
07				Initialize
08				Initialize
09				Initialize
10				Initialize
11				Initialize
12				Initialize
13				Initialize
14				Initialize
15				Initialize
16				Initialize
17				Initialize
18				Initialize
19				Initialize
20				Initialize

Batch Output of Separate Files

Recorder auto save, and files divided by power outages are automatically treated as a single file and can be output as continuous data.

Import/Export

You can import and export settings.

Setting Display

You can display the settings in a list.

Environment Migration

You can migrate operational data such as RF10 settings and audit trails to other PCs. The migrated database can be password-protected, reducing the risk of information leakage.

□ Others

Auto-build an FTP Server

When installing RF10, you can automatically build an FTP server by simply entering its configuration information (using IIS).

Trial Period

You can use the software without a license for 60 days in Trial mode. The settings created during the trial period are carried over if you purchase a standard (no-option) license.

If you purchase a Lite (option /LE) license the settings are initialized, but you can restore your settings by exporting them during the trial period and then importing them after you enter the license.

□ Template Creation Tool

To output a custom report, you need to create a template that defines the report layout and contents. Keywords placed in the template are replaced with information in the data file when the report is output.

- Report template in PDF format: Create with "SMARTDAC+ Report Template Builder."
- Report template in Excel format: Create in Microsoft Excel. The Keyword Assist tool is available.

Keyword Assist Tool

This tool enables the Keyword Input Support function included in the SMARTDAC+ Report Template Builder (R6.01 or later) for creating report templates in Excel. You can automatically create and copy keywords by selecting them and setting the required parameters. You can create Excel templates efficiently by pasting copied keywords into them.

Please download "SMARTDAC+ Report Template Builder" and "Keyword Assist Tool" from the URLs below. If you install SMARTDAC+ Report Template Builder R6.01 or later, the Keyword Assist tool is already included.

<https://myportal.yokogawa.com/>

■ Optional Functions

Lite Edition (option, /LE)

File conversion and FTP functionality only (standard and custom reports not included). You can upgrade from the Lite edition to the standard edition for a fee.

■ PC System Requirements

Operating Environment

The RF10 is intended for use in a closed (non-Internet) network.

Not intended for use in an Internet environment.

The warranty is invalid if the RF10 is used over the Internet.

Hardware ¹

Item	Description
CPU	Intel Core i5 or higher (12th generation or higher) or equivalent or better performance
Internal memory	16 GB or more
Storage	64 GB or more of free space, SSD recommended, NTFS recommended.
Communication ports	Ethernet port compatible with OS

¹ We do not guarantee functionality in a virtual machine.

Operating System ^{1, 2}

OS	Edition
Windows 11	Pro
	Enterprise
Windows Server 2019	Standard
Windows Server 2022	Standard
Windows Server 2025	Standard

- ¹ Be sure to match the display language of this software, the language of the OS, and the language of the recorder unit of the target data file.
- ² Yokogawa will also stop supporting OSs that Microsoft Corporation no longer supports.

Related Software

Item	Description
Universal Viewer	Displays data file
Report Template Builder	Create a PDF report template
Keyword Assist Tool	Support for entering keywords for Excel format report templates
Microsoft Office Excel	Excel 2021, Excel 2024, Microsoft 365
PDF Reader	Adobe Acrobat Reader(the latest version recommended)
Microsoft Visual C ++ v14 Redistributable ¹	A package called the Visual C++ Redistributable Package.

- ¹ When you run the RF10 installer, these runtimes and packages are automatically installed. It is not necessary to prepare them in advance.

■ Model and Suffix Codes

Basic Software

Model	Suffix Code	Optional Code	Description
RF10			OpreX Auto Report and File Conversion Software
Optional functions		/LE	Lite edition

Upgrade License

Model	Suffix Code	Optional Code	Description
RF10UP			Upgrade License for RF10
Upgrade	-01		Light edition → Standard edition

■ How the Software is Provided

Name	Description
License sheet	Contains the license keys. Check that the correct number of licenses are present.

■ Accessories (Sold Separately)

Product	Model/part no.
Validation Document for RF10 ^{1, 2}	775230

- 1 Provision of Validation Documents
A license sheet containing the license key required for installation is provided.
- 2 Validation documents for RF10. Does not contain validation documents for the 773230 SMARTDAC+ (for /AS option) or 438230 DX (for /AS1 option).

Software

Download the latest version from the following URL:

<https://myportal.yokogawa.com/>

User's Manual

Product user's manuals can be downloaded or viewed at the following URL. To view the user's manual, you need to use Adobe Acrobat Reader (the latest version recommended).

<https://www.yokogawa.com/daqsoft/>

Validation Document

Download the validation document from the following URL:

<https://myportal.yokogawa.com/>

■ 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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