

Comprehensive Device Management Program DAQ Master USER MANUAL



Thank you very much for selecting Autonics products. For your safety, please read the following before using.

Preface

Thank you for purchasing an Autonics product.

This user manual contains information about the product and its proper use, and should be kept in a place where it will be easy to access.

User Manual Guide

This user manual contains information about the product and its proper use, and should be kept in a place where it will be easy to access.

- Please familiarize yourself with the information in this manual before using the product.
- This manual provides detailed information on the product's features. It does not offer any guarantee concerning matters beyond the scope of this manual.
- This manual may not be edited or reproduced in either part or whole without permission.
- A user manual is not provided as part of the product package. Visit <u>www.autonics.com</u> to download a copy.
- The manual's content may vary depending on changes to the product's software and other unforeseen developments within Autonics, and is subject to change without prior notice.
- This manual is produced based on DAQMaster 2.6.0 version.

User Manual Symbols

Symbol	Description		
Note	Supplementary information for a particular feature.		
Å Warning	Failure to follow instructions can result in serious injury or death.		
🛕 Caution	Failure to follow instructions can lead to a minor injury or product damage.		
Ex.	An example of the concerned feature's use.		
×1	Annotation mark.		

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1 DAQMaster Overview

1.1 Overview

DAQMaster is a comprehensive device management program that can be used with Autonics communication supporting products.

DAQMaster provides GUI control for easy and convenient management of parameters and multiple device data monitoring.



1.2 Features

(1) DAQMaster Pro Version Feature

Data Base

Database managing system (Access, MySQL, SQL Server, Oracle, SQLite) turns information into database in real-time, making creation and management of database easier.

- Real-time Logging
 At the set cycle and condition, real-time log file is generated in CSV file.
- Modbus Device Editor

You can add the any modbus devices which are not supported at DAQMaster to set and monitor the property and I/O.

OPC Client

It is Interface method for better compatibility among application programs based on OLE/COM and DCOM technology of Microsoft. It provides industry standard mechanism for communication and data conversion between client and server.

DDE Client

It supports communication (IPC) among process embedded in Microsoft Window system, allowing application programs to share and exchange information. This function uses shared memory and provides a common protocol (instruction set and message format) to application programs.

(2) Featurs

• Multiple Device Support

Simultaneously monitor multiple devices and set parameters. Simultaneously connect units with different addresses in a single device. Multiple RS-232 ports are available for communications using Modbus remote terminal unit.

Device Scan

In cases of multiple units (with different addresses) connected together, the unit scan function automatically searches for units.

Convenient User Interface

Freely arrange windows for data monitoring, properties, and projects. Saving a project also saves the screen layout.

Project Management

Saving data as a project file includes added device information, data monitoring screen layouts, and I/O source selection. When you open the project file, the last state of the saving moment will be loaded. Organizing project list makes managing project files easier.

• Data Analysis

Performs grid and graph analyses of data files (*.ddf) using data analysis feature of DAQMaster. Saves grid data in .rtf, .txt, .html, or .csv files in Data Grid.

Monitoring Data Log

When monitoring, data log files can be saved in either DAQMaster data files (.ddf) or CSV (.csv) files. Open files saved in .csv format directly from Microsoft Excel. Define log data file naming/saving rules and destination folders to make file management convenient.

- Tag Calculation Editing
 Read tag value is available to calculate the set formula for the desired value.
- Print Modbus Map Table Report

Print address map reports of registered Modbus devices. Modbus map table reports can be saved in html (*.html) and pdf (*.pdf) formats.

Multilingual Support

Supports Korean, English, Japanese, and Simplified Chinese. To add a different language, modify the files in the Lang folder rename, and save.

Script Support

Uses the Lua Script language and deals with different I/O processes for individual devices.

1.3 DAQMaster Funtion Comparison Table by Version

Functions	General version	Pro version
Modifying parameter	0	0
Data monitoring	0	0
Data log	0	0
Tag calculation editing	0	0
Trigger	X	0
Data analysis	0	0
Analysis spread	X	0
User Modbus Device Editor	X	0
Script Ecitor	Х	0
Database Device	Х	0
DDE Server	Х	0
TCP/IP Server	Х	0
DDE Client	Х	0
OPC Client	Х	0
WMI Manager	Х	0
Realtime Log (CSV)	0	0
Realtime Log (DB)	Х	0
SQL Server	Х	0
Oracle	Х	0
MySQL	Х	0
PostgreSQL	Х	0
SQLite	Х	0
Nexus DB	Х	0
Inter Base	Х	0
Firebird	Х	0
ODBC	X	0
MS Access	X	0
Sybase ASE	X	0
Sybase ADS	X	0
DB2	X	0
DBF	Х	0

2 Installing the Program

2.1 System Requirements

Item	Minimum specifications
System	IBM PC compatible computer with Intel Pentium III or above
Operations	Windows 98/NT/XP/Vista/7/8/10
Memory	256 MB+
Hard disk	1GB+ of available hard disk space
VGA	Resolution: 1024×768 or higher
Others	RS232C serial port (9-pin), USB port

2.2 Preparations

- 1st Download DAQMaster program at Autonics' web page(www.autonics.com).
- 2nd Close all programs before you start DAQMaster installation.

Double-click DAQMaster setup.exe to start installation.

3rd Installer Language window appears. Select the language and click OK button. DAQMaster supports English, Japanese, Korean and Simplified Chinese.

Installer La	anguage	۲
	Please select the language of the installe	r
	Korean	•
	English	
	Japanese	
	Korean Simplified Chinese	
	Simplified Granese	
Installer La	anguage	۲
	Please select the language of the installe	r
	English	•
	OK Cancel	



5th Choose Install Location window appears. Default installation path is C:\Program Files

(x86)\DAQMaster.

其 DAQMaster Free 2.0.0.2705 Setup			ی د
Choose Install Location Choose the folder in which to install DAQMaste	er Free 2.0.0.2705.		
Setup will install DAQMaster Free 2.0.0.2705 in folder, click Browse and select another folder.			ent
Destination Folder		Browse	
Space required: 125.0MB Space available: 15.6GB			
Autonics, Inc. DAQMaster Free	< Back Ir	nstall Ca	ncel

4th Click Next in the installation welcome window.

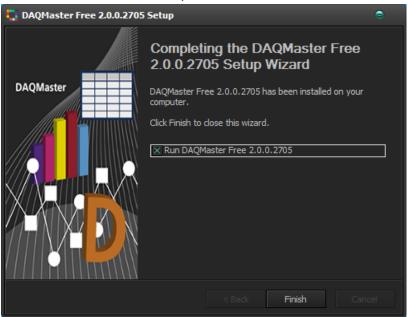
6th Click Install button to choose the default path for installation. Click Browse button to change the installation path. In the Browse Folder window, select the desired destination folder and then click OK to start installation.

🚦 Browse For Folder	2
Select the folder to install DAQMaster Free 2,0,0,2705 in	
3DP Autonics Documents and Settings IzexTemp Autonics IzexTemp Nextepmsn NVIDIA Program Files Adobe Adobe Adobe Media Player Adobe Media Player Adobe Adobe Common Files Common Files ComPlus Applications DAQMaster DAQMaster for ASONE	
Make New Folder OK Cancel	

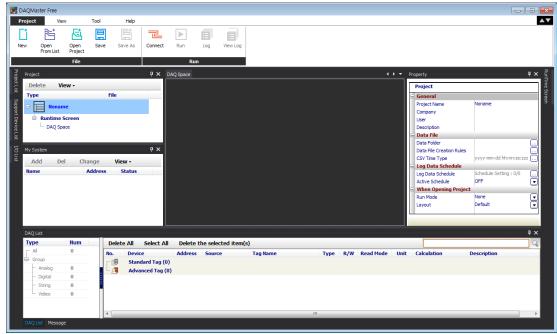
7th Installation progress is displayed in the status window as follows.

😳 DAQMaster Free 2.0.0.2705 Setup		۲
Installing Please wait while DAQMaster Free 2.0.0.2705	is being installed.	
Extract: autonics.tk4.dev 100%		
Show details		
Autonics, Inc. DAQMaster Free		

8th Installation Complete window appears after installation is completed. If the check box in the Installation Complete window is checked, DAQMaster runs upon completion of installation. You can now run DAQMaster by double-clicking the DAQMaster icon on the desktop.



When running the program for the first time, the initial screen displays the following.



2.2.1 Register License

When installing DAQMaster, it provides pro demo version.

After finishing demo period (30 days), pro functions are inactive. Only general version is available.

After registering license, pro functions are available: DDE Server, Edit ModBus Device, TCP/IP Server, Script Editor, Trigger, Realtime Log, Miscellaneous (Database, DDE Client, OPC Client, WMI Manager) and analysis spread of data analysis.

For purchasing licenses, contact the retailers by referring the web site (<u>www.autonics.com</u>).

(1) Entering license

1st Enter Help > License menu.



2nd At License, click 'Request Serial Number'.

License				 X
License	© US	B Dongle		Close
Contact Autonics to register o System ID	r upgrade this pr	oduct.		DAQMaster
8F43				Brightaster
DAQMaster Pro?	Request Se	erial Number		
	License	Tag Limit	Client	
	1	50	1	
Demo Remaining Period		0Day		
Serial Number			Register	
Register Code				

Enter user information (last name, family name, company, etc.) and click 'Save clipboard'. Based on this information, ask the serial number and register code to the retailer.

otanor.			
Request Serial	Number		x
User Informatio	n		
Lastname			
Firstname			
Company			
Phone			
Email			
System Id			
Sav	e dipboard	Cancel	

3rd Enter the provided serial number and register code.

4th When click 'Register', the program will be registered as pro version and be able to use pro functions continuously.



The registered Pro version displays the registered number of licenses and tag limit.

After registering Pro version, 'Register' button turns into 'Upgrade' button. When you enter new serial number, registered number of licenses and tag limit are changed, corresponding to new serial number.

(2) Connecting USB dongle

Plug the USB dongle for DAQMaster Pro license to your PC and run the DAQMaster Pro. The license key is installed automatically. (it may take some time.)

🖉 Note

You can check the serial number, (the number of) tag limit, and (the number of) client at USB Dongle of "Help>License" at Help menu,

C License		OSB Dongle	Close
	Serial No 2018	_	DAQMas
	Tag Limit	Client	
	100	5	

2.2.2 Installation Folder Structure

This section explains the folder structure created when you installed DAQMaster.

After DAQMaster installs completely, folders are created as below. The program and all relevant documents are stored in these folders.

If you selecte the default installation path during installation, a DAQMaster folder is created under [C:\Program Files] as a subfolder. If you selecte a new destination folder, DAQMaster folder is located in that folder.

DAQMaster

data
device
 help
 Lang
 plugin
 sample
tools

(1) Device folder

Device folder contains the device information files (*.dev), which can be monitored and set with DAQMaster. When the program is executed, the files in this folder automatically add related devices to the program.

If devices are added or upgraded after the program is installed, copy the device information file and put it into this folder. The list of available devices will be updated. However, if a communication related function is added or modified, it also changes the contents of the [plug-in] folder. Therefore changes may or may not be applied depending on the level of upgrade.

(2) Lang folder

The language information files (*.lang) available in this program are contained here. The program reads all files in the folder and automatically adds them to the program when it runs. The language information files are written in a text file format, so you can modify and add text using XML Notepad. Korean, English, Japanese, Simplified Chinese language files are in this folder by default.

(3) Plug-in folder

This folder contains core library files (*.dll) for ModBus communications as well as runtime screen files (*.rpu). The [prop] folder under the [plug-in] folder stores library files that have special functions for each specific device.

2.2.3 Uninstalling the Program

There are procedures to uninstall DAQMaster. Select Start > Program > DAQMaster > Uninstall or Start > Setting > Control Panel > Add/Remove a Program > DAQMaster.

If you select Remove, a confirmation window will appear. Click Yes to remove DAQMaster from the computer.

2.3 Start and Exit

2.3.1 Start

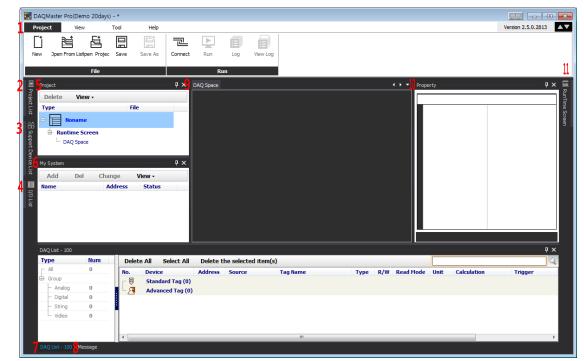
Double-click DAQMaster on the desktop or select Start > Program > DAQMaster to start DAQMaster.

2.3.2 Exit

Click X button on the top right corner of the screen to end the program.

Projects are not saved automatically. Please make sure you save the project before you exit.





2.4 DAQMaster Screen Layout

The program screen is divided into sections as shown in the preceding screenshot and each section is composed of the following items.

NO.	Item	Description
1	Menu	Displays DAQMaster menus by category. If you select a
1	Meriu	menu, submenus appear.
2	Project List	Displays recent projects or usually used project list to
2		manage the files.
3	Support Device List	Displays a list of devices supported by DAQMaster.
4	I/O List	Displays parameter items of devices added to My System.
5	Project	Shows the basic information of the current project.
6	My System	Shows list and connection status of devices connected to
0	Wy System	DAQMaster.
7	DAQ List	Shows added parameter items in I/O List.
		Records events.
8	Message	It displays communication connection and disconnection,
		errors.
9	DAQ WorkSpace	Displays added UI items in RunTime Screen.
10	Property	Allows checking and modification of information for items in
10	горецу	Project, My System, DAQ List and setting unit parameters.
11	Run Time Screen	Displays screen library for data monitoring.

2.4.1 Menu

(1) Project

Project	View	Tool	Help				
New Dpe	en From Listper	Projec Save	Save As	Connect	Run	Log	View Log
		File			Rı	JN	

1) File

- New: Creates a new project.
- Open From List: Opens a project from the project list.
- Open Project: Opens a saved project.
- Save: Saves the project you are working on.
- Save As: Saves the project as a file name.

2) Run

- Connect/Disconnect: Connects or disconnects the device and communication.
- Run/Stop: Starts or stops monitoring data in the connected devices.
- Log/Stop logging: Saves or stops logging currently monitored data.
- View Log: Views log data during logging. You can check data between Log running point and View Log executing point.

(2) View

Project View	Tool	Help		
Tool - Language -	Tile Align Horizonta Align	Vertical Align	Layout -	User Layout
View	Windows	5		Layout

3) View

- Tool: Set for Property, Support Device List, My System, Project, I/O List, Run Time Screen, DAQ List, Message of the project.
- Language: Changes the program language.
- 4) Windows

Aligns multiple runtime screens (Data: Grid, Multi Panel, Panel, Line Graph, Bar Graph, Color Map Graph, Gauge Graph, Histogram Graph, Device: Alarm History Grid) diagonally, horizontally, and vertically.

5) Layout

Executes saving, deleting, loading layout. You can select the saved layout at User Layout.

Lay	+] rout -	User La	yout
	Defau Runti		
		Layout e Layout	

- Default: Changes docking screen layout to default layout.
- Runtime: Displays only run time screen. Select the hidden docking screen at View menu.
- Save Layout: Saves the current layout and adds it at User Layout.

Save Layout	
Standard	•
ок	Cancel

• Delete Layout: Select the saved layout and delete it.

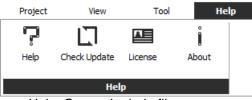
Delete Layout	
Standard	
ок	Cancel

(3) Tool

Project	View	Tool	Help		
Time Display	Data Analysis	DDE Server	dit ModBus Devic		Script Editor
Time Display	Data Analysis		ool	Server	Script Editor

- Time Display: Displays monitoring time.
- Data Analysis: Runs the data analysis program. Allows analysis of DAQMaster data file (*.ddf).
- DDE Server: Runs DDE Server setting.
- Edit ModBus Device: Executes Modbus Editor.
- TCP/IP Server: Operates DAQMaster as a TCP/IP Server.
- Script Editor: Runs Script Decive Editor

(4) Help



- Help: Opens the help file.
- Check Update: Checks the version of the program via the internet update server and automatically updates to the latest version.
- License: Registers and checks license.
- About: Checks the DAQMaster version.

2.4.2 Support Device List (Docking Screen)

Support Device List shows list of devices supported by DAQMaster. The Support Device List will be updated continuously.

Support Device List			⊨ ×
Search Device			Q
Name		Function	
	NICS (16)		^
- 0	ARM Series	Modbus Digital Remote I/O	
	BFC	Digital Display, Fiber Optic Amplifier	
- 📷	CT Series	Programmable Counter(Timer)	
- 9 8 c	DS(A)-xT Series	Intelligent Display Unit	
- 9 8 0	DS-RRT Series	Intelligent Display Unit	
- 🚌	MP5 Series	Pulse(Rate) Meter(ModBus)	
- 🚌	MP5W	Pulse(Rate) Meter	
	MP5Y	Pulse(Rate) Meter	E
	MT4 Series	Multiple Panel Meter	
	SCM-USU2I	2-CH USB Temperature Data Logger	
- 1	THD	Temperature/Humidity Controller	
	ГК4	General-Purpose Temperature Controller	
	TM2	2-CH Modular Type Temperature Controller	
	TM4	4-CH Modular Type Temperature Controller	
	TX Series	LCD Display Temperature Controller	
	TZ/TZN	Dual PID Control Temperture Controller	
E- n Miscell	aneous (3)		-
	Database	Database	
	DDE Client	DDE Client	
	OPC Client	OPC Client	
Proces	s Automation (7)		
	OPU (1-Phase)	Thyristor Unit	-

2.4.3 Project

Project saves runtime screen information and I/O source. Allows you to work in previously used environments again. In Property at the right side of the screen, you can change general information, data file, log data schedule, and project opening option. For more information, refer to '2.4.9 Property'.

Project			×
Delete View			
Туре		File	
Noname			
🖶 Runtime Scre	en		
🖶 DAQ Space			
- Gri	d	Grid	
	lti Panel	Multi Panel	

2.4.4 I/O List (Docking Screen)

I/O List shows parameters entries you can monitor for devices added to My System. I/O List appears depending on connected devices.

To monitor units of the connected device, you have to list desired sources from I/O List to the DAQ List. Searching function is available.

ice	Source	Interface
👪 тка	1 (0/19)	R5-232 - COM3
- Presen	t Value	Analog, R
- Set Val	ue	Analog, R
- Heating	g MV	Analog, R
- Cooling	MV	Analog, R
- Heater	Current Monitoring	Analog, R
- °C Lam	p	Digital, R
- °F Lam	p	Digital, R
— %Lam	p	Digital, R
	amp	Digital, R
	amp	Digital, R
- AT Lam	p	Digital, R
- SV1La	mp	Digital, R
— SV2 La	mp	Digital, R
— SV3 La	mp	Digital, R
— AL1La	mp	Digital, R
— AL2 La	mp	Digital, R
— MAN La	amp	Digital, R
— DI-1 IN		Digital, R

Added sources are shown in gray.



I/O source cannot be added to DAQ List when the Status is Run.

2.4.5 My System

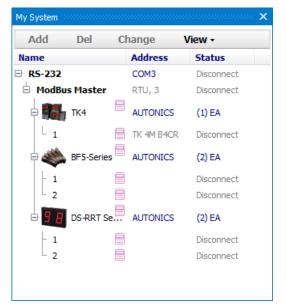
My System displays devices and units added from the device list in a tree structure. You can also check and configure connection status.

You can add, change or delete devices and units (addresses) in My System.

Add Del	Change	View -	Add Del	C	hange	View -
Name	Address	Status	Name		Address	Status
RS-232	COM3	Disconnect	■ RS-232		COM3	Connected
🗄 ModBus Master	RTU, 3	Disconnect	🗄 ModBus Mast	er	RTU, 3	Connected
🗆 🎼 тк4	AUTONICS	(1) EA	🗄 🎆 тк4		AUTONICS	(1) EA
L 1	🗄 TK 4M B4CR	Disconnect		E	TK 4M B4CR	Connected

- RS-232: Allows property modification related to RS-232 communications in Property when devices are disconnected.
- ModBus Master: Allows property modification related to ModBus Master protocol in Property when devices are disconnected (mode and the number of re-try are displayed).
- Device (TK4): Allows you to see connected device information.
- Unit (1): Allows read and write of parameters as well as check the reading process while devices are connected.

Connects a device to multiple communications ports as displayed in following image.



2.4.6 DAQ List

DAQ List is a list of I/O sources that will be communicated.

the number of I/O sources is displayed by signal type in the left list. When one of signal type is selected, I/O sources in right list is rearranged by signal type.

DAQ	List coccocco	000000000000000000000000000000000000000	0010000		000000					000100000000	00000000		0100010001			4 x
Тур	e	Num		D	elete	e All Select All	Delete t	he selected item(s)								Q.
F A		19		No).	Device	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calculation	Description	
Ē- G				₽		Standard Tag (19))									~
	Analog	5				COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Cont		1		E
	Digital	14			-4	COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R	Cont		,		
	String	0			-4	COM3_TK4	1	Heating MV	COM3_1_Heating MV	Analog	R	Cont	%	1		
└ Vidieo		0				COM3_TK4	1	Cooling MV	COM3_1_Cooling MV	Analog	R	Cont	%	,		
						COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R	Cont	Α	1		-
				•												F .

Vou con coorch the	dealrad tog	(atopdard a		ot the r	ight top	of the	
You can search the	desired lag	(stanuaru u	n user)	alther	Igni-lop	or the	DAQLISI.

Delete	All Select All	Delete ti	he selected item(s						Present		Q
No.	Device	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calculation	Description	
P 🗊	Standard Tag (1)										
L 🗸	COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Cont		1		
L 🖉	Advanced Tag (0)										
•											÷.

Note

Elements of the DAQ List cannot be added to a runtime screen when the Status is Run.

2.4.7 Message

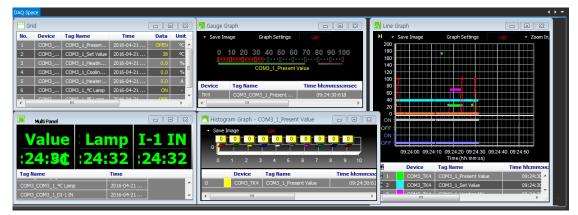
Records events (communication status (start/stop communication, error), log status (start/stop log), etc.) during running the program.

Level Time Tag Message Debug Info Warnov Error Alarm	Message	e						 		: 4 ×
	Level	Time	Tag	Message	Al Debug Info Warn ✓ Error	W: 0	E: (XXX	

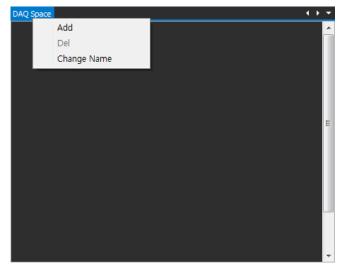
Messages are saved as *.txt file or log file. Log file is reside in 'Message' folder in the installation folder.

2.4.8 DAQ WorkSpace

Displays added UI screen (Data: Grid, Multi Panel, Panel, Line Graph, Bar Graph, Color Map Graph, Gauge Graph, Histogram Graph, Device: Alarm History Grid) in RunTime Screen.



To add or delete DAQ WorkSpace or change DAQ WorkSpace name, click "DAQ Space" of DAQ Space screen.



Click pull-down icon (▼) on the upper right of DAQ WorkSpace to select the activated space.

Ex.

The name of the DAQ WorkSpace is changed to 'Gauge and Color', and 'Graph' space is added.



2.4.9 Property

The Property window allows item checking and modification of Project, My System and DAQ List.

There are check-only items and modifiable items. Modifiable items are displayed as edit type, combo box type, run type and mixed edit/combo type.

(1) Edit type

-			
	TK4 >> 1		
6	General		
	Device Name	TK4	=
	Unit Address	1	
	Model		
	DAQ Repeat Interval	1000 msec	
×	Frame Interval	20	
	User Unit Name		
	Version		

Enter number or text in the blank. Input range (if applicable) is displayed at the bottom.

(2) Combo box type

≫ Active Schedule	OFF
When Opening Project	OFF
Run Mode	Apply

Click the combo button on the right to see a list of items to select.

(3) Run type

nun type		
≫ Data File Creation Rules		[]
Click [] button on the	right to start the re	
Data File Creation Rules		×
View		
noname		
Run at Save Dialog Automatic Sequential Numbers Date(mm.dd.ih.nn.ss) Project Name - Space Date(yyyy-mm-dd)		
Data File DDF File	-	
Data Folder		
Reset	OK Cancel	

(4) Mixed edit-combo type

≫	Stop Bit	2
	Bit Per Byte	1
	Hardware	1.5
	Software	2

Enter numbet or text in the blank (within the range specified at the bottom) and select a value from the list. Items out of range can only be selected from the combo box list.

2.4.9.1 Project Properties

Clicking Project Name (default: Noname) allows you to set and enter General (project name, company, worker, description), Data file (data folder, data file creation rules, CSV time type, etc.), Log data schedule (log data schedule, active schedule), and Project opening option (run mode, layout).

		Property ×				
		Г	Project			
		E	General			
			Project Name	Noname		
			Company			
Project	×		User			
			Description			
Delete View -		E	Data File			
Туре	File		Data Folder			
- Noname			Data File Creation Rules			
			CSV Time Type	yyyy-mm-dd hh:nn:ss:zz	z	
Runtime Screen		E	Log Data Schedule			
DAQ Space			Log Data Schedule	Schedule Setting : 0/0		
			Active Schedule	OFF	•	
		E	When Opening Project			
			Run Mode	None	•	
			Layout	Default	⊡	
					_	

(1) General

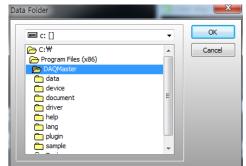
You can enter project name, company, worker, description for project management.

(2) Data File

You can designate log data automatic saving options: the folder to save, creation rule of data file, and time type of CSV.

Log data is available to save as *.csv or *.ddf file type.

Data Folder: Designates the folder to save project data.



•

Data File Creation Rules: Designates creation rule of data file.

Data File Creation	Rules			×
View				
noname				
Run at Save Dial Automatic Seque Date(mm.dd.hh. Project Name - Space Date(yyyy-mm-d	ntial Numbers nn.ss)			
Data File	DDF File	•		
Data Folder				
Reset			ОК	Cancel

• CSV Time Type: Sets CSV time type.

CSV Time Type	
Date	Year/Month/Day(yyyy-mm-dd, 💌
Time	Hour/Min/Sec/MSec(hh:nn:ss:: 💌
Date Type	yyyy-mm-dd
Time Format	hh:nn:ss:zzz
	Apply All Project
	OK Cancel

• Realtime log: At the set cycle and condition, logging starts in real-time. It is available to set each I/O. This function is only for DAQMaster Pro version.

When you click "Data File> Realtime Log[...]" at Project Property window, 'Realtime Log' dialog box appears. Click 'Add' button executes 'Log Editor'.

Realtime Log		_	
Add	Edit	Del	Delete All
Category	Inf	ormation	
			Close

In the 'Log Editor' dialog box, you can set 'Save Type' of the real-time log file.

- When setting save type as 'Database', Set log name, saving condition, and saving interval.

Saving conditions are following.

Condition		Description	
Periodic Auto Save (No Condition)	٩	No condition.	
Equal	=	When selected tag value is equal to the set value, logging starts.	
Less Than	<	When selected tag value is less than the set value, logging starts.	
Greater Than	>	When selected tag value is greater than the set value, logging starts.	
Equal or Less than	≦	When selected tag value is equal or less than the set value, logging starts.	
Equal or Greater than	≧	When selected tag value is equal or greater than the set value, logging starts.	
Not Equal	!=	When selected tag value is not equal as the set value, logging starts.	
Rising Edge	▲	When selected tag value is rising edge, logging starts.	
Falling Edge	¥.	When selected tag value is falling edge, logging starts.	

In Information box, set 'Database Connection Info' and 'Table Columns Info'.

'Table Columns Info' is actiaved after setting 'Database Connection Info'.

Log Editor								
Save Type Database Reset Log Name								
Save Interval 0 Hour 0 Min 1 Sec								
Field	Туре	Тад Туре	Tag Name					
			ОК	Cancel				

1st Click 'Database Connection Info' [...] button and 'Database Settings' dialog box appears. Set provider, server, port, user name, password and database. It can access to various data base and provides I/O function.

Database Setting	gs			X
Database Con	nection Setting	15		
Provider	Access			•
Server				Ψ.
Port				
User Name				
Password				
Database			₩DAQMaste	er Pro₩?
		ſ		
		Prev	Next	Cancel

2nd After entering information, click [Next] and 'Database Table Settings' appears.

Select the desired table or add the new table. Click 'Next'.

Database1.accdb	Contraction of Contra	(management	×
Database Table Settin	<u>qs</u>		
Table			•
Test	1 Da Dei Deiete All		
		9	
	Prev	Next	Cancel

Database1.accdb		×
Database Table	<u>Settings</u>	
Table		•
	Add Del	Delete All
New Table		
Table		
Field	Туре	Field
		Туре
		Scale 1
		Precision 0
		Add Field Delete Field
		Edit Field Delete All
		New Table Cancel
L		Prev Next Cancel

3rd At 'Database Time Field Settings', select save type and time field.

Database1.accdb		_
Database Time Field Settin	<u>qs</u>	
Save Type		
OB Field : Tag	🔘 DB Field : Tag List	
Time Field		•
Time Held		
	Prev Next	Cancel

atabase Fiel	d Settings			
Field	Туре	Tag Type	Tag Name	
Test2	String		[Time]	
		Prev	ок	Cancel

4th Check the data base file and click 'OK'

5th After completing the setting, Log Editor dialog displays the set database connection information. Table Columns Info [...] button is actiaved.

Editor				_ _ _ X
Log Name Condition		ave (No Condition		Reset Logging
Save Interval	0 Hour	0 Min	1 Sec	
Information Database Connec	tion Info			
Provider Server	Access			
Port	0			
User Name	•			
Database		-	-	
Table	Test2			
Table Columns In	fo (DB Field :	Tag)		
Field	Type	Tag Type	Tag Name	
Test2	String	[Time]		
			ОК	Cancel

At 'Table Columns Info', it is available to check and edit elements: field, type, tag type, tag name

- When setting save type as 'CSV File',

Set log name, saving condition, saving interval.

Saving conditions are following.

Condition		Description
Periodic Auto Save (No Condition)	ଓ	No condition.
Equal	=	When selected tag value is equal to the set value, logging starts.
Less Than	<	When selected tag value is less than the set value, logging starts.
Greater Than	>	When selected tag value is greater than the set value, logging starts.
Equal or Less than	≦I	When selected tag value is equal or less than the set value, logging starts.
Equal or Greater than	≧	When selected tag value is equal or greater than the set value, logging starts.
Not Equal	!=	When selected tag value is not equal as the set value, logging starts.
Rising Edge	∡	When selected tag value is rising edge, logging starts.
Falling Edge	¥	When selected tag value is falling edge, logging starts.

In Information box, set 'File Path Information' and 'Tag List Information' .

Log Editor				
Save Type Data Data Log Name CSV Condition O Pe	base	(No Condition)		Reset
Save Interval	0 Hour (D Min 1	Sec	
Database Connect Table Columns Int				•••
Field	Туре	Tag Type	Tag Name	
			ОК	Cancel

1st Click 'File Path Information' [...] button and 'CSV Log Editor' dialog box appears. Set file path settings: folder, file name, file name rule

	-	
CSV Log Editor		
File Path Settings	5	
Folder	C:₩Program Files (x86)₩DAQMa	aster
File Name	TK4	
File Name Rule	[Automatic Sequential Numbers]	+ [File Name] + [Space]
	Automatic Sequential Numbers File Name	Automatic Sequential Numbers File Name Space
	Space Date(yyyy-mm-dd) Time(hh.nn.ss)	
		Delete All
		OK Cancel

2nd Click 'Tag List Information' [...] button and 'CSV Log Editor' dialog box appears. Set

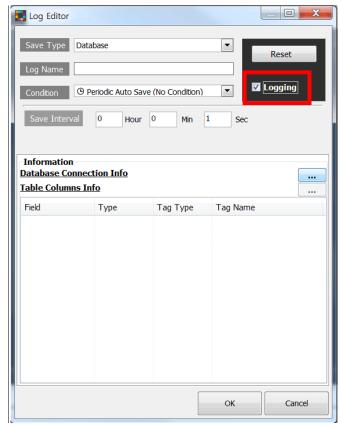
tag list settings.			
CSV Log Editor		The Party of the P	×
Tag List Settings			
Add Del	Delete All		
Device	Tag Name		
<u></u>		ок с	ancel
			ancer

3rd Click 'Add' and DAQ Tag List is appears. Add tags.

0.	Device	Address	Source	Tag Name	Туре	R/W	Unit	Description
- 8	Standard Tag						1	
	COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R		
	COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R		
	COM3_TK4	1	Cooling MV	COM3_1_Cooling MV	Analog	R	%	
💙	COM3_TK4	1	% Lamp	COM3_1_% Lamp	Digital	R		
🗸	COM3_TK4	1	℃ Lamp	COM3_1_°C Lamp	Digital	R		
-	COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R	A	
2	Advanced Ta							
							ОК	Cancel

4th If logging need to be started when executing DAQMaster, check 'Logging' at Log Editor dialog box.

When checking 'Logging', the file (*.prx) is created at the set file path and logging starts.



(3) Log Data Schedule

Saves log data at the scheduled time automatically.

٠

Log Data Schedule: Sets log data saving tim	e.
1 Add Save 3 Del	
Starting Time(hh:mm): 00:00 Ind Time(hh:mm): 24:00	4
Starting Time(hh:mm) : 00:00 End Time(hh:mm) : 24:00 Splite Log(hh:mm) ::	5 Starting Time(hh:mm) 0
	7 Splite Log(hh:mm)
	Sun Mon Tue Wed Thu Fri Sat
	9 OK Cancel

No	Description
1	Adds log data schedule items.
2	Displays scheduled log data items. You can delete the scheduled item by checking the left check box and clicking 3. 'Delete' button.
3	Saves or deletes the set items.
4	Designates log data name. The file name of data file creation rule is displayed next to the data name.
5	Designates start time.
6	Designates end time.
7	Designates split save time. When you set 1 hour 30 minutues, it saves the file for 1 hour 30 min. and creates another file and saves it.
8	Designates repetition day of week.
9	Checks log data schedule items.

Active Schedule: Designates whether to activate log data schedule. ٠

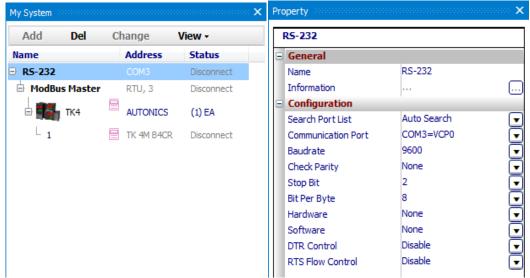
(4) When Opening Project

- Run Mode: Sets runing mode when opening the saved project file. •
- Layout : Designates the screen layout (default, runtime, current layout) when opening the project.

2.4.9.2 My System Properties

(1) RS-232

Click RS-232 in My System to modify Name in RS-232 general properties.



You can also modify Search Port List, Communication Port, Baudrate, Check Parity, Stop Bit, Per Byte, Hardware, Software, DTR Control, and RTS Flow Control in Configuration.

(2) Modbus Master

You can modify Name in ModBus Master general properties by clicking ModBus Master in My System. You can also modify Mode and Timeout in Configuration.

My System			× Property	
Add Del	Change	View -	ModBus Master	
Name	Address	Status	- General	
RS-232	COM3	Disconnect	Name	ModBus Master
🗄 ModBus Master	RTU, 3	Disconnect	Information	
🗆 🏬 тка	AUTONICS	(1) EA	ID	
L 1	TK 4M B4CR	Disconnect	Mode	RTU
			Timeout	2000 msec
			Retries	3

(3) Device (TK4)

Click a device (TK4) in My System to see basic device information in the Property window.

My System					Pro	perty	×
Add	Del	Ch	ange	View -		ГК4	
Name			Address	Status		File	
■ RS-232			COM3	Disconnect		Description	Temperature / Process Contro
🗄 ModBus	Master		RTU, 3	Disconnect		Date	2009.06.02
				(A		Date Modified	2011.07.11
- 🗄 🎆 T	K4		AUTONICS	(1) EA		Creation	
L 1		E	TK 4M B4CR	Disconnect		Revision	1.0
					Ξ	Version	
						Vendor	AUTONICS
						Product	TK4
						Major Revision	1
						Minor Revision	1

(4) Address (1)

Click the device address (1) in My System to see detailed device information. You can also change Device Name and set DAQ Repeat Interval.

			Property second second	
			TK4 >> 1	
			General	
			Device Name	TK4
System accordence		*****************	Unit Address	1
Add Del	Change	View +	Model	TK 4M B4CR
	-		DAQ Repeat Interval	1000 msec
ame	Address	Status	Frame Interval	20 msec
RS-232	COM3	Disconnect	User Unit Name	
ModBus Master	RTU, 3	Disconnect	Version	HW: 200, SW: 520
		(4) = 4	Parameter 0	-
🖻 🎆 ТК4	AUTONICS	(1) EA	Parameter 1	
L 1	TK 4M B4CR	Disconnect	Parameter 2	
			Parameter 3	
			Parameter 4	

You can check and modify device parameters by reading parameters while devices are connected.

2.4.9.3 DAQ List Properties

(1) General

If you select items that were added from I/O List for communication, the Property window displays item information. You can change Tag Name, Decimal Point, Unit, and Scrept variables in General proporties and edit Tag value formulas in I/O Data Calculation.

Туре	Num		De	elete	All	Select All	Delete t	he selected item(s)							
All	19		No.		Devic	æ	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calcula	tion Description	
- Group		E	P (Stan	dard Tag (19)									
- Ana	-			- 🗸	COMS		1	Present Value	COM3_1_Present Value	Analog	R	Cont		1		[
- Strir				- 🗸	COMB	-	1	Set Value	COM3_1_Set Value	Analog	R	Cont		1		
- Vidie				~	COM3 COM3	-	1	Heating MV	COM3_1_Heating MV	Analog	R	Cont	%	1		
				- ×	COME	-	1	Cooling MV	COM3_1_Cooling MV COM3_1_Heater Current M	Analog Analog	R	Cont	% A	1		
			1	Ť	COM	2114	1	Heater Current M	COMS_1_Neater Current M	Analog	ĸ	Conc	~	1		Þ
DAQ List	Message															
									~							
Prope	erty concern		····						<u>^</u>							
									_							
TK	4 >> 1 >>	Pre	es	en	it Va	alue										
	eneral															
D	evice					TK4										
Δ.	ddress					1										
						1										
S	ource					Preser	nt Value									
Б	ag Name					COM3	1 Prese	ent Value								
D	ecimal Point					0										
U	nit															
S	cript Variable					Tag1										
	-															
	escription															
ΞΙ,	/O Data Ca	lcul	la	tio	n											
E	dit Calculatio	m						0								
						1		e								
						1			I							

(2) I/O Data Calculation

You can edit tag values at "Property > I/O Data Calculation > Edit Calculation". When reading the tag value via editing calcuation at DAQMaster, you can get the desired data by applying the calcuation at data. 'x' means the output tag value from device. This function displays the calcuated output value at DAQMaster.

It Calculation		
dit Calculation		Template
Read Calculation	x= 1	Test Delete nal Point Not Used
Write Calculation	x= 1	Test Delete
Example x + x*2 + (x - 10) + ($x + 10) + x^2 + \sin(x)$	
+, -, *, /, ^, E, (,), sin, :sch,		acosh, atanh, sec, csc, cot, asec, acsc, acot, sech,
		OK Cancel

Click 'Templete' at the top-right of the dialog to edit and save the usually used calculations. It is useful to apply read/write calculation directly.

dit Calculation	-	
Edit Calculation		Template
Read Calculation	x= 1	Test Delete nal Point
		Not Used 🔻
Write Calculation	x= 1	Test Delete nal Point Not Used
Example x + x*2 + (x - 10) + (x	$(x + 10) + x^2 + \sin(x)$	
+, -, *, /, ^, E, (,), sin, c csch, coth, asech, acsch, acoth,		. cosh, tanh, asinh, acosh, atanh, sec, csc, cot, asec, acsc, acot, sech, int, pi
x : Tag Value 		
		OK Cancel

Enter the desired formular and click the 'Save' and 'Apply'. The saved template is applied the 'Edit Calculation' dialog box.

Add Del Delete All	Name 17F to 10	Save
	Description	
	converts from °F to °C	
	Read Calculation	Apply
	(x-32)*(5/9)	Decimal F
	Write Calculation	Apply Decimal F
+, -, *, /, ^, E, (,), sin, cos, tan, asin, atar csch, coth, asech, acoth, acoth, sqrt, log, ln, exp x : Tag Value	n, sinh, cosh, tanh, asinh, acosh, atanh, sec, csc, cot, as , abs, int, pi	ec, acsc, acot, sech,
	App	ly Close

Edit Calculation			X
Edit Calculation			Template
Read Calculation	x= 20	Calculation OK!, -6.67	Test Delete
(x-32)*(5/9)			nal Point Not Used
Write Calculation	x = 1		Test Delete
			nal Point Not Used
Example $x + x^{2} + (x - 10) + $	x + 10) + x^2 + s	in(x)	
+, -, *, /, ^, E, (,), sin, c csch, coth, asech, acsch, acoth x : Tag Value), sec, csc, cot, asec, acsc, acot, sech,
			OK Cancel

(3) Trigger

In "Property > Trigger > Conditions [...]", you can set Trigger event executing conditions. When Tag velue matches the conditions, Triger event is activated as your setting.

Tag Trigger Event - COM1	1_PV
Trigger List	➡ ➡ COM1_1_PV
	Active
	Trigger Name
	Condition
	Static Time 0 Hour 0 Min 5 Sec
	Check Time AM 9:46:06
	Use AM 9:46:06
	Event
	OK Cancel

• Trigger Management

Management		Description
Trigger list		Displays the saved triggers as list.
Add trigger	Ţi	Adds a trigger on the trigger list. You can set trigger name, conditions, etc.
Save trigger		Saves the added trigger at the trigger list.
Delete trigger		Delete the selected trigger on the trigger list.
Delete all triggers	Ľ	Delete all triggers on the trigger list.

Trigger conditions

	<u> </u>	
Conditions		Description
Periodic Auto Save (No Condition)	ଓ	No condition.
Equal	=	When selected tag value is equal to the set value, trigger starts.
Less Than	<	When selected tag value is less than the set value, trigger starts.
Greater Than	>	When selected tag value is greater than the set value, trigger starts.
Equal or Less than	≦	When selected tag value is equal or less than the set value, trigger starts.
Equal or Greater than	≧	When selected tag value is equal or greater than the set value, trigger starts.
Not Equal	!=	When selected tag value is not equal as the set value, trigger starts.
Rising Edge	₽	When rising edge signal is input, trigger starts.
Falling Edge	*	When falling edge signal is input, trigger starts.
Static Maintain	7	When the value is maintained during the set time, trigger starts.
Check Time		

Check Time

When the set trigger condition is satisfied during the set check time, trigger starts.

Event

Condition	Description
Log Start	When tag value maches the set condition, logging stars.
Log Stop	When tag value maches the set condition, logging stops.
Send to Telegram	When tag value maches the set condition, Telegram message is sent to the designated person.
Alam sound play	When tag value maches the set condition, alam sound is played. You can select audio file you want. (supported audio file format: *.mp3, *.mp2, *.wav, *.ogg)
Tag Error Message	When the trigger condition is satisfied, the run time list data cell color of this tag is changed. Data value is displayed as 'Tag error' and it is displayed same as log file.
Tag Alarm	When the trigger condition is satisfied, the run time list data cell color of this tag is changed. Data value is displayed as the actual data value.

※1. Telegram setting

Telegram is a nonprofit open source internet messanger, available in diverse operating system such as Android, IOS, Window, MAC and Linux. It provides users with source code, encouraging them to develop desired functions with the messanger.

By the Bot, virtual conversation contact, when tag value maches the set condition, Telegram message is sent to the designated person. (Internet connection is required.)

By telegram functions, you can share the massage to the other groups and search the messages. Please refer to the telegram usage. (Android and IOS system have a identical setting process. This manual explains with Android)

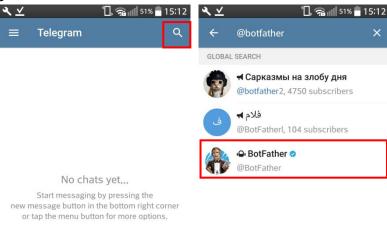
1st Search "Telegram" at the Andriod Play store and download the application.

2nd You have to creat and register a virtual robot called Bot to receive messages from

DAQMaster.

In contats of Telegram, search and select @Botfather at the upper the magnifying





3rd Click 'Start' at the below button of the display.



4th Enter '/newbot' in the message box to creat your own Bot.

According to the BotFather message, name a Bot name, Bot user name (must end in 'bot' or 'Bot').

Bot user name is for identifying name at the telegram. It must end in 'bot' or 'Bot'. If the other named the designated name already, it is not used in duplicate.

(E.g. Bot name: Autonics, user name:at_androido_autonicsbot)

ヽ ⊻	`D,	- 🙃 🛯 49	9% 🔤 15:16
~ 🎧	BotFather bot		
		/newbc	ot 15:13 🗸
	w bot. How are ease choose a r		
	Bot name	Autonic	s 15:13 🗸
for your bot Like this, for tetris_bot,	let's choose a u . It must end in r example: Tetri at_androido_au	'bot'. sBot or	
bot. You wil at_androido now add a c section and bot, see /he commands. you've finis	ratulations on y I find it at t_me/ _autonicsbot. Y lescription, abo profile picture f Ip for a list of By the way, wh hed creating yo r Bot Support if	'ou can ut for your ien ur cool	

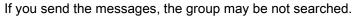
5th Then you are provided with address to chat with the created Bot and token to connect your Bot and DAQMaster.

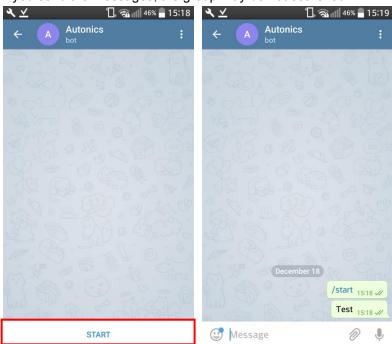
Click the given address to join chat with the Bot.

← ♠ Like this, for tetris_bot.	at_androidd	etrisBot o	15:13	:
tetris_bot. Done! Cong	at_androidd		15:13	A.
	1 1000	_autonics		
	2.1.2		sbot 15:15	11
at androido now add a c section and bot, see /he commands. you've finis bot, ping ou a better use sure the bot before you c Use this tok API: 489	I find it at the autonics of the secret profile picture profile picture profile picture profile picture pictur	ne/ Add t. You cal about ure for you of when g your coo rt if you w Just mal rational	ress n ur vil vant ke P	
b8ao	angute to		Toker	
For a descri this page: h core,telegra	ttps://	2010 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100	ee	

6th Click 'Start' at the button of the display.

One or two times of free conversation are necessary prior to receiving message from your Bot.





- 7th At DAQMaster, select the I/O to apply trigger and click "Property > Trigger > Conditions [...] " and 'Tag Trigger Event' dialog box appears. Add trigger and enter condition/value and select Event as 'Send to Telegram'. Telegram settings are available.
- 8th Go back to the DAQMaster, enter the token of 5th step in the token blank in Tag Trigger Event dialog. Click 'Search Groups'.

Tag Trigger Event - COM3_1_Present Value
Trigger List 📑 🔒 🏦 🎦 COM3_1_Present Value
Active
Trigger Name Test
Condition 🖉 Rising Edge 🗸 🗸
Value 30
Check Time 오전 9:46:06 🗘
Use 오전 9:46:06 文
Event Send to Telegram
Telegram Setting
Token 489 BV3U LJU
Select All
To: User
Alarm Message Time TagName Condition
Test
OK Cancel

9th You can see user name of chat relevent to the token.

Tag Trigger Event - CON	3_1_Present Value	×
Trigger List	📬 🖬 🗄	COM3_1_Present Value
	Active	
	Trigger Name Test	
	Condtition	na Edae
		ig coge
	Value 30	
	Check Time 오전 9:	46:06
	Use 오전 9:	46:06
	Event Send to	Telegram 🗸
	Telegram Setting	
Token 489	BV3U LJu	
Select All		Search Groups
To: User)		
Alarm Message	ne TagName	Condition
		Test
		OK Cancel

10thCheck the desired receiver and select chat to use and choose alam message format among time, tag name, and condition.

After enter test message in the bottom blank, click 'Save and Test' button.

Tag Trigger Event - COM3_1_Present Value	x
Trigger List 📑 🖬 👚 COM3_1_Present Value	
Active	
Trigger Name Test	
Condition 🖉 Rising Edge	~
Value 30	
Check Time 오전 9:46:06	-
Use 오전 9:46:06	÷
Event Send to Telegram	~
Telegram Setting	
Token 489 BV3U LJu	
Select All Search Group	os
To: 🔽 (User)	
Alarm Message Time TagName Condition	
TEST	
Test	
	_
OK Can	cel
UK Car	icel

11thYou can receive test message in Telegram

<u> </u>		62%	17:42
← A Aute	onics		
			E.
An Ca		3	
	ecember 1		5:18 🗸
		Test	5:18 🖋
		Test	7:40 🛷
[Test][Time]2017- TagName]COM3_1 ndition](null)TEST	I_Present	25:42:45[tValue[Co 17:42	
Image Message		Ô	Ļ

12thTelegram message setting is completed.

When tag value maches the set condition, Telegram message is sent.

2.4.9.4 Runtime Properties

You can desigante added runtime screen (Data: Grid, Multi Panel, Panel, Line Graph, Bar Graph, Color Map Graph, Gauge Graph, Histogram Graph, Device: Alarm History Grid) name, update interval, and the others.

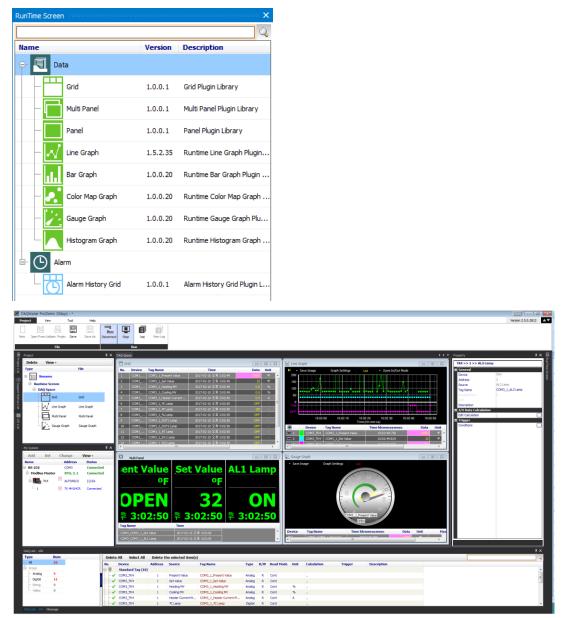
You can modify the name of the Grid in Run UI general properties by clicking Grid at Runtime Screen in Project dialog. You can also modify Update Interval time in Config. (Default: 1,000 ms.)

Name	Version	Description
🕀 🖳 Data		
Grid	1.0.0.1	Grid Plugin Library
- Multi Panel	1.0.0.1	Multi Panel Plugin Library
- Panel	1.0.0.1	Panel Plugin Library
- Line Graph	1.5.2.35	Runtime Line Graph Plugi
- Bar Graph	1.0.0.20	Runtime Bar Graph Plugir
- Color Map Graph	1.0.0.20	Runtime Color Map Graph
- Cauge Graph	1.0.0.20	Runtime Gauge Graph Plu
Histogram Graph	1.0.0.20	Runtime Histogram Graph
Alarm		

Run UI		
General		
Name	Grid	
Information		
Configuration		
Update Interval	1000 msec	

2.5 Runtime Screen Library

Double-click UI item in Runtime Screen Library and the item is added in DAQ WorkSpace.



Runtime Screen Library is a list of runtime screens for data monitoring.

Runtime screens support Data: Grid, Multi Panel, Panel, Line Graph, Bar Graph, Color Map Graph and Gauage Graph, Histogram Graph, Device: Alarm History Grid. You can open multiple screens at the same time for monitoring. Information such as screen position, screen size and I/O source is saved when saving the project.

2.5.1 Data

(1) Grid

💾 Gri	d				2 23
No.	Device	Tag Name	Time	Data	Unit
	COM3	COM3_1_Present Value	2016-04-20	25	۹C
2	COM3	COM3_1_Set Value	2016-04-20	38	۹C
3	COM3	COM3_1_°C Lamp	2016-04-20	ON	-
4	COM3	COM3_1_9F Lamp	2016-04-20	OFF	-
•					- F

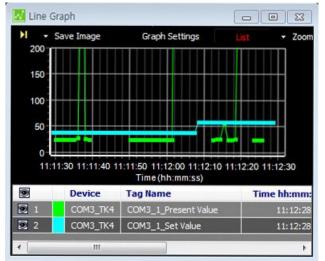
(2) Multi panel

Multi Panel				
Value	Lam	p	[-1	L IN
٥C				
30	C	DN		OFF
! 11:51:14	! 11:51	:15	! 11	:51:15
Tag Name		Time		
Tag Name COM3_COM3_1_Preser	nt Value)4-20	^

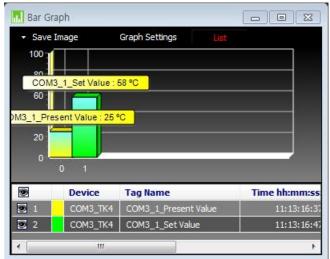
(3) Panel



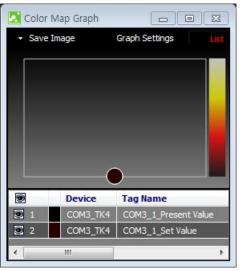
(4) Line Graph



(5) Bar Graph

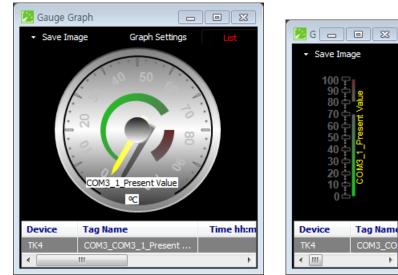


(6) Color Map Graph



Autonics

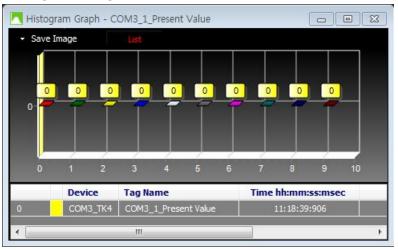
ъ



(7) **Gauge Graph**



(8) **Histogram Graph**



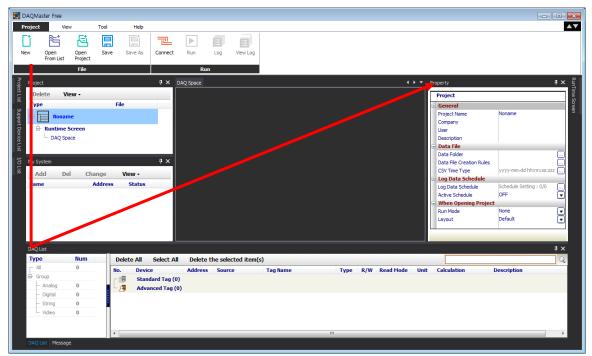
2.5.2 Alarm

(1) Alarm History Grid

🐻 Alar	rm History Grid		
No.	Time	Device	Tag Name
1	2016-04-20 11:19:05:277	COM3_TK4	COM3_1_Present Value
2	2016-04-20 11:19:14:387	COM3_TK4	COM3_1_Present Value
3	2016-04-20 11:19:15:401	COM3_TK4	COM3_1_Present Value
•			+
No.	Device	Tag Name	
1	COM3_TK4	COM3_1_Present Value	^
_	2010 T//	20112 4 0 111 I	•

3 Getting Started

On a default layout screen, you generally work from left to right.



The basic work order is as follows:

- 1st Select a device from the Support Device List in the very left side of the screen and add it to My System.
- 2nd Select a device from My System and add a relevant unit (address).
- 3rd From the very left I/O List, add I/O items for monitoring to DAQ List at the bottom.
- 4th Select a monitoring screen from Runtime Screen library in the very right side of the screen.
- 5th Drag an I/O source from DAQ List and drop it onto the Runtime Screen.
- 6th Configure RS-232 or Modbus TCP environment.
- 7th Connect (you can read and set the device parameters).
- 8th Run (data file logging is available).

3.1 Support Device List - Selecting a Device

For example: TK4 (Address 4) is connected to RS-232 Port 1.

First, select the device to communicate with from the Supported Device List. The Support Device List (docking screen) is a list of devices supported by DAQMaster. You can only communicate with listed devices.(The Support Device List will be updated continuously).

Below is the example screen for the currently supported devices(as of Fabruary, 2017).

Туре	Series/Mo	odel name	Function
		ARM	Modbus Digital Remote I/O
	\$	BFC	Digital Display, Fiber Optic Amplifier
	11.178 A	СТ	Programmable Counter (Timer)
	9 B	DS(A)-xT	Intelligent Display Unit
	9 8	DS-RRT	Intelligent Display Unit
		MP5	Pulse Meter (Modbus RTU)
	100	MP5W	Pulse Meter
	100	MP5Y	Pulse Meter
		MT4	Multi Panel Meter
Autonics	1 st	SCM-USU2I	2-CH USB Temperature Data Logger
	I	SCM-WF48	SCM-WF48 Configuration
		TF3	Refrigeration Temperature Controller
	1	THD	Temperature/Humidity Sensor
		TK4	General-Purpose Temperature Controller
		TM2	2-CH Modular Type Temperature Controller
		TM4	4-CH Modular Type Temperature Controller
		ТХ	LCD Display Temperature Controller
		TZ/TZN	Dual PID Control Temperature Controller
		Database	Database
Miscellaneous	DDE	DDE Client	DDE Client
	©PC	OPC Client	OPC Client

Туре	Series/Mo	odel name	Function
	WMI	WMI Manager	WMI Manager
		DPU (1-Phase)	Thyristor Unit
		DPU (3-Phase)	Thyristor Unit
		KN-2000W-D2	Multi Input Indicator
Process Automation		KPN	Digital Process Controllers
		KRN50	50mm Hybrid Recorder
		KRN100	100mm Hybrid Recorder
		KRN1000	LCD Touchscreen Paperless Recorder
Devices made i	n Script Edi	tor	

When a device is selected, you can see basic information about the device in Property window as follows.

ТК4	
- File	
Description	Temperature / Process Contro
Date	2009.06.02
Date Modified	2011.07.11
Creation	
Revision	1.0
- Version	
Vendor	AUTONICS
Product	TK4
Major Revision	1
Minor Revision	1

If you click or double-click the device expand button (+) in the Support Device List, the spesific list of support device will appear.

Autonics

Select the device you want to add to My System (Temperature Controller TK4). Double-click or mouse right-click the selected device and click Add to My System to add the device.

	Temperature/Humidi	ty Controller
— 🎼 ТК4	🖏 Refresh	s Controller
- TM2	Add to My system	Temperature Controller
- 1114 TM4	↓ ■ Expand All ■ Collapse All	Temperature Controller
TX Series	TX Series	1
TZ/TZN	Dual PID auto tuning	controller
Process Automat	ion (7)	

- Refresh: Updates Support Device List when device files (*.dev) are added.
- Add to my system: Adds device to My System to communicate.
- Expand all: Shows the list of all supported devices.
- Collapse all: Hides the list of all supported devices.

Double-click RS-232 or TCP/IP on the new DAQ interface, or select it and click OK.

(TK4 supports RS-232 communication and it displays only RS-232.)

You can modify the configuration of the added RS 232 or TCP/IP in properties.

TK4 - DAQ Interface	
New DAQ Interface	Added DAQ Interface
RS-232	
TCP/IP	
	OK Cancel

If there is another devices added earlier, you can see added RS-232-COM1 on the Added DAQ Interface.

ΤK	4 - DAQ Interface		×
	New DAQ Interface	Added DAQ Interface	
	RS-232	RS-232 - COM3	
	TCP/IP		
		OK Cano	el

3.2 Setting RS-232, TCP/IP

3.2.1 RS-232C

Set up RS-232 for communication. Select RS-232 in My System and check Property window.

			P	roperty		
			Г	R5-232		
			G	General		
				Name	RS-232	
				Information		
			6	Configuration		
My System			$\sim \mathbf{x}$	Search Port List	Auto Search	•
Add Del	Change	View -		Communication Port	COM3=VCP0	
Add Del	_			Baudrate	9600	
Name	Address	Status		Check Parity	None	Ē
🖻 RS-232	COM3	Disconnect		Stop Bit	2	Ē
🗄 ModBus Master	RTU, 3	Disconnect		Bit Per Byte	8	Ē
🗖 🏭 тк4		(1) EA		Hardware	None	Ē
🖻 🌆 тка	AUTONICS	(1) EA		Software	None	Ţ
L 1		Disconnect		DTR Control	Disable	
				RTS Flow Control	Disable	⊡

Property window displays information about the communication port currently in use.

If you want to change the name in My System, modify Name in Property window.

Item		Description		
Search	Fix Init List	Loads communication port list of computer at the point when RS-232 is added, saves it to the Port List and then fixes it.		
Port List	Auto Search	Rearranges Port list, if the port list of computer (such as USB 232) is changed.		
Communi	cation Port	Shows choice of connectable COM Ports. You can designate the connected COM Port.		
Baudrate		1,200, 2,400, 4,800, 9,600, 19,200, 38,400, 57,600, 115,200 bps		
Check Parity		Allows communication parity selection. (none, odd, even, mark, space)		
Stop Bit	top Bit Selects Stop Bits. (1, 1.5, 2)			
Bit Per By	⁄te	Selects Byte Size. (5, 6, 7, 8)		
Hardware	1	None, RTS/CTS		
Software		None, XON/XOFF		
DTR Cont	trol	Disable, enable, handshake		
RTS Flow	Control	Disable, enable, handshake, toggle		

The Config items are following.

3.2.2 TCP/IP

Set up TCP/IP for communication. Select TCP/IP in My System and check Property window.

			Property	************************
			TCP/IP	
			🖃 General	
My System			Name	TCP/IP
Add Del	Change V	/iew -	Information	•••
Name	Address	Status	Configuration	
TCP/IP	127.0.0.1	Disconnect	Socket Type	Client
🖶 ModBus Master	RTU, 3	Disconnect	Address	127.0.0.1
KRN 100	Process Au	(1) EA	Port	502
			Connection Timeout	3000
└ 1		Disconnect	Client Type	Nonblocking Mode
			Auto Connection Mode	Use

Property window displays information about the communication port currently in use. If you want to change the name in My System, modify Name in Property window. The Config items are following.

ltem		Description
Socket	Client	Sets as client mode (when connecting KRN100)
Туре	Server	Sets as server mode.
Address		Enters the designated IP Address from the main device.
Port		Sets port number.
Connection	Timeout	Sets Connection Timeout
	Non Blocking	After transmission, next transmission is available regardless of response.
Client Type	Blocking	After transmission, next transmission is available after receving response.
Auto	Use	Uses auto connection mode.
Connection Mode	Not used	Not use auto connection mode.

At ModBus Master property, set Mode of Config as ModBus TCP.

Property		∞ ₽ ×
ModBus Master		
🖃 General		_
Name	ModBus Master	
Information		
ID		
Configuration		
≫ Mode	ModBus TCP	•
Timeout	RTU	
Retries	ASCII ModBus TCP	
	Modbas TCP	

3.3 Adding a Unit to My System

My System displays device and communication interfaces added from the Support Device List in a tree structure. It also displays connection status, and you can add, change and delete device units (addresses).

By selecting an item, you can set or modify it in Property window.

Add Del	C	hange	View -
ame		Address	Status
RS-232		COM3	Disconnect
ModBus Master		RTU, 3	Disconnect
🗄 🎆 ТК4	8	AUTONICS	(1) EA
L 1	E		Disconnect

Selecting TK4 device enables Add button. To add a unit(address), click the Add button on the tab or right-click on mouse to select Add.

My System			×
Add	Del	Change	View -
Name		Address	Status
■ RS-232			Disconnect
🗄 ModB	us Master	RTU, 3	Disconnect
13	тк	E	
		Del	
		Add	
		Scan Unit Add	dress
		Read All Unit	Parameters
		Copy Paramet	ters
		Print Modbus Edit I/O Script	

Select address (number 1) set to TK4 device. Double-click or use '>' button to add, then click OK button.

2 3 4 5 6 7	E	<	Used Device	Model
3 4 5 6 7		<		
2 3 4 5 6 7 8	E	<		
4 5 6 7		<		
5 6 7		<		
6 7				
7				
8				
9				
10				
11				
12		>		
13		1		
14				
15				
		1		

Add Unit - TK4					×
Use All	Use None			Ма	x Device :99
Device List			Used Device	Model	
1	<u>_</u>		1		
2	=				
3					
4		<			
5					
6					
7					
8					
9					
10					
11					
12		>			
13		-			
14					
15	-				
				ОК	Cancel

You will see the unit (address: 1) added under the device in My System. If you want add same type of multiple devices, click Add button. (Up to 99 devices can be added.)

My System		×
Add Del	Change	View -
Name	Address	Status
■ RS-232	COM3	Disconnect
🗄 ModBus Maste	r RTU, 3	Disconnect
🗄 🏭 ТК4	AUTONICS	(1) EA
L 1		Disconnect

Selecting the unit address (1) activate Change button. To change the unit address, click the Change button on the tab or right-click on mouse to select Change.

My System					×
Add	Del	Chang	je	View -	
Name		Add	lress	Status	
🖻 RS-232				Disconnect	
🗄 ModBu	s Maste	r RTU	J, 3	Disconnect	
- 33	TK4	🗎 ал	ONICS	(1) EA	
L 1		Del Change Paramete User Grou Read All	up Settin	igs	
		Save Para Connect	ameter V	'alues	

If you click Change button, the current address (1) highlights in yellow. Select a new address and click OK to change the unit address.

Device List 1 2 3 4			Used Device	Model
2 3			1	
3	E			
	-			
4				
		<		
5				
6				
7				
8				
9				
10				
11				
12		>		
13				
14				
15	-			
		1		
		1	L	OK Cancel

Note

Unit (address) cannot be deleted, changed or added while the Status is Connect.

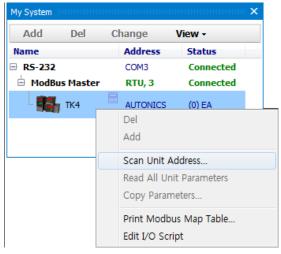
3.4 Scan Unit

Scan Unit feature scans multiple connected device units. You can check the detected units and add them to My System by using this feature.

1st Add TK4 device and configure RS-232 environment as below. And then connect.

Add Del	Change	View -				
Name	Address	Status				
RS-232	COM3	Disconnect				
🗄 ModBus Master	RTU, 3	Disconnect				
占 🏬 тк4	AUTONICS	(1) EA				
L 1	E	Disconnect				

2nd When connected, select TK4 device, and right-click to select Scan Unit Address.



3rd If you select Scan Unit Address menu, the following Scan Unit dialog appears.

Scan Unit - TK4	×
Scan Unit	
Address Range 1 - ~ 99 -	Retry 0 - Start Scan
Scan Status	
Scanned Unit 0	Other Scanned Unit 0
No. Address Model Version	No. Address Model Version

4th Set an address range to scan and click Start Scan button to scan units automatically. Scanned units are listed on the left side. Other scanned units are listed on the right side.

Scan Unit Address Range 1 • ~ 99 • Retry • • Stop Scan Scanned Unit • • • 99 • Retry • • • Stop Scan Scanned Unit • • • • • • • • • • • • • • • • • • •	Scan Unit - TK4			×
Scan Status 3 Scanned Unit 0 No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Range 1 Other Scanned Unit 0 No. Address Model Version No. Address Model Version	Scan Unit			
Scanned Unit 0 Other Scanned Unit 0 No. Address Model Version No. Address Model Version OK Cencel Scan Unit TK4 Scan Unit No. Address Range 1 O Scan Status 4 Scan Status Scan Unit 0 No. Address Model Version No. Address Model Version	Address Range 1	• ~ 99 •	Retry 0 -	Stop Scan
Scanned Unit 0 Other Scanned Unit 0 No. Address Model Version No. Address Model Version OK Cencel Scan Unit TK4 Scan Unit No. Address Range 1 O Scan Status 4 Scan Status Scan Unit 0 No. Address Model Version No. Address Model Version	Scan Status 3			
No. Address Model Version No. Address Model Version OK Cancel Scan Unit TK4 Scan Unit CK Scan Unit Scan Status 4 Scanned Unit 1 Other Scanned Unit No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version	Stari Status			
No. Address Model Version No. Address Model Version OK Cancel Scan Unit TK4 Scan Unit CK Scan Unit Scan Status 4 Scanned Unit 1 Other Scanned Unit No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version No. Address Model Version				
OK Cancel Scan Unit - TK4 Scan Unit Scan Status 4 Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus Scanstatus <t< td=""><td>Scanned Unit 0</td><td></td><td>Other Scanned Unit</td><td>0</td></t<>	Scanned Unit 0		Other Scanned Unit	0
Scan Unit - TK4 Scan Unit Address Range 1	No. Address Model	Version	No. Address Model	Version
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4 Scan Unit Address Range 1				
Scan Unit - TK4				
Scan Unit Address Range 1				OK Cancel
Scan Unit Address Range 1				×
Address Range 1 ~ 99 Retry 0 Stop Scan Scan Status 4 Scanned Unit 1 Other Scanned Unit 0 No. Address Model Version No. Address Model Version				
Scan Status 4 Scanned Unit 1 No. Address Model Version				
Scanned Unit 1 Other Scanned Unit 0 No. Address Model Version	Address Range	• ~ 99 •	Retry 0	Stop Scan
Scanned Unit 1 Other Scanned Unit 0 No. Address Model Version No. Address Model Version				
No. Address Model Version No. Address Model Version	Scan Status 4			
No. Address Model Version No. Address Model Version				
No. Address Model Version No. Address Model Version	Scanned Unit 1		Other Scanned Unit	0
✓ 1 TK 4M B4CR SW:520, HW:200		Version		
	☑ 1 TK 4M B4CR	SW:520, HW:200		
L JI				
OK Cancel				

5th Check a unit to add from the list and click OK. It is added and marked as Connected.

Add	Del	C	nange	View -			
Name			Address	Status			
RS-232			COM3	Connec	ted		
HodBus	Master		RTU, 3	Connec	ted		
- 15	TK4		AUTONICS	(1) EA			
L 1			TK 4M B4CR	Connect	ed		

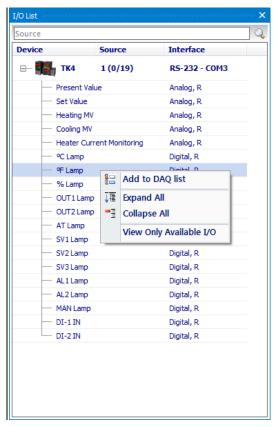
3.5 Adding an I/O to the I/O List

 $\rm I/O$ sources are used to read and control data. To monitor a source listed in the I/O List, you must add the source to DAQ List.

I/O List shows which units are added to My System. If you click expand button (+), it displays a list of available I/O sources to add. You can search the desired I/O and add it.

/O List	**********		
Source			(
Device	Source	Interface	
— 🏭 тк	4 1 (0/19)	R5-232 - COM3	
- Pres	ent Value	Analog, R	
- Set \	/alue	Analog, R	
- Heat	ing MV	Analog, R	
— Cool	ng MV	Analog, R	
- Heat	er Current Monitoring	Analog, R	
- •CL	amp	Digital, R	
9F La	amp	Digital, R	
— % La	amp	Digital, R	
— ол	1 Lamp	Digital, R	
— ол	2 Lamp	Digital, R	
— AT L	amp	Digital, R	
— SV1	Lamp	Digital, R	
— SV2	Lamp	Digital, R	
— SV3	Lamp	Digital, R	
— AL1	Lamp	Digital, R	
— AL2	Lamp	Digital, R	
- MAN	Lamp	Digital, R	
- DI-1	IN	Digital, R	
DI-2	IN	Digital, R	

Double-click or right-click sources you want to communicate, and select Add to DAQ List.



I/O sources are added to DAQ List as below.

уре	Num)elete	All Select All	Delete t	he selected item(s))							
All	19	N) .	Device	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calculation	Description	
Group				Standard Tag (19))									
 Analog 	5		F.	COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Cont				
 Digital 	14			COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R	Cont				
 String 	0			COM3 TK4	1	Heating MV	COM3 1 Heating MV	Analog	R	Cont	%			
Vidieo	0		-4	COM3 TK4	1	Cooling MV	COM3 1 Cooling MV		R	Cont	%			
				COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R	Cont	Α			
		1												,

Note

I/O source cannot be added to DAQ List when the Status is Run.

To delete added source in DAQ List, select and right-click the source. If you select a source or sources you want to delete and right-click on mouse, a pop-up menu will appear as below. Then click 'Delete the selected item(s)', 'Remove all' or 'Select All' to delete.

rpe	Num		De	lete	All Select All	Delete t	Delete the selected item(s)									
All	19		No.		Device	Address	Source	Tag	Name 1	Туре	R/W	Read Mode	Unit	Calculation	Description	_
Group		6	- 1	9	Standard Tag (19)										
 Analog 	5	- 11	H	1	COM3_TK4	1	Present Value	1_Pre		Analaa	R	Cont	۹C			
 Digital 	14			1	COM3 TK4	1	Set Value	1_Se	Delete the selected ite	em(s)	R	Cont	°C			
- String	0			1	COM3 TK4	1	Heating MV	1 He	Delete All		R	Cont	%			
- Vidieo	0			4	COM3_TK4	1	Cooling MV		Select All		R	Cont	%	1		
			-	~	COM3_TK4	1	Heater Current M			PLAN	R	Cont	А			

Sources added to DAQ List are grayed out in the I/O List. The image below shows that Present Value, Set Value, Heater Current Monitoring, OUT1 Lamp, OUT2 Lamp, AL1 Lamp, and AL2 Lamp are added to DAQ List.

e		Source	Interface
÷.,	TK4	1 (11/19)	R5-232 - COM3
— P	Present Va	lue	Analog, R
— s	Set Value		Analog, R
- +	leating M\	/	Analog, R
- 0	Cooling MV		Analog, R
- +	leater Cur	rrent Monitoring	Analog, R
0	C Lamp		Digital, R
0	F Lamp		Digital, R
- 9	% Lamp		Digital, R
- 0	OUT1 Lamp	þ	Digital, R
- 0	OUT2 Lamp	þ	Digital, R
- A	AT Lamp		Digital, R
— s	V1Lamp		Digital, R
— s	V2 Lamp		Digital, R
— s	V3 Lamp		Digital, R
— A	L1Lamp		Digital, R
— A	L2 Lamp		Digital, R
- N	1AN Lamp		Digital, R
- 0	DI-1 IN		Digital, R
- 0	DI-2 IN		Digital, R

3.6 DAQ List

DAQ List shows a list of sources added from I/O List.

Туре	Num		Delete	All Select All	Delete t	he selected item(s)							
All	19	N	lo.	Device	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calculation	Description	
🖻 Group		Ę	F 🗐	Standard Tag (19))									
 Analog 	5			COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Cont		,		
 Digital 	14			COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R	Cont		,		
 String 	0			COM3_TK4	1	Heating MV	COM3_1_Heating MV	Analog	R	Cont	%	,		
Vidieo	0			COM3_TK4	1	Cooling MV	COM3_1_Cooling MV	Analog	R	Cont	%	1		
				COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R	Cont	А			
														۱.

To add I/O sources in the DAQ List to the runtime screen, select the sources to add, then drag and drop them onto the botton of the runtime screen. Make sure to place the mouse cursor on the text of the source when selecting a source to drag and drop.

You can select a source in the DAQ List and check/modify it in Property window.

Property	×
TK4 >> 1 >> Presen	t Value
🖃 General	
Device	TK4
Address	1
Source	Present Value
Tag Name	COM3_1_Present Value
Decimal Point	0
Unit	
Script Variable	Tag1
Description	
I/O Data Calculation	n
Edit Calculation	,

General items of Property is as below.

- Device: Device name
- Address: Unit address
- Source: I/O source name
- Tag name: Saves tag name as 'address_I/O source name' and is changeable.
- Decimal point: Changes the decimal point of data.
- Unit: Allows you to change the unit of data.
- Script Variable: Tag value
- Description: Allows you to enter the description. (Read/write mode)

I/O Data Calcualation items of Property is as below.

• Edit Calcuation: When reading tag value, apply the data formular to get the desired data.



For certain I/O sources, decimal point and unit will be set automatically. In this case, they conform to the parameter set values.

3.7 Adding from DAQ List to Runtime Screen Library

Runtime screens monitor data and support 4 types of screen, Data: Grid, Multi Panel, Panel, Line Graph, Bar Graph, Color Map Graph, Gauge Graph, and Histogram Graph, Alarm: Alarm History Grid. You can search the desired runtime screen and select it. Runtime screens can be set and added according to the user environment. If an error occurs while adding Panel to Runtime Screen Library, install Adobe Flash Player.

Name	Version	Description
- 📃 Data		
Grid	1.0.0.1	Grid Plugin Library
- Multi Panel	1.0.0.1	Multi Panel Plugin Library
- Panel	1.0.0.1	Panel Plugin Library
Line Graph	1.5.2.35	Runtime Line Graph Plugin.
Bar Graph	1.0.0.20	Runtime Bar Graph Plugin
Color Map Graph	1.0.0.20	Runtime Color Map Graph
Gauge Graph	1.0.0.20	Runtime Gauge Graph Plu.
Histogram Graph	1.0.0.20	Runtime Histogram Graph
Alarm		
Alarm History Grid	1.0.0.1	Alarm History Grid Plugin L

To add a runtime screen from runtime screen library, double-click the type as required.

Below is an example of runtime screen display. (Grid, Multi Panel, Line Graph are applied.)



3.7.1 Data

3.7.1.1 Grid

Grid displays multiple I/O source data in text for monitoring.

Whenever data is updated in Run status, the color of Time column inverts.

💾 Gri	d							
No.	Device	Tag Name	Time	Data	Unit	Min	Мах	Avera
1	COM3	1_Present V	2016-04-20	27	°C	27	28	A
2	COM3	1_Set Value	2016-04-20	38	°C	38	38	
3	COM3	1_Heating MV	2016-04-20	54.4	%	0.0	54.4	
4	COM3	1_Cooling MV	2016-04-20	0.0	%	0.0	0.0	
5	COM3	1_Heater C	2016-04-20	0.0	А	0.0	0.0	=
6	COM3	1_ºC Lamp	2016-04-20	ON	-	-	-	
7	COM3	1_⁰F Lamp	2016-04-20	OFF	-	-	-	
8	COM3	1_OUT2 Lamp	2016-04-20	OFF	-	-	-	
9	COM3	1_SV1Lamp	2016-04-20	OFF	-	-	-	
10	COM3	1_SV3 Lamp	2016-04-20	OFF	-	-	-	-
•								•

Grid column is editable. Right-click the head of grid, 'Select Column' dialog box appears. You can check the desired item to show.

Select Column		×
Select Column		
	ОК	Cancel

If you did not check 'Display When Updated' from the pop-up menu (see below), the color does not invert upon update. If you selected 'Reset Min./Max.' in the pop-up menu, Min and Max columns are reset and shows Min/Max values from that point on.

🛗 Gri	d					[- 0	X
No.	Device	Tag Name	Time	Dat	a Unit	Min	Max	Aver
1	COM3	1_Present V	2016-04-20		Delete Se	lected I/O	28	•
2	COM3	1_Set Value	2016-04-20		Delete All		38	
3	COM3	1_Heating MV	2016-04-20		Delete All	1/0	55.3	
4	COM3	1_Cooling MV	2016-04-20		Display W	/hen Updated	0.0	
5	COM3	1_Heater C	2016-04-20		Reset Mir	n./Max.	0.0	Ε
6	COM3	1_ºC Lamp	2016-04-20	4	Up	Ctrl+Up	-	
	COM3	1_⁰F Lamp	2016-04-20	Ţ.,	Down	Ctrl+Down	-	
8	COM3	1_OUT2 Lamp	2016-04-20	×.	Down	Ctri+Down	-	
	COM3	1_SV1Lamp	2016-04-20		Row Colo	r	-	
10	COM3	1_SV3 Lamp	2016-04-20		Default R	ow Color	-	-
۲ 📃				-				•

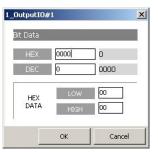
💾 Grie	d							X
No.	Device	Tag Name	Time	Data	Unit	Min	Мах	Aver
1	COM3	1_Present V	2016-04-20	OPEN	°C	26	28	•
2	COM3	1_Set Value	2016-04-20	38	°C	38	38	
3	COM3	1_Heating MV	2016-04-20	0.0	%	0.0	66.2	
4	COM3	1_Cooling MV	2016-04-20	0.0	%	0.0	0.0	
5	COM3	1_Heater C	2016-04-20	0.0	А	0.0	0.0	E
6	COM3	1_ºC Lamp	2016-04-20	ON	-	-	-	
7	COM3	1_⁰F Lamp	2016-04-20	OFF	-	-	-	
8	COM3	1_OUT2 Lamp	2016-04-20	OFF	-	-	-	
9	COM3	1_SV1Lamp	2016-04-20	OFF	-	-	-	
10	COM3	1_SV3 Lamp	2016-04-20	OFF	-	-	-	-
•								. ► a

If a parameter value causes an alarm (refer to the manual of the device), it flashes as below.

In case of ARM Series, when Input IO or Output IO is added, the output by bit is available.

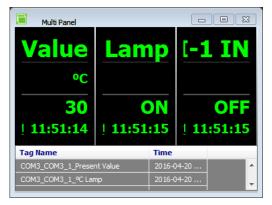
<u> </u>	Grid							• 🛛
No	Device	Tag Name	Time	Data	Unit	Min	Мах	Average
1	ARM Slim	1_Input IO#1				-		
2	ARM Slim	1_Input IO#2		-				
3	ARM Slim	1_Input IO#3						
4	ARM Slim	1_Input IO#4						
5	ARM Slim	1_Output IO#1		0000000 0000000				
•	· .							▶

Double-click the data (number) and you can edit the data and control it.



3.7.1.2 Multi panel

It displays I/O source data as Flash type. Multi Panel Viewer can display several I/O source in a screen.. If alarm of parameter value occurs among data (refer to the manual of the device) and it flahses in the set alarm color.



You can change align mode, color, update interval, etc. at Property.

		Pr	operty according to the second		×
			Run UI		
		E	General		
			Name	Multi Panel	
			Information		
Project	····· ×	E	Configuration		
Project	~		Align Mode	Horizontal Align	•
Delete View -			Display Mode	Normal View	•
Туре	File		Update Interval	1000 msec	
			View Input I/O	🗹 true	•
■ Noname			Bottom Color	dBlack	
Buntime Screen			Alarm Color	dRed	
🗄 DAQ Space			User Alarm Settings		
- brig space		E	Normal View Font S	etting	
Multi Panel	Multi Panel		Unit Font	Tahoma,26,dLime	
			Value Font	Tahoma,48,clLime	
			Tag Name Font	Tahoma,26,clLime	
			Time Font	Tahoma,26,clLime	

 Align mode: Set the align mode for several I/O source. It supports horizontal, vertical, horizontal grid align, vertical grid align. The below is the vertical grid align (grid: 3).

Multi Panel				
Value	Lam	p	[-1	L IN
٥C				
30	C	DN		OFF
11:51:14	! 11:51	:15	! 11	:51:15
Tag Name		Time		
COM3_COM3_1_Preser	nt Value	2016-0)4-20	^
COM3_COM3_1_ºC Lar	mp	2016-0)4-20	



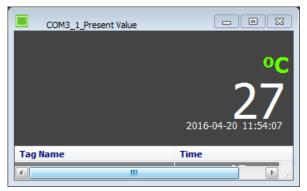
User Alam Settings: Sets user alam option to each Tag

User Alarm Settings
Tag Name COM3_1_Present Value
User Alarm Conditions
Add Del Delete All
No. Alarm Conditions
0 Value = 🔻 0
Alarm Sound
Use Alarm Sound
Open Delete Play
0:00 0:00
OK Cancel

*The other settings are same as Panel graph. Refer to the '오류! 참조 원본을 찾을 수 없습니다. 오류! 참조 원본을 찾을 수 없습니다.'.

3.7.1.3 Panel

Panel displays I/O source data in Flash. A Panel can display only one I/O source. If a parameter value causes an alarm (refer to the manual of the device), it flashes as the set alarm color.

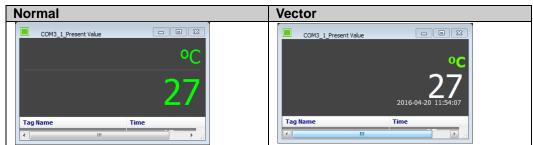


Select Panel on the runtime screen in the project window to modify properties (such as color, update interval) in the Property window.

		PT	operty		~ ^
			Run UI		
		E	General		
Project		× ×	Name	COM3_1_Present Value	
Delete Misure			Information		
Delete View -			Configuration		
Туре	File		Display Mode	View Vector	•
B Noname			Update Interval	1000 msec	
			View Input I/O	🗹 true	•
Runtime Screen			Bottom Color	\$00444444	⊡
DAQ Space			Alarm Color	\$00FF80FF	⊡
Panel	COM3_1_Prese	E	Normal View Font S	ietting	
			Unit Font	Tahoma,26,clLime	
			Value Font	Tahoma,48,clLime	

Config section in the Property window contains the following items:

Display Mode: You can select Normal or Vector.



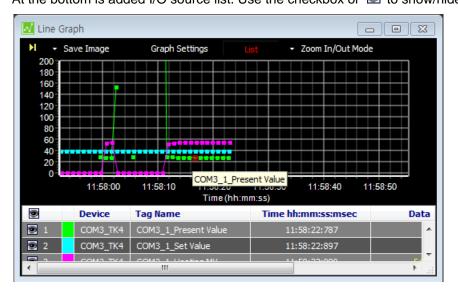
- Update Interval: Panel update interval.
- View Input I/O: Show/hide settings of the I/O source list.
- Bottom Color: Background color of the panel.
- Alarm Color: Invert color when an alarm is issued.

Normal View Text Font section in the Property window contains the following items:

- Unit Font: Unit font setting for normal view of display mode.
- Value Font: Value font setting for normal view of display mode.

3.7.1.4 Line Graph

Line Graph displays multiple I/O source data as a graph for monitoring. At the bottom is added I/O source list. Use the checkbox of 💌 to show/hide the graph.

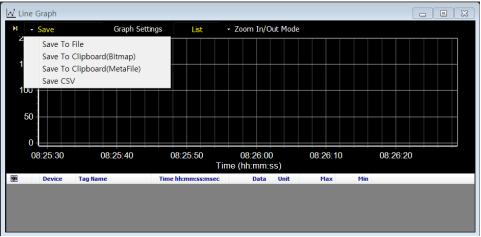


To change the color by each I/O source, double-click the color front of device.

Color		×
Basic Colors:		
	—) —)	
	1	
Custom Color	S:	
	efine Custom Colo	rs >>
ОК	Cancel	

(1) Save image

Save Image feature saves the current graph screen as an image. Save Image dialog appears when Save Image button is clicked. Images can be saved in '*.bmp', or '*.wmf' format.



- Save To File: Saves in Bitmap (*.bmp) or Windows metafile (*.wmf).
- Save To Clipboard (Bitmap): To use this image directly for other application program, saves in Bitmap (*.bmp) file to clipboard.
- Save To Clipboard (MetaFile): To use this image file directly for other application program, saves in MetaFile (*.wmf) to clipboard.
- Save CSV: Saves in CSV file(*.csv).

(2) Graph settings

Graph Settings tab

Graph Settings allows you to change the general Graph environment.

Craph Settings	(Auis Cattin	aa Taal (aub Thoma	
Graph Settings	r Axis Settin	gs Tool G	Lonfig Gr	apn Theme	
Axis Setungs					
Time Axis Se	ttings	•			
Time 0					
Min 1					
Sec 0					
		·			
2Time Format h	n:nn:ss	Ho	ur/Min/Sec	(hh:nn:ss) 🔻	
<u>ا</u>	Less Daint		4 Sq	uare 💌	
	View Point				
5Line Width			6 Poin	t 2	
7 View Dat	a <mark>8</mark> 3	0	Digital Ax	tis (%)	
9 ^{Line}					
	Y Value	Color	Width	Line Color	
Upper Limit	0.00		2	Change	
Reference	0.00		2		
Lower Limit	0.00		2	Change	
				-	
L			ОК	Car	ncel

No	Item	Description
1	Axis Settings	Sets time (Hours, Min and Sec).
2	Time Format	Sets time expression for the Time Axis (X Axis)
3	View Point	Shows data point when selected (hides data point when not selected).
4	Point Type	Sets point type.
5	Line Width	Sets thickness of the graph line.
6	Point	Sets point size.
7	View Data	Shows data value when selected (hides data value when not selected).
8	Digital Axis (%)	Sets digital axis as a percentage.
9	Line	Sets displaying or not upper limit, reference, lower limit line. Sets Y value, color, width and line color of upper limit, reference, lower limit line.

• Y Axis Settings tab

Set Y axis direction and range of each tag.

Graph Settings	
Graph Settings Y Axis	Settings Tool Config Graph Theme
Left Y Axis	Min -50.00 Unit
Auto Scale	Max 200.00 Inverted
1 Grid	Increment 0
Right Y Axis	Min -50.00 Unit
Auto Scale	Max 200.00 🔲 Inverted
Z Grid	Increment 0
	Y Axis Settings
No Tag Name	Type Axis
3 🖲 Left Y Axis	C Right Y Axis
	OK Cancel

No	Item	Description
1	Left/Right Y Axis Setting	Sets the left/right Y axis auto scale, max/min range, and unit of the selected tag. Sets the inversion of Y axis.
2	Tag List	Shows s list of tag added at the graph. Selects the tag to be appeared as Y axis.
3	Left/Right Y Axis	Sets the Y axis type (left/right) of the selected tag.

Tool Config tab

٠

You can set the color band to recognize and emphasize the desired range.

Graph Settings		X
Graph Settings Y Axis Settings	Tool Config	Graph Theme
Color Band		
) No Band		1 + - A
4		
3 Band name		Left Y Axis 🔻
5 Start		4 ^{End}
		OK Cancel

No	Item	Description
1	Add/Delete/Delete all	Adds/Deletes/Deletes all color band.
2	Band list	Displays the added color bands list.
3	Band name	Sets color band name.
4	Band standard	Sets Y axis (left/right) of color band standard.
5	Start/End range	Sets color band's start/end range.
6	Transparent	Sets color band transparent.
7	Color	Sets color band color.

Graph Theme

•

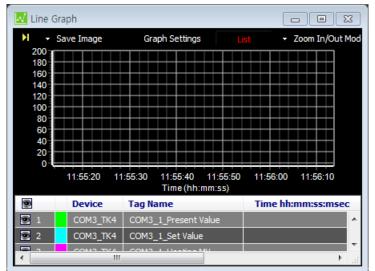
You can set the graph theme (text color, grid color, background color).

Graph Se	ttings	
Graph S	Settings Y Axis Settings Tool Config Grap	h Theme
Bla	ack	
	Data Text Tex	
	Grid Grid Bo	bttom
	Bottom	
	ОК	Cancel
No	ок	Cancel
No		Description Selects graph theme.
No		Description Selects graph theme. - Black
No		Description Selects graph theme. - Black
No		Description Selects graph theme Black
No		Description Selects graph theme. - Black
No		Description Selects graph theme. - Black
<u>No</u>		Description Selects graph theme. - Black Understand of the set of
	Item	Description Selects graph theme. - Black Use Set of the Complete
	Item	Description Selects graph theme. - Black - White
	Item	Description Selects graph theme. - Black
	Item	Description Selects graph theme. - Black www.executions.com/office/com/offi
	Item	Description Selects graph theme. - Black - White - White
	Item	Description Selects graph theme. - Black Uver crept crept crept crept crept creater and c
	Item	Description Selects graph theme. - Black Uver crept crept crept crept crept creater and c

(3) List

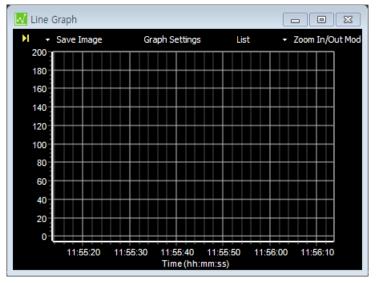
List displays or hides I/O source list items at the bottom of the graph. Clicking the List button toggles item display on and off.

List ON



List OFF

.



(4) Zoom

Zoom controls Zoom In/Zoom Out of the graph.

•	Zoom In/Out Mode
•	Zoom In/Out Mode
	Data Analysis Mode
	Data Display Mode
•	Zoom

Zoom In



On the graph, hold left mouse button and drag to lower right-hand corner to enlarge the selected area.

2 Zoom Out



On the graph, hold left mouse button and drag to upper left-hand corner to return to default scale.

3 Change X/Y Axis



On the graph, hold right mouse button and drag to change positions of X/Y axes. If the graph is enlarged or X/Y axes positions have changed, X axis does not automatically move when data has updated.

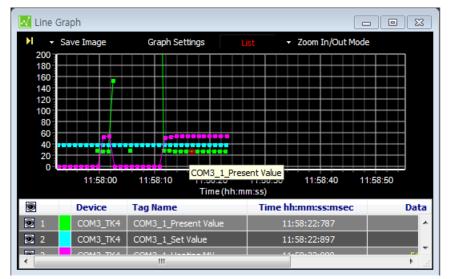
The program preserves user-changed graph scale and axes positions. It considers this as graph analysis mode.

Mouse wheel functions

Operation	Function
Ctrl + mouse wheel up	Increases X axis
Ctrl + mouse wheel down	Decreases X axis
Shift + mouse wheel up	Increases Y axis
Shift + mouse wheel down	Decreases Y axis
Mouse wheel	Increases/decreases X/Y axes at the same time.

Data Analysis Mode

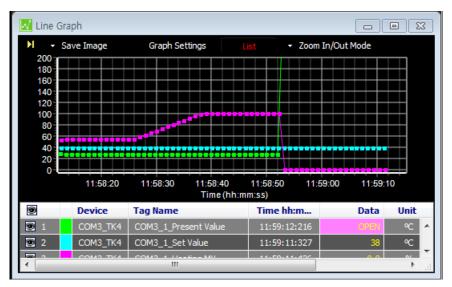
Shows X axis (Time) and Y axis values of the mouse position on the graph.



Data Display Mode

Displays all data values of the mouse position on the graph.

🕨 🚽 S	ave Image	Graph Se	ttings	List -	Data Display I	Mode	
200		44.50.35					
180		+++-=					H
160			resent Value :	27%			
140 120			et Value · 38°C				
100		CON3 1 H	eating MV : 91	.0%			
80					فنفاف الألك	كن فنفا	4
60					COM2 1 Hay	No. MV	-
40			********		COM3_1_Hea	iting Miv	H
20							H
0-	anana ka	******	\leftrightarrow	\leftrightarrow	\leftrightarrow		=
	11:58:00	11:58:10	11:58:20	11:58:30	11:58:40	11:58:50	
			Time (hh:	mm:ss)			
9	Device	Tag Name		Time h	:mm:ss:mse	C	Dat
91	COM3_TK4	COM3_1_Pre	sent Value	11	:58:52:029		

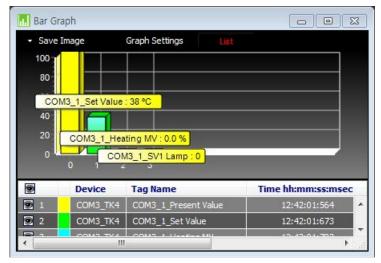


If any parameter value causes an alarm (refer to the manual of the device), it flashes as below.

3.7.1.5 Bar Graph

Bar Graph displays multiple I/O source data as a bar graph for monitoring.

At the bottom is added I/O source list. Use the checkbox of 🖻 to show/hide the graph.

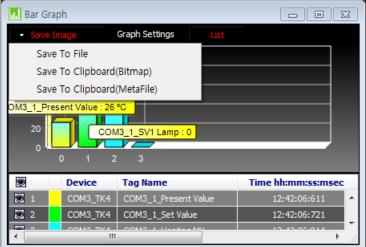


To change the color by each I/O source, double-click the color front of device.

Color	x
Basic Colors:	
💻 🥅 📁 📠 🗖	
Custom Colors:	
Define Custon	n Colors >>
OK Cancel	

(1) Save image

Save Image feature saves the current graph screen as an image. Save Image dialog appears when Save Image button is clicked. Images can be saved in '*.bmp', or '*.wmf' format.



- Save To File: Saves in Bitmap (*.bmp) or Windows metafile (*.wmf).
- Save To Clipboard (Bitmap): To use this image directly for other application program, saves in Bitmap (*.bmp) file to clipboard.
- Save To Clipboard (MetaFile): To use this image file directly for other application program, saves in MetaFile (*.wmf) to clipboard.

(2) Graph settings

Graph Settings allows you to change the general Graph environment.

Graph Se	ttings		
1 _{Axis}	s Settings		
	X Axis Settings	Y Axis Settin	gs
	Min -0.50 Max 10.00	Min 0.00 Max 100.0	0
	2 View 3D 3 Bar Style	ar	
	Vertical Bar		
		ОК	Cancel

No	Item	Description
1	Axis Set	Sets the range of Min. and Max. values of the X/Y axes.
2	3D View	Sets the display status of the bar.
3	Bar Style	Sets the horizental and vertical styles of the bar.

(3) List

List displays or hides the I/O source list at the bottom of the graph. Clicking the List button toggles item display on and off. ٠

List ON

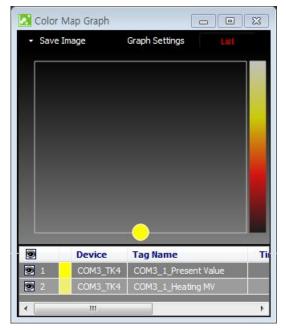
	Image	Graph Settings		
100 80				
and				
and the second se	M3_1_Set Value	: 38 °C		
40				
20	COM3 1 Hea	ting MV : 0.0 %		
0				
0		13_1_SV1 Lamp : 0		
0 . 9			Time hh:mm:ss:msee	c
20000	0	//3_1_SV1 Lamp : 0	Time hh:mm:ss:msee 12:42:01:564	c
9	Device	/3_1_SV1 Lamp : 0 Tag Name		

List OFF •

Save Image	Graph Settings List	
100		
90		
80		
70		
60		
COM3_1_Set \	alue : 38 °C	
40		
30		
20		
10 COM3_1	_Heating MV : 0.0 %	
	COM3_1_SV1 Lamp : 0	

3.7.1.6 Color Map Graph

Color Map Graph displays multiple I/O source data as a color map graph for monitoring. At the bottom is added I/O source list. Use the checkbox of 💿 to show/hide the graph.



(1) Save image

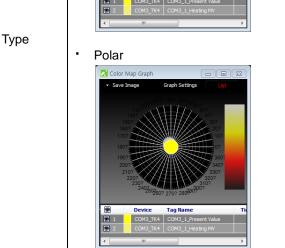
Save Image feature saves the current graph screen as an image. Save Image dialog appears when Save Image button is clicked. Images can be saved in '*.bmp', or '*.wmf' format.

COIO	Map Graph	0	
 Save 	Image	Graph Settings	
Sav	ve To File		
Sav	ve To Clipboard	d(Bitmap)	
Sav	ve To Clipboard	d(MetaFile)	
		0	
	Device		
1	СОМЗ_ТК4	COM3_1_Present Va	
and the second se		COM3_1_Present Va	

- Save To File: Saves in Bitmap (*.bmp) or Windows metafile (*.wmf).
- Save To Clipboard (Bitmap): To use this image directly for other application program, saves in Bitmap (*.bmp) file to clipboard.
- Save To Clipboard (MetaFile): To use this image file directly for other application program, saves in MetaFile (*.wmf) to clipboard.

Autonics

(2) **Graph settings** Graph Settings × Graph Type Normal 5 Color Map • 2 X Axis Settings Y Axis Settings HOT Min 0.00 Min 0.00 Max 100.00 Max 100.00 3 Circle Size Circle Size 10 4 Tag Name X Po... Y Po... Min Max 0 COM3_1_Present Value 0.00 0.00 -1999.00 9999.00 1 COM3_1_Heating MV 0.00 0.00 0.00 1000.00 OK Cancel No Item Description • Normal Color Map Graph Save Image Graph Settings 9 9 1 9 2 Device Tag Name COM3_TK4 COM3_1_Pre Graph Type 1



No	Item	Description
2	X/ Y Axes set	Sets max./min. value of X/Y axes range.
3	Circle size	Sets displayed circle size.
4	List	Shows s list of tag added at the graph. Double-click an item to set X,Y coordinate (Normal) or angle and distance (Polar Bar) depending on graph type setting.
5	Color Map	Sets color map. Color map supports HSV, JET, HOT, COOL, and GRAY mode.

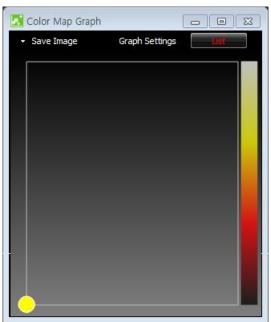
(3) List

List displays or hides the I/O source list at the bottom of the graph. Clicking the List button toggles item display on and off.

• List ON

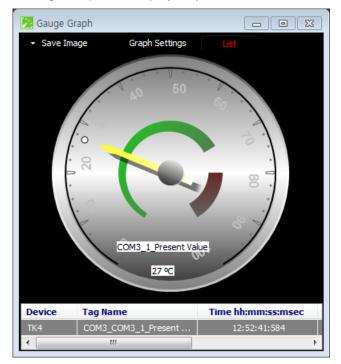
Color	Map Graph		• 33
- Save	Image	Graph Settings	
		•	
9	Device		
9	Device COM3_TK4	Tag Name	
	12122-31222		1

List OFF

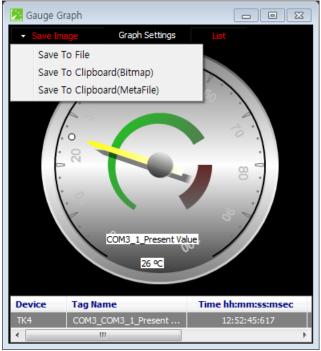


3.7.1.7 Gauge Graph

A Gauge Graph can display only one I/O source.



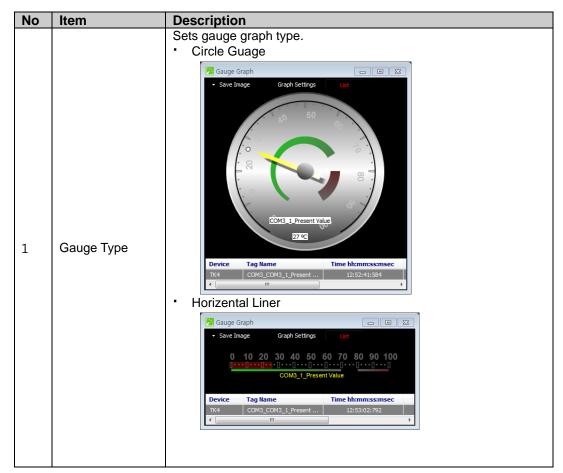
(1) Save image



- Save To File: Saves in Bitmap (*.bmp) or Windows metafile (*.wmf).
- Save To Clipboard (Bitmap): To use this image directly for other application program, saves in Bitmap (*.bmp) file to clipboard.
- Save To Clipboard (MetaFile): To use this image file directly for other application program, saves in MetaFile (*.wmf) to clipboard.

(2) Graph settings

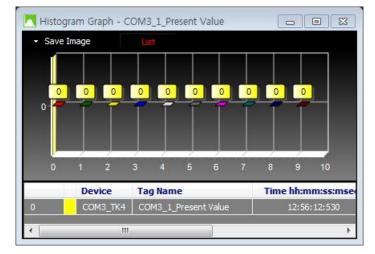




No	Item	Description
		Vertical Linear
		🔀 Gauge Graph
		Save Image Graph Settings List
		100 90 90 90 88 90 70 90 50 90 40 90 20 90 10 90 20 90 11 12:53
		IX4 COMS_LPREEnt 12:55 < III >
		Numeric Gauge
		Compage Graph Compage Graph Compage Graph Settings List Compage Graph VALUE Device Tag Name Time hh::m::ss: TK4 COM3_COM3_1_Present 12:54:47:12
		LED Gauge
		✓ Gauge Graph ✓ X • Save Image Graph Settings ↓ CDH3E1EPresent Value ✓ C Device Tag Name Time hh::m::ss: TK4 COM3_COM3_1_Present 12:54:56:12 ✓ ····
2	Minimum, Maximum, Label Interval	Sets minimum/maximum value and label interval displayed on graph.
3	TagName Visible	Sets display and color option of tagname
4	Green/Red Line Visible	Sets display option of green/red line in graph.
5	Green/Red Line Setting	Sets start/end value of green/red line.

3.7.1.8 Histogram graph

It devides and displays data by the set update interval and the number of devision. You can specify the update interval, upper/lower limit and the number of devision at Property.



(1) Save image

Save Image feature saves the current graph screen as an image. Save Image dialog appears when Save Image button is clicked. Images can be saved in '*.bmp', or '*.wmf' format.

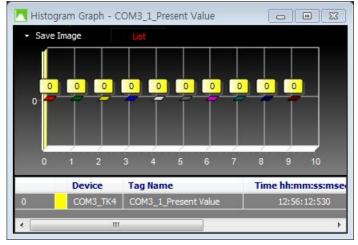
🔼 Histogra	m Graph - C	OM3_1_Pr	esent \	/alue			-	•	×
- Save Im	age	List							
Save	To File To Clipboard To Clipboard			0	0	0)	
					Ĩ	Ĩ			l
0	1 2	34	5	6	7	8	9	10	
	Device	Tag Nam	e			Time	hh:m	m:ss:m	ıse
0	COM3_TK4	COM3_1_	Presen	t Value			12:56:	18:588	
•									۰Þ.

- Save To File: Saves in Bitmap (*.bmp) or Windows metafile (*.wmf).
- Save To Clipboard (Bitmap): To use this image directly for other application program, saves in Bitmap (*.bmp) file to clipboard.
- Save To Clipboard (MetaFile): To use this image file directly for other application program, saves in MetaFile (*.wmf) to clipboard.

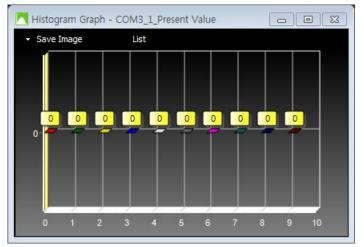
(2) List

List displays or hides the I/O source list at the bottom of the graph. Clicking the List button toggles item display on and off. ٠

List ON



List OFF •



3.7.2 Alarm

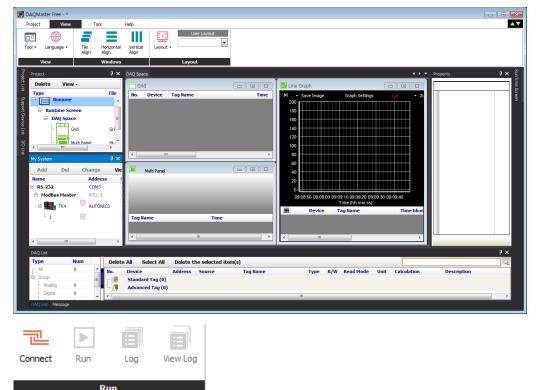
3.7.2.1 Alarm History Grid

Alarm History Grid displays alarm data of I/O source in text for monitoring. Whenever an alarm occurs in Run status, the alarm list is updated directly.

No.	Time	Device	Tag Name
1	2016-04-20 11:19:05:277	COM3_TK4	COM3_1_Present Value
2	2016-04-20 11:19:14:387	COM3_TK4	COM3_1_Present Value
3	2016-04-20 11:19:15:401	COM3_TK4	COM3_1_Present Value
3		сомз_тк4 !!!	COM3_1_Present Value

3.8 Connection

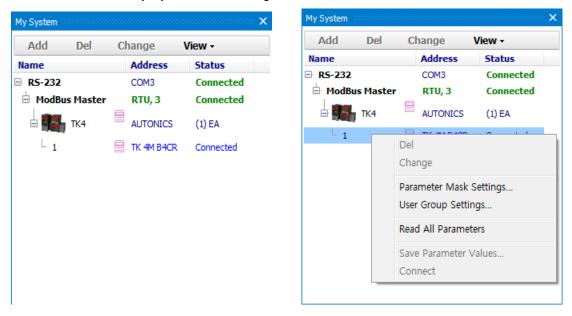
All necessary settings to connect a device has completed as following image.



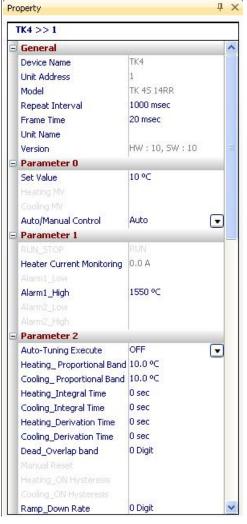
Click the 'Connect' button on the toolbar and check the connection status in My System. If the connection is successful, Status displays 'Connected'.

To edit a parameter of a connected unit in DAQMaster, you should load parameters of the connected unit.

Select TK4 Unit 1 in My System and then right-click it to execute the 'Read All Parameters'.



When the reading is completed, the Property window displays the parameters. Parameter change is also available.



If you only want to monitor paramiter without editing, click 'Run' button on the toolbar.

When parameter values are changed in the Property window, changed values are immediately applied through communication with the device. While requesting a parameter value change, all property values are displayed in gray (not modifiable). They are restored to the original color, when the changing is over.

To apply the changed value, change the value and press Enter (for edit type), or select an item with the mouse or the Alt + arrow keys, and press enter (for list type).

If a unit related item in a parameter is changed, all unit values of the related parameter will be changed. If a range related item is changed, this range will be applied to all parameter items.

If an out-of-range value is entered in a property with a range of value, the input is ignored and the value is restored to original. The range is displayed at the bottom of the Property box.

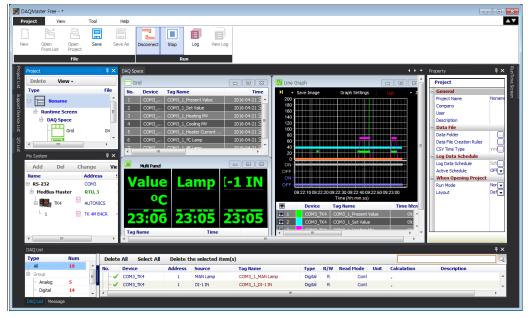
A parameter with a designated input format is only editable in the specified format.

Values of parameters in 'Disable' status are not displayed and the names are grayed out. In Reading mode, names and values of parameters are grayed out.

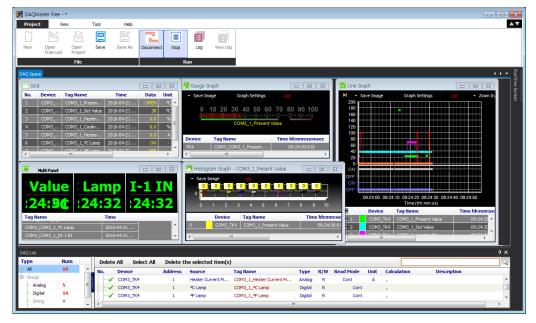
The language of the parameters does not change (regardless of the language selected when installing the program).

3.9 Running the Program

Below is an image of the program in progress.



If you changed the layout from 'Default' to 'Runtime' on the toolbar (View > Layout), the monitoring screen displays as below.

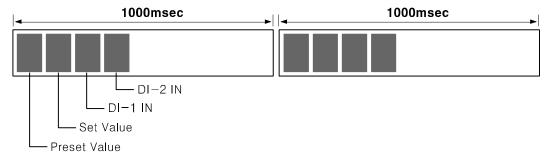


Note

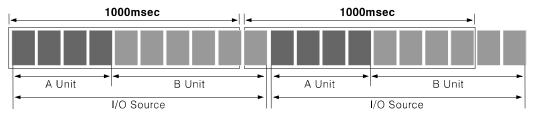
Setting a reading repetition of the unit

Under General box in Propetry window of connected units, 'DAQ Repeat Interval' sets an interval of I/O source reading repetition in 'Run' status.. The default value is 1000 ms.

If four I/O sources are added to DAQ List, the program recieves data of four I/O sources from connected units and another four after 1000 ms passed, as shown in the diagram below. When the number of I/O do not exceed the Repeat Interval value(1000 ms), the program brings data on the designated cycle.



When a large number of I/O sources are added, data reading cycle may exceed the defined Repeat Interval, as shown in the image below.



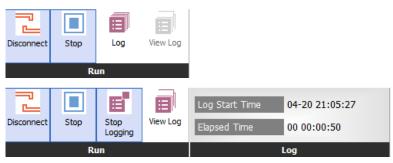
In this case, the program change the preset Repeat Interval value to the minimum interval.

As a result, if actual I/O data reading time exceeds the set Repeat Interval value(time), the program and the units communicate on the minimum time interval required to read all I/O sources.

If the environment requires a precise set value, add RS-232 port(s) and split the device connection.

3.10 Logging

When the status is 'Run', the 'Log' button on the toolbar is activated.



If you start logging, log start time and elapsed time are displayed on the right side.

If you click Stop Logging, the Save As window appears. Files are saved in DAQ Data File (*.ddf) and CSV File (*.csv) format.

Save As			×
Save in:	📔 New Folder	- 3 🕫 📂 🗄	⊡ ▼
My Recent Documents Desktop My Documents	Noname 🔜		
My Computer My Network	File name:	noname 🗸	ОК
	Save as type:	DAQ Data File(∗,ddf) CSV File(∗,csv)	Cancel

DAQ Data Files (*.ddf) can be analyzed using tool. "Tool > Data Analysis in DAQMaster Program"

	Data Anal	ysis											x
I	File	Database	View	Help									
	E1	E 🖪	Ei	周日	I 🖩 🛛 - 🛛	√ ⊞			ABC				
	New	Open Save		Open		aph Alarm Grid		Delete	Change Name				
ŀ	Project File				Analysis Window Analysis Sp			ace					
	File List			무× Anal	lysis Space								• •
	File												
1				д×									
	Analysis Wind Window	low		Ψ×									
		sis Space											
l													
	DAQ List												Ψ×
	No.	File		Device	Address	Source	Tag	Name	Туре	Variable	Unit	Start Time	
													- 1
													_
	AQ List DE	리스트	_	n	1	_	_						- F
L	und also be												

3.11 Saving Project

You can save the project you were monitoring.

Set values of device, RS-232 configuration, repeat interval, runtime screen are saved. Before saving, specify project properties as follows.

1st Select Noname at the top of the project tree.



2nd In the Property window, the project name is marked as Noname. Company name,

Property								
Project								
General								
Project Name	Noname							
Company								
User								
Description								
- Data File								
Data Folder								
Data File Creation Rules								
CSV Time Type	yyyy-mm-dd hh:nn:ss:zz	z						
🖃 Log Data Schedule 👘								
Log Data Schedule	Schedule Setting : 0/0							
Active Schedule	OFF							
When Opening Project								
Run Mode	None	•						
Layout	Default	•						

worker, and description are empty.

Enter basic project information, such as company name, worker, and other

descriptions as below.

Property	🗙							
Project								
🖃 General								
Project Name	Autonics_TK							
Company	AUTONICS							
User	Auto							
Description	Test							
🖃 Data File								
Data Folder								
Data File Creation Rules								
CSV Time Type	yyyy-mm-dd hh:nn:ss:zzz							
Log Data Schedule								
Log Data Schedule	Schedule Setting : 0/0							
Active Schedule	OFF 💽							
When Opening Project								
Run Mode	None 💽							
Layout	Default 💽							

3rd Select "Project > File > Save" from main menu to save the project in the desired location.

ocation.				
Project	Viev	N	Tool	Help
New	Open From List	Open Project	Save	Save As
		File		

Save Project			x
Save in:	📔 New Folder	- 🥝 🌶 📂 🎞 -	
My Recent Documenrs Desktop My Documents My Documents My Computer	TK4.dqp		
My Network	File name:	- O	ĸ
My Network	Save as type:	DAQMaster Project File(*,dqp)	

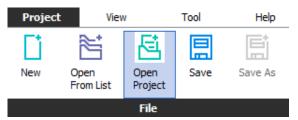
3.12 Opening a Project

Opens a saved project.

There are two ways to open a project: 'Open Project' and 'Open From List'. You can only open a project when communications are disconnected.

3.12.1 Open Project

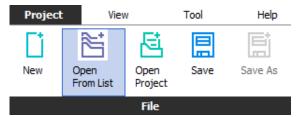
Directly selecting a project file is the most common way to open a project file.



3.12.2 Open Project List:

This method opens a file from a list of frequently used projects.

This is a convenient project file management system. Similar to the favorites menu of the Internet browser, you can add frequently used projects to the list.



You can creat a parent folder in the Project List by clicking 'Add Folder' and manage saved project files under the parent folder. You can also change folder/file names as well as add or delete folders/files.

Selecting a folder in the Project List activates Add Folder, Change Name, Add, and Delete menus. Selecting a project file in the Project List activates Add folder, Add and Delete menus.

Project List	3 4	×
Add Folder Change Name	Add Del	Current Project
Project Name	Description	Со
🖻 🚞 TK4		
Autonics_TK	Test	AU
•		Þ

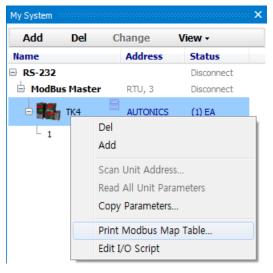
No	Item	Description
1	Add Folder	Adds a folder.
2	Change Name	Changes the name of folder.
3	Add	Adds a project file. Click Add opens Project List window
4	Delete	Removes selected folder or file.

3.13 Modbus Map Table Report

This feature outputs ModBus map table of a device, which uses ModBus communications, as a report.

Direct print out is available and you can save in a PDF File (*.pdf) or Html File (*.html) format.

In the status that a device is added, right-click the device in My System and Select Print ModBus Map Table from the pop-up menu.



Preve	2 3							
	📑 🗙 🛛 Pa	e : 1/4 Microsoft XPS Document Writer						
		ModB us Memory Map Table Company: Autores Device New: 176						
		Dete: 2016-04-20						
		No Modilus Address R/W Size Pensimeter 1 40001 0000 R/W 1 Set Vere						
		2 4000 000 N/W 1 247/364						
		2 40003 00.02 R/W 1 Costing M/						
		4 4 0004 00 03 R/W 1 Auto/Neruel Control						
		5 40051 0033 R/W 1 RUN_STOP						
_		6 40051 0023 R/W 1 Mutt SV No 7 40053 0024 R 1 Heatler Current Montoing						
		7 40053 0034 R 1 Haster Current Honto thg 6 40054 0025 R/W 1 Atmit_Low						
		9 40055 0036 R/W 1 Abmi_Hgh						
		10 40056 0027 R/W 1 Akm2_Low						
		11 40057 0038 R/W 1 Aarm2_Hgh						
		12 40055 0029 R/W 1 S/-054tttg/bitus 12 40059 0024 R/W 1 S/-454tttg/bitus						
		14 40050 0028 R/W 1 SV2 Setting Value						
		15 40061 003C R/W 1 5V-3.5etting Value	(
		16 40101 0064 R/W 1 Auto-Tunin p Bixecute						
		17 40102 0065 R/W 1 Hading_PepotionsBand						
		16 40103 00.66 R/W 1 Cooling Propertional Band 19 40104 00.67 R/W 1 Hagtho Integral Time						
		19 40104 00 67 R/W 1 Heating_Integrations 20 40105 00 66 R/W 1 Cooling_Integrations						
		21 40105 00.09 R/W 1 Hattp://www.china						
		22 40107 00 6A R/W 1 Cooling_Deviation Time						
		23 40106 00.69 R/W 1 Dead_Dearleband						
		24 40109 00.00 R/W 1 ManualReast						
		25 40110 0060 R/W 1 Hathg_0H Hytanata 26 40111 0065 R/W 1 Hathg_0F Offat						
		27 40112 006F R/W 1 Cooling_ON Hysterest						
		2 6 40:13 0070 R/W 1 Cooling_OFF Officiat						
		29 40114 0071 R/W 1 MVLowLimb						
		30 40115 0072 R/W 1 MV Hgh Umit						
_		21 40115 0073 R/W 1 Bamp_Up Bate 23 40117 0074 R/W 1 Bamp_DownRate						
		Modžus Memory Map Table AUTONICS / TK4 🎼 1						
	-							
	-							
No	Item	Description						
		Configures the printer to print.						
1	Printer Setu							
1		Printer setting options vary by a printer model.						
2	Print	Prints the ModBus map table.						
3	Close	Closes the print preview window.						

Below is a preview window.

4 Changing Program Language

4.1 Change Language

Changes the program language. Default language is the program installation language.



Select "Tool > Language" from the main menu. Language option is applied immediately and the program is displyed in the selected language.



4.2 Modifying and Adding Languages

DAQMaster program allows users to add and modify the language. Language files reside in 'lang' folder in the installation folder. Its default format is XML.

To modify language, open the language file in Notepad as below, modify and save.

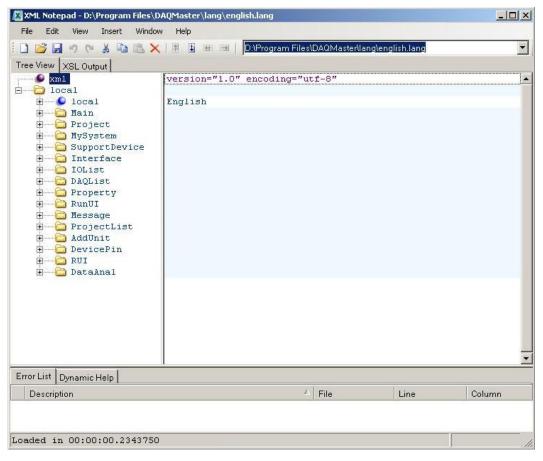
inglish.lang - Notepad	
File Edit Format View Help	
xml_version="1.0" encoding="utf-8"?	
<local> <local>English</local></local>	
<pre><tocar>Ligrisit</tocar> </pre> <pre></pre> <pre></pre> <pre>Cocar>Ligrisit</pre> <pre>/Tocar> </pre> <pre></pre> <pre>/Tocar> </pre> <pre>/Tocar</pre> <pre>/Tocar</pre> <pre>/Tocar</pre> <pre>/Tocar<td></td></pre>	
<daqmaster></daqmaster>	
<main> <_D>File<!--_D--></main>	
< <_1>¥iew _1	
<_2>Run _2	
<_3>Tool _3	
<_4>#indows _4 <_5>Help _5	
<_6>New _6	
<_7>Open	
From List _7 <_8>0pen	
Project _8	
<_9>Save _9	
<_10>Save As _10 <_11>Open Data _11	
<_12>Save Data _12	
<_13>Print Preview _13	
<_14>Exit _14 <_15>Property _15	
<_16>Support Device List _16	
<_17>My System _17	
<_18>Project _18 <_19>I/O List _19	
<_20>RunTime Screen _20	
<_21>DAQ List _21	
<_22>Message _22	-
۲ III III III III III III III III III I	

To add a language, copy and rename the existing language file.

Change the title of language In <local>English</local> section in English. (highlighted with a square in the image below), change the English contents to your desired language and save. (For example, to change to Korean: Change 'File' to '파일'.)

Korean.lang - Notepad	
File Edit Format View Help	
Prod Land Product Product Prod Product Product Product Product Product Product	
<	<u>ا</u>

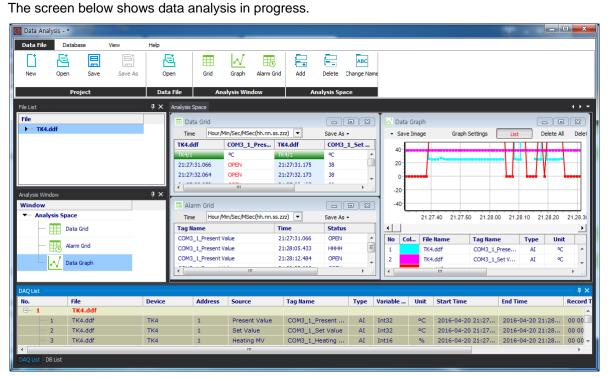
Since the default language file is in XML format, you can edit the file using XML Notepad (a freeware provided by Microsoft) as below.



5 Data Analysis

With this program you can analyze monitored data files (*.ddf) through Grid or Graph screen.

You can save monitored data files as a different file name.



5.1 Screen Layout

DAQMaster data analysis screen is divided into sections as shown in the below screenshot and each section is composed of following items.

🚺 Data	Analysis	.*	_												•		X
Data I	ile	Database	View	Help													
		i 🗐	Ē	臣		₩ 18	E		АВС								
New	Q	pen Save	Save As	Open	Grid	Graph Alarm Grid	Add	Delete C	hange Nar	ne							
		Project		Data File	Ana	alysis Window	Ar	alysis Spac	e								
File List				· · · · · · · · · · · · · · · · · · · ·	is Snace		· · · ·			-							< + -
File					-					T <u>Q</u>	Data Gra						
	K4.ddf			7	Data Grid				9 X							- 0	
					ime Hour/M	lin/Sec/MSec(hh.nn.ss.:	- L	Save As		•	Save Ima	age	Graph Sett	tings	List	Delete All	Delet
				TK			K4.ddf K4/1	COM3_:			40	-			┝╍╉╺╄╍╌┩		
					27:31.066		1:27:31.175	38			20					1	
				21:	27:32.064	OPEN 2	1:27:32.173	38			0						
									•		20						
Analysis				· · · ×							40						
Windo	w nalysis !	·			Alarm Grid				• X		40 <u>1</u>	-					
	_					lin/Sec/MSec(hh.nn.ss.:	•	Save As				21.27	.40 21.27.50	21.28.00	21.28.10	21.28.20	21.28.30
	- =	Data Grid			Name	-	ime	OPEN OPEN			Col	ril- i	Name Ta	ag Name	Туре	11-1	
	- =	Alarm Grid			43_1_Present V		1:28:05.433	HHHH	E	1	Col	TK4.		ag Name OM3_1_Pre		Unit ℃	
	- IX	Data Graph			43_1_Present V		1:28:12.484	OPEN		2		TK4.		OM3_1_Set		•C	
	~	Data Graph		•					•	1							► a
	_																
DAQ List																	∞ ₽ ×
No.		File TK4.ddf		Device	Address	Source	Tag Name		Туре	Variab	le U	nit	Start Time	E	nd Time		Record T
	- 1	TK4.ddf		ТК4	1	Present Value	COM3 1 F	Present	AI	Int32		°C	2016-04-20 2:	1:27 2	2016-04-20	21:28	00 00
	- 2	TK4.ddf		ТК4	1	Set Value	COM3_1_5		AI	Int32		°C	2016-04-20 2:		2016-04-20		00 00
	- 3	TK4.ddf		ТК4	1	Heating MV	COM3_1_H	Heating	AI	Int16		%	2016-04-20 23	1:27 2	2016-04-20	21:28	00 00 +
•	DB List					III											4

No	Item	Description
1	Menu	Menus are displayed by category. Select a menu to display submenus.
2	File List	Shows a list of project files to analyze.
3	Analysis Window	Shows items at the Analysis Space.
4	DAQ List	Shows I/O source list is saved in the data file.
5	DB List	Shows DB list.
6	Analysis Space	Space for displaying data grid, data graph, Alarm Grid.
7	Data Grid	Shows I/O data as grid data.
8	Data Graph	Shows I/O data as graph data.
9	Alarm Grid	Shows alarm data as grid data.

5.1.1 Menu

5.1.1.1 Data File

Data File	Databa	ase	View	Help							
Ľ	ē			€ P	巴	\sim	Ö				A
New	Open	Save	Save As	Open	Grid	Graph	Alarm Grid	Analysis	Add	Delete	Change Name
	Project					Analys	is Window		A	nalvsis So	ace

(1) Project

- New: Initializes the opened Data file and the analysis screen.
- Open: Opens the saved data file (*.dap).
- Save: Saves the opened data file or anaylsis windows.
- Save As: Saves the opened data file or anaylsis windows as other file name.

(2) File

• Open: Opens DAQMaster log file (*.ddf, *.krd, *.t5d).

(3) Analysis Window

You can add the items (grid, graph, alarm grid) for displaying Analysis Space.

(4) Analysis Space

You can add and delete a tap, or change the tap name at the Analysis Space.

5.1.1.2 Database

This menu is available only for DAQMaster Pro version.

Data File	Database	View	Help
Connect DB	Grid DB G	raph	
Connect	DB Chart		

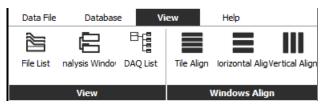
(1) Connect

You can check the data of connected database.

(2) DB Chart

It displays database data as grid or graph via field setting, etc.

5.1.1.3 View



(1) View

Opens file list, analysis window, DAQ List at Data Analysis.

(2) Align Windows

Aligns analysis windows. Select Tile Align, Horizontal Align, or Vertical Align according to the environment.

5.1.1.4 Help

Data File	Database	View	Help
) Information			
Help			

Information for DAQMaster data analysis program.

5.1.2 File List

Shows a list of opened Data Files (*.ddf).

File		
- 1	rK4.ddf	
	— Data Type : DAQMaster Data File(
	— File Version : 2705	
	— Log Time : 2016-04-20 오후 9:28:52	
	— Title : Noname	
	Company:	
	- Worker :	
	Description :	

5.1.3 Analysis Window

Shows items at the Analysis Space.

Analysis Window	oooo 🗖 🗙
Window	
▼── Analysis Space	
— Data Grid	
- Alarm Grid	
Data Graph	

5.1.4 DAQ List

DAQ List shows I/O source list saved in the data file.

I/O sources can be analyzed through the analysis screen.

DAQ List 4 X												
No.		File	Device	Address	Source	Tag Name	Туре	Variable	Unit	Start Time	End Time	Record Tin
	1	TK4.ddf										*
	- 1	TK4.ddf	ТК4	1	Present Value	COM3_1_Present	AI	Int32	°C	2016-04-20 21:27	2016-04-20 21:28	00 00:
	- 2	TK4.ddf	ТК4	1	Set Value	COM3_1_Set Value	AI	Int32	°C	2016-04-20 21:27	2016-04-20 21:28	00 00:0
	- 3	TK4.ddf	TK4	1	Heating MV	COM3_1_Heating	AI	Int16	%	2016-04-20 21:27	2016-04-20 21:28	00 00:1 🔻
٠ 📃												F.

5.1.5 Analysis Space

(1) Grid

Analyzes I/O data in grid. Drag the I/O source from the DAQ List and drop onto the data graph screen to analyze it.

🎹 Data Grid				2
Time H	lour/Min/Sec/MSec(hh	.nn.ss.zzz) 💌	Save As 🝷	
TK4.ddf	COM3_1_Pre	es TK4.ddf	COM3_1_	Set
TK4/1	۹C	TK4/1	°C	*
21:27:31.066	OPEN	21:27:31.175	i 38	
21:27:32.064	OPEN	21:27:32.173	38	
21:27:33.078	OPEN	21:27:33.187	38	
21:27:34.092	2 OPEN	21:27:34.201	38	-
<				• a

(2) Graph

Analyzes I/O data in graph. Drag the I/O source from the DAQ List and drop onto the data graph screen to analyze it.

Right-click to set the display setting of graph (tag, view point, Y Auto scale).



(3) Alarm Grid

Analyzes alarm data in grid. Drag the alarm source from the DAQ List and drop onto the data graph screen to analyze it.

🔣 Alarm Grid	i			
Time H	our/Min/Sec/MSec(hh.nn.	.ss.zzz) 💌	Save	As 🕶
Tag Name		Time	Stat	us
COM3_1_Pres	ent Value	21:27:31.066	OPE	N
COM3_1_Pres	ent Value	21:28:05.433	HHH	н
COM3_1_Pres	ent Value	21:28:12.484	OPE	N
COM3_1_Pres	ent Value	21:28:25.603	OPE	N
COM3_1_Pres	ent Value	21:28:45.790	ННН	н
•				ł

(4) Analysis Spread

This function is only for KRN1000. Analyzes tag values in spread. Displays data with in designated range, which is set by users.

5.2 Analyzing Data

5.2.1 Opening Data Files

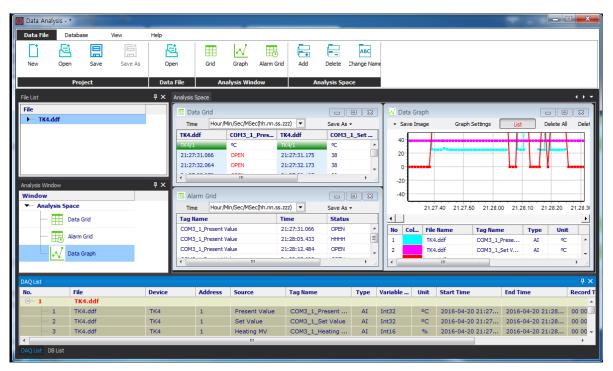
Select "Data File > Project > Open" to open a data file.

Open					? 🛛
Open Look in: My Recent Documents Desktop	noname noname1111 noname_long temp_20130	131002_112047 jtime	•	• € * II •	
My Documents My Computer	iest2				
My Network Places	File name:	temp_20130524_105041			Open
	Files of type:	All Files(*.ddf,*.krd)		•	Cancel

5.2.2 Add Analysis Screen

DAQ List contains I/O source list of the file. At 'Data File > Analysis Window', select the added Data Grid, Data Graph, Alarm Grid for Analysis Space.

Select I/O source on the DAQ List screen, then drag and drop onto the Data Grid, Data Graph, Alarm Grid.



The file displayed on the Data Grid screen and the Alarm Grid can be saved as a different file name in *.txt, *csv, *.html or *rtf formats.

🔲 Data Gri	d					• 🔀
Time	Hour/Min/Sec/MSec	:(hh.nn.ss.zzz) 💌	Save As 👻	Delete All	Delete Channel	Print
TK4.ddf	COM3_1_	Pres TK4.ddf	*.txt	TK4.ddf	COM3_1_He	a
21:27:36.13	20 OPEN	21:27:36.	*.CSV	21:27:36.33	39 0.0	~
21:27:37.1	19 OPEN	21:27:37.	* html	21:27:37.33	37 0.0	=
21:27:38.13	33 512	21:27:38.	*.rtf	21:27:38.35	51 0.0	=
21:27:39.14	47 26	21:27:39.		21:27:39.34	49 62.8	
21:27:40.16	51 25	21:27:40.27	0 38	21:27:40.36	62.8	
21:27:41.13	75 25	21:27:41.28	4 38	21:27:41.37	62.9	
21:27:42.18	39 25	21:27:42.29	8 38	21:27:42.39	91 59.8	
21:27:43.20	3 27	21:27:43.31	2 38	21:27:43.40	05 61.9	
21:27:44.2	17 26	21:27:44.32	6 38	21:27:44.4	19 63.0	
21:27:45.2	15 25	21:27:45.32	4 38	21:27:45.4	18 63.2	-

You can use zoom with the mouse wheel feature on the data graph screen for analysis.

In Save Image, You can save the currently shown graph screen as an image .

📈 D	ata Gra	ph										- [• 🕺
÷ 9	Save Ima	ige	Gr	aph S	ettings		List		De	elete All		Delete	Channel
5	°1								П		П		
4	0							┝╍╋			H		
3	0		_						H		H		
2	0							H			Ŧ		
1	0							H			t		
	0	k						1.1	-	haad	ł		
-1	0								-				
-2	0								-				
-3	0								-				
-4	0								-				
-5		21.2	7.40	21.2	7.50	21.2	8.00	21.	28.1	0 2	21.2	8.20	21.28.30
													Þ
No	Col	File N			Tag Na	ame		Тур	e	Unit	t		Min
1		TK4.0			COM3			AI		°C			
2		TK4.0	ldf		COM3	1_Se	t V	AI		°C			
•				III									۱. F

You can set time axis, time format, graph line width, etc of the graph in Graph Settings.

Graph Settings			
Axis Settings			
Time Axis Setti	ngs	Y Axis Setti	ngs
Hour 0		Min -50.0	00
Min 1	-	Max 50.0	
Sec 0	=		
Sec 0			
Time Format hh.nn.	ss Hour/N	1in(hh.nn)	•
Vie Vie	w Point		
Line Width 2	-	Point 2	*
DI Axis(%) 30			
Line			
	Y Value	Color	Width
🗌 Upper Limit	0.00		2
Reference	0.00		2
Lower Limit	0.00		2
☐ View Tag Na ☐ View Tag Ch			
	IECK DUX		
	C	ж	Cancel

5.2.3 Print

Data Analysis program supports printing graph, grid, etc.

🔟 Data Grid						8
Time Hour/Min/Sec/MSec(hh.nn.ss.zzz) 💌 Save As 🔹 Delete All Delete Channel Print						
TK4.ddf	COM3_1_Pres	TK4.ddf	COM3_1_Set	TK4.ddf	COM3_1_Hea	
TK4/1	°C	TK4/1	°C	TK4/1	%	~
21:27:31.066	OPEN	21:27:31.175	38	21:27:31.284	0.0	
21:27:32.064	OPEN	21:27:32.173	38	21:27:32.283	0.0	=
21:27:33.078	OPEN	21:27:33.187	38	21:27:33.297	0.0	-
21:27:34.092	OPEN	21:27:34.201	38	21:27:34.311	0.0	
21:27:35.106	OPEN	21:27:35.215	38	21:27:35.325	0.0	

Click the 'Print' and the 'Preview' dialog box appears.

Preview	<u>n</u> =	1.0	100		5
Page : 1/3	Send	To One	lote 2013		
	Data Analysis				
	THADA COMS_1	Present Valuef	COMS_1_Set Value	#ddf	COM3_1_Heating MV
	TH#/1 TC	TK4/1		4 /1	~
	2127 21.056 OPEN	21:27:21.475		2721284	0.0
	2127 22.054 OPEN	21:27:22.172		2722262	0.0
	2127 23.078 OPEN	21:27:22.167		2722297	0.0
	2127 24.092 CPEN 2127 25.106 CPEN	21:27:24.201 21:27:25.215		2724311	0.0
	2127 25.108 OPEN 2127 26.120 OPEN	21:07:05.215		2725225	0.0
	2127 25.120 OPEN 2127 27.119 OPEN	21.07.26.229		2726220	0.0
	2127 28:122 512	21-27-26-242		2727227	0.0
	2107 09.147 26	21.27.29.256		2729349	62.6
	2127 40.161 25	21:27:40.270		2740363	62.4
	2127 41 175 25	21:27:41.294		2741277	61.9
	2127 42.199 25	21:27:42.299	36 21	2742391	59.4
	2127 42 202 27	21:27:42.212	26 21	2742405	61.9
	2127 #4.217 26	21:27:44.326	36 21	2744419	63.0
	2127 45 21 5 25	21:27:45.324	36 2 1	2745419	a1
	2127 46 21 2 25	21:27:46.222	26 21	2746416	63.0
	2127 87 227 25	21:27:47.227	36 21	2747430	61.0
	2127 46 22 6 25	21:27:48.325	26 21	2748429	6.1
	2127 49 22 4 25	21:27:49.333		2749427	6.1
	212750328 35	21:27:50.247		2750.441	63.0
	212751252 25	21:27:51.261		2751455	62.9
	2 1 27 52 36 6 25	21:27:52.275		2752469	62.0
	212752360 25	21:27:53.369		2752462	62.0
	1127 54 394 15 1127 55 393 15	21:27:54.402		2754497	64.0 68.5
	2127 55 293 25	21:27:55.402		2755495	72.4
	112/50.207 23	21:27:50.416		2757522	74.7
	1127 59 335 35	21:27:59.444		2758527	81.2
	212759349 25	21:27:59.459		2759551	15.5
	2120 00 363 25	21:29:00.472		2600365	W3
	2129 01 377 25	21:20:01.465		2801579	94.1
	212002301 25	21-26-02.500		2802592	96.3
	Data Analysia				1

6 DDE Server

DAQMaster performs as a DDE(Dynamic Data Exchange) Server, allowing communication among programs in Microsoft Windows system. This DDE Server became DAQMaster uses shared memory. DAQMaster provide protocol or format of instructions and message to applications.

External programs can exchange data of DAQMaster with each other through DDE Server.

1st Click "Tool > DDE Server" in main menu to open DDE Server Settings dialog.

_	rver Settings			Tool						
_	iter settings									
)E Server Se	ettings						Servic	e DAQMaster	Topic DA
DAQ List							Item Value Type		DDE Server Item	- Jan Dar Jacking
	Device	Address	Source	Tag Name	Туре	R/W	Item Device Address		Server Starts Wn Drogram Item Name Tag Na	
*	Standard Tag COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Source	I		
	COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R	Tag Name			
	COM3_TK4	1	Heating MV	COM3_1_Heating MV	Analog	R	Type			
	COM3_TK4	1	Cooling MV	COM3_1_Cooling MV	Analog	R	R/W Unit			
	COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R	Description			
<u>A</u> .	Advanced Ta						DAQ Time DAQ Value			
							Selected Type	4		
							Item DDE			
•						Þ				
Selected D	AQ Item									
No. I	Device	Address	Source	Tag Name	Туре	R/W	Unit Description			

2nd From DAQ List, double-click Tag to provide to DDE Client.

(Service: DAQMaster, Topic: DAQ are set)

Q Lisi								Value Type		p	DDE Server Iter	
색				~	-		L Iten					arts when Starti
	Device Standard Tag	Address	Source	Tag Name	Туре	R/W	Add				Item Name	Tag Name
/	COM3_TK4	1	Present Value	COM3_1_Present Value	Analog	R	Sour	ce				
1	COM3_TK4	1	Set Value	COM3_1_Set Value	Analog	R		Name				
1	COM3_TK4	1	Heating MV	COM3_1_Heating MV	Analog	R	Туре					
1	COM3_TK4	1	Cooling MV	COM3_1_Cooling MV	Analog	R	R/W Unit					
1	COM3_TK4	1	Heater Current M	COM3_1_Heater Current M	Analog	R		ription				
	Advanced Ta							Time				
							DAC	Value				
							Selec	ted Type				
							Iten	n	DDE			
						,						
cted	DAO Item											
	Device	Address	Source	Tag Name	Туре	R/W	Unit	Descriptio	n			
	TK4	1	Present Value	COM3_1_Present Value	Analog	R						
	TK4	1	Set Value	COM3_1_Set Value	Analog	R						

7 Edit ModBus Device

You can add the any modbus device which are not supported at DAQMaster and set and monitor the property and I/O. This function is available only for DAQMaster Pro version.

(1) Creating Device File

1st Double-click 'Tool' of menu and Edit Modbus executes at DAQ Space.

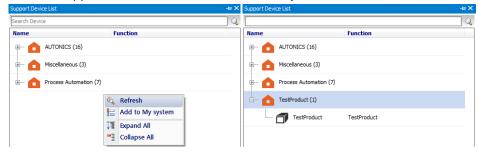
Project	View		Тоо	I		Help					
\odot)		?			* 8	88 88 88			
Time Display	Data Ana	alysis	DDB	E Ser	ver	dit M		P/IP rver	Script Editor		
ModBus Editor 🗡 DAQ Space					Т	ool				4 >	Ŧ
Edit Modbus											
New Load Save	Save As	Add	Delete Proj	Dele perties	ete All		Save Clear Contents	Properties			
File Name		Address	Name	R/W	Size	User Group	Save Type	Category	•		
Vendor							Name				
Product								Not Used			
Description								The obed			
Icon								1			
(32X32) Add Icon							Data				
Delete								SInt16(-32,7	i8~32,767) v		
		•						Analog	*		
	•			1/0				Inverse Continue Rea			
mmunication Devi RS-232		Address	Name	R/W	Size	User Group		0			
	_										
Frame Interval	40 msec										
		•			1	F					
			No. of Par								
Modbus Device File Se	ettina	Pr	operties a	and I/C) List			Pr	operties and I/O Edit		

2nd At Modbus Device File Settings, you can create new device file (*.udv) or load the saved user device file (*.udv).

Enter vender name, product name, description, etc. and click 'Save' or 'Save As' to save the file.

New	Load	Save	Save As
File Nar	ne		
Vendo			
Produc	t		
Descript	ion	_	
Icon (32X32 Add)	Icon	
Delet	e		
Start Add	ress <mark>Star</mark>	tat 1	•
mmunicatio	n Devi 📝 R	S-232 CP/IP	
Frame Int	erval		40 msec

- 3rd 'Save' or 'Save As' dialog box appears. Enter file name. The save file name is displayed at File Name of Modbus Device File Settings
- 4th Refresh Support Device List and check the newly added device.



(2) Adding device properties and I/O

6) Add One

1st Click 'Add' at Properties and I/O List' of Edit Modbus and 'Add' dialog box appears.

Select 'Add One' and click 'OK'.

Add	Delete	Delet	e All	Save Clear Co	ntents F
	Pro	pertic Ad	d		23
Address	Name	R/W			
			Add One	🔘 Auto Add Mul	tiple
			Save Type	Properties	•
			Name		
			Read	Not Used	-
			Write	Not Used	-
			Start Address	0	
•		III	Value Type	SInt16(-32,768~32,7	67) 🔻
Address	Name	I/O R/W	Signal Type	Analog 👻	
riddi Coo	- Harrie		Value Mode	Inverse 💌	
			Reading When F	Rur Continue Reading	-
			Start Address	1	
			Add Num	1	
			User Group	0	
•	No. of P	III arame		ОК	Cancel

2nd Set save type and the desired contents at Properties and I/O Edit of Edit Modbus.

In case of add one	e, set the one	save type among	category,	properties,	or I/O.
--------------------	----------------	-----------------	-----------	-------------	---------

Save Type	Category	-
Name	Category Properties I/O	
	Not Used	Ŧ
	Not Used	
	1	
Data		
	SInt16(-32,768~32,767)	-
	Analog 👻	
	Inverse 💌	
	Continue Reading	Ŧ
	0	

3rd When save type is 'category',

Set the category name. Click 'Save' and the category is added at the properties list.

Add	Delete	De	lete A	I	Save Clear Contents	Properties PA1
	Pro	perties	;			
Address	Name	R/W	Size	User Group	Save Type	Category 🔻
	PA1		0	0		
					Name	PA1
						Not Used 👻
						Not Used 👻
						0
						0
					Data	
						SInt8(-128~127) 🔻
						Analog 👻
•				4		Inverse 🔻
		1/0				Continue Reading 👻
Address	Name	R/W	Size	User Group		0

4th When save type is 'properties',

Set name, read/write type, address, size, value type, etc of properties. Click 'Save' and the properties is added at the properties list.

Add	Delete	De	lete A	I	Save	Clear Contents	Properties	Alarm 1
	Pro	perties	;					
Address	Name	R/W	Size	User Group	Save Ty	pe	Properties	•
	PA1		0	0				
20001	Alarm 1	R	1	0	Name		Alarm 1	
					Read		01 Read Coils	•
					Write		Not Used	•
					Address		20001	
					Size(x2by	tes)	1	
					Data			
					Value Typ	e	SInt16(-32,768	~32,767) 🔻
					Signal Typ	e	Analog	•
•		III		4	Value Mod	le	Inverse	•
		1/0			Reading V	Vhen Running DAQ	Continue Readin	ng 🔻
Address	Name	R/W	Size	User Group	User Grou	ιp	0	
					Default Va	alue	0	
					Min		-32768	
					Max		32768	
					Unit			
					Decimal Po	pint	0	
4				b	Descriptio	n		
•				1				
	No. of Pa	ramete	ers: 2					

5th When save type is 'I/O',

Set name, read/write type, address, size, value type, etc of I/O. Click 'Save' and the properties is added at the I/O list.

Add	Delete	De	elete A	I	Save Clear Contents	I/O PV1
	Pro	perties	;			
Address	Name	R/W	Size	User Group	Save Type	I/0 -
	PA1		0	0		
20001	Alarm 1	R	1	0	Name	PV1
					Read	02 Read Discret Input 🔹
					Write	Not Used 🔹
					Address	30001
					Size(x2bytes)	1
					Data	
					Value Type	SInt16(-32,768~32,767) ▼
					Signal Type	Analog 🔻
•				۱.	Value Mode	Inverse 🔻
		1/0			Reading When Running DAQ	Continue Reading 🗸
Address	Name	R/W	Size	User Group	User Group	0
130001	PV1	R	1	0	Default Value	0
					Deraut value	
					Min	-32768
					Max	32768
					Unit	
					Decimal Point	0
•	: 		1	•	Description	
	No. of Pa	ramet	ers: 3			

6th To edit the properties and I/O, click the desired one at Properties or I/O List. At the Properties and I/O Edit, the contents are displayed. After the edit, click 'Save'.

- 7) Auto Add Multiple,
- 1st Click 'Add' at Properties and I/O List' of Edit Modbus and 'Add' dialog box appears. Select 'Auto Add Multiple' and below menu is activated.

Add	Delete	D	Add	
Address	Name	opertie R/W		
			Add One	Auto Add Multiple
			Save Type	Properties
			Name	
			Read	Not Used 💌
			Write	Not Used 💌
			Start Addres	s 0
•			Value Type	SInt16(-32,768~32,767) 🔻
		1/0	Signal Type	Analog 🗨
Address	Name	R/W	Value Mode	Inverse 💌
			Reading Whe	en Rur Continue Reading 🔹
			Start Addres	s 1
			Add Num	1
			User Group	0
•				OK Cancel
	No. of P	arame		

2nd Select save type at 'Add' dialog box.

In case of auto add multiple, set tye one save type between properties, or I/O.

Add			×				
	A REAL PROPERTY AND A REAL						
) Add One	Auto Add Multiple Auto Add Multi					
	Save Type	Properties					
	Name	Properties I/O					
	Read	Not Used	•				
	Write	Not Used	•				
	Start Address	0					
	Value Type	SInt16(-32,768~32,767)	•				
	Signal Type	Analog 👻					
	Value Mode	Inverse 🔻					
	Reading When Ru	Continue Reading	•				
	Start Address	1					
	Add Num	1					
	User Group	0					
		OK Cance	el				

3rd Set name, read/write type, address, size, value type, etc of properties or I/O for auto add multiple.

Set start number and add number to add multiple properties or I/O.

For example, property name: AL, Start number: 1, Add number: 5, total 5 properties are automatically added as AL1 to AL5 name.

Name AL0 AL1 AL2	R/W R R R R	Size 1 1	User Group 0
AL0 AL1 AL2	R R	1	0
AL1 AL2	R	-	-
AL2		1	0
	D		
	R.	1	0
AL3	R	1	0
AL4	R	1	0
			•
	AL4		AL4 R 1

Set user group which helps to reduce time for reading/writing data for the same group.

4th To edit the properties and I/O, click the desired one at Properties or I/O List. At the Properties and I/O Edit, the contents are displayed. After the edit, click 'Save'.

8 TCP/IP Server

DAQMaster performs as TCP/IP Server and exchanges monitoring data with DAQMaster Client in JSON format. Network data can be displayed in server, allowing data monitering.

1st Click "Tool > TCP/IP Server" in main menu to operate DAQMaster Server. Pop-up

message saying 'Run DAQMaster Server' appears at the corner of the screen.

Project	View	Tool	Help				
\odot		Ŷ	*				
Time Display	Data Analysis	DDE Server	dit ModBus Devic	TCP/IP Server	Script Editor		
		Τα	ool				
Run DAQMaster Server							
Running DAQMaster Server							

2nd Icon 🗮 is generated on the Windows taskbar. When you double-click this icon,

DAQMaster TCP/IP Server setting dialog pops up.

TCP/IP address (highlighteded with red box) is displayed automatically. In order to connect Client, this addess is need to be entered.

🖀 DA	QMaster TC	P/IP Serve	r(DAQServer) - 2	.1 . 4:		
Set	tings IP	Addres	s 2		•	Server Online
User N	Management	Stay Login	Events			
-	Add	Delete	All Clear			
No	User II)	Password	User Type		

3rd Click 'Settings' to set TCP/IP Port. (Default option: 5050)

4th In 'User Management' tap, you can manage a list of client users accessible to TCP/IP Server by adding, deleting, edting user ID and password.

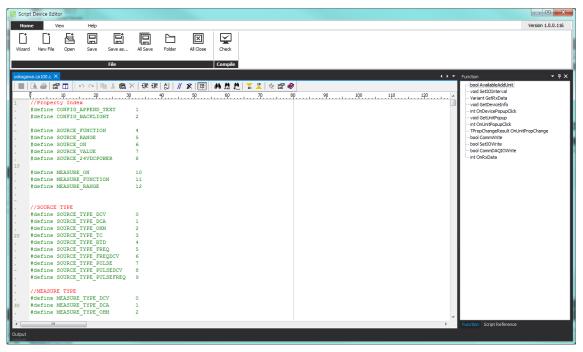
In 'Stay Login' tap, you can check log-in/log-out time and detailed connection information of listed users.

In 'Events' tap, you can see every events releated to logged communication.

9 Script Editor

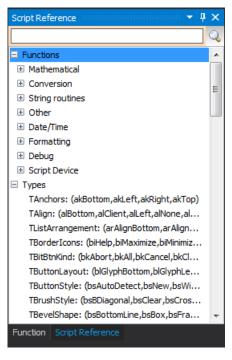
With Script Editor, you can edit script of Script Decive.

Click "Tool > Script Editor" in the main menu to execute 'Script Device Editor'



Supported scripting language is C, JS, Basic, and PAS.

Script Device Editor provides script reference.



'Check' in Compile checks whether scripting language has error or not.

When errors are detected in the scripting language, output box pops up at the bottom of the screen and shows details about errors. (double-clicking erroneous item leads you to the point)



If checking is over without error, modified script language is loaded automatically and ready to use when running DAQMaster.

10 Special Features

This chapter describes special features when connecting the device and DAQMaster. Each special feature is different by the device, refer to the below descriptions of each device.

10.1 TK Series(high accuracy standard PID control temperature controller) TF3 Series (refrigeration temperature controller) KPN Series (high performance and high accuracy process controller)

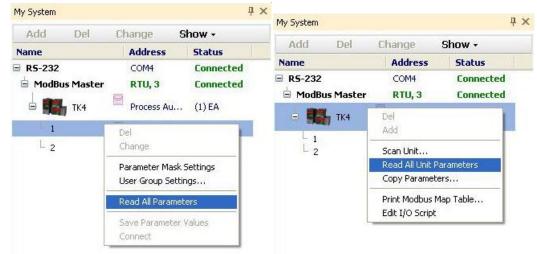
Save parameter values, copy parameters, parmaeter mask and user parameter group is available by DAQMaster. (Following explanation is based on TK)

(1) Save parameter values

When several same model units cannot be connected to DAQMaster at once and parameter copy is not available, you can save the setting of the device as a file and utlize the file at a later.

1st Connect the TK device which parameters are saved.

2nd Click 'Read All Parameters' of the unit device which parameters are saved or 'Read

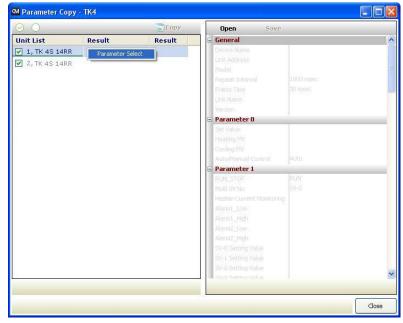


All Unit Parameters' of TK at My System.

3rd Select TK at My System and right-click to select 'Copy Parameters' and Parameter Copy dialog appears.



4th Right-click the unit which parameters are saved and select 'Parameter Select'. The parameter values of the unit is loaded at the right side of the dialog.



5th Click 'Save' and it saves parameters in *.prx file.

0 0		Copy	Open	Save	-	SW:10, HW:10
Unit List Result Result			Parameter 0			
 ✓ 1, TK 4S 14RR ✓ 2, TK 4S 14RR ✓ 2, TK 4S 14RR 	SW:10,HW:10 SW:-1,HW:-1		Set Value Heating MV Cooling MV Auto/Manual Coni E Parameter 1 Futu STGP Multi SV No Heater Current M Alarma Low Alarma Low Alarma Low SV-0 Setting Valu SV-1 Setting Valu	lonitoring (0.0 % 0.0 % Manual SV-0 0.0 A 100.0 %	G
			SV-3 Setting Value Parameter 2 Auto-Turing Exec Heating_Proporti Heating_Integral Cooling_Integral Cooling_Derivatio	e ional Band 3 onal Band 3 Time 0 Time 0 on Time 0		

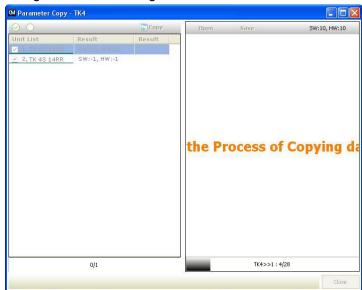
(2) Copy parameters

To connect the several same model units at once, you can copy the parameters. You can copy the saved parameter file or the parameter settings of the dedicated device(standard unit) to the other devices(target units).

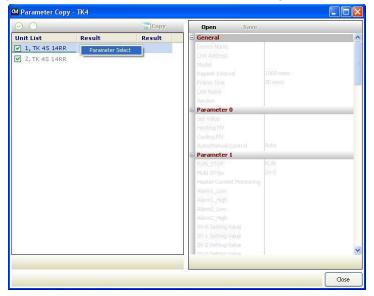
- To copy the saved parameter file,
 - 1st Same orders 1st to 3rd of the Save parameter values.
- 2nd Check the units to be copied at the check box of the left side of the dialog.
- 3rd Click 'Open' and select the parameter file and it loads at the right side of the dialog.

	Сору	Open	Save		SW:10, HW:10
Result	Result	- Parameter 0)		
SW:10, HW:10		Set Value		0.0 %	
SW:-1, HW:-1		Heating MV			
		Auto/Manual C	Iontrol	Manual	•
		😑 Parameter 1		11	
		RUN_STOP			
		Multi SV No			
		Heater Curren	t Monitoring	0.0 A	
		Alarm1_Low			
		Alarm1_High		100.0 %	
		Alarm2_Low			
		Alarm2_High			
		SV-0 Setting V	alue	0.0 %	
		SV-2 Setting V	alue		
		SV-3 Setting V	ลโตซ		
		😑 Parameter 2			
		Auto-Tuning E			
		Heating_Prop	ortional Band	10.0 %	
		Cooling_Propo	ortional Banc	10.0 %	
		Heating_Integ	ral Time	0 sec	
		Cooling_Integr	al Time	0 sec	
		Heating_Deriv	ation Time	0 sec	
		Cooling Deriva	stion Time	fi sec	
	SW:10, HW:10	SW:10, HW:10	SW:10, HW:10 SW:-1, HW:-1 SW:-1, HW:-1 SW:-1	SW:10, HW:10 SW:-1, HW:-1 SW:-1, HW:-1 SW:-1, HW:-1 SW:-1, HW:-1 SW:-10P Hold SV No Heater Current Monitoring Alern1_High Alern2_High SV-0 Setting Value SV-1 Setting Value SV-1 Setting Value SV-3 Setting Value SV-3 Setting Value SV-3 Setting Value	SW:10, HW:10 SW:11, HW:10 SW:-1, HW:1 SW:11, HW:10 SW:-1, HW:11 SW:11, HW:11 SW:-1, Setting Yale SW:11, HW:11, HW:11 SW:-2, Hgh: SW:20, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Yale SW:11, Setting Yale SW:-1, Setting Yale SW:11, Setting Y

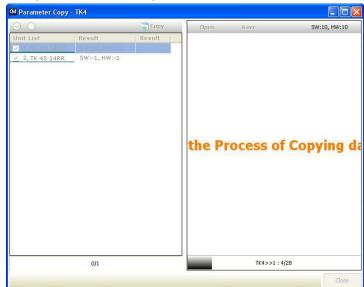
4th Click 'Copy' and copy is progressing. 'the Process of Copying data' text appears at the right side of the dialog.



- 5th After completing copy, 'Copy Complete!' dialog box appears. Click 'OK' and copy is finish.
- To copy the parameter settings of the dedicated device(standard unit) to the other devices(target units),
- 1st Same orders 1st to 3rd of the Save parameter values.
- 2nd Check the units to be copying (standard unit) and to be copied (target unit) at the check box of the left side of the dialog.
- 3rd Right-click the unit to be copying(standard unit) and select 'Parameter Select'. The parameter values of the unit is loaded at the right side of the dialog.



4th Click 'Copy' and copy is progressing. 'the Process of Copying data' text appears at the right side of the dialog.



5th After completing copy, 'Copy Complete!' dialog box appears. Click 'OK' and copy is finish.

(3) Parameter mask

This feature is able to hide unnecessary parameters to user environment or less frequenctly used parameters in parameter group.

Masked parameters are not only displayed. The set values of masked parameters are applied.

Parameter 1 P	PArl	Parameter 2	PAr 2	Parameter 3	PAr 3	Parameter 4	PAry	O Device Name
Heating_MV h	1- 5	Auto-Tuning Execute	RE	Input Type	1	Alarm1 Mode	BI - 1	TK4
Cooling_MV	ALC: N	Heating_Propotional Band	H-P	95 5385	Unit	Alarm1 Mode		Unit Address
RUN STOP	AL DECK	Cooling Propotional band	E-P	Low Input Range		Alarm1 Hysteresis		Unic Address
Multi SV No 5	14 2000	Heating_Integral band	H-1	High Input Range		Alarm1 NO/NC		4
leater Current Monitoring	1292 No. 1	Cooling Integral Time	E-1	and a second contract the		Alarm1 ON Delay Time		Model
	A CONTRACTOR OF A CONTRACTOR		H-d	Scailing Low Scailing		Alarm1 OFF Delay Time	subcasse - the	
		Heating_Derivation Time	n-o [-d			Alarm I OFF Delay Time Alarm2 Mode		TK 4W 14RN
Alarm1_High A		Cooling_Derivation Time		High Scailing				Version
Alarm2_Low R	100 TA	Dead_Overlap Band	db	Display Unit Lamp		Alarm2 Type		
Alarm2_High	All Second	Manual Reset	STOC PSICA	Input Bias		Alarm2 Hysteresis		H/W : 100
SV-0 Setting Value	1838 - 2665 - 1	Heating_ON Hysteresis	CALCULAR AND	Input Digital Filter		Alarm2 NO/NC	ANNER CALL	S/W : 401
SV-1 Setting Value	10480	Heating_OFF Offset		SV Low Limit		Alarm2 ON Delay Time		5/101
SV-2 Setting Value		Cooling_ON Hysteresis	A STATE OF STATE OF STATE	SV High Limit		Alarm2 OFF Delay Time		
SV-3 Setting Value	and become	Cooling_OFF Offset	and the second	Operating Type		Alarm3 Mode		Download
Alarm3_Low R		MV Low Limit		Control Method		Alarm3 Type		ę
Alarm3_High R	H.E.J.	MV High Limit		Auto-Tuning Type		Alarm3 Hysteresis		3 Save
		Ramp_Up Rate		Output1(SSR_Curr) Type		Alarm3 NO/NC		<u> </u>
		Ramp_Down Rate	- Rid	Out1 SSR Function	o ISr	Alarm3 ON Delay Time	A3.on	(A) Open
		Ramp Time Unit	r.Unt	OUT1 Current Range	o IñA	Alarm3 OFF Delay Time	A3.0F	Initialize factory default
				Output2(SSR_Curr) Type	oUES	LBA Time	L BR.E	default
				Out2 Current Range	8750	LBA Set Level	<u>L Б Я. 5.</u>	
				Heating Control Time	H-F	Analog Output1 Mode	Ron I	
				Cooling_Control Time	E-F	Low Out1 Scale	FSL I	
						High Out1 Scale	FSH I	
						Unit Address	Adr 5	
						Bit Per Second	6PS	
						Parity Bit	Prey	Close
							>	Q

No	Item	Description
1	Parameter mask selection	Select the to-be masked parameters. Right-click the to-be masked parameters and they turn gray.
2	Download	Applies the set masked parameters to the device.
3	Save	Saves the set masked parameters as a mask information file.
(4)	Open	Opens the saved mask information file.
(5)	Initialize factory default	Clears the set for the masked parameters. Download this setting to apply it to the device.
6	Close	Closes the Parameter Mask Settings dialog.
$\overline{\mathcal{O}}$	Device information	Displays device name, unit address, model name, and version.

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Parameter 1	PAr 1	Parameter 2	PAr 2	Parameter 3	PAr 3	Parameter 4	^	Device Nan
Heating_MV	H-āu	Auto-Tuning Execute	RE		- n=h	Alarm1 Mode		TK4
Cooling_MV		Heating Propotional Band	H-P		Unit:			Unit Addres
RUN STOP		Cooling Propotional band	C-P	Low Input Range	10 NY 11			
– Multi SV No		Heating_Integral band	CONTRACTOR ON	High Input Range	Service and the			4
Heater Current Monitoring	Et-ñ	Cooling_Integral Time	C - 1	Scailing	dot			Model
		Heating_Derivation Time	H-d	Low Scailing	L-SC			TK 4W 14
		Cooling_Derivation Time	C-d	High Scailing	H-SC			114 100 140
		Dead_Overlap Band	db	Display Unit Lamp	d.Unt	Alarm2 Type		Version
		Manual Reset	rESt	Input Bias	In-b	Alarm2 Hysteresis		H/W : 10
		Heating_ON Hysteresis	н.ну5	Input Digital Filter	d.F			
		Heating_OFF Offset	H.oSt	SV Low Limit	L-Su			S/W:40
		Cooling_ON Hysteresis	C.HYS	SV High Limit	H-Su	Alarm2 OFF Delay Time		
		Cooling_OFF Offset	C.oSt	Operating Type	o-Ft		ſ	Download
		MV Low Limit	L-ñu	Control Method	E-ñd		l	borniodd
		MV High Limit	H-ñu	Auto-Tuning Type	REE		l r	
		Ramp_Up Rate	- RāU	Output1 (SSR_Curr) Type	oUt I			Save
		Ramp_Down Rate	- And	Out1 SSR Function	o ISr	Alarm3 ON Delay Time	[[Open
		Ramp Time Unit	r.Unt	OUT1 Current Range	n IñA	Alarm3 OFF Delay Time		Initialize facto
				Output2(SSR_Curr) Type	oUES			default
				Out2 Current Range	8720	LBA Set Level		
				Heating Control Time	H-F			
				Cooling_Control Time	C-E			
		1						
						Bit Per Second		

Example of masking alarm, SV setting parameters of parameter 1 group, input type, unit of parameter 3 group, and all of parameter 4 group.

(4) User parameter group [PAru]

This feature is able to set the frequently used paramters to the user paramter group. You can quickly and easily set parameter settings.

User parameter group can have up to 30 parameters.

User Group Settings	Parameter 1	PAr I	Parameter 2	PAr 2	Parameter 3	PArg	14	7 Device Name
	Set Value	50	Auto-Tuning Execute	RE	Input Type	In-t		TK4
		H-ñu	-	H-P			4	
	Heating_MV	100 S (50) T	Heating_Proportional B		Unit	Unit	1	Unit Address
	Cooling_MV	[-ñu	Cooling_Proportional B	E-P	Low Input Range	Lord	ķ	4
	RUN_STOP	r-5	Heating_Integral Time	H-1	High Input Range	H-rG	+	
	Multi SV No	Surn	Cooling_Integral Time	E-1	Scaleing Decimal Point	dot	÷	Model
	Heater Current Monitori	CE-8	Heating_Derivation Time	H-d	Low Scailing	L-SE	F	TK 4W 14RN
	Alarm1_Low	AL IL	Cooling_Derivation Time	E-d	High Scailing	H-SC	4	
	Alarm1_High	AL IH	Dead_Overlap band	db	Display Unit Lamp	dUnt	+	Version
	Alarm2_Low	ALST	Manual Reset	rESt	Input Bias	In-b	4	H/W : 100
	Alarm2_High	AL SH	Heating_ON Hysteresis	HHYS	Input Digital Filter	nAuF	1	
	SV-0 Setting Value	50-0	Heating_OFF Offset	Host	SV Low Limit	L-Su	4	S/W:401
	SV-1 Setting Value	50-1	Cooling_ON Hysteresis	CHYS	SV High Limit	H-Su	1	
	SV-2 Setting Value	50-2	Cooling_OFF Offset	CoSt	Operating Type	o-Ft	1	A
	SV-3 Setting Value	50-3	MV Low Limit	L-ñu	Control Method	C-nd	1	3 Download
	Alarm3 Low	RLBL	MV High Limit	H-ñu	Auto-Tuning Type	REE	1	~
	Alarm3_High	RLBH	Ramp_Up Rate	- RAU	Output1 (SSR_Curr) Type	oUt I	1	4 Save
	377 10		Ramp Down Rate	- Rād	OUT1 SSR Function	o 15r	1	5 Open
			Ramp Time Unit	rAnd	OUT1 Current Range	o IñA	1	\sim
				1.11.0	Output2(SSR_Curr) Type	WARE CONSISTENT.		6 default
					OUT2 Current Range	0258	1	
					Heating Conrol Time	H-E		
					Cooling_Conrol Time	E-E	1	
					Cooling_Conrol Time	6 6	Ľ	
							ł	
							1	
							ł	
All initialize	8						1~	8 Close

No	Item	Description
1	User parameter group	Displays the selected parameters as user group parameter Double-click the parameters for the user group, and these parameters turn gray. To delete the parameters at the user group, double-click the parameters.
2	User group selection	 All initialize: Initializes the set user group. ↑, ↓: Changes the selected parameter order up/down.
3	Download	Applies the set user group to the device.
4	Save	Saves the set user group as a user group information file.
(5)	Open	Opens the saved user group file.
6	Initialize factory default	Clears the set for the user group. Download this setting to apply it to the device.
7	Close	Closes the User Group Settings dialog.
8	Device information	Displays device name, unit address, model name, and version.

Autonics

Ex.

User Group Setti	ngs	Parameter 1	PAr 1	Parameter 2	PAr 2	Parameter 3	PArg	Parameter 4	PAry	^	Device Name
Set_Value RUN STOP	5u r - 5	Set_Value	5u	Auto-Tuning Execute	RE	Input Type	In-E	Alarm1 Mode	AL-1		TK4
- SV-0 Setting Value	50-0	Heating_MV	H-ñu	Heating_Proportional B	H-P	Unit	Unit	Alarm1 Type	RL IE		Unit Address
SV-1 Setting Value	Su- 1	Cooling_MV	E-ñu	Cooling_Proportional B	C-P	Low Input Range	L-rG		RIHY		4
SV-2 Setting Value	54-2		5-5	Heating_Integral Time	H-I	High Input Range	H6		A In		
SV-3 Setting Value	5u-3	Multi SV No	Surn	Cooling_Integral Time	E-1	Scaleing Decimal Point	dot	Alarm1 ON Delay Time	R lan		Model
danual Reset	rESt	Heater Current Monitori	CE-8	Heating_Derivation Time	H-d	Low Scailing	L-SE	Alarm1 OFF Delay Time	R. IoF		TK 4W 14R
nput Bias	In-b	Alarm1_Low	AL IL	Cooling_Derivation Time	E-d	High Scailing	H-SE	Alarm2 Mode	S-18		
arm1 Mode	AL-I	Alarm1_High	AL IH	Dead_Overlap band	db	Display Unit Lamp	dUnt	Alarm2 Type	S-JR		Version
aamii Mode alamn 1 Type	AL IL	Alarm2_Low	ALST	Manual Reset		Input Bias		Alarm2 Hysteresis	RSHA		H/W : 100
uarmii iype Jarmii Hysteresis	A IHY	Alarm2_High	H5 JR	Heating_ON Hysteresis	нну5	Input Digital Filter	nRuF	Alarm2 NO/NC	n58		
The company of the	A In			Heating_OFF Offset	HoSt	SV Low Limit	L-Su	Alarm2 ON Delay Time	no5R		S/W : 401
larm1 NO/NC Iarm1 ON Delay				Cooling_ON Hysteresis	CHUS	SV High Limit	H-Su	Alarm2 OFF Delay Time	A902B		
ilarm1 ON Delay ilarm1 OFF Delay				Cooling_OFF Offset	CoSt	Operating Type	o-Ft	Alarm3 Mode	AL-3		Download
larm1 OFF Delay	n ior			MV Low Limit	L-ñu	Control Method	[-nd	Alarm3 Type	ALBE		Download
		Alarm3_Low	RL3L	MV High Limit	H-ñu	Auto-Tuning Type	REE	Alarm3 Hysteresis	R3HS		
		Alarm3_High	AL 3H	Ramp_Up Rate	-RAU	Output1 (SSR_Curr) Type	oUt I	Alarm3 NO/NC	R3n		Save
				Ramp_Down Rate	- Rād	OUT1 SSR Function	o 15r	Alarm3 ON Delay Time	RBon		Open
				Ramp Time Unit	- Rid	OUT1 Current Range	o lāß	Alarm3 OFF Delay Time	RBOF		
						Output2(SSR_Curr) Type	oUt 2	LBA Time	L.b.R.E		Initialize factor default
						OUT2 Current Range	865o	LBA Band	LEAD		
						Heating_Conrol Time	H-E	Analog Output Mode	Roni		
						Cooling_Conrol Time	C-E	Low Out1 Scale	FSL I		
								High Out1 Scale	FSH I		
								Low Out2 Scale	FSL2		
			L					High Out2 Scale	FSH2		
								Unit Address	RdrS		
All initialize	1							Bit Per Second	685	~	Close

Example of the set user group with SV setting, control output RUN/STOP, alarm output 1 low/high-limit, SV-0/1/2/3 set value, manual reset, input correction, alarm output 1 mode/option/hysteresis/contact type/ON delay time/OFF delay time parameters.

10.2 DS/DA-T(Intelligent Display Unit)

DS/DA displays I/O source value, unit, and user set value by DAQMaster.

Connect DAQMaster and DS, DA(RS485 input type) and click '...' button located on the right of Setting at Config in the Property window. A display unit screen is open at DAQ Workspace.

Pr	operty	φ×	
Π	DS(A)-xT Series >>	1	
	General	201	
	Device Name Unit Address Model Repeat Interval Frame Time Unit Name Version	DS(A)-xT Series 1 1000 msec 40 msec	
E	Config	1	
	Setting	Setting	
DA	AQ WorkSpace		
-	DS(A)-xT #1		

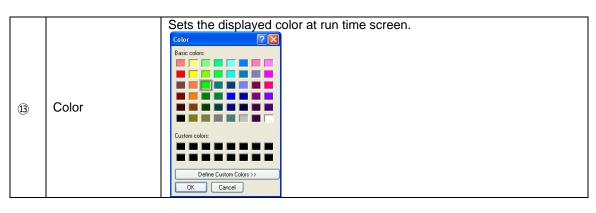
Double-click a moniring screen of a display unit screen at DAQ Workspace and Setting dialog appears.

Autonics

DPU Setting - D	DS(A)-xT #	1		2		3			(Ð							
1 NUM	10 ‡	Digit(1	0.01976	124	e Mode		verlap	Mode		- S.S.	lap 1	Interv	val	20	000	* *	ന്നട
1 2 3 8. 8. 8 .	4 5 8.8.	6 7 8. 8.	8 9 8. 8	10 8.	11 12	13 (5)	14	15	16	17	18	19	20	21	22	23	24
6 Add Date/Tim	ie 🛛 🖓 A	dd User D	isplay		(8))	Del					10	Dat	a			
No Source		Offse	9	Disp	olay Type	Tex	t Aligr	<u>ı</u>		Displ OIC OIC Text	Sour Unit Aligr	ce		() 10 () Usi	ər	ame	
1	н 8	✓ I	8 -	J	8 -			. ~		O Le Sourc Jum				🔿 Rig	ht		
7 Segment Data Type		~ 0		T	8			~					Sav	/e			
12 DPU Update	Interval	5	00 🗘 1	msec(5	0~1000())	0	3) Color		B۶	9						
																Clos	e

No.	Item	Description
1	NUM	Set the number of display units. Set range is 1 to 24.
2	Line Mode	Displays the added sources of list at the connected display units in a line.
3	Overlap Mode	Displays the added sources of list at the connected display units by overlapping at the set interval time.
4	Overlap Interval	Activated for overlap mode. Set the interval time for overlap display.
5	Display parts	Displays the connected display units and sources in the set color. Right-click this part to select the segment. 7 segment 16 segment 16 segment When selecting unit segment, Unit Type dialog box appears to select the unit display mode. Unit Type Unit Type Unit Type Unit Type Unit Type Unit Type Unit Type Unit OV OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF OFF O

		Select one of date and time information types.
6	Add Date/Time	Dite/Time Dit-3-14 Dit-3-14 10:3-14 10:3-14 10:3-14 10:3-14 10:3:14 10:3:55 2001-3-14 2001/3/14 3/14 3/14 3/14 13:30 13:30:55 1:30 PM 1:30:55 PM 1:30 PM 1:30:55 PM 1:30:55 PM 1:30:55:123
		OK Cancel
\bigcirc	Add User Display	Add the desired characters. Enter the characters at Source of DPU Data.
8	Del	Delete the added source of list.
9	List	Displays the added I/O sources. Add I/O sources by dragging them at DAQ list. Press 'Ctrl+ \uparrow or \downarrow ' to change the order of sources.
(1)	Data	Add Date/Time Add User Display Del Deta No Source Offset Num Display Type Text Align 1 1_Metwork Power V 0 5 User Right 1 1_Metwork Power V 0 5 User Right 1 1_Metwork Power V 0 5 User Text Align 1 1_Metwork Power V 0 5 User Text Align 7 Segment H 8 0 8 N 8 0 2 Display type - IO Source: Displays the value of the source. Num 5 Save - IO Source: Displays the value of the source. - IO TagName: Displays the name of the source. - IO Unit: Displays the unit of the source. - IO Unit: Displays the name of I/O source and it is editable. - - Num: Sets the desired number of display units. - - Save: Saves the settings.
1	Data 7 Segment Data Type DPU Update	No Source Offset Num Display Type Text Align Display Type 1 1 Network Power V 0 5 User Right 10 5 User 10 <



Ex.

Example of adding two date/time sources, overlap mode and 2000ms of overlap interval.

DPU Setting -	DS(A)-	xT #1																	×
NUM	12	2 🛟 Dig	git(1~2	24)	Line	Mode	e	0	verlap	o Mode	ode Overlap Interval 2000 🚔 m								
1 2 3 B. B. B .	4 B .	56 888	7 8 .	89 88	1	11 8.	12 8	13	14	15	16	17	18	19	20	21	22	23	24
Add Date/Tir	ne	Add U	ser Dis	play	II.	J		C	el	Landad			I	1	Dat	a	I		
	1 2001-3-14 0 11 Date/Time Right										Display Type I O Source I O TagName I O Unit Date/Time								
											1	Text O Lei	1446		(💽 Rig	ht		
7 Segment	н	8 🗸	I	8 -	J	8	*	к	Ł	3 ~		Sourc Num	e 1:	30:55	РМ 12	*			
7 Segment Data Type	N	8 💌	0	8 -	т	8	~	x		3 ~					Sav	e			
DPU Update	Inter	val	50	0 🗘 m	nsec(50)~10)000)			Color		BP	98						
																		Clos	ie 👘

It displays 2012-04-13 for 2 sec.(2000ms) at first then displays 03:20:06 PM for 2 sec. alternately.

10.3 SCM-WF48_(Wi-Fi/RS485-USB Communication Converter)

Communication setting of SCM-WF48 is editable with DAQMaster. Connect DAQMaster and SCM-WF48 after setting communication mode to USB with USB/485 communication mode switch on the side of the SCM-WF48 device.

Double-click SCM-WF48 in My System to open SCM-WF48 Config tap in DAQ Space.



(1) Connecting device

You can connect SCM-WF48 to DAQMaster in manual mode or auto mode.

1) Manual connection

Auto Search	Port	COM61=VCP3	▼ Baudrate	9600	Byte Size	8 -	Parity	None 💌	Stop Bit	2 •
-------------	------	------------	------------	------	-----------	-----	--------	--------	----------	-----

Enter the port, baudrate, byte size, parity, stop bit values in the upper side of the SCM-WF48 Config tap equal to SCM-WF48 device and click 'Connect'. Followings are default values of SCM-WF48.

Baudrate	9600
Byte Size	8
Parity	None
Stop Bit	1
<u> </u>	

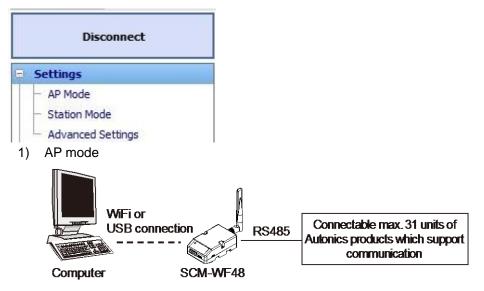
2) Auto connection

Port COM1=Serial0 COM10=VSerial_0 COM11=VSerial_1 COM61=VCP0		Bau	drate	
		 ✓ 9600 ✓ 19200 ✓ 38400 ✓ 57600 ✓ 115200 		Byte Size 8 Parity None 1
Select All	Select None	Select All	Select None	Stop Bit

Click 'Auto Search' to open 'Auto Search' dialog. If you select items to search and click 'Search' button, DAQMaster displays accessible SCM-WF48. When PC is connected with over 2 SCM-WF48 devices, DAQMaster is automatically connected with first SCM-WF48 in numerical order of port number.

(2) Setting communication mode

Select communication mode of SCM-WF48 from AP mode and Station mode.



SCM-WF48 performs as AP (access point).

PC, smart phone, PLC are connected directly with SCM-WF48 using Wi-Fi to communicate with other devices which are connected to SCM-WF48 with RS485 wired connection.

1st Click 'AP Mode' to operate AP mode setup wizard.

2nd Set Wi-Fi generation.

AP name	SCM-WF48A	Р	(1~32 ASCII)	AP Scan
MAC address			(Optional)	MAC select
Channel	AUTO	•		
Static IP	IP	192.168.1	.21	
	Mask	255.255.2	55.0	
	Gateway	192.168.1	.1	
	Gateway	192.168.1	.1	

- AP name: Sets displaying name. Default is SCM-WF48AP.
- Channel: Sets Wi-Fi frequency. (setting range: Auto, 1~14) If the number of channel is same or next to each other with another wirelessly connectied devices, communication interference occurs and makes communication status unstable.
- Static IP: Sets IP, Mask, Gateway as follows.
 Please check network environment ahead of setting.

IP	192.168.1.1
Mask	255.255.255.0
Gateway	192.168.1.1

3rd Set Wi-Fi authentication.

Authentication Mode	Auto 💌	
Password		(8~63)
	Show Password	

Followings are types of authentication.

Туре		Description			
		Selects mode of authentication automatically.			
Auto		Passphrase is required for connection.			
		If you enter passphrase at the first time, DAQMaster connects automatically without passphrase.			
Open		Selecting SSID connects AP, without passphrase.			
	WEP				
	WPA	Encrypts connection and communication.			
	WPA2	In order to strengthen security, PWA mode is recommended.			
PWA	WPAAES	Passphrase is required for connection. Order of security safety: WPA2TKIP > WPA2AES > WPAAES,			
	WPA2AES	WPA2 > WPA > WEP			
	WPA2TKIP				

4th Set Wi-Fi protocol.

Protocol	TCP	
Mode		
	Server	
Port	5000	

- Protocol: Select Wi-Fi protocol from TCP, UDP.
- Mode: 'AP mode' only supports Server mode.
- Port: A set of server and client has set in same port value. (In Modbus communication, 502 port is used in general)

5th Set UART.

Baudrate	9600	
Byte Size	8	
Parity	no	
Stop Bit	1	

Enter the Baudrate, Byte Size, Parity, Stop Bit values equal to the device which is connected to SCM-WF48 device with RS485 or USB and click 'Write'.

6th On the SCM-WF48 Config tap, setting values are displayed on the left side and progress for connection is shown on the right side.

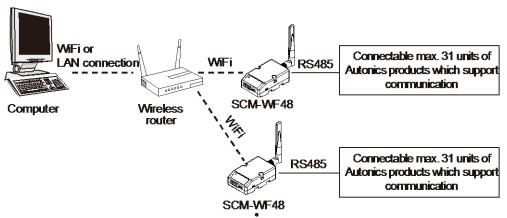
When applying setting values is completed, message saying 'Write OK!' pops up. AP Mode

[Configure] Wi-Fi Mode : Wi-Fi Direct(AP) SSID : SCM-WF49AP Channel : AUTO	*	16:26:50:086 Start Writing 16:26:57:313 Writing OK!
IP : 192.168.1.21 Mask : 255.255.255.0 Gateway : 250.168.1.1 Port : 5000		
Authentication mode : Auto Password : UART(USB/RS-485 Baudrate : 9600 ByteSize : 8 Parity : no StopBit : 1		Write OK!
		ОК

7th AP mode setting is finished.

Please reboot SCM-WF48 device in order to apply setting values to the device.

2) Station mode



SCM-WF48 is linked to another AP.

Wireless router and SCM-WF48 is connected using Wi-Fi therefore PC, smart phone, PLC connected to wireless router can communicate with other devices which are connected to SCM-WF48 with RS485 wired connection.

- 1st Click 'Station Mode' to operate Station mode setup wizard.
- 2nd Set Wi-Fi generation.

AP name	SCM-WF48A	P	(1~32 ASCII)	AP Scan
MAC address			(Optional)	MAC select
Channel	AUTO	•		
IP	DHCP	•		
Static IP	IP	192.168.1	.21	
	Mask	255.255.2	55.0	
	Gateway	192.168.1	.1	

- AP name: Sets displaying name. Default is SCM-WF48AP.
- AP Scan: Scans AP. When scanning AP, it may be necessary to repeat again.
- MAC select/address: Check the 'MAC select' and you can enter MAC address. When the same SSIDs exist, enter the MAC address and connect the desired SSID.
- Channel: Sets Wi-Fi frequency. (setting range: Auto, 1 to 14) If the number of channel is same or next to each other with another wirelessly connectied devices, communication interference occurs and makes communication status unstable.
- IP: Selects IP from DHCP and Static IP.
 DHIP: DAQMaster sets IP automatically.
 Static IP: User sets IP manually.

• Static IP: Sets IP, Mask, Gateway as follows. Please check network environment ahead of setting.

IP	192.168.1.1
Mask	255.255.255.0
Gateway	192.168.1.1

3rd Set Wi-Fi authentication.

Authentication Mode	Auto 💌	
Password		(8~63)
	Show Password	

Followings are types of authentication.

Туре		Description	
		Selects mode of authentication automatically.	
Auto		Passphrase is required for connection.	
Auto		If you enter passphrase at the first time, DAQMaster connects automatically without passphrase.	
Open		Selecting SSID connects AP, without passphrase.	
	WEP		
	WPA	Encrypts connection and communication.	
	WPA2	In order to strengthen security, PWA mode is recommended.	
PWA	WPAAES	Passphrase is required for connection. Order of security safety: WPA2TKIP > WPA2AES > WPAAES,	
	WPA2AES	WPA2 > WPA > WEP	
	WPA2TKIP		

4th Set Wi-Fi protocol.

	·	ТСР	Protocol
	•	Client	Mode
		192.168.1.21	Server IP
		5000	Port

- Protocol: Select Wi-Fi protocol from TCP, UDP.
- Mode: Select Mode from Server and Client. Server: SCM-WF48 operates as server. Client: SCM-WF48 operates as client. Connecting information of server is required.
- Server IP: Enter server IP.
- Port: A set of server and client has set in same port value. (In Modbus communication, 502 port is used in general)
- 5th The other settings are same as AP mode. Refer to the '1) AP mode'.
- 3) Advanced settings

Set network communication at once without setup wizard.

You can save/ load/save as the communication settings.

Write	dvanced Settings			□ S2W APP VERSION=5.2
AP name SCM-VF-48LAP MAC address Channel B IP Static IP IP Static IP Mak 255.255.255.0 Gateway 192.168.50.100 Mask 255.255.255.0 Gateway 192.168.50.1 Local Port Stote Password URT(USB/485) Baudrate 9500 Parity no	🗋 🖻 🖫 Wi-Fi Mode 🗛 Mode	•		Write
MAC address MAC select Channel 6 IP Static IP Static IP IP Make 255.255.255.0 Gateway 192.168.50.100 Mask 255.255.255.0 Gateway 192.168.50.1 Authentication Mode Auto Password (0+63) Show Password Image: Second Secon	Wi-Fi			
Channel Image: Constraint of the second	AP name SCM-WF48IAP AP Scan	Protocol	TCP 💌	
IP Static IP IP 192.168.50.100 Static IP IP 192.168.50.100 Port Mask 255.255.0 Gateway 192.168.50.1 Authentication Mode Auto Image: Comparison of the second se	MAC address MAC select	Mode	Client 💌	
Static IP IP 192.168.50.100 Mask 255.255.255.0 Gateway 192.168.50.1 Authentication Mode Auto Password (8~63) Show Password Show Password	Channel 6	Destination	IP 192, 168, 50, 100	
Static IP IP 192.168.50.100 Mask 255.255.255.0 Gateway Gateway 192.168.50.1 Authentication Mode Auto Password (8~63) Show Password Party Baudrate 9600 Party no	IP Static IP		Port 5000	
Mask 255.255.255.0 Gateway 192.66.50.1 Authentication Mode Auto Password Show Password UART(USB/485) Baudrate 9600 Party no	Static IP IP 192, 168, 50, 100	Local Port		
Gateway 192.168.50.1 Authentication Mode Auto Password Show Password UART(USB/485) Baudrate 9600 Parity no		LOCALPOIL	3000	
Authentication Mode Auto Password UART(USB/485) Baudrate 9600 Parity no				
Password (8~63) Show Password UART(USB/485) Baudrate 9600 Parity no	Gateway 192, 166, 50, 1			
UART(USB/485) Baudrate 9600 Parity no	Authentication Mode Auto			
UART(USB/485) Baudrate 9600 Parity no	Password (8~63)			
Baudrate 9600 V Parity no V	Show Password			
	UART(USB/485)			
	Baudrate 9600 V	arity no	•	
		•		

Autonics



Note

Notes for SCM-WF48 communication setting

- Single Wi-Fi network needs at least one AP.
- Single network consisting of wire and wireless connection needs at least one DHCP server.
- At least one set of server and client is necessary.

(3) Utility

'UART Settings', 'Reset Factory Default', 'Profile' allows you to check or edit the setting value.

θU	Itility
-	UART Settings
	Reset Factory Default
	Profile

1) UART Settings

You can check or edit VCP(USB), RS-485 communication setting values.

	6B/485)	1/
Baudrate	9600	
Byte Size	8	
Parity	no	
Stop Bit	1	

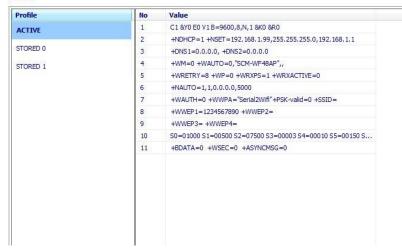
2) Reset Factory Default

Initializes Baudrate, Byte Size, Parity, Stop Bit of SCM-WF48 to its factory default settings. Reset Factory Default

 Do you want to Reset Factory?
OK Cancel

3) Profile

Displays Wi-Fi setting information of SCM-WF48. Profile



(4) Firmware version upgrade

After connecting SCM-WF48, you can check the firmware version and upgrade it at top-right of SCM-WF48 Config tab. (your computer should have wireless lan and Internet connection is required.)

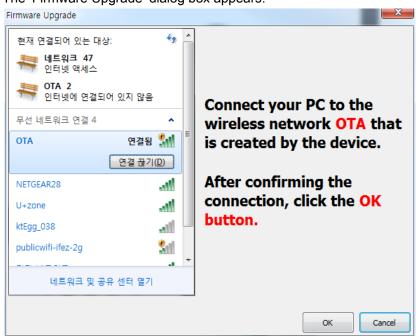
S2W APP VERSION=5.2.3

1st Click the 🛄 icon.

2nd The dialog for firmware version upgrade appears.

Click the 'OK' button.





3rd The 'Firmware Upgrade' dialog box appears.

Wireless network connection of PC sets as OTA and click 'OK'.

4th It connects to 'OTA Firmware Update'.

E Firmware Upgrade	100 Mar 1000-003	* materia			- 0 X
	Ga	in Span.			Î
	OTA Firr	mware Upd	late		
	Firmware Image :	Upload	찾아보기		E
<	4TO 111	AFU Version: 0.9.1		1	
페이지 로딩 완료					

Add the SCM-WF48 firmware which is downloaded at Autonics web site. Click the 'Upload' button.

5th Firmware upgrade is completed.

10.4 KRN50 (50mm compact hybrid recorder)

The following are special features for KRN50 while in communication with DAQMaster.

(1) Accessing Record Backup Data

To get the recorded data, click '...' button located on the right of Record Backup in the Property window.

1	(RN50 >> 2	
	General	245
	Device Name	KRN50
	Unit Address	2
	Model	1942.005
	Repeat Interval	1000 msec
	Frame Time	40 msec
	Unit Name	
	Version	
	Record	
		Stop
		Graphic
		OFF.
	Rec Speed	10.mm/h
	Rec Period	
	Memo Period	30 min
		Korea
		10.mm/h
		STOP
		STOP
	Record Backup	Get Record Backup Data 🛛 🛄
	User Image Download	Logo/Boot/Unit
÷	Option	
33	R5485	
	Date/Time	20 7
	Environment	
	Reservation	N.
	Input Type	
÷	Alarm	28

To read memory information, the device status must be Connected and not Run. There are also cases in which you cannot read from memory depending on KRN50 parameter setting. (Refer to 'KRN50 user manual'.)

Memory Information	Upload Data	
Memory Information		
Start Time		
End Time		
UpLoad Data Size		
Start Time	12 VMon 12 VDay	12 - Hour 12 - Mir
End Time	12 VMon 12 VDay	12 - Hour 12 - Mir
Available depending on 1 (R/W - Off)	Environment>>Setting Lock	Setup
Data UpLoad Status		Cancel Reading Data

Once all conditions are met and ready to get memory data, follow the steps below:

- 1st Run [Memory Information] in KRN50 Record Memory Data window. It gets the information from currently saved memory.
- 2nd Set [Uploaded Data Size].
- 3rd Run [Upload Data].
- 4th You can cancel the operation while data is being uploaded. When data reading is complete, OK button is enabled.
- 5th If you click OK, recorded data will be shown in two screens the Grid and the Graph.

(2) Downloading User Images

User Image allows you to download images to KRN50 and change logo, unit and boot images.

You can also reset images back to the original status. This is also a self protocol, so cannot download images during Run.

1) Download logo

You can change the company logo image on contents that are printed on recording paper.

Logo image should be 384 X 80 pixel of bitmap file.

Downloa	ad KRN50	User Image			X
Logo	Unit			Init	Download
Logo I	mage				
		Pre	view Logo		80
			384		
Data D	ownload Stat	US			
To do this, c	levice should	be connected to th	e network.		Close

2) Download Units

There are 0-9 user units.

The download procedure is: select a unit list \rightarrow select a destination to save \rightarrow double-click a unit image to add the image \rightarrow download.

Logo Unit Boot	Init	Download
Unit List	Save in Folder:	
KRN50 Default	User Unit Font1 Position User Unit Font2 Position User Unit Font3 Position User Unit Font4 Position User Unit Font5 Position User Unit Font5 Position	
	Unit Image	Deleti Add
Force		

3) Download boot images

The boot image (logo image) appears on LCD upon initial power supply to KRN50.

You can change booting logo image which displays when KRN50 is power ON. The image should be 128 X 32 pixel of bitmap file.

Downloa	id KRN50) User Ima	age		
Logo	Unit	Boot	_	Init	Download
Boot Ir	mage				
			Boot Preview		32
			128		
Data Di	ownload Sta	tus			
L To do this, d	evice should	be connected	to the network.		Close

10.5 KRN100 (100mm hybrid recorder)

The following are special features for KRN100 while in communication with DAQMaster.

(1) Accessing Record Backup Data

It is available to access saved backup data of KRN100 and to analyze backup data by data analysis feature.

To get the recorded data, click '...' button located on the right of Record Backup from User

Memory in the Property window.

Property	4 X
KRN100 >> 1	
🖃 General	
Device Name	KRN100
Unit Address	1
Model	
Repeat Interval	1000 msec
Frame Time	40 msec
Unit Name	
Version	
🗉 Print Control Status	
Mounting Slot	
INPUT SETUP	
ALARM SETUP	
ALARM OUTPUT STATUS	SETUP
DIGITAL INPUT SETUP	
COMMUNICATION SETU)
RECORD SETUP	
SYSTEM SETUP	
FILE/MEMORY SETUP	
USER/INFORMATION SE	TUP
User Memory	
≫ Record Backup	LogData Download 🛛 🛄
User Unit/Logo Image	User Unit/Logo Image Dow()
Boot Logo (Capture)	Capture

According to the USER INFORMATION SETUP of KRN100, it cannot read the memory. (Refer to the user manual for KRN100.)

1st Designate the folder for record backup data to be saved.

KRN100 Record Memory Data					×
Name		Size The Numb	Start Time	End Time	
	Data Folder		OK Cancel		
Download Folder C: #Document	s and Settings₩Administrator₩My Docu	ments₩DAOMaster₩]]
To do this, device should be connected to t				OK	

2nd Select the record backup data to download. Click the right mouse button and select 'Download Log File'.

Double click the backup data and it enters to data analysis.

KRN100 Record Memory Data				E.
Name	Size	The Numb	Start Time	End Time
🖙 🛅 2012				
🖨 🛅 4				
🖨 🚞 10				
KRN100_20120410_090540.KRD	6,980	2	2012.04.11 09:05:40	2012.04.11 09:08:56
🖃 🛅 3				
- B KRN100_20120403_094941.KRD				
- RRN100_20120403_090532 KPD	20,252	2	2012.04.04 09:05:32	2012.04.04 09:16:42
- 🖹 KRN100 20120403 08465 Download Log File				
KRN100_20120403_08091 Data Anal				
- 3				
- 2				
B- D 2011				
i i 12				
- 26				
- 23				
- 22				
21				
		Шетон т Ш		
Download Folder C: WDocuments and Settings WAdministrator W	My Documents	₩DAQMaster₩		
To do this, device should be connected to the network.				OK Cancel

3rd After completing download to the desginated folder, the below message appears.

Download Completed	
Ok	

(2) Downloading User Images

You can add user unit and boot images of KRN100.

- 4) Download units
 - There are 0-9 user units.

The download procedure is selecting User Unit Position, double-click Small Unit, Middle Unit, Big Unit image, and selecting the image. After this, Download button is active.

Unit	I KRN100 User Image Boot	_	Delete	Download
User0 User1 User2 User3 User4 User5 User6 User7 User8 User9	User Unit Position	Image	Small Unit(32 mA/n Middle Unit(3 mA/n Big Unit(72xr] 32×12)
Data D	ownload Status			
				Close

5) Download boot images

The boot image (logo image) appears on LCD upon initial power supply to KRN100. You can change booting logo image which displays when KRN100 is power ON.

The image should be 320×120 pixel of bitmap file.



10.6 KRN1000 (LCD touch screen paperless recorder)

The following are special features for KRN1000 while in communication with DAQMaster.

(1) Record Backup

You can download backup data which is saved in KRN1000 internal memory from "Record Backup" section.

Directory form is year, month, day. Click the relevant icon and check below list.

To download backup file, click the file name with right mouse button and select "Download Log File" menu.

KRN1000 Record Memory Data					×
Name		Size	No. of Cha	Start Time	End Time
□ 2016					
4					
中 🗀 7					
- 🖹 KRN1000_20160407_16		2,826	4	2016.04.08 16:58:37	2016.04.08 16:58:44
- 🖹 KRN1000_20160407_16		2,048	4	2016.04.08 16:58:37	2016.04.08 16:58:44
- 🖹 KRN1000_20160407	Download Log File				
- 🖹 KRN1000_20160407	Data Analysis				
-	00120.KRD	_			
6					
L 🔁 5					
L 2					
L 🔁 2015					
Download Folder C:₩Users₩	Administrator \Documents \DAC	ųmaster₩			
					OK Cancel

Backup files are strucured as tree type directory at KRN1000 internal memory. You can easily fine and download the desired file.

10.7 ModBus Master

Select ModBus Master of My System and click '...' of property. ModBus Master dialog box opens.

My System			ą ×	ModBus Master		
Add	Del	Change S	how +	🖃 General		
Name		Address	Status	Name	ModBus Master	
B R5-232	ıs Master	COM5 RTU, 3	Disconnected Disconnected	Bout D ■ Config		
e 🚮	TK4	Factory Au	(1) EA Disconnected	Mode Timeout Retry	RTU 1000 msec 3	

(1) ModBus Master Communication test

Click 'Communication Test' and it executes communication test.

M ModBus Master			
Information Communication	Test CRC16 Calculate A	bout	
Support Function	01 READ COIL STATUS		
01 READ COIL STATUS 02 READ INPUT STATUS 03 READ HOLDING REGISTERS 04 READ INPUT REGISTERS 05 WRITE SINGLE COIL 06 WRITE SINGLE REGISTER 15 WRITE MULTIPLE COILS 16 WRITE MULTIPLE REGISTERS	Slave ID(Dec) Starting Address(Hex) Quantity of Outputs(Dec) Byte Count(Dec) Write Data(Hex) 01 01 00 00 00 01 FD CA		Test
<			>

(2) CRC16 calculate

This is calculating CRC16 of protocol.

To calculate CRC16, enter Hex data to data and click 'CRC16 Calculate'. It creates two CRC16 data.

M ModBus Master	
Information Communication Test CRC16 Calculate About	
Data (HEX Data, Ex - 01 00 01 0A AB CD EF)	
01 10 00 00 00 01	
CRC16 Calculate	
01 C9	

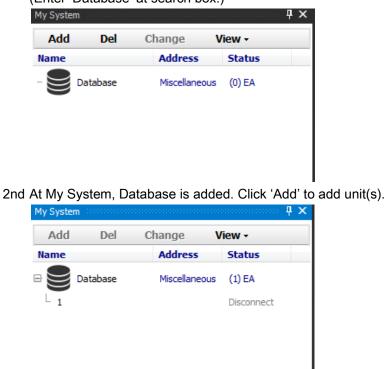
10.8 Miscellaneous

You can add or edit the miscellaneous devices which are not supported at DAQMaster. This function is available only for DAQMaster Pro version.

Gearch Device		(
Name	Function	
AUTONICS (17)		
- 💼 Miscellaneous (4)		
— 😑 Database	Database	
- DDE Client	DDE Client	
- OPC OPC Client	OPC Client	
WMI WMI Manager	WMI Manager	
+- Process Automation (7)		
Here Yokogawa (1)		

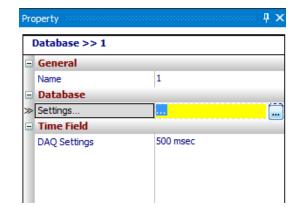
10.8.1 Database

1st Double-click 'Database' of Miscellaneous at Support Device List to add it at My System.



(Enter 'Database' at search box.)

3rd Click the added unit and Database property is displayed at Property window.



4th Click '...' button of Settings and 'Database Settings' dialog box appears.

Database Settings			_
Database Connec	tion Settings		
Provider			•
Server	Access		<u>^</u>
Port	Advantage ASE		=
	DB2 DBF		
User Name	InterBase MySQL		
Password	ODBC		-
Database			
		Next	Cancel

You can set provider, server, port, user name, password, database at Database Settings dialog box.

It is available for various database and supports I/O function.

10.8.2 DDE Client

1st Double-click 'DDE Client' of Miscellaneous at Support Device List to add it at My System.

(Enter 'DDE Client' at search box.)

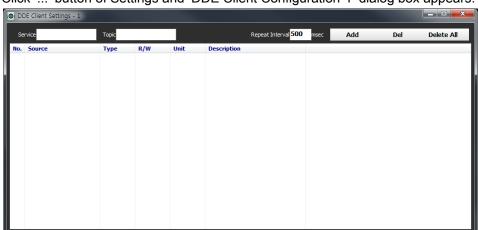
My System	100000000000		ч. т.
Add	Del	Change	View -
Name		Address	Status
- Joe D	DE Client	Miscellaneous	; (0) EA

2nd At My System, DDE Client is added. Click 'Add' to add unit(s).

My System				Ψ×
Add	Del	Change V	/iew -	
Name		Address	Status	
e ipe e	DE Client	Miscellaneous	(1) EA	
L 1			Disconnect	

3rd Click the added unit and DDE Client property is displayed at Property window.

Pro	perty concernsion	······································
I	DDE Client >> 1	
Ξ	General	
	Name	1
Ξ	DDE Client	
≫	Settings	
	Service	
	Topic	
Ξ	DAQ Settings	
	DAQ Repeat Interval	500 msec



4th Click '...' button of Settings and 'DDE Client Configuration-1' dialog box appears.

5th For connecting DDE Server, enter Service, Topic of DDE Server as as Service and topic of DDE Client Configuration-1.

Below is for Test: DDE Server.

Service: DDEServer		Example Read Excel Cell		Rand Max	
Topic: DAQMaster		=DDEServer DAQMaster!	DdeServerItem1	1000	Random
tem : DdeServerItem1 tem : DdeServerItem2	743 512	Item : DdeServerItem3 Item : DdeServerItem4	528	Interval 500	

When DDE Server Service: DDE Server, Topic: DAQMaster,

Enter service of DDE Client Configuration-1 as 'DDEserver', and topic as 'DAQMaster'.

O DI	DE Client Settings - 1									
Se	rvice DDEServer	Topic DDES	erver		Repeat I	Interval <mark>500</mark>	msec	Add	Del	Delete All
No.	Source	Туре	R/W	Unit	Description					

6th (Click 'Add' a	at 'DDE Client	Configuration-1'	dialog box to	add DDE Item.
-------	---------------	----------------	------------------	---------------	---------------

Test: DDE Server supports for items (DdeServerItem1 to 4).

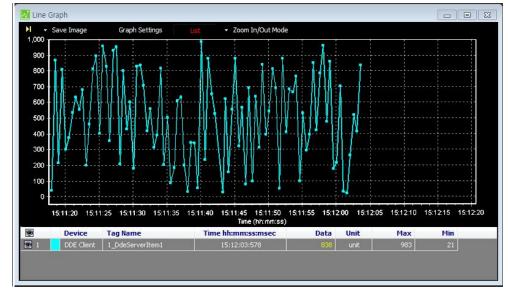
Item Name						ОК	
Unit						Cancel	
Description							
R/W	Read/Wri	ite	•				
Туре	SInt16(-3	32,768~32,763	7) 🔻				
Decimal Point	0		•				
List	Add	De	el [Delete All			
	No	Name		Value			
						Service	
						DDEServer	
						Торіс	
						DDEServer	
tem		Descripti	ion				4
tem Name	!	Enter DD	DE Serve	er item r	ame.		
Jnit		Set data	unit.				
Description	ı	Enter de	scription	n of the i	tem.		
		R	Read	ing is or	ıly ava	ailable.	
R/W		W	Writin	ng is only	y avail	lable.	
		R/W	Read	ing/Writ	ing is	only available.	
Гуре		Set data	display	method			
iype	oint	Set decir	mal poin	t positio	n		
Decimal Po							
		Displays	item list	t.			

s	ervice DDEServer	Topic DDE	erver			Repeat Interval 500	msec	Add	Del	Delete All
No.	Source	Туре	R/W	Unit	Description					
1	DDEServerItem1	Analog	RW							
2	DDEServerItem2	Analog	RW	°C						

7th Check the added item at I/O List and it is available to be added at DAQ List.

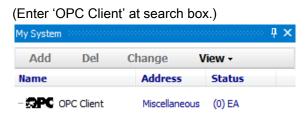


8th At runtime screen, monitoring is available by various graph types.



10.8.3 OPC Client

1st Double-click 'OPC Client' of Miscellaneous at Support Device List to add it at My System.



2nd At My System, OPC Client is added. Click 'Add' to add unit(s).

My System	10000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ф	×
Add	Del	Change	View +		
Name		Address	Status		
⇒ ©PC o	PC Client	Miscellaneous	(1) EA		
∟ 1			Disconnect		

3rd Click the added unit and OPC Client property is displayed at Property window.

Property	↓ ×
OPC Client >> 1	
General	
Name	1
OPC Client	
≫ Settings	(iii)
DAQ Settings	
DAQ Repeat Interval	1000 msec

OPC Client Configuration _ 1									
OPC Server		I/O List	:						ОК
	•	Add	Delete	Delete All			DAQ Repeat Interva	1000 msec	
OPC Server Path		Name			R/W	Description			
	•								
	4								

4th Click '...' button of Settings and 'OPC client Configuration_1' dialog box appears.

5th Click ' $\mathbf{\nabla}$ ' button at OPC Server to select the desired OPC server.

OPC Client Configuration _ 1		- 🗆 🗙
OPC Server	I/O List	ОК
I	Add Delete Delete All A V DAQ Repeat Interval msec	
Graybox.Simulator.1 MRD.DA2.1	Name R/W Description	
(((((((((((((((((((

6th When selecting OPC Server, OPC server path is displayed as list. Double-click OPC server path or select OPC server path and click '→' button, the path is added at I/O List.

OPC Server		I/O List			
Graybox.Simulator.1	+	Add Delete Delete Al		DAQ Repeat Interval 1000	msec
OPC Server Path		Name	R/W	Description	-
OPC Server		numeric.triangle.int8	R	Triangle wave	
D - Options		numeric.triangle.uint32	R	Triangle wave	
 	•	numeric. triangle. uint64	R	Triangle wave	
foat double double double foat square	4				

7th You can add or delete OPC server path by 'Add, Delete, Delete All' of upper menu of I/O List.

OPC Server	I/0 List						
Graybox.Simulator.1	-	Add Delete Delete Al		DAQ Repeat Inter	val 1000 msec		
OPC Server Path		Name	R/W	Description			
OPC Server		numeric.triangle.int8	R	Triangle wave			
options		numeric.triangle.uint32	R	Triangle wave			
 - numeric - saw - sin - triangle - int8 - int16 - int16 - int32 - int54 - foat - double - square - random - textual 	•	numeric. triangle. uint64	R	Triangle wave			
▷-							

8th Check the added path at I/O List and and it is available to be added at DAQ List.

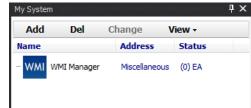
Source			Q							
Device	Source	Interface								
	. 1 (3/3)	OPC Client								
-	numeric.triangl	Analog, R								
-	numeric.triangl	Analog, R								
	numeric.triangl	Analog, R								
QList										
Q List rpe Num	Delete All Selec									
New York Concerning Street Stree	No. Device	Address Source	5) Tag Name	Туре	R/W	Read Mode	Unit	Calculation	Trigger	Description
Al 3 Group Analog 3	No. Device Standard Ta OPC Client	Address Source ag (3) 1 numeric.triangle.l	Tag Name	Analog	R	Cont	Unit		Triangle wave	Description
Al 3: Group	No. Device	Address Source ag (3) 1 numeric.triangle.i 1 numeric.triangle.i	Tag Name		R R		Unit			Description

9th At runtime screen, monitoring is available by various graph types.



10.8.4 WMI Manager

1st Double-click 'WMI Manager' of Miscellaneous in Support Device List to add it to My System. (Enter 'OPC Client' at search box.)



2nd Click 'Add' to add unit to WMI Manager in My System.

Add	Del	Change	View -
ame		Address	Status
WMI	WMI Manager	Miscellaneous	(1) EA
- 1			Disconnect

3rd When you click a unit in My System, you can check properties of WMI Manager in the Property box.

Property	ų ×
WMI Manager >> 1	
E General	
Name	1
🗏 WMI Manager	
Setting	
IP	
DAQ Settings	
DAQ Repeat Interval	500 msec

4th Click [...] button in the Property box to open 'WMI Configuration' window.

• WMI Configuration									_ _ ×
IP <mark>(local)</mark> U	ser Name		Password				Connect	Delete	Delete All
Query	No S	ource	Туре	R/W	Unit	Description			

5th Click 'Connect' to monitor local CPU load. When connecting is completed, items such as CPU Usage, Total Memory, Free Memory appears in the Query list.

WMI Configuration										- 0 ×
IP (local)	User Name			Password				DisConnect	Delete	Delete All
Query		No	Source	Туре	R/W	Unit	Description			
EPU Usage										
Image: Total Memory										
Free Memory										
Used Memory										
🕀 — Total Disk										
🕀 – Free Disk										
User Query										
	I									
	I									
	I									
	I									
	I									
	I									

6th Double-click item to monitor in order to open setting dialog and click 'OK' in dialog to add in source list in the right side. You can edit the source list with 'Delete' and

Delete	All'	button.
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"

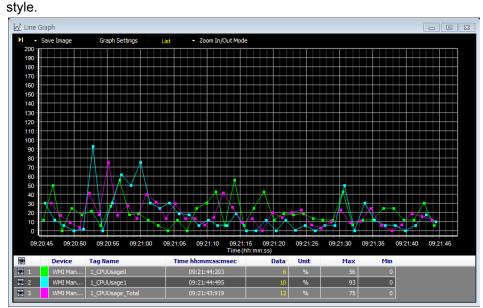
WMI Item					x				
Data Settings									
Item Name	CPUUsage_Tota								
Unit	%								
Description									
R/W	Read	•							
Туре	SInt16(-32,768	~32,767) 💌							
Decimal	0								
		Ok		Cancel					
() WMI Configuration	20	Į							_ 🗆 💌
IP (local)	User Name		Password	н Н	-		DisConnect	Delete	Delete All
Query	No	Source	Туре	R/W	Unit	Description			
E- CPU Usage	1	CPUUsage0	Analog	R	%				
— o	2	CPUUsage 1	Analog	R	%				
- 1	3	CPUUsage2	Analog	R	%				
- 2	4	CPUUsage3	Analog	R	%				
- 3 	5	TotalMemoryMicrosoft Wi	Analog Analog	R	MB MB				
Total Memory	•	FreeMemoryMicrosoft Win	Analog	ĸ	MD				
Microsoft	Windows 7								
- Free Memory									
Microsoft	Windows 7								
- Used Memory									
🕀 🕁 Total Disk									
🕀 🕂 Free Disk									
User Query									
I Z J Total Total Memory Microsoft Free Memory Used Memory Used Memory Used Query									

In User Query, you can perview a result in diverse WMI Query format.

7th Added query items to source list are registered automatically in I/O list. The items can be listed in DAQ list like another I/O source.

Source						Q .						
Device		Source		Interface								
⊟– WI	MI WMI	1 (0/7)		WMI Mana	ger							
	- CPUUsage0			Analog, R								
_	- CPUUsage1			Analog, R								
-	- CPUUsage2			Analog, R								
_	- CPUUsage3			Analog, R								
-	TotalMemor	Microsoft W	/indo	Analog, R								
_	- FreeMemory	Microsoft W	indo	Analog, R								
	- CPUUsage_1	Total		Analog, R								
AQ List - 100 Type	Num		Delete	All Select All	Delete t	he selected item(s)					
- All	7		No.	Device	Address	Source	Tag Name	Туре	R/W	Read Mode	Unit	Calculatio
Group			₽.₽	Standard Tag (7)								
- Analog	7			WMI Manager	1	CPUUsage0	1_CPUUsage0	Analog	R	Cont	%	1.00
				WMI Manager	1	CPUUsage 1	1_CPUUsage1	Analog	R	Cont	%	100
- Digital					1	CPUUsage2	1 CPUUsage2	Analog	R	Cont	%	
- String Vidieo	0			WMI Manager		-		-				'
- String	-			WMI Manager WMI Manager WMI Manager	1	CPUUsage3 TotalMemoryMicr	1_CPUUsage3 1_TotalMemoryMicrosoft Wi	Analog Analog	R	Cont	% MB	

8th You can moniter selected query items at the runtime screen in various kinds of graph



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