

Programmable Operator Interface

# MONITOUCH

## Safety Considerations

- For safe operation, read the instruction manual or user manual that comes with the product carefully or consult the distributor from which you purchased the product, before using the product.
- Products introduced in this catalog have not been designed or manufactured for such applications in a system or equipment that will affect human bodies or lives.
- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult the Hakko Overseas Sales Section.
- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

## Notes to consider before purchasing

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- Consult your distributor or us for further information about products in this catalog.

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Distributor

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**V9** series  
V9 makes automation complete.

**Hakko Electronics Co., Ltd.**



# The new MONITOUCH series scales new heights of excellence; optimum operability, intuitive controls, and extended capability to display and utilize your application.

On its release in 1988 as the first ever programmable display\*, MONITOUCH augured in a new era of human-machine interface technology. It is now used as an information terminal for countless different purposes in production sites all over the world. The total number of shipments has reached around one million.

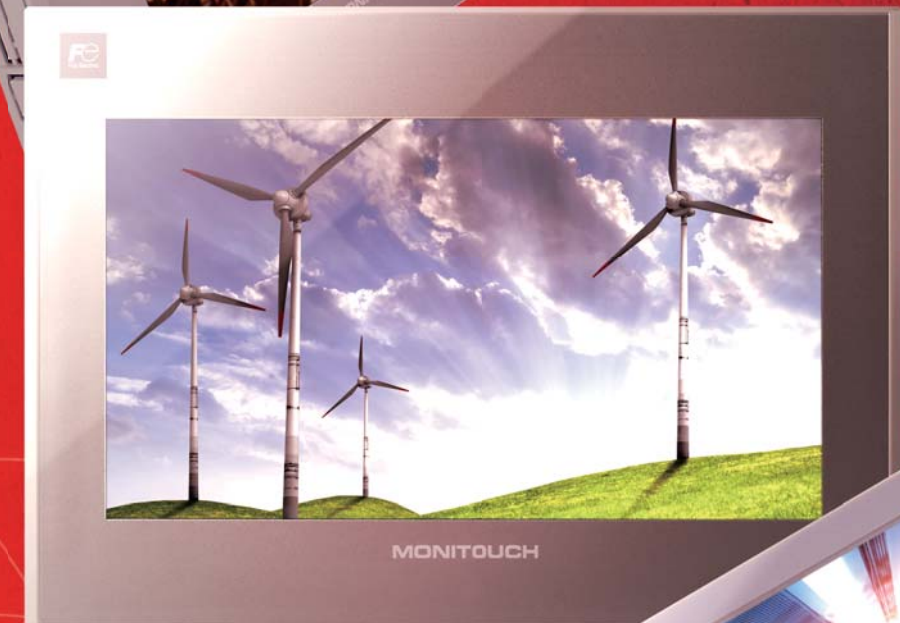
Now, Hakko Electronics Co., Ltd. has introduced its new range with an impressive array of exciting new cutting-edge features expressly designed to meet the needs of our clients.

The MONITOUCH PREMIUM series, the next generation of programmable displays, is here.

\*According to our own research.



V9 Standard  
High performance model



V9 Advanced  
High resolution widescreen LCD  
with wireless LAN



V9 Lite  
Basic model

# MONITOUCH V9 series

04..... V9: Lineup  
06..... V9: Features 1  
08..... V9: Features 2  
10..... V9: Extended Functions 1  
12..... V9: Extended Functions 2  
14..... V-SFT Ver.6  
17..... V9: Optional Units

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22..... V9: Dimensions & Part Names  
24..... V9: Product Details  
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28..... V8: Dimensions & Parts Names  
29..... V8: Accessories  
30..... PLC Connection - Summary  
32..... Temperature Controller / Servo /  
Inverter Connection - Summary  
34..... Service & Support  
35..... Product Warranty



We provide a wide range of display, with wide  
The V9 series lineup helps to establish the most  
fulfilling the needs of automation.

range of functionalities.  
efficient information system

V9 Advanced

10.1 inches

● V9101iWRLD DC  
● V9101iWLD DC

7 inches

● V9071iWRLD DC  
● V9071iWLD DC

15 inches

● V9150iX AC  
● V9150iXD DC

12.1 inches

● V9120iS AC  
● V9120iSD DC



V9 Lite

10.4 inches

● V9100iS AC  
● V9100iSD DC

8.4 inches

● V9080iSD DC

10.4 inches

● V9100iC AC  
● V9100iCD DC

8.4 inches

● V9080iCD DC

5.7 inches

● V9060iTD DC



| Model                      | V9101iW                    | V9071iW                       | V9150iX                    | V9120iS                    |
|----------------------------|----------------------------|-------------------------------|----------------------------|----------------------------|
| Display size               | 10.1" wide                 | 7" wide                       | 15"                        | 12.1"                      |
| Display device             | TFT color LCD              | TFT color LCD                 | TFT color LCD              | TFT color LCD              |
| Resolution W:H (dots)      | 1024×600                   | 800×480                       | 1024×768                   | 800×600                    |
| Colors                     | 16.7 million <sup>*1</sup> | 16.7 million <sup>*1</sup>    | 16.7 million <sup>*1</sup> | 16.7 million <sup>*1</sup> |
| Touch switch               | Capacitance                | Capacitance                   | Analog resistance film     | Analog resistance film     |
| Screen memory (FROM)       | 64MB                       | 64MB                          | 64MB                       | 64MB                       |
| Backup memory (SRAM)       | 800KB                      | 800KB                         | 800KB                      | 800KB                      |
| Ethernet (LAN)             | ○                          | ○                             | ○                          | ○                          |
| Extended cable LAN         | ○                          | ○                             | △ <sup>*2</sup>            | △ <sup>*2</sup>            |
| Wireless LAN               | △ <sup>*2</sup>            | △ <sup>*2</sup>               | △ <sup>*2</sup>            | △ <sup>*2</sup>            |
| Serial (CN1)               | RS-232C/422/485            | RS-232C/422/485 <sup>*3</sup> | RS-232C/422/485            | RS-232C/422/485            |
| Serial (MJ1)               | RS-232C/485                | RS-232C/485                   | RS-232C/485                | RS-232C/485                |
| Serial (MJ2)               | RS-232C/485                | RS-232C/422/485               | RS-232C/485                | RS-232C/485                |
| Communication I/F          | ○                          | ○                             | ○                          | ○                          |
| Optional unit I/F (GUR-XX) | ○                          | —                             | ○                          | ○                          |
| SD card I/F                | ○                          | ○                             | ○                          | ○                          |
| USB (Type A)               | ○                          | ○                             | ○                          | ○                          |
| USB (Type mini-B)          | ○                          | ○                             | ○                          | ○                          |
| Sound output               | ○                          | —                             | ○                          | ○                          |

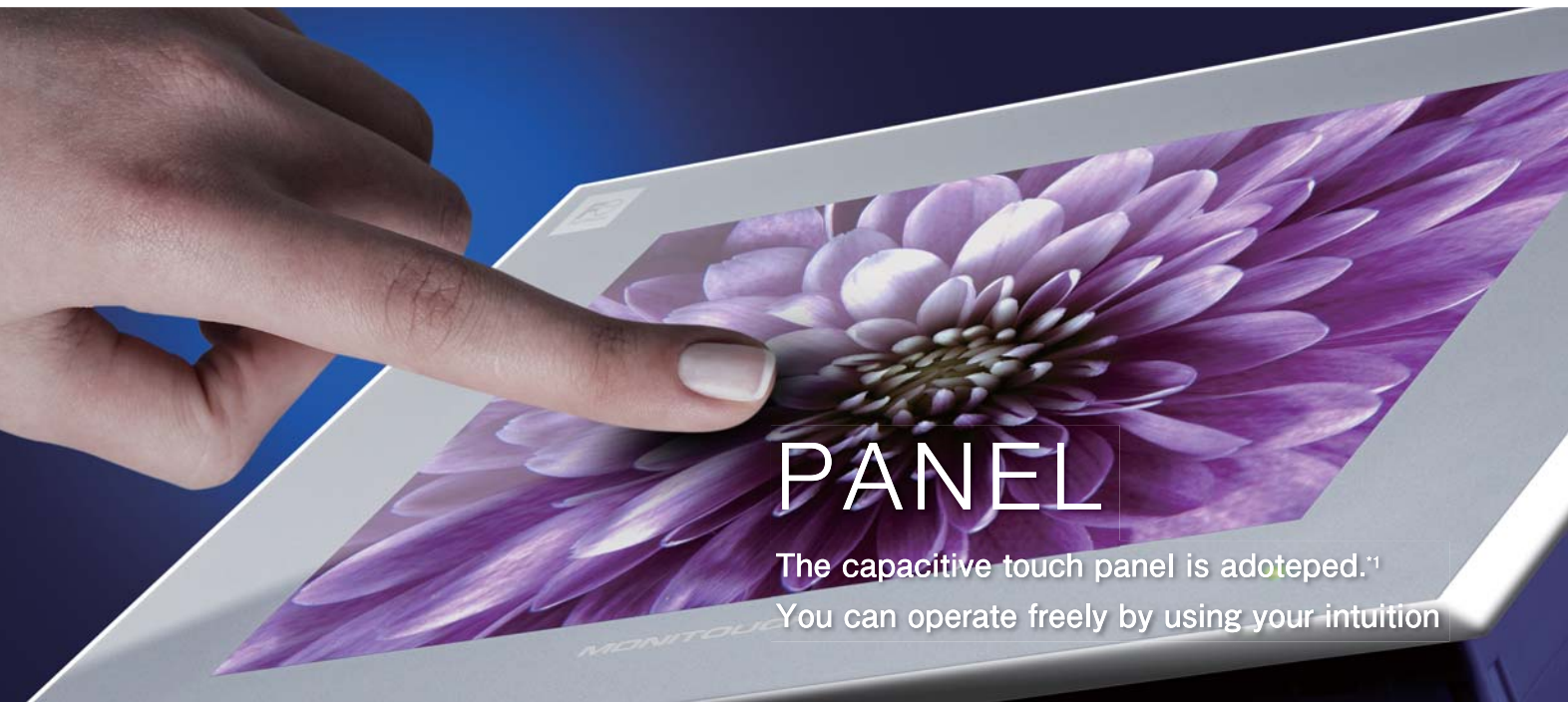
Please refer to page 24 for the details of each model.

| V9100iS                    | V9080iSD                   | V9100iC                    | V9080iCD                   | V9060iTD                      |
|----------------------------|----------------------------|----------------------------|----------------------------|-------------------------------|
| 10.4"                      | 8.4"                       | 10.4"                      | 8.4"                       | 5.7"                          |
| TFT color LCD              | TFT color LCD              | TFT color LCD              | TFT color LCD              | TFT color LCD                 |
| 800×600                    | 800×600                    | 640×480                    | 640×480                    | 640×480                       |
| 16.7 million <sup>*1</sup> | 16.7 million <sup>*1</sup> | 16.7 million <sup>*1</sup> | 16.7 million <sup>*1</sup> | 260 thousand <sup>*1</sup>    |
| Analog resistance film     | Analog resistance film     | Analog resistance film     | Analog resistance film     | Analog resistance film        |
| 64MB                       | 64MB                       | 64MB                       | 64MB                       | 64MB                          |
| 800KB                      | 800KB                      | 800KB                      | 800KB                      | 800KB                         |
| ○                          | ○                          | ○                          | ○                          | ○                             |
| △ <sup>*2</sup>            | △ <sup>*2</sup>            | —                          | —                          | —                             |
| △ <sup>*2</sup>            | △ <sup>*2</sup>            | —                          | —                          | —                             |
| RS-232C/422/485            | RS-232C/422/485            | RS-232C/422/485            | RS-232C/422/485            | RS-232C/422/485 <sup>*3</sup> |
| RS-232C/485                | RS-232C/485                | RS-232C/485                | RS-232C/485                | RS-232C/485                   |
| RS-232C/485                | RS-232C/485                | RS-232C/485                | RS-232C/485                | RS-232C/422/485               |
| ○                          | ○                          | ○                          | ○                          | ○                             |
| ○                          | ○                          | —                          | —                          | —                             |
| ○                          | ○                          | ○                          | ○                          | ○                             |
| ○                          | ○                          | ○                          | ○                          | ○                             |
| ○                          | ○                          | ○                          | ○                          | ○                             |
| ○                          | ○                          | —                          | —                          | —                             |

<sup>\*1</sup>: Only for pictures, 3D parts and videos. Other items are displayed in 65,536 colors. <sup>\*2</sup>: Depending on the model. <sup>\*3</sup>: When optional unit DUR-00 is installed.



# Kindness to our customers is the origin of

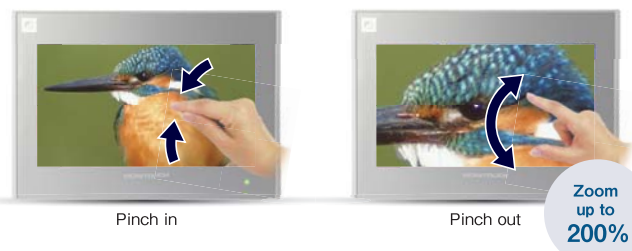


\*1: Only V9 Advanced model.

## Smooth Operation with Your Fingers

### Zooming In and Out with Two Fingers V9 Advanced

The displayed image can be magnified up to 200% by pinching out the screen\*, and reduced to the original size by pinching it in.



\*2: The image can be scaled up and down by double tapping for V9 Standard/Lite.

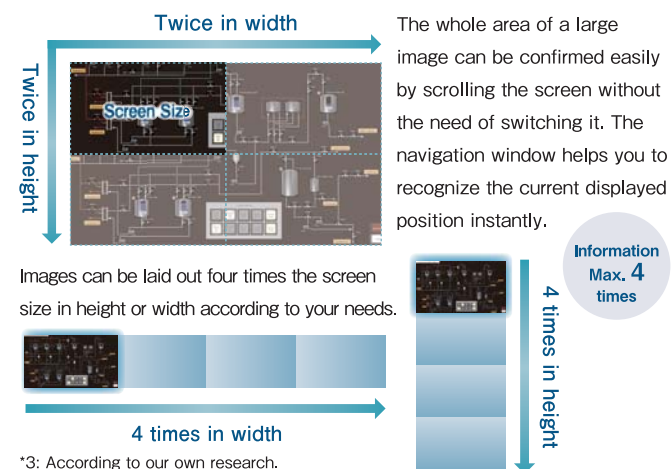
### Scrolling Magnified Images

You can view a particular part of a magnified image in close-up while scrolling around the screen.



## Abundant Quantity of Information

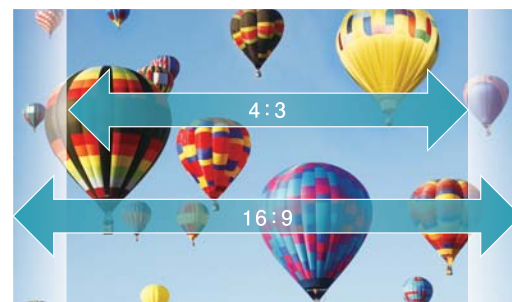
### Displaying Four Times the Screen Size First in industry



\*3: According to our own research.

### Widescreen LCD V9 Advanced

V9 Advanced models are equipped with a high-precision, high-resolution widescreen (16:9). Greater volume and variety of information can be displayed on the screen.



# evolution of MONITOUCH.

## Enhanced Display Capacity

### Video Player Function

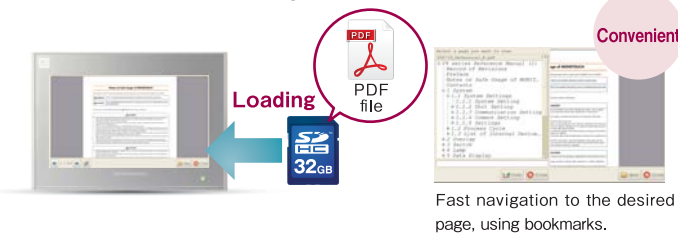
A video player function is provided with all models of the V9 series. The video player can be operated by a switch on the V9 or a command from the system menu or PLC. Animated images used for operation instruction and other operations will reduce the down time of machines and facilitate the standardization of operation.



\*4: Please see the specifications (P18) for models with sound output function.

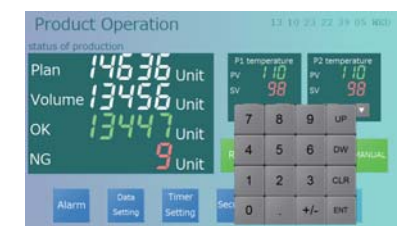
### PDF Viewer Function

PDF files stored on SD cards can be displayed. PDF instruction manuals can be used for troubleshooting.



Fast navigation to the desired page, using bookmarks.

### 7-segment Fonts for Realistic Expression

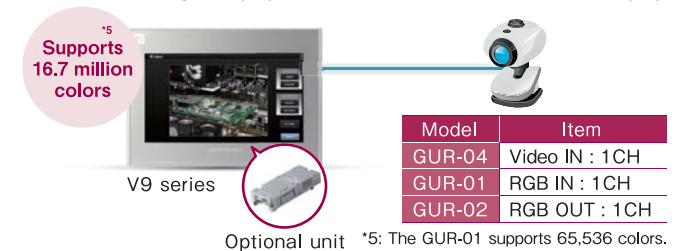


7-segment fonts allow for realistic, highly visible expression of measuring instruments.

Non-illuminated segments can be shown in a subtle color.

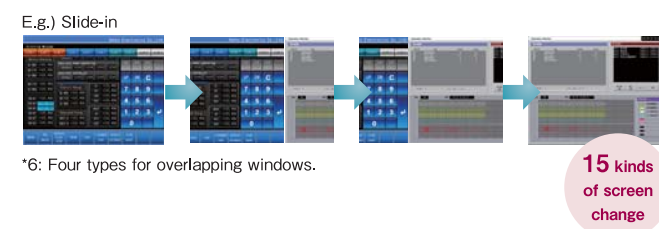
### Video/RGB Input-Output Support

By attaching an optional unit, videos and RGB images can be displayed on the V9. Also, images displayed on the V9 can be sent to external displays.



### Versatile Screen Transition Functions

15 kinds\*6 of functions are available for screen switching and overlapping.



\*6: Four types for overlapping windows.

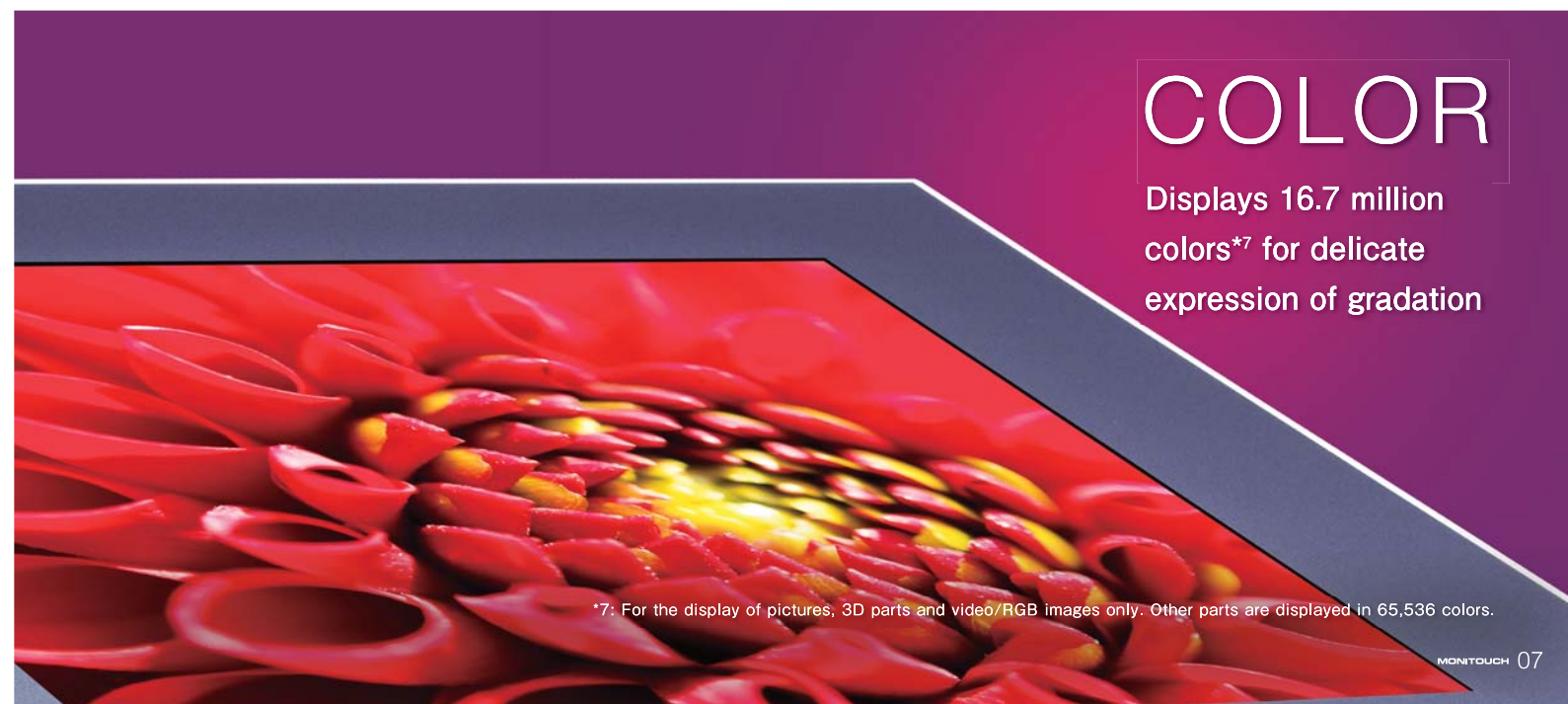
### Compatible with Vertical Placement

The screen can also be displayed and edited while the panel is placed vertically (by left or right turning).



# COLOR

Displays 16.7 million colors\*7 for delicate expression of gradation



\*7: For the display of pictures, 3D parts and video/RGB images only. Other parts are displayed in 65,536 colors.



# Easy and safe network monitoring and control



## VNC Server Function

### Remote Connection from Tablet PCs

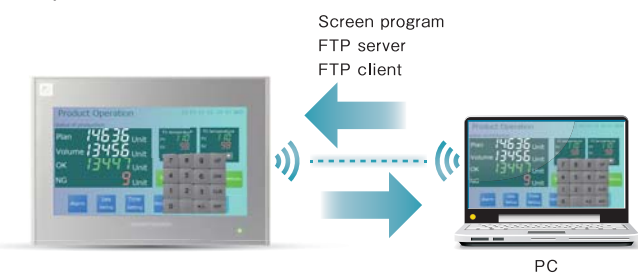
All types of the V9 series are equipped with VNC server function for remote monitoring and control of production from your tablet PC.



## Wireless LAN Function

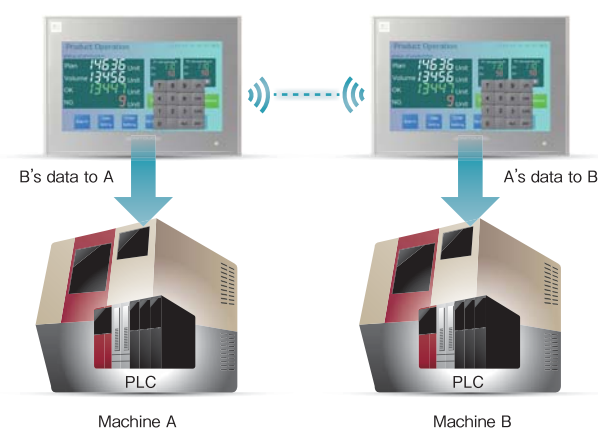
### Wireless Data Transfer

By connecting a PC to a V9 via wireless LAN, transmission of screen program and the reading and writing of files through FTP server/client function becomes available. On-site debugging can be conducted easily, without the need for a cable connection.



### Data Transfer via V9 Panels

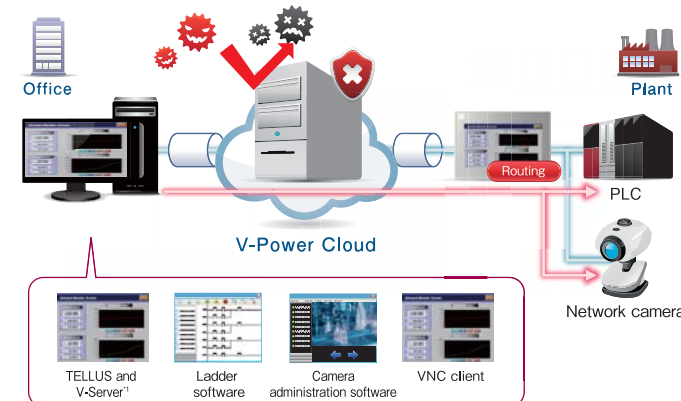
With macro EREAD/EWRITE, data can be transferred between machines using V9 panels as a gateway.



## Networking

### Secure, easy and low cost remote control by VPN

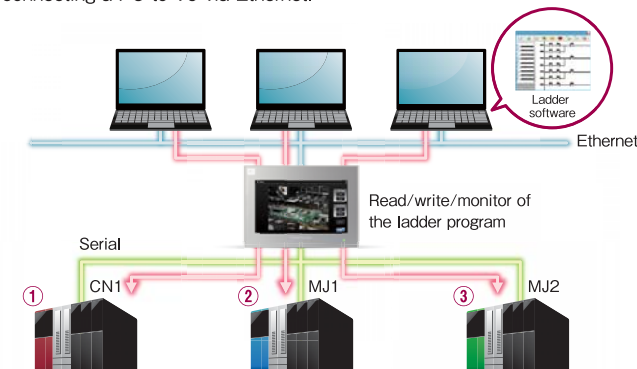
MONITOUCH, equipped with VPN (Virtual Private Network) function, facilitates secure remote control through a public network. In addition, VPN's routing function enables a V9 series unit to connect with PLC and network cameras via Ethernet.



\*1 TELLUS and V-Server for V9 is under development.

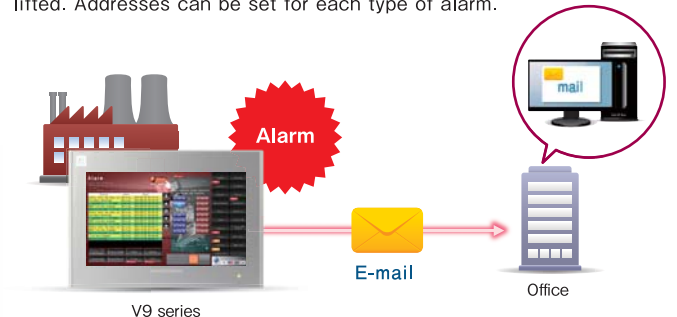
### Ladder Program Transmission (3-way) Support

Up to 3 PLCs are accessible to monitor and revise PLC programs by connecting a PC to V9 via Ethernet.



### E-mail Transmission Function

E-mails can be sent to preset addresses when alarms are issued or lifted. Addresses can be set for each type of alarm.



**Secure**

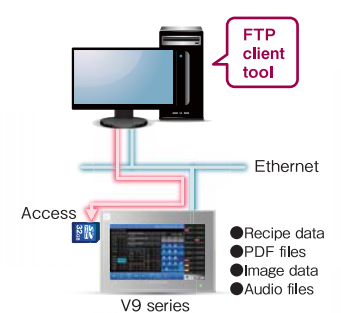
### Enhanced Security

SSL/TLS transmission is supported, so you can work with peace of mind.

### FTP Server/Client Support

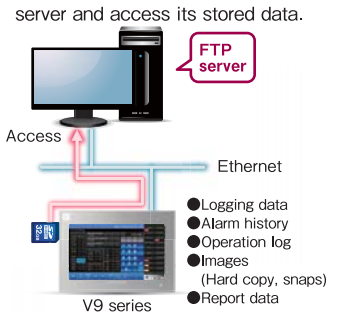
#### FTP Server Function

Files in a storage media inserted in a V9 can be read out and written using a PC.



#### FTP Client Function

Files on an FTP server can be read and written using a V9. It is also possible to use a V9 as an FTP server and access its stored data.



## NETWORK

Enhanced safety features while connecting to various types of network



# Easy verification of daily data and error reports

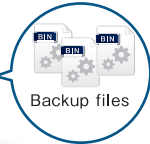

## LOGGING

Improved functions for displaying trend data and alarms

## Trend Data Display



### Backup Data Display

Backup files can be loaded and displayed on V9. Alarm backup data can also be displayed.




### Easy Creation of Backup Files


By using the scheduler, backup files are automatically created at scheduled timings.



Backup file





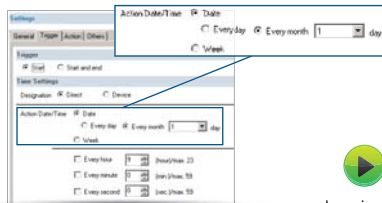
or




Destination for data save can be selected freely.

### Coordination with the Scheduler

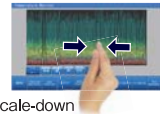
Operations such as bit output and execution of macro programs can be scheduled on a specific date and time. Also, start and stop of logging, and data saving can be conducted by setting the logging conditions.



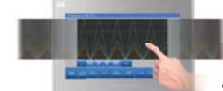
### Magnification of Trend Graph Scale



Scale-up



Scale-down



Scrolling

The time scale of trend graph can be magnified, and the display can be scrolled by touch and drag.

## Alarm Display

### Scrolling of the Alarm Messages



Scrolling the alarm messages

The entire alarm message can be displayed by scrolling the screen with touch and drag.


### Running Emergency Messages



Flowing Messa

Alarm messages run automatically at a specified position when alarms are occurred.

Convenient tools for scrolling



## Screen Overlapping

### Improved Overlapping Functions

Up to 10 windows can be overlapped on the screen. No limit on the size of each window.

You can make all ten windows transparent at the same time.

All of the ten windows can be left displayed even when the screen is changed.



10 windows at once

Select items to display constantly.

### Four-times of Normal Overlapping Windows

Four times more information than of normal overlapping windows can be registered and used as sub screen.



### Various Screen Transition Functions

Four kinds of functions such as slide-in and fade-out are available for screen switching and overlapping.

E.g.) Slide-in



## OVERLAP

Exponentially improved display performance by extended functions





# Easy and smooth operation with new functions

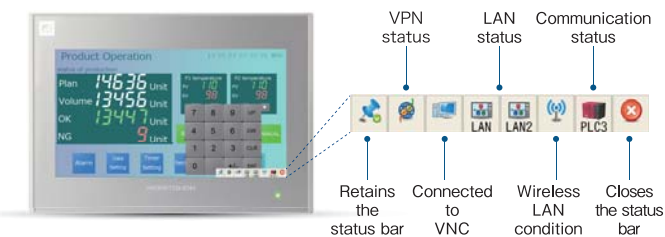
## SETTING

Various setting functions  
for improving usability

## Unit Display

### Display of V9 Status

The status of V9 is displayed in the status bar.<sup>\*1</sup>



\*1: The contents of the status indication are subject to change.

### System Keyboard Available

A versatile keyboard for inputting upper and lower case letters and numbers is available for easy setting.

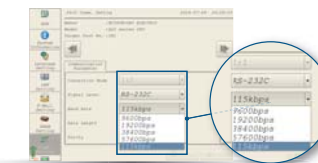
Select the system keyboard from the set menu.



## Local Screen Settings

### Transmission Settings

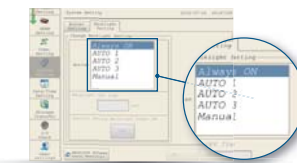
Transmission settings with connected devices can be modified on the V9.



Communication setting

### Backlight Settings

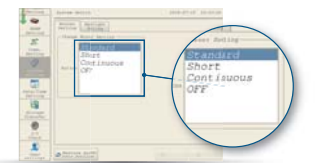
Backlight settings can be modified on the V9.



Backlight setting

### Buzzer Settings

Buzzers settings can be modified on the V9.



Buzzer setting

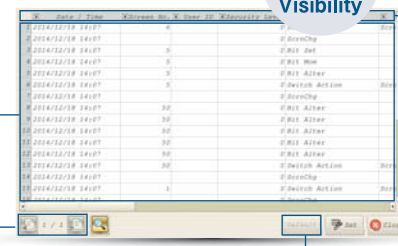
## Operation Log

### Improved Operation Log Viewer

The operability and visibility of the log viewer have been improved.

**Log display area**  
Double-tapping for  
displaying details

**File change**  
A log file selected for  
display



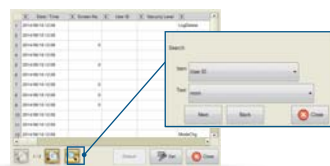
**Improved  
Operability  
Visibility**

**Title line**  
Filtering for each  
item.

**Setting**  
Viewer display  
setting

### Search Function

Operation log can be searched for by specifying an operator or date and time.



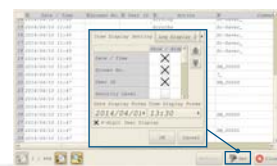
### Filter/Sort Settings

Filter and sort can be set for displayed items.



### Display Item Settings

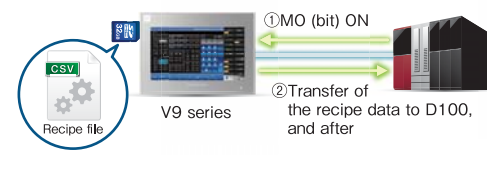
It is possible to select items to display in the operation log.



## Recipe

### Global Control Function

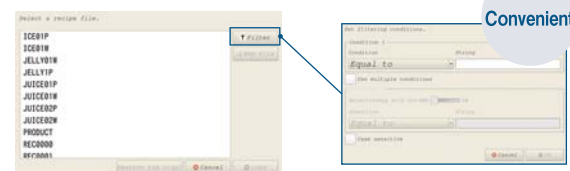
It is possible to read and write to specified files and record data, regardless of the screen displayed, by turning on or off a bit.



**Transferring  
recipe data  
to the PLC**

### Filter Settings

The required data can be easily extracted using the recipe selection list dialog to narrow down file and record searches.



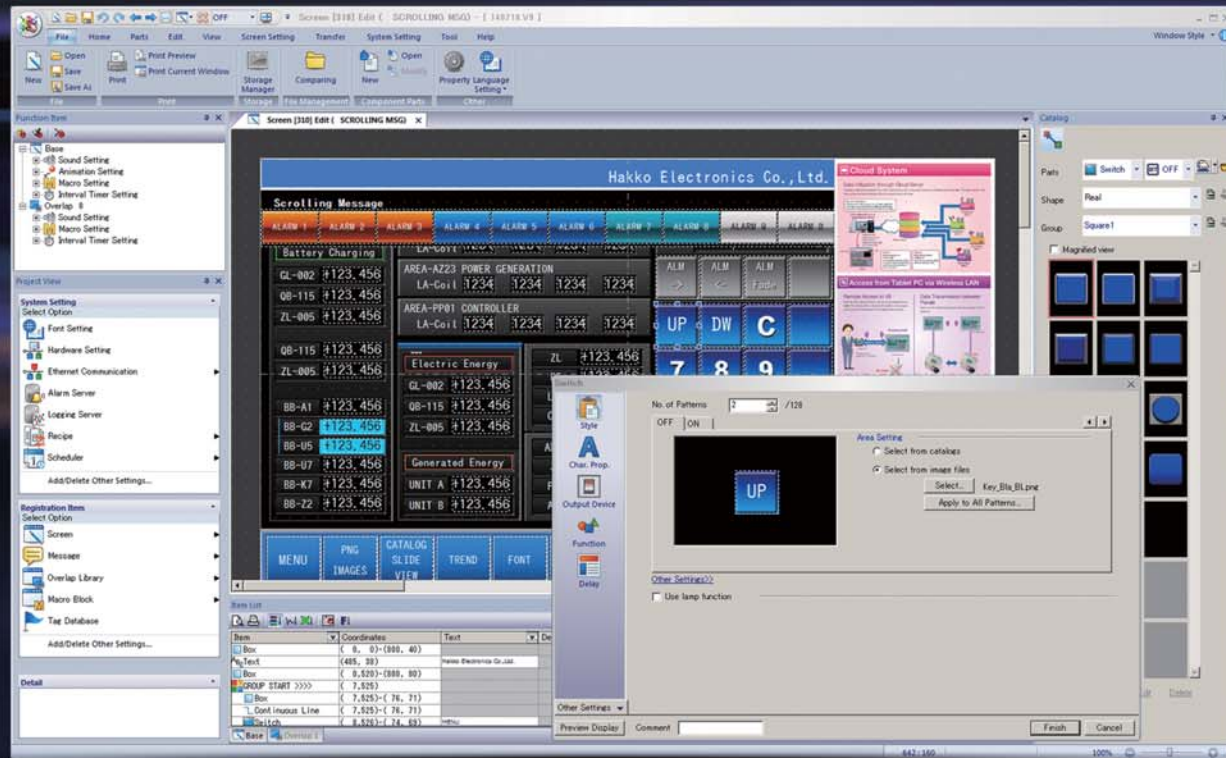
## INFORMATION

Visualizing information  
for prompt recognition

MONITOUCH  
V9  
series



# Simple configuration of beautiful screens



# V-SFT ver.6

|           |  |
|-----------|--|
| PC        | PC/AT compatible machine with Windows  |
| OS        | Windows XP/ XP 64Edition/ Vista 32bit/ Vista 64bit/ Win 7 32bit/ Win 7 64bit/ Win 8 32bit/ Win 8 64bit/ Win 8.1 32bit/ Win 8.1 64bit |
| CPU       | Pentium 4 2.0GHz or higher recommended.  |
| Memory    | 2.0GB or more  |
| Hard disk | For installation: 2.0GB or more available space  |

\* For installing the OS, administrator authority is required.

|                  |   |
|------------------|---|
| Disc drive       | DVD-ROM drive   |
| Display          | Resolution: 1024×768 (XGA) or more  |
| Color indication | High color (16 bit) or higher   |
| Others           | Microsoft .NET Framework 4.0 or 4.5 is required. (When .NET Framework 4.0 or 4.5 has not been installed in PC, Framework 4.0 is installed automatically.) |

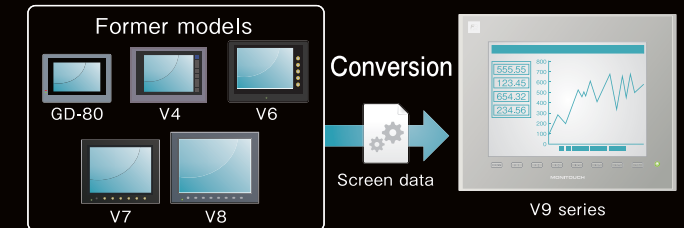
## Compatibility with Previous Models

### V8 series Compatibility

V-SFT Ver. 6 provides intuitive operation, with easy-to-use visual tools and refined displays. In addition to the V9 series, V-SFT Ver. 6 is also compatible with the V8 series.

### Compatible with Data from Former Models

Screen data produced using previous versions of V-SFT can be converted for use in the current model. It is possible to use former screen data assets.



## Configuration of Easy-to-view Screens

### Wider Range of Parts

The number of picture icons has been increased, and the icons with plain design have been added. Pick from the wide range of ready-made icons for sophisticated representation.



### Simple icons added

Popular simple icons that are used widely on smartphones have been introduced.



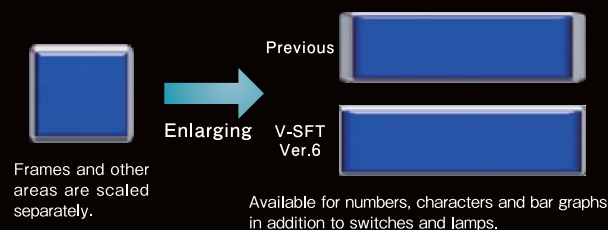
### Increased picture icons

The number of the picture icons has been increased.



### Improved 3D Parts Scaling Function

3D parts can be scaled up and down without changing the widths of frames. Frame size can be modified by batch, or individually according to the item type.



\* For V9 series square picture icons and 3D parts with frames (excluding some icons and parts)

### Line Width Setting

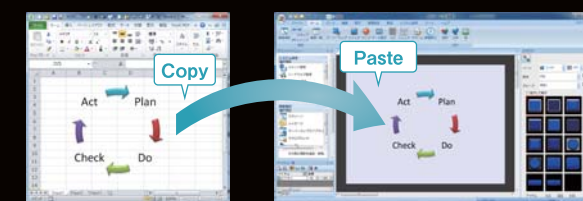
The line widths of graphic items and trend items (graph lines, reference lines) can now be set in eight steps. Effective screens can be created using a variety of drawing tools and graph representations.



\* Excluding thick lines

## Copy/Paste of Microsoft Office Data

Graphics created in Microsoft Office Word, Excel and PowerPoint can be copied and pasted into V-SFT files by converting them to pictures, patterns or parts.



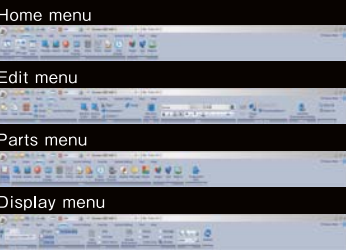
## Pasting of an Image File

It is possible to paste a PNG file directly onto the screen. JPG, BMP and GIF formats are also supported as image files, allowing you to create whatever visually impressive screen you choose.



Upgraded Operability

Ribbon Menu



The ribbon-shaped menu bar is available. Enlarged icons are easily visible also improves the operability remarkably.

Graphic Indication of System Configuration



The improved hardware setting screen makes it easy to grasp exactly how devices are connected together in the system.

Docking Windows



The project view windows and item view windows can be docked or floated easily.

Integration of Search Menu



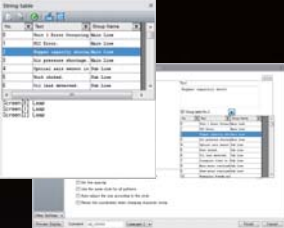
The search menu, which used to be displayed separately, has now been integrated for easy operation.

Enhanced Interlocking Setting



Interlock can be set with a ladder drawing screen. Multiple conditions for interlocking can be easily set. It is possible to set interlocking for keypad indication conditions in addition to switch conditions. Up to five conditions (AND or OR) for a bit device, word device or security device can be set, which is suitable for setting complicated conditions.

Character String Table



Text for switches, lamps and other parts can be managed centrally using the character string table. Frequently used text can be registered in the table for easy reference and batch modification.

\* Switches, lamps, text, and multi text only.

Facilitation of Screen Configuration

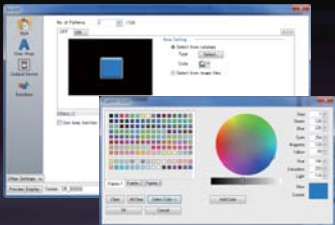
Guided Setting Process

With the help of the clear instructions in the dialog, setting can be conducted smoothly and collectively.



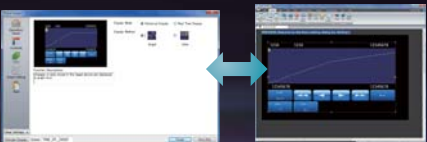
A Wider Range of Colors for 3D parts

65,536 colors are available for 3D Parts.

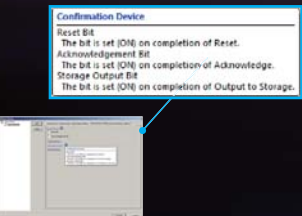


Visualization of Setting

Set conditions can be confirmed on the preview screen before completing setting. By switching the preview screen and setting dialog, the setting can be confirmed easily even on a PC with low resolution.

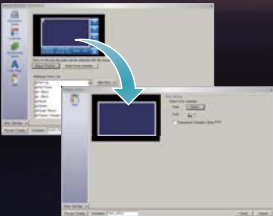


Tool Hints to Support Configuration



Tool hints are provided at many points to support configuration. When you hover the mouse over the item, a hint for operation will appear. You can learn the procedure for configuration without referring to the manual.

Direct Editing with the Item View



In the item view, an indication range and component parts consisting of various parts including switches are selected. Since there is no need to select various items respectively, smooth and efficient editing is possible.

Optional Units

Extension Units

**GUR-00 (Video input 4ch)\***  
Displays images from video cameras on V9 directly.

**GUR-01 (RGB input 1ch)**  
Displays RGB input on V9.

**GUR-02 (RGB output 1ch)**  
Displays images of V9 on a monitor.

**GUR-04 (Video input 1ch)**  
Displays images from a video camera directly.

**GUR-10 (Video input 2ch + RGB input 1ch)\***  
Displays images from video camera and RGB input on V9 simultaneously.

**GUR-11 (RGB input 2ch)\***  
Displays RGB images such as PC images through two channels on V9 simultaneously.

\* Scheduled to be released in April 2016.

Communication Units

|                        |                           |
|------------------------|---------------------------|
| <b>CUR-00</b> OPCN-1   | <b>CUR-04</b> PROFIBUS-DP |
| <b>CUR-01</b> T-link   | <b>CUR-06</b> SX bus      |
| <b>CUR-02</b> CC-Link  | <b>CUR-07</b> DeviceNet   |
| <b>CUR-03</b> Ethernet | <b>CUR-08</b> FL-net      |

Configuration software

**V-SFT-6 (Ver.6)**  
WindowsXP/ XP 64Edition/ Vista 32bit/ Vista 64bit/ Win7 32bit/ Win7 64bit/ Win8 32bit/ Win8 64bit/ Win 8.1 32bit/ Win 8.1 64bit

Cables

| Type          | Configuration                                  | Connected to                           |
|---------------|--|--|
| <b>V-CP</b>   | RS-232C<br>Modular 8pin<br>Length: 3m          | PC                                     |
| <b>V6-BCD</b> | RS-232C<br>Modular 8pin<br>Length: 3m          | Barcode reader                         |
| <b>V6-MLT</b> | RS-485<br>Modular 8pin<br>Length: 3m           | MONITOUCH V8/V9                        |
| <b>V6-TMP</b> | RS-232C/485<br>Modular 8pin<br>Length: 3・5・10m | Temperature controller, inverter, etc. |
| <b>UA-FR</b>  | Type A<br>Length: 1m                           | Card reader/writer, USB memory, etc.   |

**DUR-00**(Dedicated optional unit for V9071iW/ V9060iTD)

Used for serial connection with D-Sub9pin.

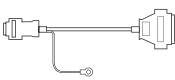
Other Units



**TC-D9 (Terminal converter)**  
Connects V9 with other units via RS-422/485 terminal.



**V7-BT**  
A replacement lithium battery for the V9071iW, V9060iTD and V8 series.



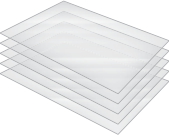
**D9-D25**  
Replacement cable for CN1 cable of V6/V7 series.



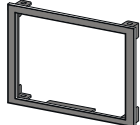
**V9-ANT**  
Antenna for V9 models compatible with wireless LAN.



**V9-BT**  
A replacement lithium battery for V9 series.  
\*Excluding the V9071iW and V9060iTD.



**V9xxx-GS/V9xxx-GSN10**  
Protection sheets for panels (5 sheets per set). N10 is a non-glare type sheet. See P.25 for details.



**Panel adapter (PAD-Vxxx)**  
Used when fitting V9 into V4/GD-80/GD-65/GD-64 panel cutout. Contact our technical helpdesk for details.



High-end specifications realize smooth and accurate operation.

General Specifications

| Item                            |                                | V9 Advanced  |                      | V9 Standard   |   |   |          |
|---------------------------------|--------------------------------|--|----------------------|---|---|---|----------|
|                                 |                                | V9101iW  | V9071iW              | V9150iX   | V9150iXD  | V9120iS   | V9120iSD |
| Power supply                    | Rated voltage                  | 24VDC  |                      | 100-240VAC  | 24VDC   | 100-240VAC  | 24VDC    |
|                                 | Permissible range of voltage   | ±10%   |                      | -15%,+10%   | ±10%  | -15%,+10%   | ±10%     |
| Insulation resistance           |                                | DC500V 10MQ or more  |                      |   |   |   |          |
| Physical environment            | Ambient temperature            | 0~50℃ <sup>*1</sup>  |                      | 0~40℃ <sup>*1</sup>   |   | 0~50℃ <sup>*1</sup>   |          |
|                                 | Ambient humidity               | 85%RH or less (without dew condensation) <sup>*1</sup>   |                      |   |   |   |          |
|                                 | Operation altitude             | 2,000 meters or lower  |                      |   |   |   |          |
|                                 | Atmosphere                     | Not to be exposed to corrosive gas, or conductive dust   |                      |   |   |   |          |
|                                 | Storage temperature            | -10~60℃ <sup>*1</sup>  |                      | -10~50℃ <sup>*1</sup>   |   | -10~60℃ <sup>*1</sup>   |          |
|                                 | Storage humidity               | 85%RH or less (without dew condensation) <sup>*1</sup>   |                      |   |   |   |          |
|                                 | Contamination level            | Level 2  |                      |   |   |   |          |
| Mechanical operating conditions | Resistance to oscillation      | JIS B 3502 (IEC61131-2) compliant, Vibration frequency: 5~9Hz, Half-amplitude: 3.5mm, Vibration frequency: 9~150Hz, Constant acceleration: 9.8m/s <sup>2</sup> (1G), X, Y, Z: 3 directions (10 times each) |                      |   |   |   |          |
|                                 | Resistance to shock            | JIS B 3502 (IEC61131-2) compliant, Peak acceleration: 147m/s <sup>2</sup> (15G), X,Y,Z:3 directions, 3 times each (18 times in total)  |                      |   |   |   |          |
| Electric operating conditions   | Resistance to noise            | Noise voltage:1,000Vp-p, pulse width:1μs, pulse rise time : 1ns  |                      | Noise voltage:1,500Vp-p, pulse width:1μs, pulse rise time : 1ns | Noise voltage:1,000Vp-p, pulse width:1μs, pulse rise time : 1ns | Noise voltage:1,500Vp-p, pulse width:1μs, pulse rise time : 1ns |          |
|                                 | Resistance to static Discharge | Complies with IEC61000-4-2, contact: 6KV, air: 8KV   |                      |   |   |   |          |
| Installation conditions         | Grounding                      | Grounding resistance: Less than 100Ω, FG/SG separation   |                      | Grounding resistance: Less than 100Ω, FG=SG                     |   | Grounding resistance: Less than 100Ω, FG/SG separation          |          |
|                                 | Structure                      | Protection structure: Front case: IP66, TYPE4X/13 <sup>*7*8</sup> (when water-proof gasket is used), Rear case: IP20, single unit, installation method: panel mounting                                     |                      |   |   |   |          |
|                                 | Cooling system                 | Natural air cooling  |                      |   |   |   |          |
|                                 | Dimensions W*H*D (mm)          | 278.5×198.5×54.4   | 201.6×147.6×60.3     | 382.8×312.8×80.8  |   | 327.8×261.0×54.9  |          |
|                                 | Panel cutout (mm)              | 257.0×183.0(+0.5/-0)   | 187.2×133.4(+0.5/-0) | 369.4×299.4(+0.5/-0)  |   | 313.0×246.2(+0.5/-0)  |          |
| Case color                      |                                | Light gray   |                      | —   |   | Light gray  |          |
| Material                        |                                | PC resin   |                      | Front case: Aluminum, Rear case: PC resin                       |   | PC resin  |          |

\*1: Wet-bulb temperature should be 39℃ or lower to prevent malfunction.

Performance Specifications

| Item                 |                                | V9 Advanced   |                              | V9 Standard                     |                                      |
|----------------------|--------------------------------|---|------------------------------|---------------------------------|--------------------------------------|
|                      |                                | V9101iW   | V9071iW                      | V9150iX                         | V9120iS                              |
| Screen memory (FROM) |                                | 64MB  |                              |                                 |                                      |
| Backup memory (SRAM) |                                | 800KB   |                              |                                 |                                      |
| Display              | Display device                 | TFT color LCD   |                              |                                 |                                      |
|                      | Resolution                     | 1024×600  | 800×480                      | 1024×768                        | 800×600                              |
|                      | Display size                   | 10.1″Wide   | 7″Wide                       | 15″                             | 12.1″                                |
|                      | Colors                         | 16.7 million <sup>2</sup>   |                              |                                 |                                      |
|                      | Backlight                      | LED   |                              |                                 |                                      |
|                      | Backlight life                 | 50,000 hours  | 100,000 hours                |                                 | 70,000 hours                         |
| Touch switch         | Type                           | Capacitance   |                              | Analog resistance film          |                                      |
| Function switch      | Quantity                       | None  |                              | 8                               |                                      |
| External interface   | D-Sub 9-pin (CN1) <sup>3</sup> | RS-232C/ RS-422/RS-485, Asynchronous type,<br>Data length: 7,8 bits, Parity: even, odd, none, Stop bit: 1, 2 bits,<br>Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200,187500 <sup>4</sup> bps             |                              |                                 |                                      |
|                      | Modular 8-pin (MJ1/ MJ2)       | RS-232C/ RS-422/ RS-485 (two-wire system), <sup>5</sup> Asynchronous type,<br>Data length: 7,8 bits, Parity: even, odd, none, Stop bit: 1, 2 bits,<br>Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps |                              |                                 |                                      |
|                      | SD card                        | One card slot provided as standard  |                              |                                 |                                      |
|                      | Ethernet                       | 2ch, Baud rate: 100Mbps, 10Mbps   |                              | 1ch, Baud rate: 100Mbps, 10Mbps |                                      |
|                      | Wireless LAN                   | Complies with IEEE802.11b/g/n (2.4GHz) <sup>6</sup>   |                              |                                 |                                      |
|                      | USB                            | Type A,Type mini-B (Ver.2.0)  |                              |                                 |                                      |
|                      | Sound output                   | 1ch provided as standard  | —                            | 1ch provided as standard        |                                      |
| Clock                | Backup period                  | 5 years (Ambient temperature 25°C)  |                              |                                 |                                      |
|                      | Calendar accuracy              | Gap ±90 sec. per month (Ambient temperature 25°C, When the battery is backed up)  |                              |                                 |                                      |
| Standard             | CE marking <sup>7</sup>        | EN61000-6-2, EN61000-6-4  |                              |                                 |                                      |
|                      | UL・cUL <sup>7</sup>            | UL508   |                              |                                 | UL508, ANSI/ISA12.12.01 <sup>9</sup> |
|                      | KC                             | Compliant   |                              |                                 |                                      |
|                      | Radio Act <sup>8</sup>         | Japan: TELEC<br>USA: FCC<br>Canada: IC RSS  | EU: R&TTE<br>South Korea: KC | Japan: TELEC                    |                                      |

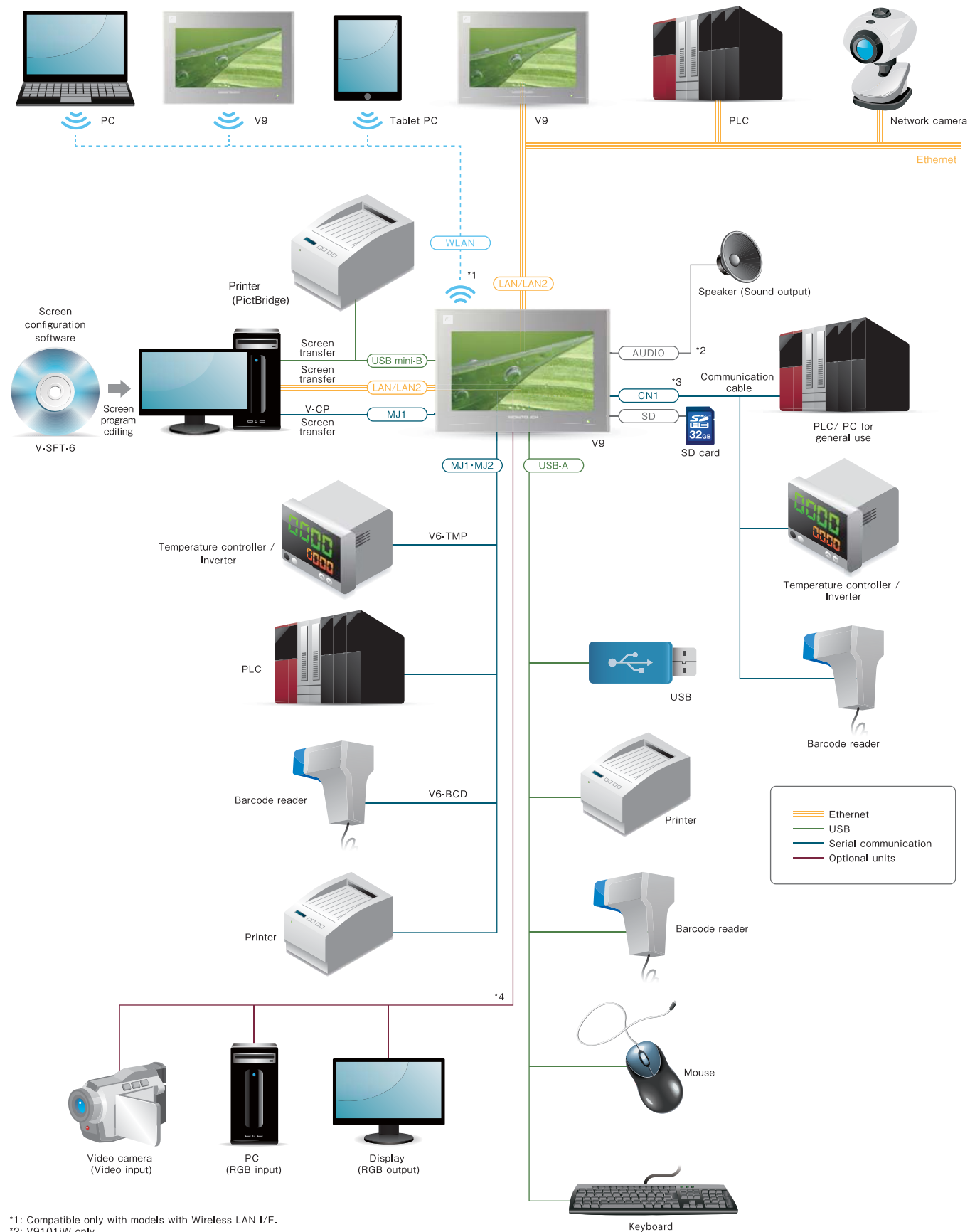
\*2: Only for pictures, 3D parts and videos. Other items are displayed in 65,536 colors.    \*3: Optional unit (DUR-00) is required for the V9071iW and V9060iTD.  
\*4: Only for Siemens MPI (Incompatible with DUR-00).    \*5: 187,500bps (four-wire system) for the V9071iW and V9060iTD MJ2 only.    \*6: Wireless LAN-compatible products only.    \*7: DC products only.  
\*8: V9101iW: Hardware of Ver.c or later V9120iSD/V9100iSD/V9080iSD/V9100iCD/V9080iCD: Hardware of Ver.b or later V9071iW/V9150iXD/V9060iTD:All versions  
\*9: V9120iSD/V9100iSD/V9080iSD: Hardware of Ver.b or later V9060iTD: All versions

| V9 Standard  |          |                      | V9 Lite    |                      |          |   |
|--|----------|----------------------|------------|----------------------|----------|---|
| V9100iS  | V9100iSD | V9080iSD             | V9100iC    | V9100iCD             | V9080iCD | V9060iTD  |
| 100-240VAC   | 24VDC    | 24VDC                | 100-240VAC | 24VDC                | 24VDC    | 24VDC   |
| -15%,+10%  | ±10%     | ±10%                 | -15%,+10%  | ±10%                 | ±10%     | ±10%  |
| DC500V 10MΩ or more  |          |                      |            |                      |          |   |
| 0~50℃ <sup>*)</sup>  |          |                      |            |                      |          |   |
| 85%RH or less (without dew condensation) <sup>*)</sup>   |          |                      |            |                      |          |   |
| 2,000 meters or lower  |          |                      |            |                      |          |   |
| Not to be exposed to corrosive gas, or conductive dust   |          |                      |            |                      |          |   |
| -10~60℃ <sup>*)</sup>  |          |                      |            |                      |          |   |
| 85%RH or less (without dew condensation) <sup>*)</sup>   |          |                      |            |                      |          |   |
| Level 2  |          |                      |            |                      |          |   |
| JIS B 3502 (IEC61131-2) compliant, Vibration frequency: 5~9Hz,<br>Half-amplitude: 3.5mm, Vibration frequency: 9~150Hz,<br>Constant acceleration: 9.8m/s <sup>2</sup> (1G), X, Y, Z: 3 directions (10 times each) |          |                      |            |                      |          |   |
| JIS B 3502 (IEC61131-2) compliant, Peak acceleration: 147m/s <sup>2</sup> (15G),<br>X,Y,Z:3 directions, 3 times each (18 times in total)   |          |                      |            |                      |          |   |
| Noise voltage: 1,500Vp-p, pulse width: 1μs, pulse rise time: 1ns   |          |                      |            |                      |          | Noise voltage:1,000Vp-p,<br>pulse width:1μs,<br>pulse rise time : 1ns |
| Complies with IEC61000-4-2, contact: 6KV, air: 8KV   |          |                      |            |                      |          |   |
| Grounding resistance: Less than 100Ω, FG/SG separation   |          |                      |            |                      |          |   |
| Protection structure: Front case: IP66, TYPE4X/13 <sup>*)*)</sup> (when water-proof gasket is used), Rear case: IP20, single unit, installation method: panel mounting   |          |                      |            |                      |          |   |
| Natural air cooling  |          |                      |            |                      |          |   |
| 303.8×231.0×54.0   |          | 235.0×180.0×48.9     |            | 303.8×231.0×54.0     |          | 235.0×180.0×48.9  |
| 289.0×216.2(+0.5/-0)   |          | 220.5×165.5(+0.5/-0) |            | 289.0×216.2(+0.5/-0) |          | 220.5×165.5(+0.5/-0)  |
| 182.5×138.8×53.0   |          |                      |            |                      |          |   |
| 174.0×131.0(+0.5/-0)   |          |                      |            |                      |          |   |
| Light gray   |          |                      |            |                      |          |   |
| PC resin   |          |                      |            |                      |          |   |



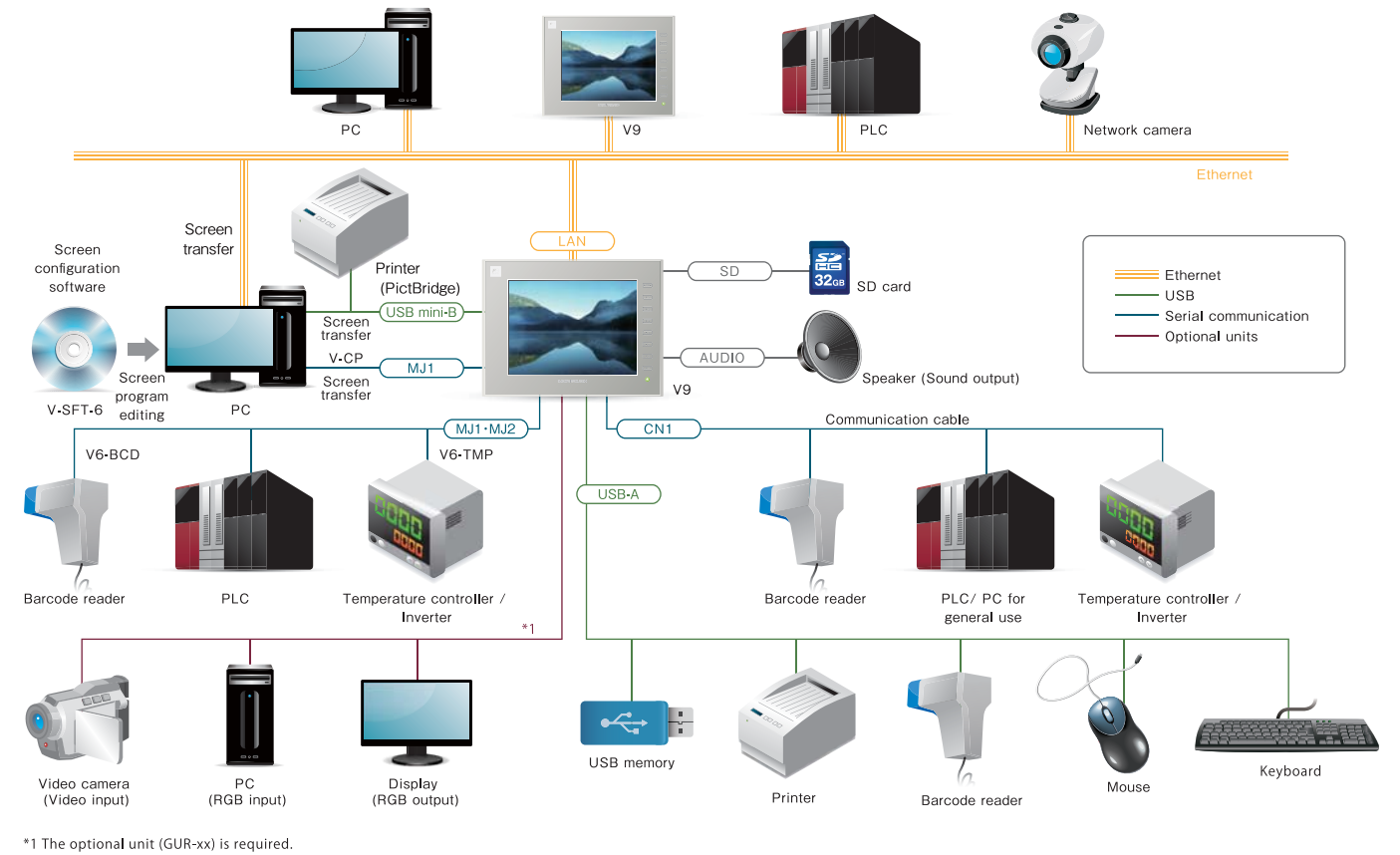
# Flexible system configuration meets diversified requirements.

## Advanced Model System Configuration



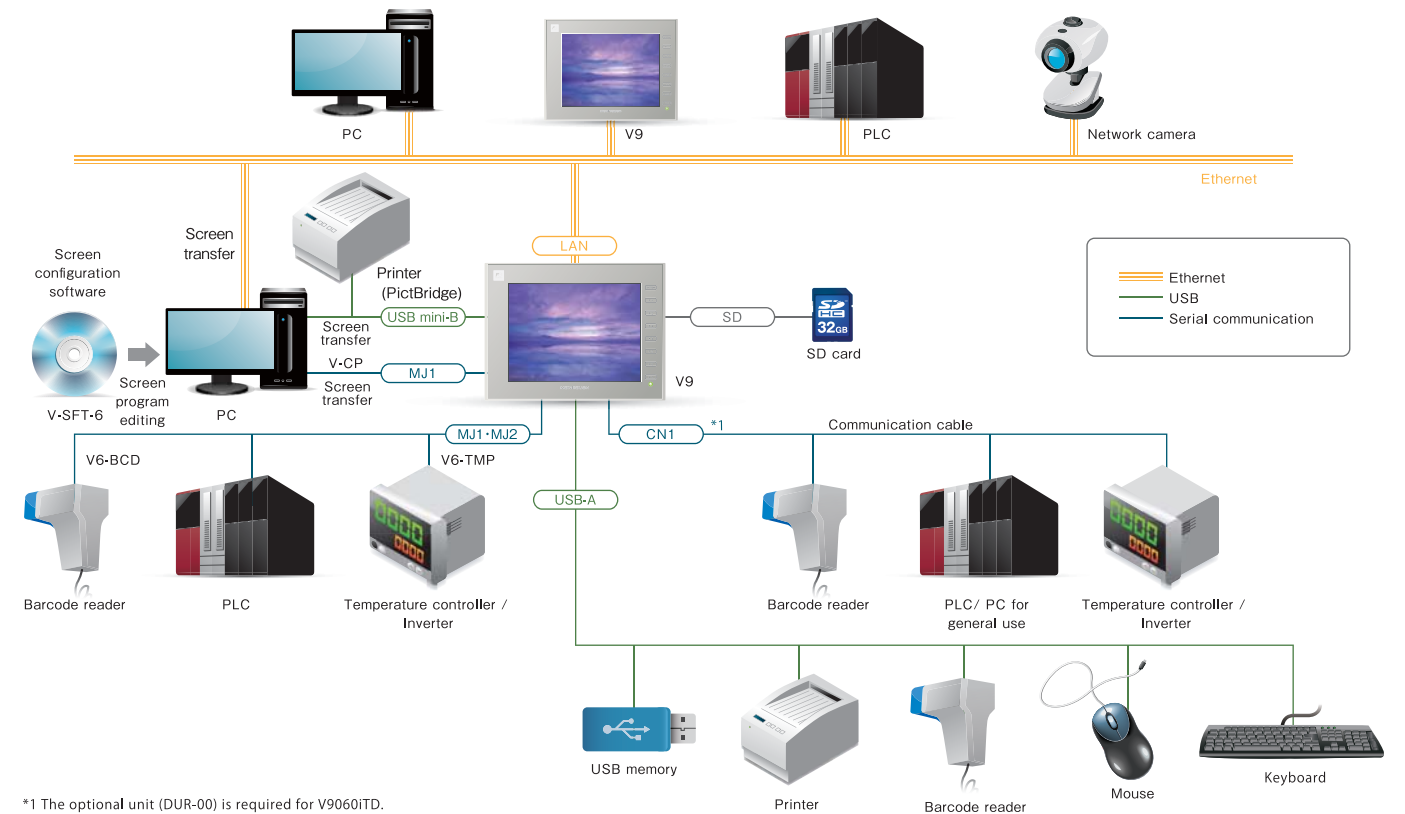
\*1: Compatible only with models with Wireless LAN I/F.  
 \*2: V9101IW only.  
 \*3: Optional unit DUR-00 is required when using the V9071IW.  
 \*4: V9101IW only. Optional unit GUR-XX is required.

## Standard Model System Configuration



\*1 The optional unit (GUR-xx) is required.

## Lite Model System Configuration

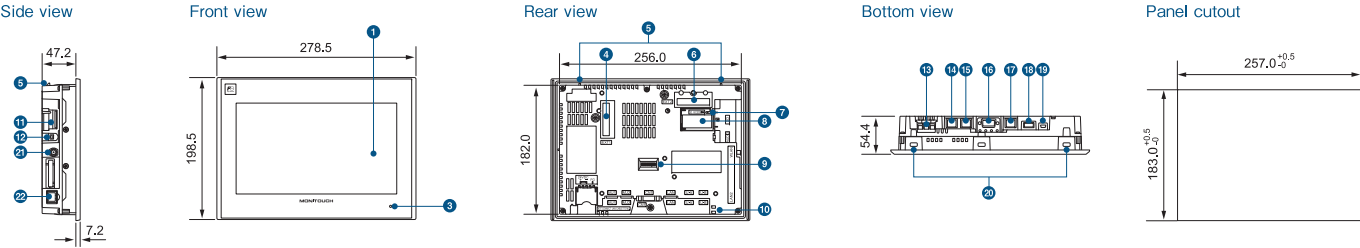


\*1 The optional unit (DUR-00) is required for V9060ITD.

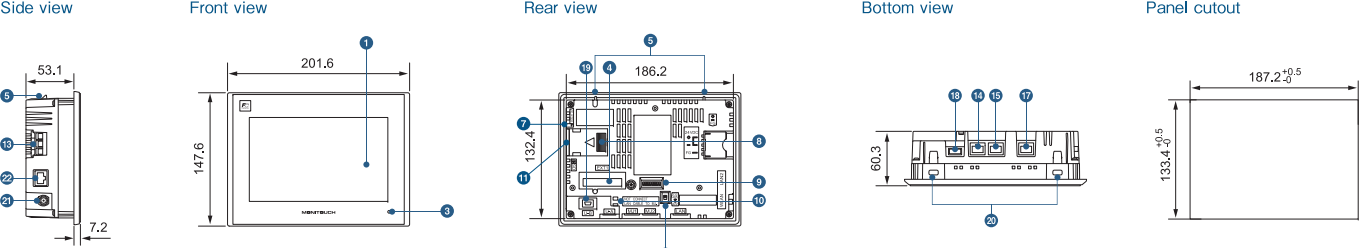


Dimensions and Part Names

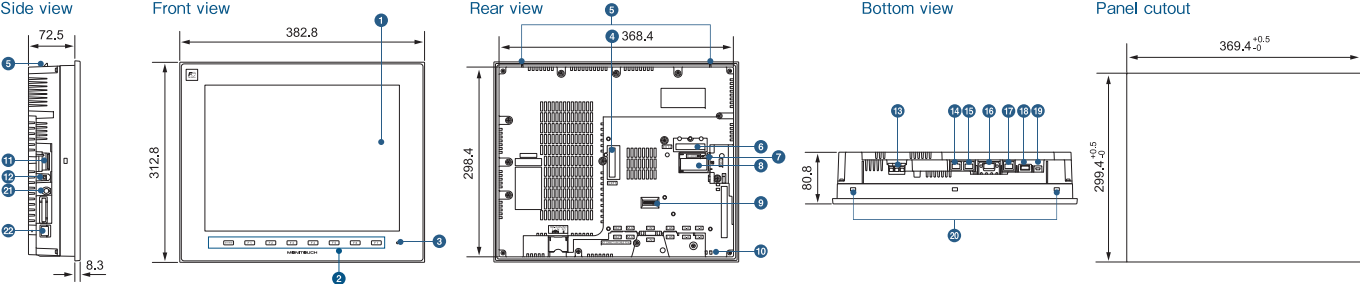
V9 Advanced V9101iW (Unit: mm)



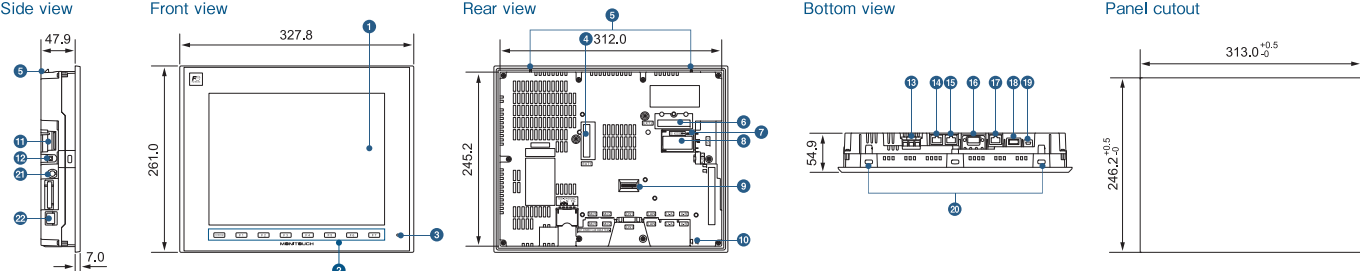
V9 Advanced V9071iW (Unit: mm)



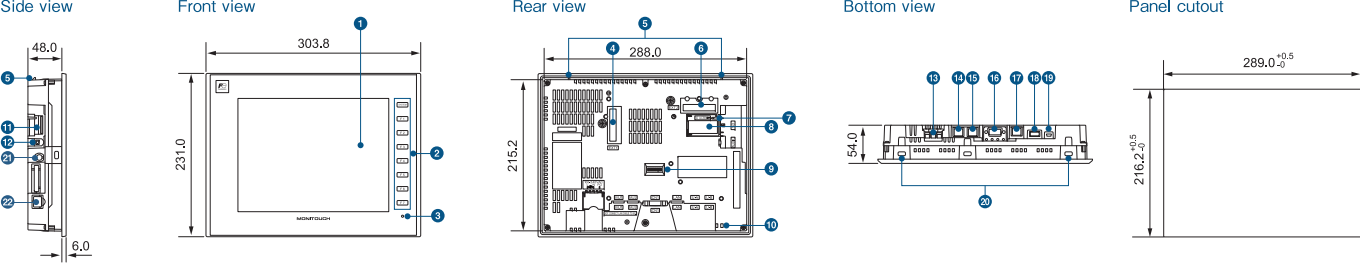
V9 Standard V9150iX (Unit: mm)



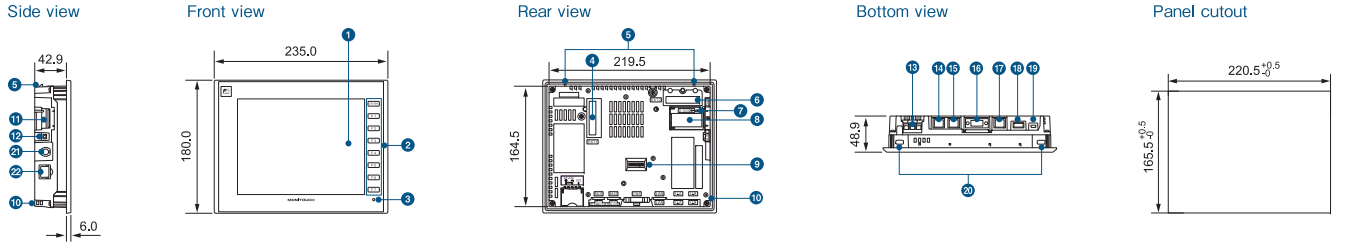
V9 Standard V9120iS (Unit: mm)



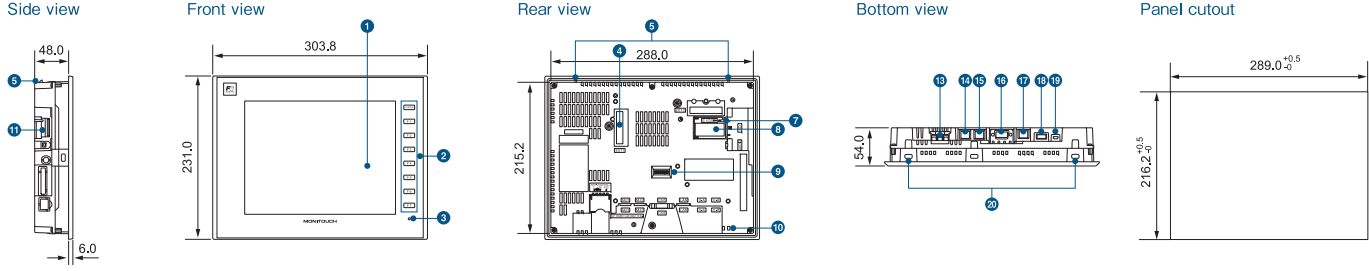
V9 Standard V9100iS (Unit: mm)



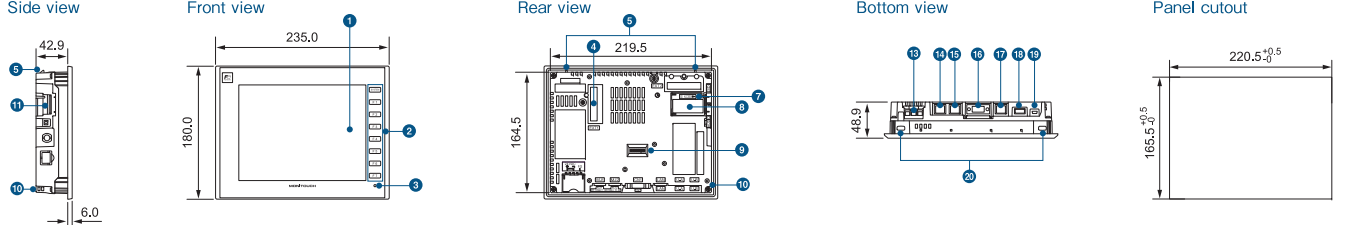
V9 Standard V9080iSD (Unit: mm)



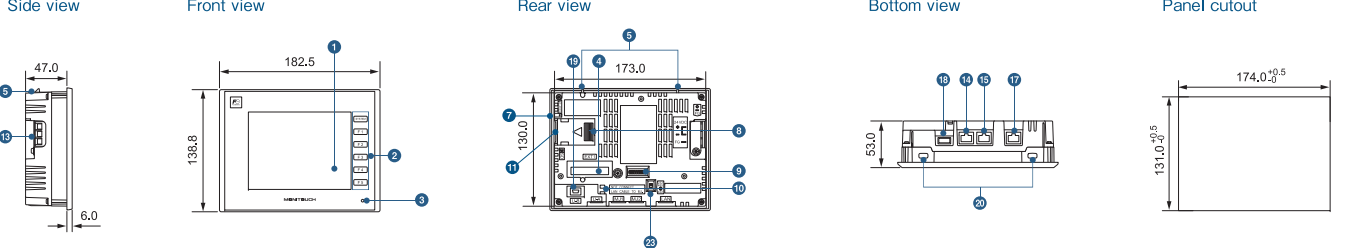
V9 Lite V9100iC (Unit: mm)



V9 Lite V9080iCD (Unit: mm)



V9 Lite V9060iTD (Unit: mm)



Part Names

|                                       |                                   |                                   |   |
|---------------------------------------|-----------------------------------|-----------------------------------|---|
| 1 Display                             | 7 SD card access LED              | 15 Power input terminal block     | 19 USB mini-B (U-B)                               |
| 2 Function switch                     | 8 Battery holder                  | 16 Modular jack 1 (MJ1)           | 20 Screw hole                                     |
| 3 Power lamp                          | 9 DIP switch                      | 17 Modular jack 2 (MJ2)           | 21 Wireless LAN external antenna connector (WLAN) |
| 4 Communication unit connector (EXT1) | 10 USB cable holding hole         | 18 PLC connector (CN1)            | 22 100BASE-TX/10BASE-T port (LAN2)                |
| 5 Fall prevention hook                | 11 SD card connector              | 19 100BASE-TX/10BASE-T port (LAN) | 23 Slide switch                                   |
| 6 Optional unit connector (EXT2)      | 12 Sound output connector (AUDIO) | 20 USB-A (U-A)                    |   |



Remarkable cost effectiveness enabled by our product lineup and optional units.

Product List

Advanced

| Model      | Display Size | Resolution | Specification          |               |                 |                 |                       |       |    |    |       | Delivery<br>Standard: ✓<br>Made to order: △ |
|------------|--------------|------------|------------------------|---------------|-----------------|-----------------|-----------------------|-------|----|----|-------|---|
|            |              |            | Touch Switch           | Video/<br>RGB | AUDIO<br>Output | Wireless<br>LAN | Extended<br>Cable LAN | UL508 | CE | KC | Power |   |
| V9101IWRLD | 10.1" Wide   | 1024×600   | Capacitance            | ✓             | ✓               | ✓               | ✓                     | ✓     | ✓  | ✓  | DC    | ✓   |
| V9100IWRLD |              |            | Analog resistance film | ✓             | ✓               | ✓               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9101IWLD  |              |            | Capacitance            | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | ✓   |
| V9100IWLD  |              |            | Analog resistance film | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9071IWRLD | Wide         | 800×480    | Capacitance            | —             | —               | ✓               | ✓                     | ✓     | ✓  | ✓  | DC    | ✓   |
| V9070IWRLD |              |            | Analog resistance film | —             | —               | ✓               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9071IWLD  |              |            | Capacitance            | —             | —               | —               | ✓                     | ✓     | ✓  | ✓  |       | ✓   |
| V9070IWLD  |              |            | Analog resistance film | —             | —               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |

Standard

| Model     | Display Size | Resolution | Specification          |               |                 |                 |                       |       |    |    |       | Delivery<br>Standard: ✓<br>Made to order: △ |
|-----------|--------------|------------|------------------------|---------------|-----------------|-----------------|-----------------------|-------|----|----|-------|---|
|           |              |            | Touch Switch           | Video/<br>RGB | AUDIO<br>Output | Wireless<br>LAN | Extended<br>Cable LAN | UL508 | CE | KC | Power |   |
| V9150iX   | 15"          | 1024×768   | Analog resistance film | ✓             | ✓               | —               | —                     | —     | —  | ✓  | AC    | ✓   |
| V9150iXD  |              |            | Analog resistance film | ✓             | ✓               | —               | —                     | ✓     | ✓  | ✓  |       | ✓   |
| V9150iXLD |              |            | Analog resistance film | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9150iXRD |              |            | Analog resistance film | ✓             | ✓               | ✓ <sup>*1</sup> | —                     | ✓     | —  | —  |       | △   |
| V9120iS   | 12.1"        | 800×600    | Analog resistance film | ✓             | ✓               | —               | —                     | —     | —  | ✓  | AC    | ✓   |
| V9120iSD  |              |            | Analog resistance film | ✓             | ✓               | —               | —                     | ✓     | ✓  | ✓  |       | ✓   |
| V9120iSLD |              |            | Analog resistance film | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9120iSRD |              |            | Analog resistance film | ✓             | ✓               | ✓ <sup>*1</sup> | —                     | ✓     | —  | —  |       | △   |
| V9100iS   | 10.4"        | 800×600    | Analog resistance film | ✓             | ✓               | —               | —                     | —     | —  | ✓  | AC    | ✓   |
| V9100iSD  |              |            | Analog resistance film | ✓             | ✓               | —               | —                     | ✓     | ✓  | ✓  |       | ✓   |
| V9100iSLD |              |            | Analog resistance film | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9100iSRD |              |            | Analog resistance film | ✓             | ✓               | ✓ <sup>*1</sup> | —                     | ✓     | —  | —  |       | △   |
| V9080iSD  | 8.4"         | 800×600    | Analog resistance film | ✓             | ✓               | —               | —                     | ✓     | ✓  | ✓  | DC    | ✓   |
| V9080iSLD |              |            | Analog resistance film | ✓             | ✓               | —               | ✓                     | ✓     | ✓  | ✓  |       | △   |
| V9080iSRD |              |            | Analog resistance film | ✓             | ✓               | ✓ <sup>*1</sup> | —                     | ✓     | —  | —  |       | △   |

Lite

| Model    | Display Size | Resolution | Specification          |               |                 |                 |                       |       |    |    |       | Delivery<br>Standard: ✓<br>Made to order: △ |
|----------|--------------|------------|------------------------|---------------|-----------------|-----------------|-----------------------|-------|----|----|-------|---|
|          |              |            | Touch Switch           | Video/<br>RGB | AUDIO<br>Output | Wireless<br>LAN | Extended<br>Cable LAN | UL508 | CE | KC | Power |   |
| V9100iC  | 10.4"        | 640×480    | Analog resistance film | —             | —               | —               | —                     | —     | —  | ✓  | AC    | ✓   |
| V9100iCD |              |            | Analog resistance film | —             | —               | —               | —                     | ✓     | ✓  | ✓  |       | ✓   |
| V9080iCD | 8.4"         | 640×480    | Analog resistance film | —             | —               | —               | —                     | ✓     | ✓  | ✓  | DC    | ✓   |
| V9060iTD | 5.7"         | 640×480    | Analog resistance film | —             | —               | —               | —                     | ✓     | ✓  | ✓  | DC    | ✓   |

\*1: Only for use in Japan.

Optional Unit List

| Type                         | Product  | Compatible Model |           |          |         |         |         |         |         |         |
|------------------------------|--|------------------|-----------|----------|---------|---------|---------|---------|---------|---------|
|                              |  | Advanced         |           | Standard |         |         |         | Lite    |         |         |
|                              |  | V9101iW          | V9071iW   | V9150iX  | V9120iS | V9100iS | V9080iS | V9100iC | V9080iC | V9060iT |
| Configuration Software       |  |                  |           |          |         |         |         |         |         |         |
| V-SFT-6                      | V8/V9 design tool software Ver.6 (Manual not included)           | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| Extension Units              |  |                  |           |          |         |         |         |         |         |         |
| GUR-00 <sup>*1</sup>         | Video 4ch input  | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| GUR-01                       | RGB 1ch input  | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| GUR-02                       | RGB 1ch output   | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| GUR-04                       | Video 1ch input  | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| GUR-10 <sup>*1</sup>         | Video 2ch input/ RGB 1ch input                                   | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| GUR-11 <sup>*1</sup>         | RGB 2ch input  | ✓                |           | ✓        | ✓       | ✓       | ✓       |         |         |         |
| DUR-00                       | V9071iW/ V9060iTD optional unit                                  |                  | ✓         |          |         |         |         |         |         | ✓       |
| Communication Units          |  |                  |           |          |         |         |         |         |         |         |
| CUR-00                       | OPCN-1   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-01                       | T-link   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-02                       | CC-Link  | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-03                       | Ethernet   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-04                       | PROFIBUS-DP  | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-06                       | SX bus   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-07                       | DeviceNet  | ✓                | DeviceNet | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| CUR-08                       | FL-net   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| Cables                       |  |                  |           |          |         |         |         |         |         |         |
| V-CP                         | Screen transfer cable (3m)                                       | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| UA-FR                        | USB-A extension cable (1m)                                       | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| V6-MLT                       | Multi-link 2 master cable (3m)                                   | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| V6-TMP                       | Temperature controller cable (3m)                                | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| V6-TMP-5M                    | Temperature controller cable (5m)                                | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| V6-TMP-10M                   | Temperature controller cable (10m)                               | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| V6-BCD                       | Barcode reader cable (3m)  | ✓                | ✓         | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | ✓       |
| D9-MB-CPUQ-2M                | MITSUBISHI ELECTRIC<br>A series / QnA series CPU (Dsub25) RS-422 | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MB-CPUQ-3M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MB-CPUQ-5M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MB-CPUQ-10M               |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MB-CPUQ-15M               |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-QCPU2-2M                  | MITSUBISHI ELECTRIC<br>Q series CPU (Mini DIN6) RS-232C          | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-QCPU2-3M                  |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-QCPU2-5M                  |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-QCPU2-10M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-QCPU2-15M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI2-09-2M                 | MITSUBISHI ELECTRIC<br>link unit (Dsub9) RS-232C                 | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI2-09-3M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI2-09-5M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI2-09-10M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI2-09-15M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI4-FX-2M                 | MITSUBISHI ELECTRIC<br>FX series CPU (Mini DIN8) RS-422          | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI4-FX-3M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI4-FX-5M                 |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI4-FX-10M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-MI4-FX-15M                |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPHCPU-2M              | FUJI ELECTRIC<br>SPH CPU RS-485 (4-wire)                         | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPHCPU-3M              |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPHCPU-5M              |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPBCPU-2M              | FUJI ELECTRIC<br>SPH CPU RS-485 (4-wire)                         | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPBCPU-3M              |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-FU-SPBCPU-5M              |  | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| D9-D25                       | Dsub9-Dsub25 conversion cable (0,3m)                             | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| MJ2-PLC                      | MJ2-Dsub25 conversion cable                                      |                  | ✓         |          |         |         |         |         |         | ✓       |
| Communication Terminal Block |  |                  |           |          |         |         |         |         |         |         |
| TC-D9                        | Terminal converter for V9/V8                                     | ✓                | △*2       | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       | △*2     |
| Battery                      |  |                  |           |          |         |         |         |         |         |         |
| V9-BT                        | Replacement battery for V9                                       | ✓                |           | ✓        | ✓       | ✓       | ✓       | ✓       | ✓       |         |
| V7-BT                        | Replacement battery for V9071iW/V9060iTD/V8                      |                  | ✓         |          |         |         |         |         |         | ✓       |
| Wireless LAN Antenna         |  |                  |           |          |         |         |         |         |         |         |
| V9-ANT                       | V9 external antenna with cable (3m)                              | ✓                | ✓         |          |         |         |         |         |         |         |
| Protection Sheets            |  |                  |           |          |         |         |         |         |         |         |
| V715-GS                      | V9150iX/V815/V715 Surface protection sheet                       |                  |           | ✓        |         |         |         |         |         |         |
| V715-GSN10                   | V9150iX/V815/V715 Surface protection sheet (Non-glare)           |                  |           | ✓        |         |         |         |         |         |         |
| V912S-GS                     | V9120iS protection sheets  |                  |           |          | ✓       |         |         |         |         |         |
| V912S-GSN10                  | V9120iS protection sheets (Non-glare)                            |                  |           |          | ✓       |         |         |         |         |         |
| V910S-GS                     | V9100iS/V9100iC protection sheets                                |                  |           |          |         | ✓       |         | ✓       |         |         |
| V910S-GSN10                  | V9100iS/V9100iC protection sheets (Non-glare)                    |                  |           |          |         | ✓       |         | ✓       |         |         |
| V908S-GS                     | V9080iS/V9080iC protection sheets                                |                  |           |          |         |         | ✓       |         | ✓       |         |
| V908S-GSN10                  | V9080iS/V9080iC protection sheets (Non-glare)                    |                  |           |          |         |         | ✓       |         | ✓       |         |
| V906T-GS                     | V9060iTD protection sheets                                       |                  |           |          |         |         |         |         |         | ✓       |
| V906T-GSN10                  | V9060iTD protection sheets (Non-glare)                           |                  |           |          |         |         |         |         |         | ✓       |

\*1 : Scheduled to be released in April 2016.  
\*2 : Optional unit DUR-00 is required.

V9 Model



Power supply  
D: 24V DC  
N/A: 100-240V AC

Wireless LAN I/F  
R: With wireless LAN I/F  
N/A: Without wireless LAN I/F  
Extended wire LAN I/F  
L: With extended wire LAN I/F  
N/A: Without wireless LAN I/F

Display device  
W: TFT color LCD (10.1" wide type=WSVGA/7.0" wide type = WVGA)  
X: TFT color LCD (XGA)  
S: TFT color LCD (SVGA)  
C: TFT color LCD (VGA)  
T: TFT color LCD (VGA)

Interface  
i: With a built-in LAN port

Touch switch  
0: Analog resistive  
1: Capacitance

Display size  
15: 15.0"  
12: 12.1"  
10: 10.4" (Standard)/ 10.1" widescreen (Advanced)  
08: 8.4"  
07: 7.0" widescreen (Advanced)  
06: 5.7"



V8 Series – scaling new heights in performance, usability and connectivity.

# MONITOUCH V8series

Provided with revolutionary features for production sites such as 8-way communication and 16-million-color high-resolution video display, the V8 series has expanded the potential of programmable operator interface panels. The screen programs and panels of the V7 series are also compatible with the V8 series.

## Product Lineup

### High performance model

| 15.0 inches   | 12.1 inches   | 10.4 inches   |  | 8.4 inches  |
|---|---|---|--|---|
|  |  |  |  |  |
| V815iXN   | V812iSN<br>V812SN   | V810iSN<br>V810SN   | V810iTn<br>V810TN  | V808iSDN<br>V808SDN   |

### Standard model

| 10.4 inches   | 8.4 inches  | 7.7 inches  | 5.7 inches   |   |   |
|---|---|---|--|---|---|
|  |  |  |  |  |  |
| V810iCN<br>V810CN   | V808iCDN<br>V808CDN   | V808iCHx<br>V808CHx   | V806iTDN<br>V806TDN  | V806iCDN<br>V806CDN   | V806iMDN<br>V806MDN   |

#### V8 Model

V8□□□□□□N

- Display size**  
15: 15 inches  
12: 12.1 inches  
10: 10.4 inches  
08: 8.4 inches  
06: 5.7 inches
- Display device**  
X: TFT color LCD (XGA)  
S: TFT color LCD (SVGA)  
T: TFT color LCD (VGA)\*1  
C: TFT color LCD (VGA)\*1  
M: TFT monochrome LCD (QVGA)
- Touch switch**  
N/A: Analog resistive  
M: Matrix resistive
- Interface**  
N/A: Without a built-in LAN port / An optional port is not available.  
i: With a built-in LAN port / An optional port is available.\*2
- Power supply**  
N/A: 100-240VAC  
D: 24VDC
- Communication units**  
Altered connector models (CN5)

\*1: QVGA for V806.  
\*2: No optional port for V810iC, V808iC or V806i.

#### V808CH Model

V808□CH□□□

- Interface**  
N/A: Without a built-in LAN port  
i: With a built-in LAN port

|   | Key switch | Deadman switch |                 |
|---|------------|----------------|-----------------|
|   |            | Switch type    | External output |
| 0 | —          | Momentary      | —               |
| 1 | Equipped   | Momentary      | —               |
| 2 | —          | 3-position     | 1 contact       |
| 3 | Equipped   | 3-position     | 1 contact       |
| 4 | —          | 3-position     | 2 contacts      |

## Specifications

|                     | Item                  | V815iXN  | V812iSN           | V812SN                        | V810iSN                 | V810SN                        | V810iTn           | V810TN                        | V810iCN           | V810CN                        | V808iSDN                 | V808SDN                       | V808iCDN          | V808CDN      |
|---------------------|-----------------------|--|-------------------|-------------------------------|-------------------------|-------------------------------|-------------------|-------------------------------|-------------------|-------------------------------|--------------------------|-------------------------------|-------------------|--------------|
| Basic specification | Display size          | 15"  | 12.1"             |                               | 10.4"                   |                               |                   |                               |                   |                               | 8.4"                     |                               |                   |              |
|                     | Display device        | TFT color  |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Resolution W/H (dots) | 1024×768   | 800×600           |                               |                         |                               | 640×480           |                               |                   |                               | 800×600                  |                               | 640×480           |              |
|                     | Colors                | 65,536 colors (without blinks) / 32,768 colors (with blinks)   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Screen memory         | FROM (12.5MB)  |                   |                               |                         |                               |                   |                               |                   | FROM (4.5MB)                  | FROM (12.5MB)            |                               |                   | FROM (4.5MB) |
|                     | Backup memory         | SRAM (512KB)   |                   |                               |                         |                               |                   |                               |                   | SRAM (128KB)                  | SRAM (512KB)             |                               |                   | SRAM (128KB) |
| Interface           | D-Sub 9-pin CN1       | RS-232C, RS-422/485, Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200,187500**1 bps         |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Modular 8-pin MJ1/MJ2 | RS-232C, RS-422/485 (two-wire system), Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Ethernet              | 100BASE-TX/10BASE-T Built-in   | Option (CUN-03-3) | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3)       | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3) | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3) | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3)        | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3) |              |
|                     | Communication I/F     | Equipped   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Expansion I/F         | Equipped   | —                 | Equipped                      | —                       | Equipped                      | —                 |                               |                   | Equipped                      | —                        |                               |                   |              |
|                     | CF card I/F           | Equipped   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
| Options             | USB I/F               | Type A and B(Ver1.1)   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Video (4ch)           | GU-00  | —                 | GU-00                         | —                       | GU-00                         | —                 |                               |                   | GU-00                         | —                        |                               |                   |              |
|                     | RGB input             | GU-01  | —                 | GU-01                         | —                       | GU-01                         | —                 |                               |                   | GU-01                         | —                        |                               |                   |              |
|                     | RGB output            | GU-02  | —                 | GU-02                         | —                       | GU-02                         | —                 |                               |                   | GU-02                         | —                        |                               |                   |              |
|                     | Video (2ch)+RGB input | GU-10  | —                 | GU-10                         | —                       | GU-10                         | —                 |                               |                   | GU-10                         | —                        |                               |                   |              |
|                     | RGB input (2ch)       | GU-11  | —                 | GU-11                         | —                       | GU-11                         | —                 |                               |                   | GU-11                         | —                        |                               |                   |              |
| Compatibility       | Sound output          | GU-00~03   | —                 | GU-00~03                      | —                       | GU-00~03                      | —                 |                               |                   | GU-00~03                      | —                        |                               |                   |              |
|                     | Communication unit    | CUN-00, CUN-01, CUN-02-2, CUN-03-3, CUN-04, CUN-06, CUN-07, CUN-08   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | I/O unit              | V-I/O  |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | CE Marking*2          | EN61000-6-2,EN61000-6-4  |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
| Compatibility       | UL•cUL*2              | UL508  | UL508/UL1604*4    |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |
|                     | Marine Standards*2~3  | NK,LR, DNV,ABS, BV,CCS   | NK,BV,CCS         |                               | NK,LR,DNV,ABS,BV,CCS,GL |                               |                   |                               | —                 |                               | NK,LR,DNV,ABS, BV,CCS,GL |                               | —                 |              |
|                     | RoHS directive        | Complied   |                   |                               |                         |                               |                   |                               |                   |                               |                          |                               |                   |              |

|                        | Item                  | V806iTDN   | V806TDN  | V806iCDN                      | V806CDN           | V806iMDN                      | V806MDN           |
|------------------------|-----------------------|--|--|-------------------------------|-------------------|-------------------------------|-------------------|
| Basic specification    | Display size          | 5.7"   |  |                               |                   |                               |                   |
|                        | Display device        | TFT color  |  |                               |                   | TFT monochrome                |                   |
|                        | Resolution W/H (dots) | 320×240  |  |                               |                   |                               |                   |
|                        | Colors                | 65,536 colors(without blinks) 32,768 colors(with blinks)   |  |                               |                   | 16 grayscale(with blinks)     |                   |
|                        | Screen memory         | FROM (4.5MB)   |  |                               |                   |                               |                   |
| Basic specification    | Backup memory         | SRAM (512KB)   | SRAM (128KB)   | SRAM (512KB)                  | SRAM (128KB)      | SRAM (512KB)                  | SRAM (128KB)      |
|                        | Interface             | D-Sub 9-pin CN1*   | RS-232C, RS-422/485, Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps |                               |                   |                               |                   |
| Modular 8-pin MJ1/MJ2* |                       | RS-232C, RS-422/485 (two-wire system), Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500*6 bps |  |                               |                   |                               |                   |
| Ethernet               |                       | 100BASE-TX /10BASE-T Built-in  | Option (CUN-03-3)  | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3) | 100BASE-TX /10BASE-T Built-in | Option (CUN-03-3) |
| Communication I/F      |                       | Equipped   |  |                               |                   |                               |                   |
| Extension I/F          |                       | —  |  |                               |                   |                               |                   |
| Options                | CF card I/F           | Equipped*6   |  |                               |                   |                               |                   |
|                        | USB I/F               | Type A and B(Ver1.1)   |  |                               |                   |                               |                   |
|                        | Video (4ch)           | —  |  |                               |                   |                               |                   |
|                        | RGB input             | —  |  |                               |                   |                               |                   |
|                        | RGB output            | —  |  |                               |                   |                               |                   |
|                        | Video (2ch)+RGB input | —  |  |                               |                   |                               |                   |
|                        | RGB input (2ch)       | —  |  |                               |                   |                               |                   |
|                        | Sound output          | —  |  |                               |                   |                               |                   |
|                        | Communication unit    | CUN-00, CUN-01, CUN-02-2, CUN-03-3, CUN-04, CUN-06, CUN-07, CUN-08   |  |                               |                   |                               |                   |
| Compatibility          | I/O unit              | V-I/O  |  |                               |                   |                               |                   |
|                        | CE Marking            | EN61000-6-2,EN61000-6-4  |  |                               |                   |                               |                   |
|                        | UL・cUL                | UL508/UL1604*4   |  |                               |                   |                               |                   |
|                        | Marine Standards*3    | NK,LR,DNV,ABS,BV,CCS,GL  |  |                               |                   |                               |                   |
| Compatibility          | RoHS directive        | Complied   |  |                               |                   |                               |                   |

| Item                  | V808iCHx  | V808CHx   |
|-----------------------|---|---|
| Display size          | 7.5"  |   |
| Display device        | TFT color   |   |
| Resolution W:H (dots) | 640×480   |   |
| Colors                | 65,536 colors (without blinks) / 32,768 colors (with blinks)  |   |
| Screen memory         | FROM (12.5MB)   | FROM (4.5MB)  |
| Backup memory         | SRAM (512KB)  | SRAM (128KB)  |
| TB2                   | RS-232C, Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps              |   |
| TB3                   | RS-422/485, Asynchronous, Data length: 7.8 bits, Parity: even, odd, none, Stop bit: 1.2 bits, Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200, 187500** bps |   |
| Ethernet              | 100BASE-TX/10BASE-T   | —   |
| CF card I/F           | Equipped  |   |
| USB I/F               | Type B (Ver1.1)   |   |
| No. of switches       | 12 (4: For external output)   |   |
| Switch type           | Membrane switch   |   |
| Mechanical life       | One million times or more   |   |
| Switch type           | Push lock type (b-contact, 2 circuits)  |   |
| Mechanical life       | 100,000 times or more   |   |
| Rated voltage         | 24VDC   |   |
| Rated current         | 1A (load resistance)  |   |
| Contact point         | a-contact, 1 circuit  |   |
| Mechanical life       | 250,000 times or more   |   |
| Electrical life       | 100,000 times or more (Switching frequency: 1,200 times/h)  |   |
| 3-position            | Switch type   | 3-position output (a-contact, 2 circuits**)                                       |
|                       | Mechanical life   | Off→On: One million times or more, Off→ON→OFF(direct circuit): 100 thousand times |
|                       | Rated voltage   | 24VDC   |
| Momentary             | Rated current   | 1A (load resistance)  |
|                       | Switch type   | Momentary switch  |
|                       | Momentary switch  | One million times or more   |
| CE Marking            | EN61000-6-2, EN61000-6-4  |   |
| UL•cUL                | UL508*7   |   |
| RoHS directive        | Complied  |   |

\*1: Only when connected with SIEMENS MPI/PPI. \*2: Only with 24VDC models. \*3: Please contact us for a unit that complies with the marine standards.  
\*4: Please contact us for a unit that complies with UL1604. \*5: Only when connected with SIEMENS MPI/PPI (MJ2 only). Not available for D-Sub9 pin (option).  
\*6: Only when equipped with DUN-10 (option). \*7: Please contact our sales department for a unit that complies with UL508. \*8: MJ2 is compatible with RS-422 (4-wire).  
\*9: a-contact: 2 circuits for CH4 and 1 circuit for CH2 and CH3 of V808(i).



## Optional Unit List

(Unit:mm)



| Type                   | Product  | Compatible Model |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
|------------------------|--|------------------|----|---|------|---|----|------|----|---|----|---|------|---|-----|----|-----------------|-----------------|-----------------|-----------------|-----------------|---|
|                        |  | V815             |    |   | V812 |   |    | V810 |    |   |    |   | V808 |   |     |    |                 | V806            |                 |                 |                 |   |
|                        |  | iX               | iS | S | iS   | S | iT | T    | iC | C | iS | S | iC   | C | iCH | CH | iT              | T               | iC              | C               | iM              | M |
| Configuration Software |  |                  |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| V-SFT-T-5(CD)          | Configuration Software for V8 – V4 series (without the manual) Ver.5 | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ | ✓   | ✓  | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| Communication Units    |  |                  |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| CUN-00                 | OPCN-1   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-01                 | T-Link   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-02-2               | CC-Link  | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-03-3               | Ethernet   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-04                 | PROFIBUS-DP  | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-06                 | SX bus   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-07                 | Device Net   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| CUN-08                 | FL-net Ver.2(OPCN-2)   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| Optional units         |  |                  |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-00                  | Video 4ch input/ Sound output  | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-01                  | RGB 1ch input/ Sound output  | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-02                  | RGB 1ch output/audio output  | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-03                  | Sound output   | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-10                  | Video 2ch input/ RGB 1ch input                                       | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| GU-11                  | RGB 2ch input  | ✓                | ✓  |   | ✓    |   | ✓  |      |    |   | ✓  |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| DUN-10                 | Option unit for V806N (Dsub9+CF card)                                |                  |    |   |      |   |    |      |    |   | ✓  |   |      |   |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| Cables                 |  |                  |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| V-CP                   | Screen program transfer cable (3m)                                   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| UA-FR                  | USB-A panel surface fixing cable (1m)                                | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| UB-FR                  | USB-B panel surface fixing cable (1m)                                | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ | ✓   | ✓  | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| V6-MLT                 | Multi-link 2 master cable (3m)                                       | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| V6-TMP                 | Temperature controller cable (3.5,10m)                               | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| V6-BCD                 | Barcode reader cable(3m)   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| MJ-D25                 | MJ-Dsub25 conversion cable   | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓               | ✓               | ✓               | ✓               | ✓               |   |
| MJ2-PLC                | MJ2-Dsub25 conversion cable  |                  |    |   |      |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |
| D9-MB-CPUQ             | mitsubishi electric A/ QnA series CPU RS-422 (2.3,5,10,15m)          | ✓                | ✓  | ✓ |      | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> |   |
| D9-QCPU2               | mitsubishi electric Q series CPU RS-232C (2.3,5,10,15m)              | ✓                | ✓  | ✓ |      | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> |   |
| D9-MI2-09              | mitsubishi electric link unit RS-232C (2.3,5,10,15m)                 | ✓                | ✓  | ✓ | ✓    | ✓ | ✓  | ✓    | ✓  | ✓ | ✓  | ✓ | ✓    | ✓ |     |    | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> | ✓ <sup>1)</sup> |   |
| D9-MI4-FX              | mitsubishi electric FX series CPU RS-422 (2.3,5,10,15m)              | ✓                | ✓  | ✓ | ✓    |   |    |      |    |   |    |   |      |   |     |    |                 |                 |                 |                 |                 |   |

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| Manufacturer                         | Models   | Connection form |                   |                    |                   | V8 | V9 |
|--------------------------------------|--|-----------------|-------------------|--------------------|-------------------|----|----|
|                                      |  | 1:1             | 1:n<br>Multi-drop | n:1<br>Multi-link2 | n:1<br>Multi-link |    |    |
| Allen-Bradley                        | PLC-5  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PLC-5 (Ethernet)                                   | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | ControlLogix / CompactLogix                        | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | ControlLogix (Ethernet)                            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SLC500   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | SLC500 (Ethernet TCP/IP)                           | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | NET-ENI (SLC500 Ethernet TCP/IP)                   | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | NET-ENI (MicroLogix Ethernet TCP/IP)               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | MicroLogix   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | MicroLogix (Ethernet TCP/IP)                       | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Automationdirect                     | Micro 800 Controllers                              | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | Micro 800 Controllers (Ethernet TCP/IP)            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | Direct LOGIC (K-Sequence)                          | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | Direct LOGIC (Ethernet UDP/IP)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Azbil                                | Direct LOGIC (MODBUS RTU)                          | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MX series  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| Baumüller                            | BMx-x-PLC  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| BECKHOFF                             | ADS protocol (Ethernet)                            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| CIMON                                | BP series  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | CP series  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | S series   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | S series (Ethernet)                                | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| DELTA                                | DVP series   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| EATON Cutler-Hammer                  | ELC  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| EMERSON                              | EC10/20/20H (MODBUS RTU)                           | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| FANUC                                | Power Mate   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| Fatek Automation                     | FACON FB series                                    | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| FUFENG                               | APC Series Controller                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| Fuji Electric                        | MICREX-F series                                    | ✓               |                   |                    | ✓                 | ✓  | ✓  |
|                                      | MICREX-F series V4-compatible                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MICREX-F T-Link                                    |                 |                   |                    |                   | ✓  | ✓  |
|                                      | MICREX-F T-Link V4-compatible                      |                 |                   |                    |                   | ✓  | ✓  |
|                                      | SPB (N mode ) & FLEX-PC series                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SPB (N mode ) & FLEX-PC CPU                        | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | MICREX-SX (T-Link )                                |                 |                   |                    |                   | ✓  | ✓  |
|                                      | MICREX-SX (OPCN-1)                                 |                 |                   |                    |                   | ✓  | ✓  |
|                                      | MICREX-SX (SX bus )                                |                 |                   |                    |                   | ✓  | ✓  |
|                                      | MICREX-SX SPH/SPB/SPM/SPE series                   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | MICREX-SX SPH/SPB/SPM/SPE CPU                      | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | MICREX-SX (Ethernet)                               | ✓               |                   |                    |                   | ✓  | ✓  |
| GE Fanuc                             | 90 series  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | 90 series (SNP-X)                                  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | 90 series (SNP)                                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | 90 series (Ethernet TCP/IP)                        | ✓               |                   |                    |                   | ✓  | ✓  |
|                                      | RX3i (Ethernet TCP/IP)                             | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Hitachi                              | HDIC-S10/2alpha.S10mini                            | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | HDIC-S10/2alpha.S10mini (Ethernet)                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | HDIC-S10/4alpha                                    | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | HDIC-S10V  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| Hitachi Industrial Equipment Systems | HDIC-S10V (Ethernet)                               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | HDIC-H   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | HDIC-H (Ethernet)                                  | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | HDIC-EHV   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| HYUNDAI                              | HDIC-EHV (Ethernet)                                | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | Hi5 Robot (MODBUS RTU)                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| IDEC                                 | Hi4 Robot (MODBUS RTU)                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MICRO 3  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MICRO Smart  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| Jetter                               | MICRO Smart pentra                                 | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | JetControl Series2/3 (Ethernet UDP/IP)             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| JTEKT                                | TOYOPUC  | ✓               |                   | ✓                  | ✓                 | ✓  | ✓  |
|                                      | TOYOPUC (Ethernet)                                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | TOYOPUC (Ethernet PC10 mode)                       | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | TOYOPUC-Plus                                       | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | TOYOPUC-Plus (Ethernet)                            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| KEYENCE                              | KZ series link                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | KZ-A500 CPU  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | KV10/24 CPU  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | KV-700   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | KV-700 (Ethernet TCP/IP)                           | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | KV-1000  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | KV-1000 (Ethernet TCP/IP)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | KV-3000/5000                                       | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | KV-3000/5000 (Ethernet TCP/IP)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| KOYO ELECTRONICS                     | KV-7000 (Ethernet TCP/IP)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SU/SG  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SR-T (K protocol)                                  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | SU/SG (K-Sequence)                                 | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| LS                                   | SU/SG (Modbus RTU)                                 | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MASTER-KxxxS                                       | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | MASTER-KxxxS CNET                                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MASTER-K series (Ethernet)                         | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | GLOFA CNET   | ✓               |                   | ✓                  | ✓                 | ✓  | ✓  |
|                                      | GLOFA GM7 CNET                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | GLOFA GM series CPU                                | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | GLOFA GM series (Ethernet UDP/IP)                  | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | XGT/XGK series CNET                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | XGT/XGK series CPU                                 | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | XGT/XGK series (Ethernet)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | XGT/XGI series CNET                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| MITSUBISHI ELECTRIC                  | XGT/XGI series CPU                                 | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | XGT/XGI series (Ethernet)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | A series link                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | A series CPU                                       | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | A series (OPCN-1)                                  |                 |                   | ✓                  |                   | ✓  | ✓  |
|                                      | QnA series link                                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | QnA series CPU                                     | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | QnA series (Ethernet)                              | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | QnH (Q) series link                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | QnH (Q) series CPU                                 | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | QnU series CPU                                     | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | Q00J/Q0/Q1CPU                                      | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | QnH (Q) series (Ethernet)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | QnH (Q) series link (multi CPU)                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | QnH (Q) series (multi CPU) (Ethernet)              | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | QnH (Q) series CPU (multi CPU)                     | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| Others                               | QnH (Q) series (Ethernet ASCII)                    | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | QnH (Q) series (multi CPU) (Ethernet ASCII)        | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | QnU series (built-in Ethernet)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | L series link                                      | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | L series (built-in Ethernet)                       | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | L series CPU                                       | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| MITSUBISHI ELECTRIC                  | A series (CC-LINK)                                 |                 |                   |                    |                   | ✓  |    |
|                                      | QnA series (CC-LINK)                               |                 |                   |                    |                   | ✓  |    |
|                                      | QnH(Q) series (CC-LINK)                            |                 |                   |                    |                   | ✓  |    |
|                                      | FX series CPU                                      | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | FX2N/1N series CPU                                 | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | FX1S series CPU                                    | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | FX series link (A protocol)                        | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FX3U/3UC/3G series CPU                             | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | FX3U/3GE series (Ethernet)                         | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FX3U/3UC/3G series link (A protocol)               | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FX5U/5UC series                                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FX5U/5UC series (Ethernet)                         | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | A-Link + Net10                                     |                 |                   |                    |                   | ✓  | ✓  |
|                                      | Q170MCPU (multi CPU)                               | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | Q170 series (multi CPU) (Ethernet)                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | IQ-R series (Built-in Ethernet)                    | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| MODICON                              | IQ-R series link                                   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | IQ-R series (Ethernet)                             | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| MOELLER                              | Modbus RTU   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| OMRON                                | PS4  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | SYSMAC C   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SYSMAC C(OPCN-1)                                   |                 | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SYSMAC CV  | ✓               | ✓                 |                    | ✓                 | ✓  | ✓  |
|                                      | SYSMAC CS1/CJ1                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SYSMAC CS1/CJ1 DNA                                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SYSMAC CS1/CJ1 (Ethernet)                          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SYSMAC CS1/CJ1 (Ethernet Auto)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Panasonic                            | SYSMAC CS1/CJ1 DNA (Ethernet)                      | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FP Series (RS232C/422)                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FP Series (TCP/IP)                                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FP Series (UDP/IP)                                 | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FP-X (TCP/IP)                                      | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| RS Automation                        | FP7 Series (RS232C/422)                            | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FP7 Series (Ethernet)                              | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | NX7/NX Plus Series (70P/700P/CCU+)                 | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | N7/NX Series (70/700/750/CCU)                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SAIA                                 | NX700 Series (Ethernet)                            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | X8 Series  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | X8 Series (Ethernet)                               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| SAMSUNG                              | PCD  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PCD S-BUS (Ethernet)                               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SPC series   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SHARP                                | N_plus   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SECNET   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SINFONIA TECHNOLOGY                  | JW series  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | JW100/70H COM port                                 | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | JW20 COM port                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | JW series (Ethernet)                               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | JW300 series                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | JW311/312/321/322 series (Ethernet)                | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Siemens                              | JW331/332/341/342/352/362 series (Ethernet)        | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | SELMART  | ✓               |                   | ✓                  | ✓                 | ✓  | ✓  |
|                                      | S5 PG port   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | S7   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | S7-200 PPI   | ✓               | ✓                 |                    | ✓                 | ✓  | ✓  |
|                                      | S7-200 (Ethernet ISOTCP)                           | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | S7-300/400 MPI                                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | S7-300/400 (Ethernet ISOTCP)                       | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | S7-300/400 (Ethernet TCP/IP PG protocol )          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | S7-1200/1500 (Ethernet TCP/IP)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | S7 PROFIBUS-DP                                     |                 |                   |                    |                   | ✓  | ✓  |
|                                      | TI500/505  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | TI500/505 V4 Compatible                            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | TP03 (MODBUS RTU)                                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | Telemechanique                                     |                 |                   |                    | ✓                 | ✓  | ✓  |
|                                      | TSX Micro  |                 |                   |                    | ✓                 | ✓  | ✓  |
| TOSHIBA                              | T series /V series (T compatible)                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | T series /V series (T compatible)(Ethernet UDP/IP) | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | EX series  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | nv series(Ethernet UDP/IP)                         | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| TOSHIBA MACHINE                      | TC200  | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| TOYO DENKI                           | μGPCsx(OPCN-1)                                     |                 | ✓                 |                    |                   | ✓  | ✓  |
|                                      | μGPCsx series                                      | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | μGPCsx CPU   | ✓               |                   | ✓                  |                   | ✓  | ✓  |
|                                      | μGPCsx series (Ethernet)                           | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| TURCK                                | BL Series Distributed I/O (MODBUS TCP/IP)          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Ultra Instruments                    | UIC CPU (MODBUS ASCII)                             | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| UNITRONICS                           | M90/M91/Vision Series (ASCII)                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| VIGOR                                | Vision Series (ASCII Ethernet TCP/IP)              | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| WAGO                                 | M series   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| XINJE                                | 750 series (MODBUS RTU)                            | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | 750 series (MODBUS Ethernet)                       | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Yaskawa Electric                     | XC Series (MODBUS RTU)                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MEMOBUS  | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | CP9200SH/MP900                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MP2300 (MODBUS TCP/IP)                             | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | CP/MP EXPANSION MEMOBUS (UDP/IP)                   | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | MP2000 series                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MP2000 series (UDP/IP)                             | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | MP3000 Series EXPANSION MEMOBUS(Ethernet)          | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Yokogawa Electric                    | FA-M3  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FA-M3R   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FA-M3/FA-M3R (Ethernet UDP/IP)                     | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FA-M3/FA-M3R (Ethernet UDP/IP ASCII)               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
|                                      | FA-M3/FA-M3R (Ethernet TCP/IP)                     | ✓               | ✓                 |                    |                   | ✓  |    |



| Manufacturer                         | Models                               | Connection form |                   |                    |                   | V8 | V9 |
|--------------------------------------|--------------------------------------|-----------------|-------------------|--------------------|-------------------|----|----|
|                                      |                                      | 1:1             | 1:n<br>Multi-drop | n:1<br>Multi-link2 | n:1<br>Multi-link |    |    |
| Agilent                              | 4263 Series                          | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| Azbil                                | SDC10                                | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC15                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SDC20                                | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC21                                | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC25/26                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SDC30/31                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC35/36                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | SDC40A                               | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC40G                               | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SDC45/46                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | DMC10                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | DMC50 (COM)                          | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | AHC2001                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | AHC2001+DCP31/32                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | DCP31/32                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | NX (CPL)                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | NX (MODBUS RTU)                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | NX (MODBUS TCP/IP)                   | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Banner                               | Presence PLUS (Ethernet/IP (TCP/IP)) | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Bosch Rexroth                        | IndraDrive                           | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| CHINO                                | LT400 Series (MODBUS RTU)            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | DP1000                               | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | DB1000B (MODBUS RTU)                 | ✓               |                   | ✓                  | ✓                 | ✓  | ✓  |
|                                      | KR2000 (MODBUS RTU)                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | LT230 (MODBUS RTU)                   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | LT300 (MODBUS RTU)                   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| DELTA TAU DATA SYSTEMS               | LT830 (MODBUS RTU)                   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PMAC                                 | ✓               |                   | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PMAC (Ethernet TCP/IP)               | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Fuji Electric                        | PYX (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PXR (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PXF (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PXG (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PXH (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PUM (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | F-MPC04P (Loader)                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | F-MPC series /FePSU                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FVR-E11S                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FVR-E11S (MODBUS RTU)                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FVR-C11S (MODBUS RTU)                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-Ace (MODBUS RTU)              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC5000 G11S/P11S                 | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FRENIC5000 G11S/P11S (MODBUS RTU)    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC5000 VG7S (MODBUS RTU)         | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-HVAC/AQUA (MODBUS RTU)        | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FRENIC-Mini (MODBUS RTU)             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-Eco (MODBUS RTU)              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-Multi (MODBUS RTU)            | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-MEGA (MODBUS RTU)             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FRENIC-MEGA SERVO(MODBUS RTU)        | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FRENIC-VG1 (MODBUS RTU)              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | HFR-C9K                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | HFR-C11K                             | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | HFR-K1K                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | PPMC (MODBUS RTU)                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FALDIC-alpha series                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FALDIC-W series                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PH series                            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PHR (MODBUS RTU)                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | WA5000                               | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | APR-N (MODBUS RTU)                   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | ALPHA5 (MODBUS RTU)                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | ALPHA5 Smart (MODBUS RTU)            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | WE1MA (Ver. A)(MODBUS RTU)           | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | WE1MA (Ver. B)(MODBUS RTU)           | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | WSZ series                           | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | WSZ series (Ethernet)                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| Gammflux                             | TTC2100                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| Hitachi Industrial Equipment Systems | SJ300 series                         | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | SJ700 series                         | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| IAI                                  | X-SEL controller                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | ROBO CYLINDER (RCP2/ERC)             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | ROBO CYLINDER (RCS/E-COM)            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | PCON/ACON/SCON (MODBUS RTU)          | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| KOGANEI                              | IBFL-TC                              | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| Lenze                                | ServoDrive9400(Ethernet TCP/IP)      | ✓               | ✓                 |                    |                   |    |    |
| MITSUBISHI ELECTRIC                  | FR-*500                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | FR-V500                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                                      | MR-J2S-*A                            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | MR-J3-*A                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | MR-J3-*T                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                                      | FR-E700                              | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| MOOG                                 | J124-04x Series                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |

| Manufacturer           | Models                                     | Connection form |                   |                    |                   | V8 | V9 |
|------------------------|--|-----------------|-------------------|--------------------|-------------------|----|----|
|                        |  | 1:1             | 1:n<br>Multi-drop | n:1<br>Multi-link2 | n:1<br>Multi-link |    |    |
| M-SYSTEM               | R1M series (MODBUS RTU)                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| OMRON                  | E5AK                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5AK-T                                     | ✓               | ✓                 | ✓                  | ✓                 |    | ✓  |
|                        | E5AN/E5EN/E5CN/E5GN                        | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | E5AR/E5ER                                  | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | E5CK                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5CK-T                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5CN-HT                                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5EK                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5ZD                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5ZE                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | E5ZN                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | V600/620/680                               | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | KM20                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | KM100                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | V680S (Ethernet TCP/IP)                    | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Orientalmotor          | High-efficiency AR series (MODBUS RTU)     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | CRK series (MODBUS RTU)                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| Panasonic              | MINAS A4 series                            | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | LP-400                                     | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| RKC                    | KW Series                                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | SR-Mini (MODBUS RTU)                       | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | CB100/CB400/CB500/CB700/CB900 (MODBUS RTU) | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | SR-Mini (Standard Protocol)                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | REX-F400/F700/F900 (Standard Protocol)     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | SRV (MODBUS RTU)                           | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | MA900/MA901 (MODBUS RTU)                   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | SRZ (MODBUS RTU)                           | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | FB100/FB400/FB900 (MODBUS RTU)             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | CSD5 (MODBUS RTU)                          | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| RS Automation          | Moscon-F50 (MODBUS RTU)                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| SANMEI                 | Cuty Axis                                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SanRex                 | DC AUTO (HKD type)                         | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| SHARP                  | DS-30D                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | DS-32D                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| SHIMADEN               | SHIMADEN standard protocol                 | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SHINKO TECHNOS         | C Series                                   | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | FC Series                                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | GC Series                                  | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | DCL-33A                                    | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | JCx-300 Series                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | PC-900                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | PCD-33A                                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | ACS-13A                                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | ACD/ACR Series                             | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | WCL-13A                                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| SUS                    | XA-A*                                      | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| TOHO                   | TTM-000                                    | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | TTM-00BT                                   | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | TTM-200 (MODBUS RTU)                       | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| TOKYO CHOKOKU PRODUCTS | MB3315/1010                                | ✓               |                   |                    |                   | ✓  | ✓  |
| TOSHIBA                | VF-S7                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-S9                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-S11                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-S15                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | VF-A7                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | VF-AS1                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-P7                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-PS1                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-FS1                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-MB1                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | VF-nC1                                     | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | VF-nC3                                     | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| TOSHIBA MACHINE        | VELCONIC series                            |                 | ✓                 |                    |                   | ✓  | ✓  |
| ULVAC                  | G-TRAN series                              | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
| UNIPULSE               | F340A                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | F371                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | F800                                       | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | F720A                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
| YAMAHA                 | F805A                                      | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | RCX142                                     | ✓               |                   | ✓                  |                   | ✓  | ✓  |
| Yokogawa Electric      | UT100                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT750                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT550                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT520                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT350                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT320                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT2400/2800                                | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT450                                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT32A/35A(MODBUS RTU)                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT52A/55A(MODBUS RTU)                      | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | UT75A(MODBUS RTU)                          | ✓               | ✓                 | ✓                  |                   | ✓  | ✓  |
|                        | μR10000/20000 (Ethernet TCP/IP)            | ✓               | ✓                 |                    |                   | ✓  | ✓  |
| Others                 | MODBUS RTU                                 | ✓               | ✓                 | ✓                  | ✓                 | ✓  | ✓  |
|                        | MODBUS TCP/IP (Ethernet)                   | ✓               | ✓                 |                    |                   | ✓  | ✓  |



# Worldwide service network for trouble-free operations

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## Global Sales Network

Our distributors are ready to support your worldwide business.  
<http://monitouch.fujielectric.com/site/distributors-e/distributors-oversea-01.html>



## To the purchasers of Hakko Electronics products:

The warranty of this product is as follows, unless there are special instructions that state otherwise in the quote, contract, catalog, or specifications at the time of the quote or order.  
The purpose or area of use may be limited, and a routine checkup may be required depending on the product. Please contact the distributor from which you purchased the product, or Hakko Electronics for further information.  
Please conduct inspection of the product promptly upon purchase or delivery. Also, please give sufficient consideration to management and maintenance of the product prior to accepting it.

### 1 Period and Coverage of the Warranty

#### 1-1 Period

- (1) The period of the warranty is effective until twenty-four (24) months from the date of manufacture printed on the plate.
- (2) The above period may not be applicable if the particular environment, conditions or frequency of use affects the lifetime of the product.
- (3) The warranty for the parts repaired by Hakko Electronics' service department is effective for six (6) months from the date of repair.

#### 1-2 Coverage

- (1) If malfunction occurs during the period of warranty due to negligence on the part of Hakko Electronics, the malfunctioning parts are exchanged or repaired free of charge at the point of purchase or delivery. However, the warranty does not apply to the following cases:
  - 1) The malfunction occurs due to inappropriate conditions, environment, handling or usage that is not specified in the catalog, instruction book or users' manual.
  - 2) The malfunction is caused by factors that do not originate in the purchased or delivered product.
  - 3) The malfunction is caused by another device or software design that does not originate in a Hakko Electronics product.
  - 4) The malfunction occurs due to an alteration or repair that was not performed by Hakko Electronics.
  - 5) The malfunction occurs because the expendable parts listed in the instruction book or catalog were not maintained or replaced in an appropriate manner.
  - 6) The malfunction occurs due to factors that were not foreseeable by the practical application of science and technology at the time of purchase or delivery.
  - 7) The malfunction occurs because the product is used for a purpose other than that for which it is intended.
  - 8) The malfunction occurs due to a disaster or natural disaster that Hakko Electronics is not responsible for.
- (2) The warranty is only applicable to the single purchased and delivered product.
- (3) The warranty is only valid for the conditions stated in (1) above. Any damage induced by the malfunction of the purchased or delivered product, including damage or loss to a device or machine and passive damage, is not covered by the warranty.

#### 1-3 Malfunction Diagnosis

The initial diagnosis of malfunction is to be made by the purchaser. The diagnosis can be conducted by Hakko Electronics or its delegated service provider with due charge upon the request of the purchaser. The charge is to be paid by the purchaser at the rate stipulated in the rate schedule of Hakko Electronics.

### 2 Liability for Opportunity Loss

Regardless of the time of occurrence, Hakko Electronics is not liable for damage caused by factors that Hakko Electronics is not responsible for, opportunity loss on the part of the purchaser caused by the malfunction of a Hakko Electronics product, passive damage, damage due to a special situation regardless of whether it was foreseeable or not, or secondary damage, accident compensation, damage to products that were not manufactured by Hakko Electronics, or compensation towards other operations.

### 3 Period for Repair and Provision of Spare Parts after Production is Discontinued (Maintenance Period)

Discontinued models (products) can be repaired for seven (7) years from the date of discontinuation. Also, most spare parts used for repair are provided for seven (7) years from the date of discontinuation. However, some electric parts may not be available due to their short life cycle. In this case, it may be difficult to repair or provide the parts during the seven-year period. Please contact Hakko Electronics or its service providers for further information.

### 4 Delivery

Standard products that do not entail application setting or adjustment are regarded as received by the purchaser upon delivery. Hakko Electronics is not responsible for local adjustments and test runs.

### 5 Service

The price of the delivered or purchased products does not include the service fee for the technician. Please contact Hakko Electronics or its service providers for further information.

### 6 Scope of Application

The above contents shall be assumed to apply to transactions and product use in the country where a Hakko Electronics product is purchased. Please consult your local supplier or Hakko Electronics for details.