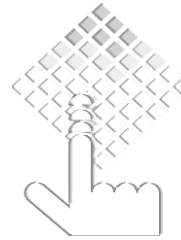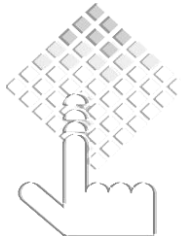# V8 Series Introduction

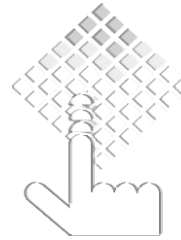*Fuji Electric Corp. of America*

Table of contents

- V8 Concept
- V8 Line-up
- V8 Key Features
- Coming New Lineup is…
- About V-SFT-5

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V8 concept

1. High Performance

2. Connectivity

3. Usability

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High Performance
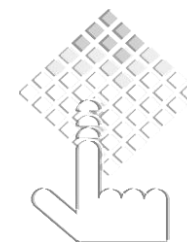
Outstanding Visibility
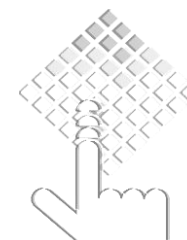
■ **Color Models**
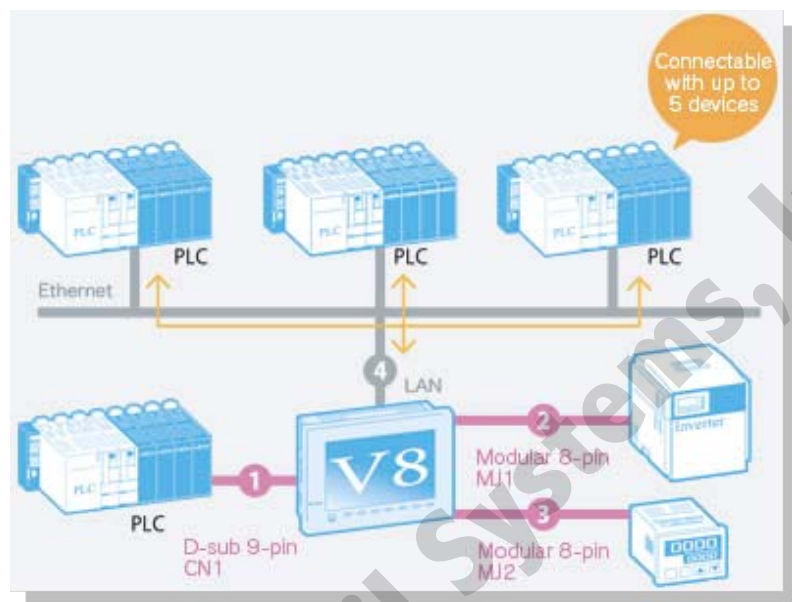
  All models support 65,535 colors!!

  Monochrome display

  256 grayscale Suitable for image processing.

  Video

  30fps video display with 1.6 million colors
  * 30fps is the same as TV!

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Connectivity

<table>
<tr><td>

Enhanced Connectivity

</td></tr>
</table>

Connectable with up to 5 devices

PLC　PLC　PLC

Ethernet

④ LAN

② Inverter

V8

Modular 8-pin MJ1

① PLC

D-sub 9-pin CN1

③

Modular 8-pin MJ2
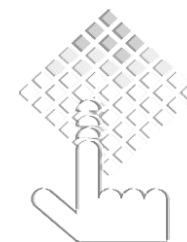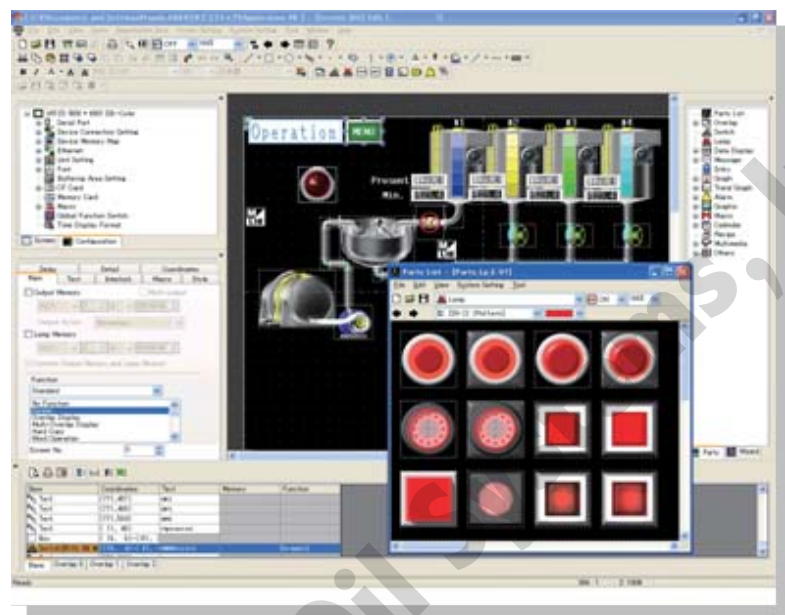
- **8WAY communication**
  Up to 8 protocols
  running simultaneously.

- **Dual IP addressing**
  First-in-industry
  V8 works as a gateway
  between 2 network!

- **2 USB ports**
  USB (master/slave)
  ports are included
  as standard equipment.

– 5 –

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Usability

Simple & Speedy configuration

■ **Improved V-SFT-5**

Many useful function to speed up development time.

■ **Component Parts**

The fastest and easiest way to configure screens.

■ **Emulator**

You can debug your screen program on your PC without any hardware!

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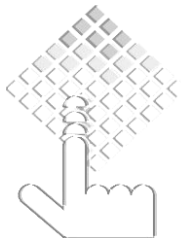
V8 Line-up

- At a glance
- V812 series (12.1")
- V810 series (10.4")
- V808 series (8.4")
- V806 series (5.7")
- Comparison
- V8 vs. V7
- Model Designation
- Certifications
- Accessories

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V8 Line up – At a glance -
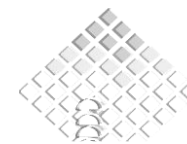
12.1"	10.4"		8.4"	5.7"
V812iS/V812S	**V810iS/V810S**	**V810iT/V810T**	**V808iS/V808S**	
TFT SVGA 64K	TFT SVGA 64K	TFT VGA 64K	TFT SVGA 64K	**ALL Color models _64-K colors!_**

"I" series
Built-in LAN

USB 2 ports
For all models

DC models
CE/UL/cUL
ABS*/NK*/LR*
*Available with limited models.

V810iC/V810C

TFT VGA 64K

V808iC/V808C

TFT SVGA 64K

V806iT
V806T
— TFT QVGA 64K

V806iC
V806C
— STN QVGA 64K

V806iM
V806M
— STN QVGA MONO

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V812 series (12.1 ″)

The flagship model of V8 Series offers the highest performance.
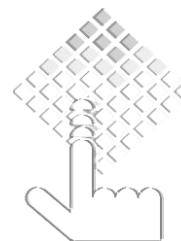
Comm. unit
- OPCN-1
- CC-Link
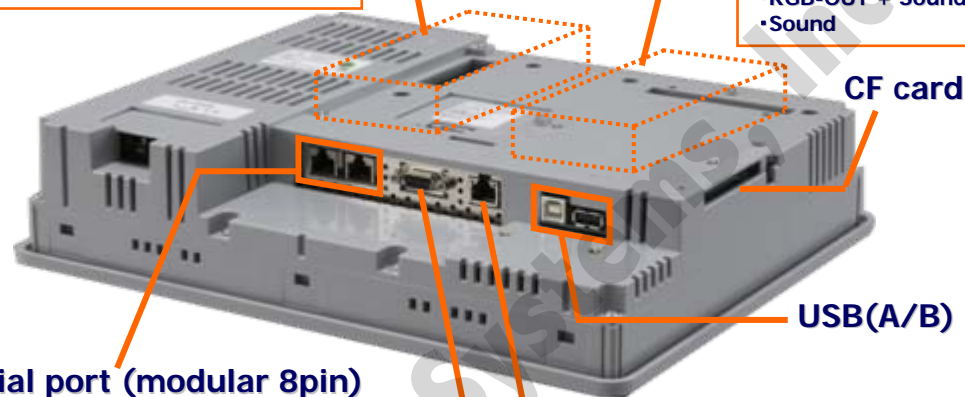- PROFIBUS-DP
- FL-net
- T-Link
- Ethernet
- DeviceNet
- SXBUS

Optional unit
- Video 2ch + RGB-IN 1ch
- RGB-IN 2ch
- Video 4ch + Sound
- RGB-IN + Sound
- RGB-OUT + Sound
- Sound

CF card

USB(A/B)

Serial port (modular 8pin)
- PLC
- PLC ladder tool
- Temp. controller/inverter
- Touchswitch
- Card recorder
- Modbus slave
- V-Link
- V-I/O
- Barcode
- Serial printer

Ethernet

Serial port (D-sub9pin)
- PLC
- Temp. controller/inverter
- General-purpose PC
- Barcode

[SVGA 64K-color model]

TFT	SVGA	64K	FROM 12.5M	SRAM 512K
Serial 3ch		Built-in CF I/F	USB A·B	

[SVGA 64K-color model]

TFT	SVGA	64K	FROM 12.5M	SRAM 512K
Serial 3ch	Built-in LAN	Built-in CF I/F	USB A·B	

— 9 —

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V810 series (10.4 ″)

Our three grades of models from highly Functional to standard are all high performance. Various line-up to meet various needs.

Comm. unit

- ・OPCN-1
- ・CC-Link
- ・PROFIBUS-DP
- ・FL-net
- ・T-Link
- ・Ethernet
- ・DeviceNet
- ・SX-BUS

Optional unit

- ・Video 2ch + RGB-IN 1ch
- ・RGB-IN 2ch
- ・Video 4ch + Sound
- ・RGB-IN + Sound
- ・RGB-OUT + Sound
- ・Sound

CF card

USB(A/B)

Ethernet

Serial port (modular 8pin)

- ・PLC
- ・PLC ladder tool
- ・Temp. controller/inverter
- ・Touchswitch
- ・Card recorder
- ・Modbus slave
- ・V-Link
- ・V-I/O
- ・Barcode
- ・Serial printer

Serial port (D-sub9pin)

- ・PLC
- ・Temp. controller/inverter
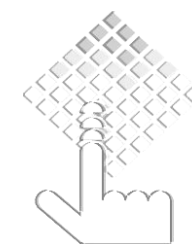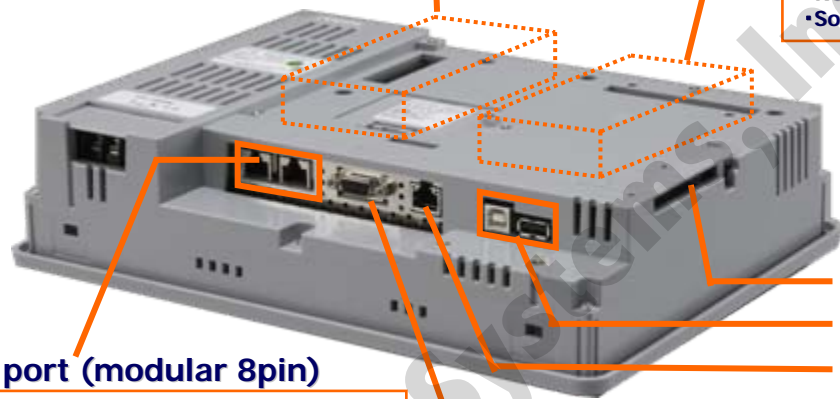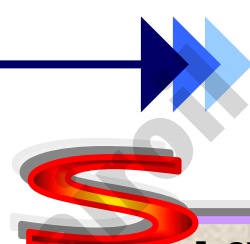- ・General-purpose PC
- ・Barcode

[SVGA 64K-color model]

TFT	SVGA	64K	FROM 12.5M	SRAM 512K
Serial 3ch	Built-in LAN	Built-in CF I/F	USB A・B	

[VGA 64K-color model]

TFT	VGA	64K	FROM 12.5M	SRAM 512K
Serial 3ch	Built-in LAN	Built-in CF I/F	USB A・B	

[VGA 64K-color model]

TFT	SVGA	64K	FROM 12.5M	SRAM 512K
Serial 3ch	Built-in LAN	Built-in CF I/F	USB A・B	

NOTE) 1: V810C --- FROM4.5M/SRAM128K/LAN is optional. 2: Built-in LAN is available with the "I" models only.

— 10 —

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V808 series (8.4″)

**TFT display is employed for all models.
Selection of SVGA and VGA is available.**

Comm. unit

・OPCN-1 ・T-Link
・CC-Link ・Ethernet
・PROFIBUS-DP ・DeviceNet
・FL-net ・SX-BUS

Optional unit

・Video 2ch + RGB-IN 1ch
・RGB-IN 2ch
・Video 4ch + Sound
・RGB-IN + Sound
・RGB-OUT + Sound
・Sound

Ethernet

CF card

USB(A/B)

Serial port (D-sub 9pin)

・PLC
・Temp. controller/inverter
・General-purpose PC
・Barcode

Serial port (modular 8pin)

・PLC ・V-Link
・PLC ladder tool ・V-I/O
・Temp. controller/inverter
・Touchswitch ・Card recorder
・Barcode
・Modbus slave ・Serial printer

[SVGA 64K-color model]

| TFT | SVGA | 64K | FROM 12.5M | SRAM 512K |
| Serial 3ch | Built-in LAN | Built-in CF I/F | USB A・B | |

[VGA 64K-color model]

| TFT | VGA | 64K | FROM 12.5M | SRAM 512K |
| Serial 3ch | Built-in LAN | Built-in CF I/F | USB A・B | |

[VGA 64K-color model]

| TFT | VGA | 64K | FROM 4.5M | SRAM 128K |
| Serial 3ch | | Built-in CF I/F | USB A・B | |

NOTE) Built-in LAN is available with the "I" models only.

— 11 —

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V806 series (5.7 ")

Compact yet functional.
Ethernet on-board for "i" models.
V7's "CU-xx" modules are compatible.

iT

[QVGA 64K-color model]

TFT	QVGA	64K	FROM 4.5M	SRAM 512K
Serial 2ch	Built-in LAN	Built-in CF I/F	USB A·B	

iC

[QVGA 64K-color model]

STN	QVGA	64K	FROM 4.5M	SRAM 512K
Serial 2ch	Built-in LAN	Built-in CF I/F	USB A·B	

iM

[QVGA monochrome model]

STN	QVGA	MONO	FROM 4.5M	SRAM 512K
Serial 2ch	Built-in LAN	Built-in CF I/F	USB A·B	

Optional Units

[Optional unit]
・DU-10

[Comm. Unit]
・CU-xx

Serial port (modular 8pin)

・PLC   ・V-Link
・PLC ladder tool ・V-I/O
・Temp. controller/inverter
・Touchswitch   ・Card recorder
・Barcode
・Modbus slave   ・Serial printer

USB-A
USB-B

Ethernet

NOTE) *without "I" --- FROM 4.5M/SRAM128KB/ LAN is optional/

— 12 —

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V806 series (5.7 ")
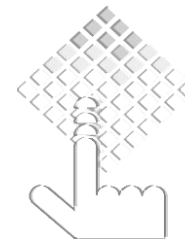
V806+ DU-10
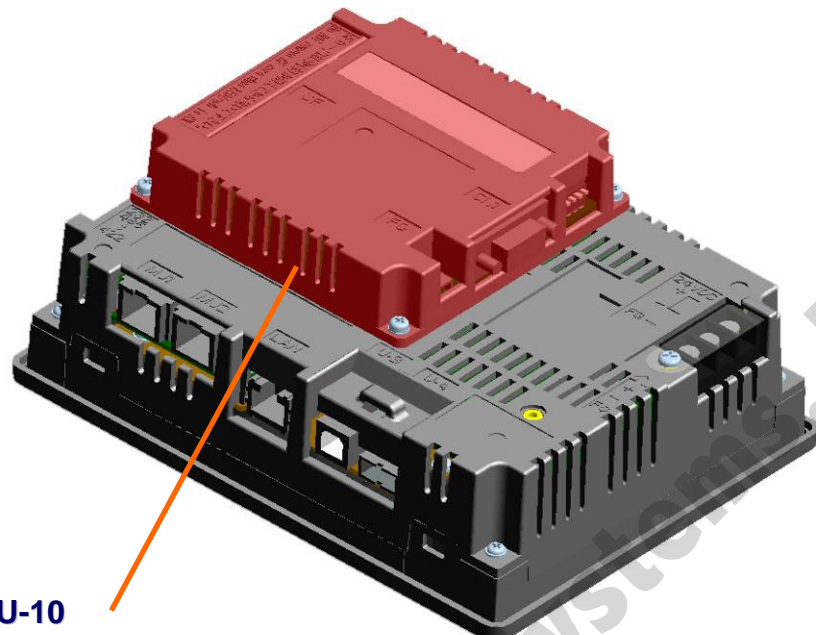
V806 + CU-xx

DU-10

[optional Unit]
・CF socket + D-sub 9pin port

<NOTE>
*DU-01:
CF + Dsub25pin + LAN for V706
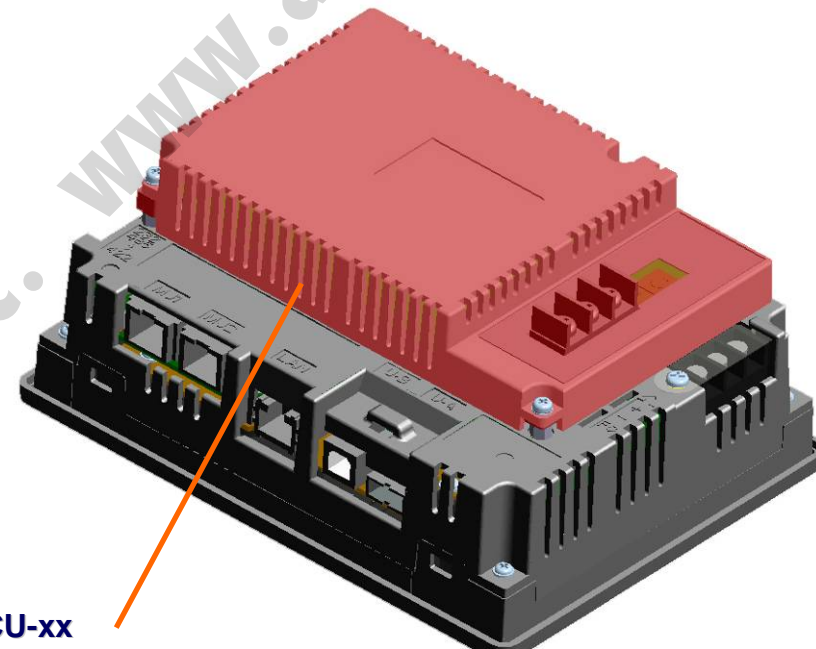
CU-xx
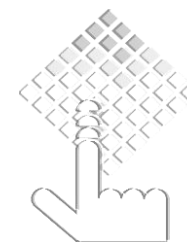
[Comm. Unit]
- PROFIBUS-DP   - Ethernet*
- DeviceNet*
- OPCN-1 *   - T-Link
- CC-Link*   -FL-net *   -SX-BUS
*Under Development

— 13 —

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V8 Line up - Comparison -

■ 12"

	V812S	V812iS
FROM(MB)	12.5	12.5
SRAM(KB)	512	512
Ethernet	Optional	Built-in
Serial port	3	3
CF I/F	Yes	Yes
USB	2	2

■ 10.4"

	V810S	V810iS	V810T	V810iT	V810C	V810iC
FROM(MB)	12.5	12.5	12.5	12.5	4.5	12.5
SRAM(KB)	512	512	512	512	128	512
Ethernet	Optional	Built-in	Optional	Built-in	Optional	Built-in
Serial port	3	3	3	3	3	3
CF I/F	Yes	Yes	Yes	Yes	Yes	Yes
USB	2	2	2	2	2	2

— 14 —

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V8 Line up – Comparison (continued)
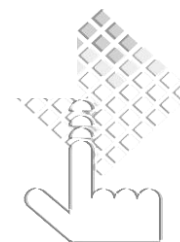
■8"

	V808SD	V808iSD	V808CD	V808iCD
FROM(MB)	12.5	12.5	4.5	12.5
SRAM(KB)	512	512	128	512
Ethernet	Optional	Built-in	Optional	Built-in
Serial port	3	3	3	3
CF I/F	Yes	Yes	Yes	Yes
USB	2	2	2	2

■5.7"

	V806TD	V806iTD	V806CD	V806iCD	V806MD	V806iMD
FROM(MB)	4.5	4.5	4.5	4.5	4.5	4.5
SRAM(KB)	128	512	128	512	128	512
Ethernet	Optional	Built-in	Optional	Built-in	Optional	Built-in
Serial port	2	2	2	2	2	2
CF I/F	Optional	Optional	Optional	Optional	Optional	Optional
USB	2	2	2	2	2	2

– 15 –

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Line-up - V8 vs V7
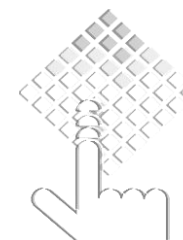
Size	V8	V7
12"	**V812iS(D), V812S(D)**	**V712iS(D), V712S(D)**
10"	**V810iS(D), V810S(D)**	**V710iS(D), V710S(D)**
	V810iT(D), V810T(D)	**V710iT(D), V710T(D)**
	V810iC(D), V810C(D)	**V710C(D) + CU-03-2**
8"	**V808iSD, V808SD**	**V708iSD, V708SD**
	V808iCD, V808CD	**V708CD + CU-03-2**
5.7"	**V806iTD, V806TD**	**V706TD + DU-01**
	V806iCD, V806CD	**V706CD + DU-01**
	V806iMD, V806MD	**V706MD + DU-01**

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Line-up - Model Designation
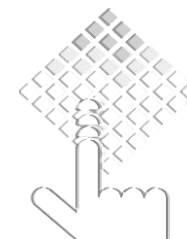
V8 ☐ ☐ ☐ ☐ ☐ -
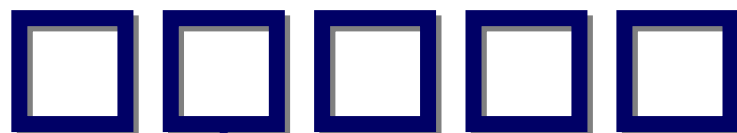
[Power supply]
None :100-240VAC
D: 24VDC

[Touchswitch type]
None:Analog switch model
M: Matrix switch model

[Display Device]
S   :64K-color TFT color LCD (SVGA)   ---12.1", 10.4"

T   :64K-color TFT color LCD (VGA)   ---10.4"
     64K-color TFT color LCD (QVGA)   ---5.7"

C   : 64K-color TFT color LCD (VGA)   ---10.4", 7.7"
      64K-color STN color LCD (QVGA) ---5.7"

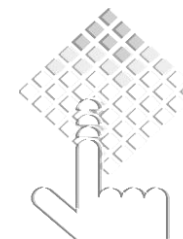M   : Monochrome STN LCD (VGA)   ---5.7"

[Functionality]
i: Built-in Ethernet
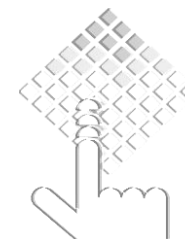None: Ethernet is available by optional module

[Size]
12: 12.1 inches
10: 10.4 inches
08: 8.4 - 7.7 inches
06: 5.7 inches

— 17 —

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Line-up - Certifications

Approvals	Models	Remarks
CE	V8 series	UL508
UL/cUL	DC models	UL1604(Class1, Division2)
ABS	V812(i)SD	<Plan to take approvals>
NK	V810(i)SD	V806 series: YES
LR	V810(i)TD	V8C series: NO
DNV*	V808(i)SD *DNV: in progress.	

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Line-up - Accessories -

■Screen configuration software

V-SFT-5 (Ver.5)
Windows98/Me/NT Ver4.0/2000/
XP/XP 64 Edition/Vista 32bit

■Communication unit

CU-xx
Communication units for field network.

00	OPCN-1 *	04	PROFIBUS
01	T-LINK	06	SX-BUS
02	CC-Link *	07	DeviceNet*
03-3	Ethernet *	08	FL-net*

*Under development

■Optional units

GU-00/01/02/03/10/11
Optional unit for Video/RGB/Sound.

00	Video + Sound	10	Video 2CH + RGB-IN
01	RGB-IN + Sound	11	RGB-IN 2CH
02	RGB-OUT + Sound		
03	Sound		

DU-10
(for V806 series)
D-Sub9pin/CF socket

■Optional items

TC-D9
Connects V8 with other units via
RS422/485 terminal.

V-I/O
External serial I/O unit with cable to
connect to V8. 16IN/16OUT.

D9-D25

Dsub9-Dsub25 conversion cable
to utilize comm cable of
previous models.
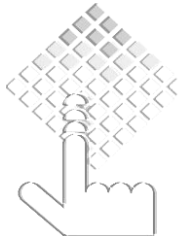
CREC
Memory card recorder

V8xx-GS/V8xx-GSN10
Protective sheets for each size.
GSN10 is anti-glare type.
5 sheets per set.

V7-BT
Lithium battery for V8 series.

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V8 Key Features

- Component Parts
- 8Way Communication
- Pop-up Alert (message box)
- Conditional Visibility
- Dual IP Address
- MES Interface
- FTP Server
- Dual CF Card Interface
- USB Keyboards
- USB Mouse
- PictBridge Printers

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Component Parts

First-ever In industry

Problem

"I want to log the alarms"。
"I want to use password for protection"
"I want to connect external devices"

I know what I want to achieve, but
SCREEN CONFIGURATION IS TOO COMPLICATED BECAUSE OF SO MANY SETTINGS!

Solution

COMPONENT PARTS

**Combinations of the functions and necessary parts which are frequently used is prepared as all-in-one "Component Part".
You can achieve complicated features just like placing a single part on a screen.**

Examples

Clock

Password

Thermo controller

I/O monitor

**Simply
Select & Place**

Component
Parts
Library

— 21 —

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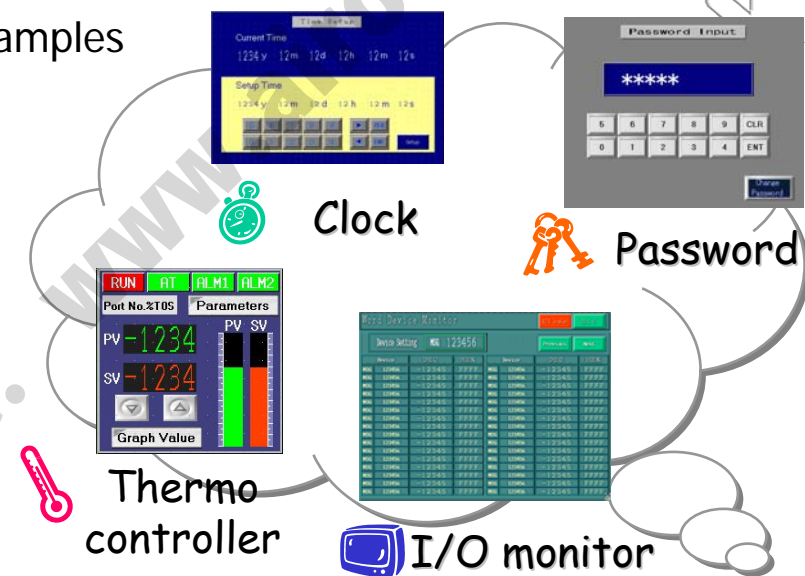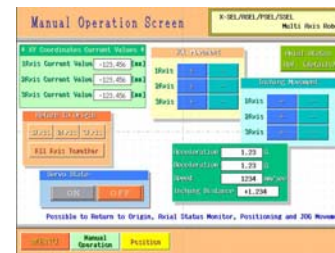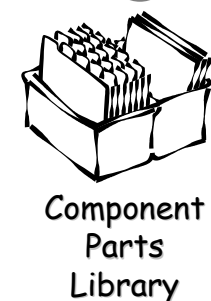
8way Communication

Problem

I want to control several external devices with one V8 panel.

But Hakko's "dual driver" is not enough!

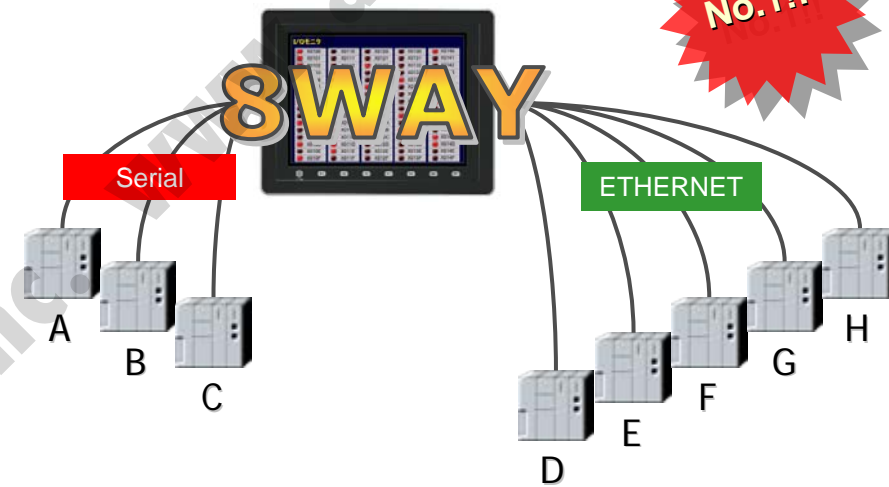I can connect only PLC and thermo controller/inverter at the same time...

Solution

WOW!

8WAY COMMUNICATION

Up to 8 different protocols run at the same time, including PLCs, thermo controllers, inverters, and more!

8WAY Communication image

No.1!!

8WAY

Serial

ETHERNET

A   B   C   D   E   F   G   H

Serial   (3 protocols)
+ ETHERNET (5 protocols)

8WAY   (8 protocols)

— 22 —

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Pop-up Alert (message box)

Problem

To avoid possible misoperation, I can achieve by
- Prompting a dialog box to proceed or cancel
- Controlling buttons by interlocking the input
  by PLC program。
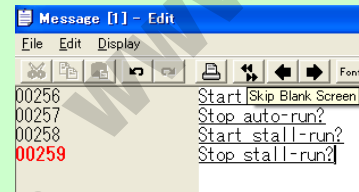
BUT I DO NOT HAVE TIME!
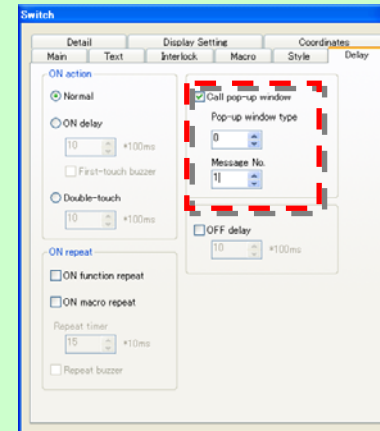
That's a bother…

Solution

MESSAGE BOX

In the Switch setting dialog, simply check a
checkbox to add message box feature and
register your desired messages.
No macro or no overlap settings!!

How to create a message box

First-ever In industry

Step 1:
Create messages.

Message [1] – Edit
File Edit Display

00256 Start Skip Blank Screen
00257 Stop auto-run?
00258 Start stall-run?
00259 Stop stall-run?

Start auto-run?

OK   Cancel

Step 2:
Switch setting dialog

Switch
Detail / Display Setting / Coordinates
Main / Text / Interlock / Macro / Style / Delay

ON action
◉ Normal
○ ON delay 10 *100ms
□ First-touch buzzer
○ Double-touch 10 *100ms
ON repeat
□ ON function repeat
□ ON macro repeat
Repeat timer 15 *10ms
□ Repeat buzzer

☑ Call pop-up window
Pop-up window type 0
Message No. 1

□ OFF delay 10 *100ms
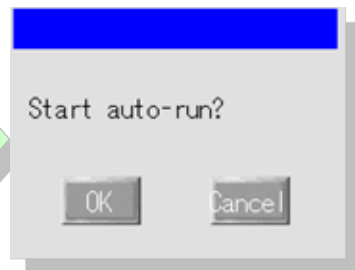
Image of
"Message box"

Easy!!

— 23 —

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Conditional Visibility

Problem

I always make several screen programs which have slight differences, depending on the machines

If possible,
I DO NOT WANT TO HAVE DIFFERENT SCREEN PROGRAMS BECAUSE IT MAKES DIFFICULT TO MAINTAIN THEM!

Solution
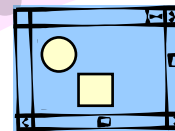
CONDITIONAL VISIBILITY

You can show/hide the items such as graphics, data displays, characters, switches, and lamps by the command from PLC.
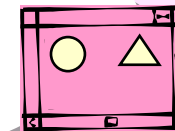Create only one screen program and control the visibility of the items to meet each machine's requirements.

Example

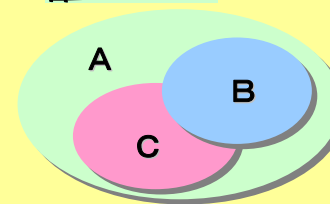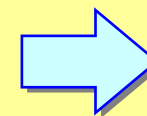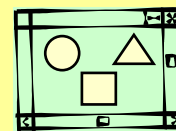Screen programs are different each other.
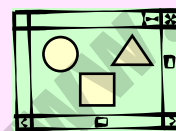
Machine A   Machine B   Machine C

Create one main screen program and…

A
B
C
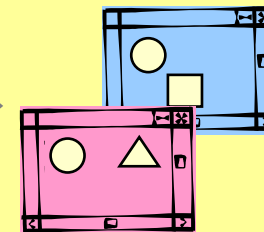
Control item's visibility by bit control.

Both "static" and "dynamic" visibility control is supported.

— 24 —

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Dual IP Address

First-ever
In industry

Problem

I want to have separate network for the office and the factory due to security reason.

I want to exchange the information between office and factory.

Solution

GATEWAY*
between two different network

It is possible to have two different IP addresses.
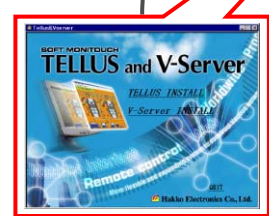**V8 becomes a gateway between factory and office while having security and reducing the load of the network.**

*When using Ethernet unit.

Image of multiple-IP

Gateway

Ethernet Unit

IP : 211.13.204.x

IP : 192.168.1.x

It is possible to monitor current status of the factory from the office
It is possible to monitor current status of the factory from the office via TELLUS & V-Server

SOFT MONITOUCH
TELLUS and V-Server
TELLUS INSTALL
V-Server INSTALL

— 25 —

Hakko Electronics Co., Ltd.

MES Interface

Problem

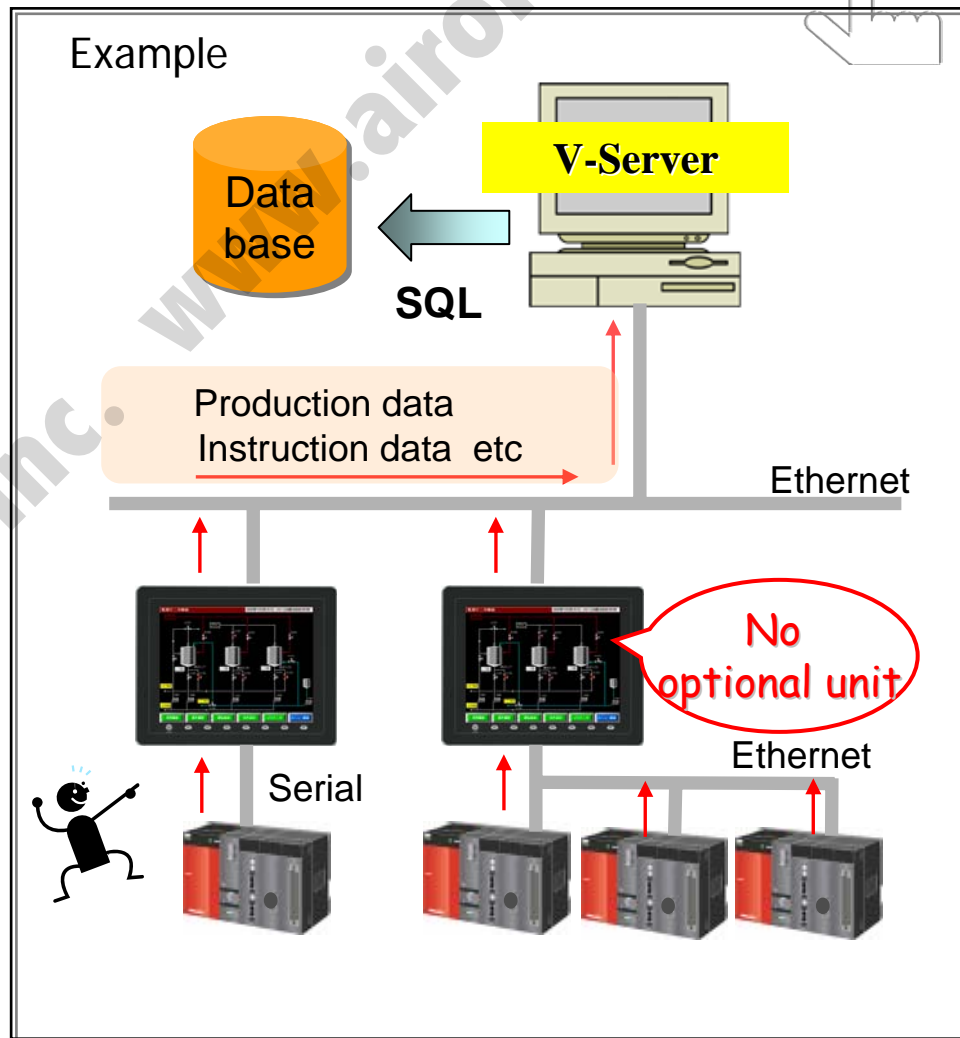I want to correct the production data to the PC, but I am not programming expert… Any good solution?

Solution

MES INTERFACE FEATURE

V8 + V-Server helps you!
No special hardware or dedicated program is required.
Various information is sent to data base in SQL via V-Server.

*MES = Manufacturing Execution System

Example

Data base

V-Server

SQL

Production data
Instruction data etc

Ethernet

No optional unit

Ethernet

Serial

— 26 —

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FTP Server

Problem

I want to manage production history of a factory from a remote office.

I want to update data of the machine which locates far from here.

But I cannot go there easily!
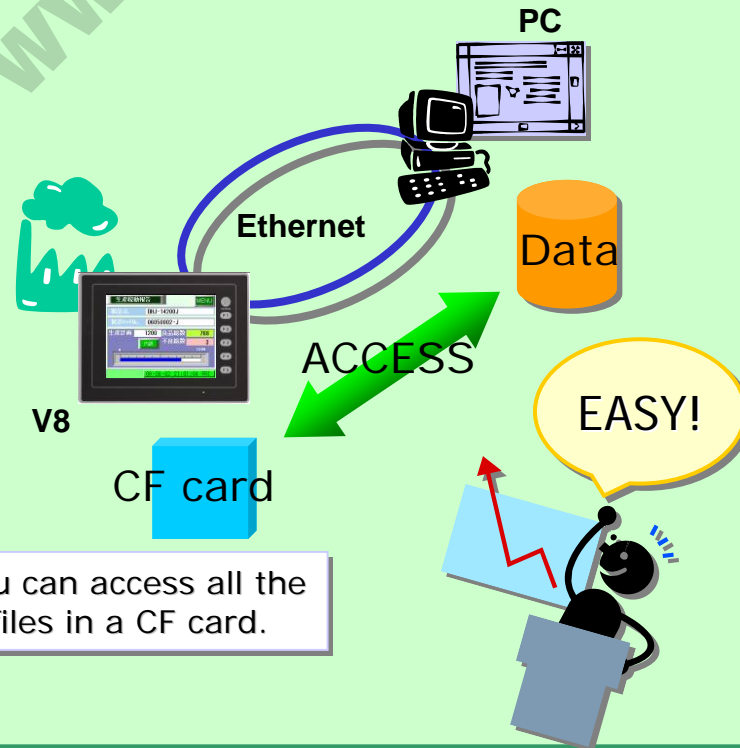
Solution

FTP SERVER

**It is possible to read/write CF card inserted in V8 from your office.
No dedicated program required, you can access data via web browser such as Internet Explorer.**

*V-Server not required.

FTP Server helps you...

You can access to the CF card inserted in V8
From your PC connected to network.
No special application program required.

PC

Ethernet

Data

V8

ACCESS

EASY!

CF card

You can access all the
files in a CF card.

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Dual CF card Interface

Problem

I am using a CF card for recipe and data logging.

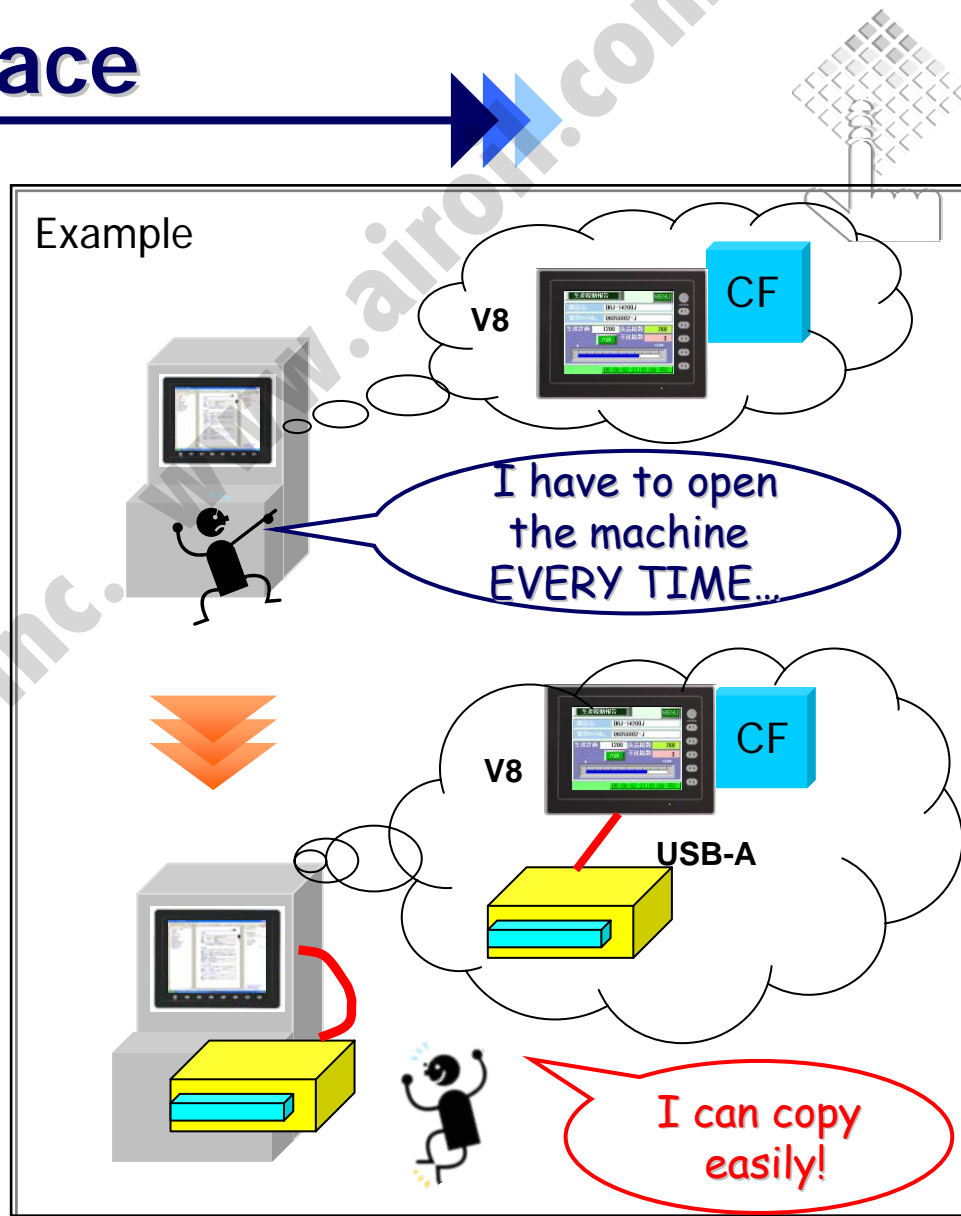BUT I NEED TO OPEN THE MACHINE TO REMOVE THE CARD…

Solution

TWO CF CARD DRIVES

You can use CF card socket on V8 and external CF card reader on USB port simultaneously.
You can copy the data from one to another.
No bothering machine operation!

Example

V8

CF

I have to open the machine EVERY TIME…

V8

CF

USB-A

I can copy easily!

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USB Keyboard

Problem

Software keyboard on the screen is too small to type!

I cannot see the screen at all when displaying keyboard, especially when using small panels.
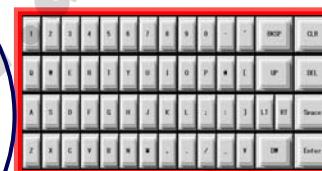
Solution

USB KEYBOARD SUPPORTED

**Entry via USB keyboard is supported.
No need to create software keyboard
or 10 key on the screen.**

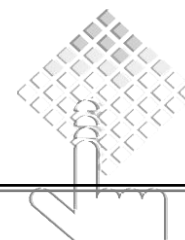Example

I cannot See the screen at all!!

How can I operate??

USB KEYBOARD

EASY ENTRY!!!

Hakko Electronics Co., Ltd.

USB Mouse

Problem

I am displaying PC screen on my touch panel, but it is difficult to control using touch switch…

Solution

USB MOUSE SUPPORTED

In addition to touch switch operation, it is also possible operate using USB mouse simultaneously.
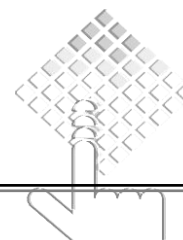
Example

It is difficult to operate by touching the panel.

I cannot operate PC screen very well…

USB MOUSE

Good! I can operate it just like PC!
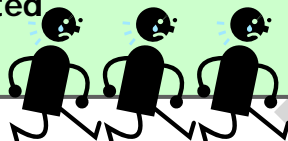
A mouse is good tool for Monitouch, too!

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PictBridge Printers

Problem

**I cannot find any MS-DOS printer nowadays.
Which printer is supported?**

It is hard to find right printer because supported models are limited.

Solution

PICTBRIDGE-COMPATIBLE PRINTER

In addition to the printers previously supported,
new printers which are compatible with PictBridge is also supported!
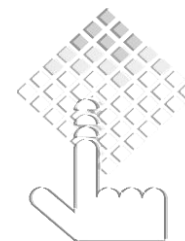
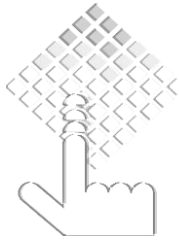Example

No Optional unit Required.

Any printers which support PictBridge can be connected to V8 Directly via USB!!

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Coming New Lineup is…

- V815X(15")
    December 2008

- V808CH (pendant type 8")
    January 2009

- Low-cost V8 (5.7", 8")
    January 2009

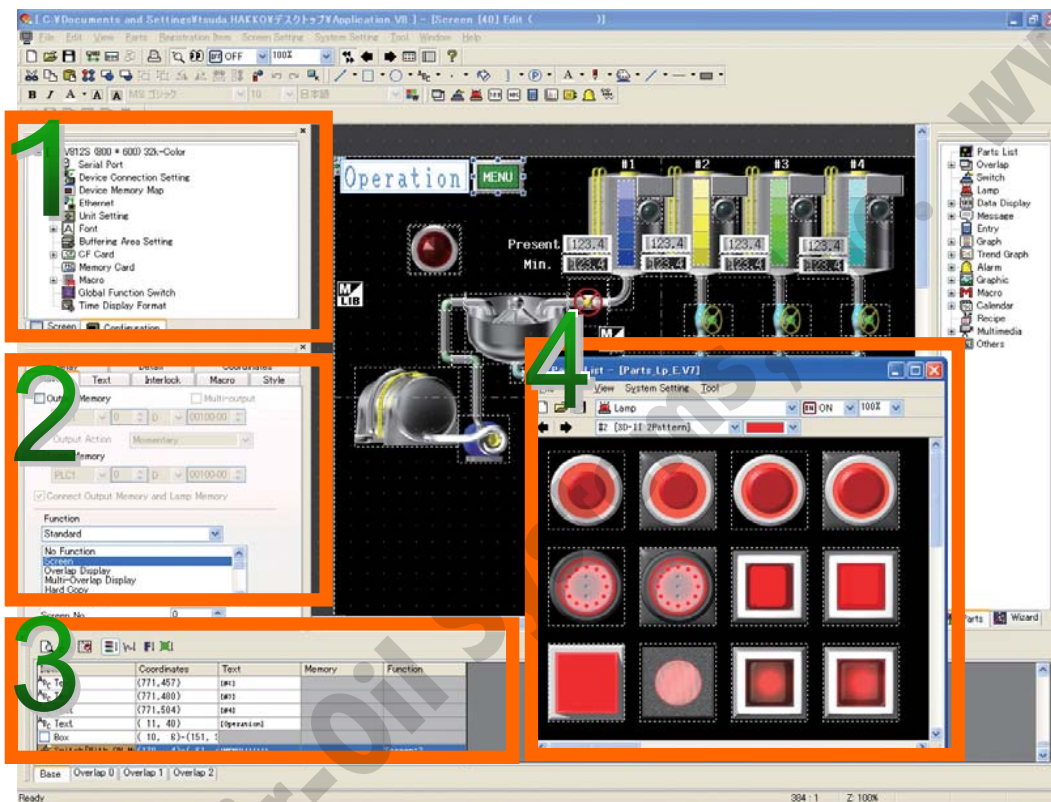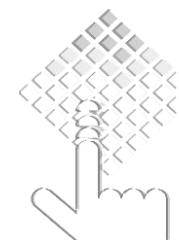Hakko Electronics Co., Ltd.

About V-SFT-5

- V-SFT-5

- Built-in Emulator

- Enhanced Object Alignment

- Scalable Screen Program

Hakko Electronics Co., Ltd.

V-SFT-5

V-SFT-5 is a screen configuration software for V8/V7/V6/V4/TELLUS.

1 Project View
Grasp screen program , settings etc.

2 Item View
Set the functions of the item from this dialog.

3 Item List
You can enter the position, switch text here.

4 Parts List
Drag and drop a part from the selection of more than 1000 kinds of attractive parts.

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Built-in Emulator

Problem

I wish I can debug my program only using PC…

I want to capture the screen image to make manuals or documents.

Solution

EMULATOR

It is possible to check the operations while creating program.

You can copy the image on Emulator and paste it to other applications such as Excel or Word.
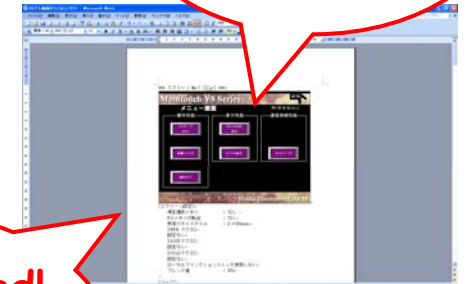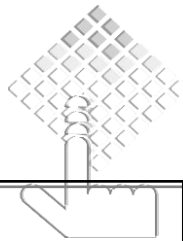Very convenient to create documents!

Example

Start the Emulator to test your program on your PC!
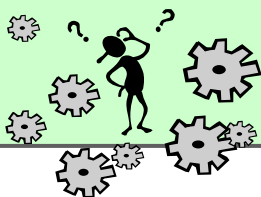
Capture the Emulator image and paste it!

Debug completed! AND Document completed!

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Enhanced object alignment

Problem

It takes time to align and adjust the size of objects…
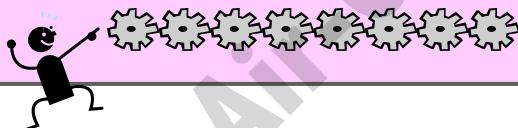
Solution

STRONG LAYOUT HELPER

UP-Down/Left-Right/Horizontal-Vertical

Equal arrangement/sizing and so on.
It reduces your development time!

Layout menu — Right-click menu

Group ▶
Order ▶
Place ▶
Arrangement (Equal) ▶
Put All in Same Size ▶
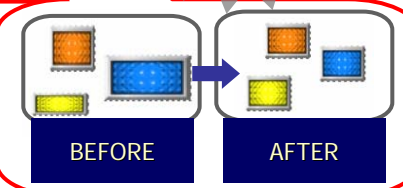Rotation/Reverse Rotation ▶
Vertex Edit
Change Part ▶
Link ▶

|⊟: Left End
:⊞ Right End
⊓⊓ Top End
ⓘⓘ Bottom End
⊩⊡⊩ Vertical Center
⊡ Horizontal Center

⊥ Vertical Align (Regular Spacing)
⊥ Vertical Align (Specified)
⊐⊏ Horizontal Align (Regular Spacing)
⊣⊢ Horizontal Align (Specified)
Switch/lamp Centering

⊟ Width
⊡ Height
⊞ All

Easy!

First-ever In Industry

BEFORE   AFTER

— 36 —

Hakko Electronics Co., Ltd.

Scalable Screen Program

Problem

**I want to reuse my project.
But screen size is different.
Do I have to make the program
again from scratch?**

Solution

SCALABLE SCREEN

**V-SFT-5 will resize the screen program
automatically by selecting desired model
from the list.**

Example

640×480

Edit Model Selection

- ● V Series   ○ UG Series

Edit Model
V810T
V812S
V810S
V810T
V810C
V808S
V808C
V806T/C
V806M
TELLUS Ver.3

Memory Expansion
None

Option Unit

Touch switch
Analog Switch

OK   Cancel

**Select
desired
model…**

800×600

Easy!!

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