

TECHNOSHOT

Quick and accurate machine data at your fingertips



Fe MONITOUCH

TS2060/TS2060i

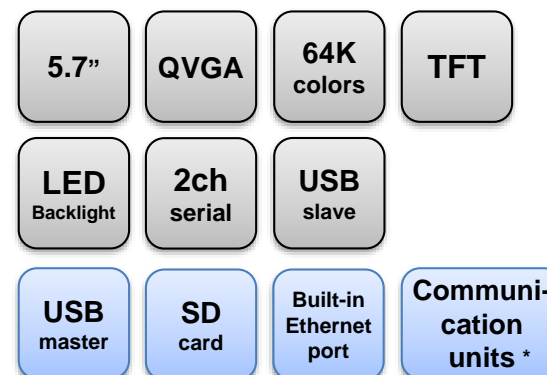
Hakko Electronics Co., Ltd.

Lineup

TS2060



TS2060i



*Compatible with "DUR-00", "CUR-xx".

Model Name

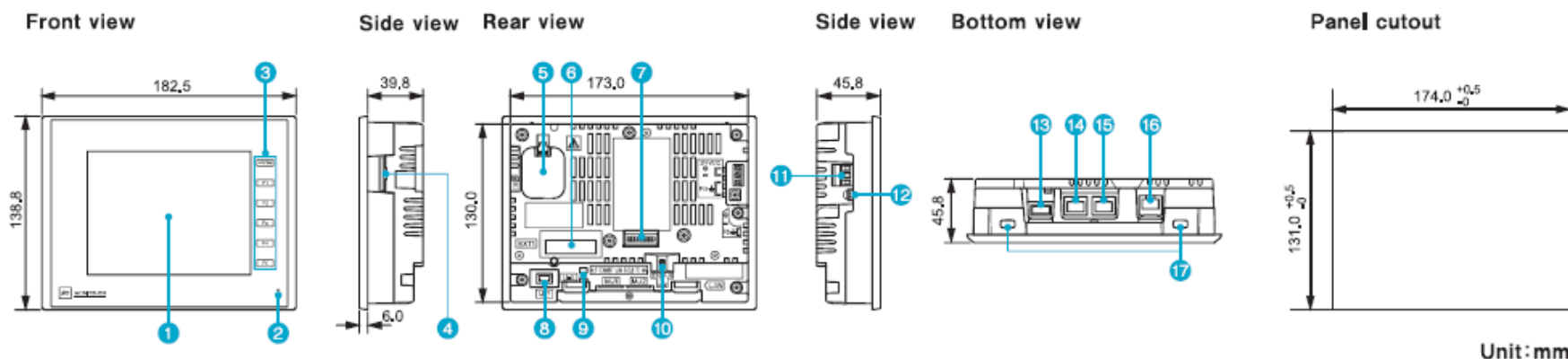
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Function Specifications

i : Compatible with an optional unit "DUR-00"
and communication units "CUR-xx".
SD/SDHC card slot 1CH
Ethernet port 1CH
USB type A 1 port
External power supply 5V

Without i : No above functions

Dimensions and Part Names



Part Names

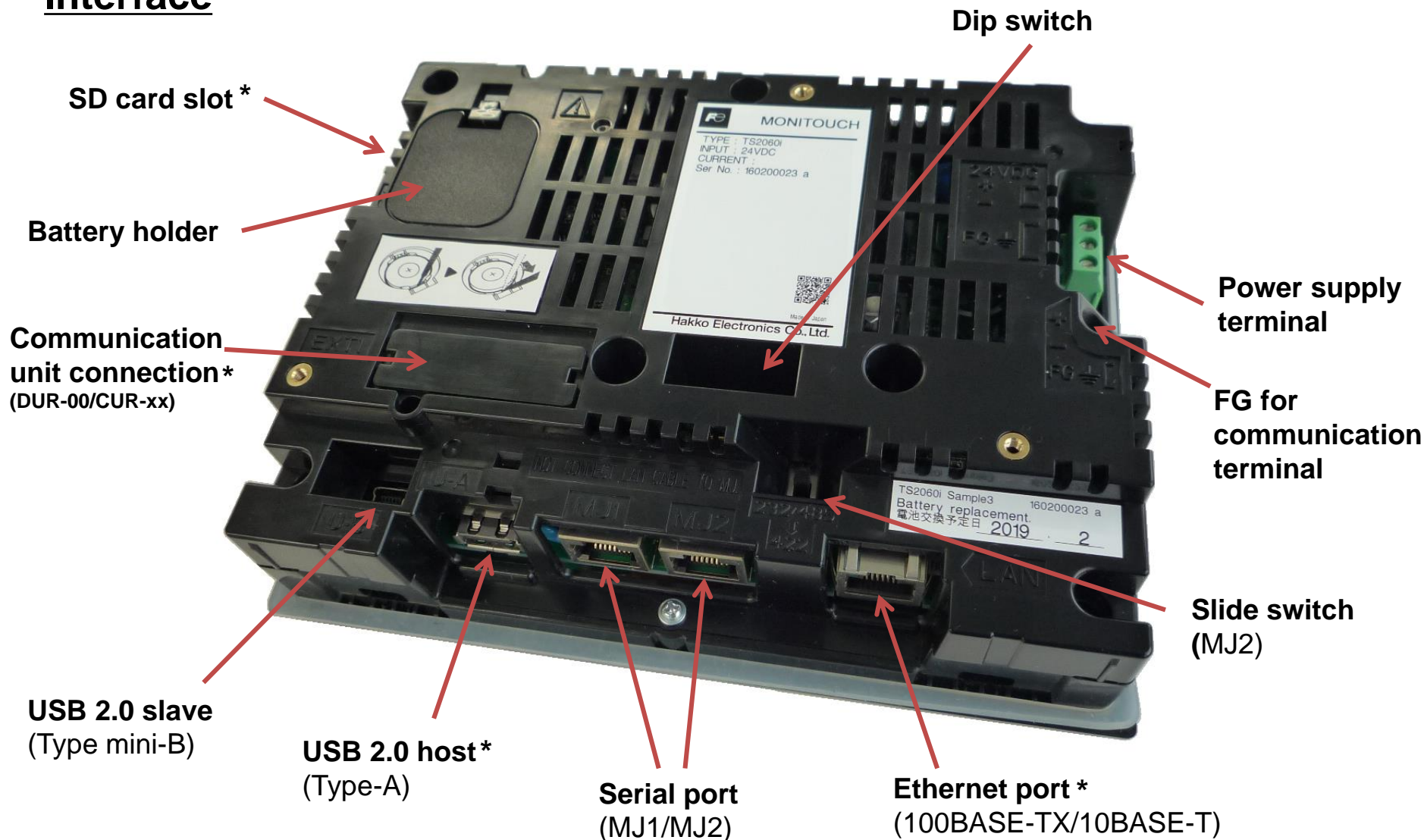
- | | | |
|---|-----------------------------|---|
| ① Display | ⑦ DIP switch | ⑬ USB-A (U-A) * |
| ② Power lamp | ⑧ USB mini-B (U-B) | ⑭ Modular jack (MJ1) |
| ③ Function switches | ⑨ USB cable fixing hole | ⑮ Modular jack (MJ2) |
| ④ SD card connector (SD) * | ⑩ Slide switch | ⑯ 100BASE-TX/10BASE-T connector (LAN) * |
| ⑤ Battery holder | ⑪ Terminal block | ⑰ Screw hole |
| ⑥ Communication interface unit connector (EXT1) * | ⑫ Communication FG terminal | |

* Only TS2060i.

Specifications

		TS2060	TS2060i
Screen memory (FROM)		2.5M bytes	10.5M bytes
Backup memory (SRAM)		128K bytes	512K bytes
Stroke font		-	Compatible
Screen specifications	Display device	TFT color	
	Resolution	320 x 240 dots	
	Display size	5.7 inches (QVGA)	
	Colors	65,536 colors	
	Backlight	LED	
	Backlight life	50,000 hrs.	
Touch switch	Type	Analog resistive film	
Function switch	Number of switches	6	
Panel cutout		174.0mm x 131.0mm (equivalent to V806/V606e/SimplePOD/S806)	
External interface	D-Sub 9-pin	-	Compatible (when the unit is with DUR-00)
	Modular 8-pin (MJ1/2)	A standard feature (Only MJ2 is compatible with 4-wire system)	
	SD card	-	1 card slot (SD/SDHC)
	Ethernet port	-	1CH (100Mbps, 10Mbps)
	USB	Type mini-B (Ver. 2.0)	Type A, Type mini-B (Ver. 2.0)
	Communication unit	-	Compatible with CUR-xx
Compliant standards		CE/KC/UL61010-1, UL61010-2-201	
Case color		Black	
Battery		Built-in button battery / Battery life 5 years (ambient temperature 25 °C)	

Interface



*Only TS2060i

The basic concept of TS2060 series

TS2060 series was designed for cost-effectiveness and multiple functions.

Main Features

- **Wide range of communication performance**
 - 8-way communication
 - Gateway function (Device Memory Map) which can connect one device to another
 - USB port
- *
- **Use of SD card for greater convenience**
 - Sampling function
 - Recipe function
 - Screen program transfer
- *
- **Versatile network functions**
 - Compatible with network cameras
 - Compatible with different network protocols
 - FTP server function
 - MES interface function
- **Functions for User-friendliness**
 - Multilanguage
 - Operation log *
 - Security function
- **A product line that meets a wide variety of needs**
 - Special models
 - Vertical installation
- **VPN remote access system available with V9 series**

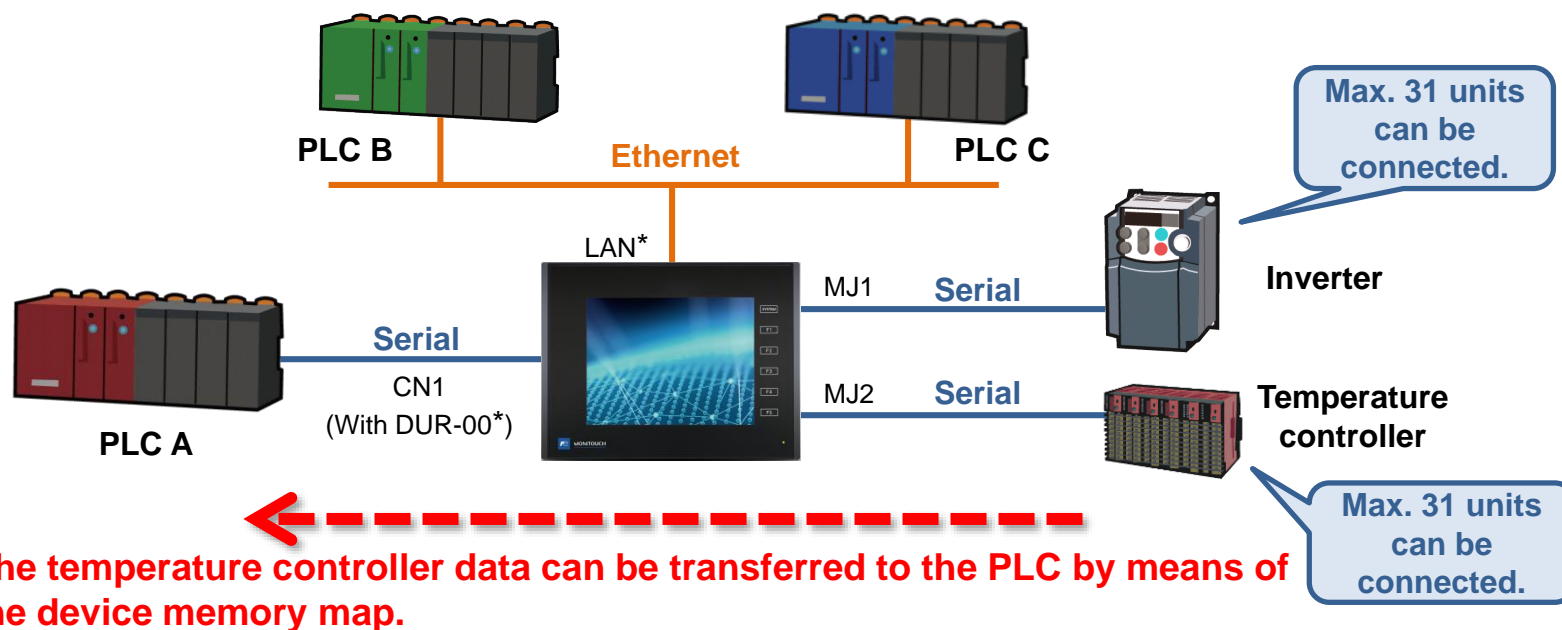
*Only TS2060i

Wide range of communication performance

· 8-way communication

One TS unit can connect up to eight types of PLC and peripherals of different models and manufacturers via Ethernet* (8 protocols) and serial connection (3 protocols).

· Gateway function (Device Memory Map) which can connect one device to another
Data of multiple units can be read and written by means of the Device Memory Map.

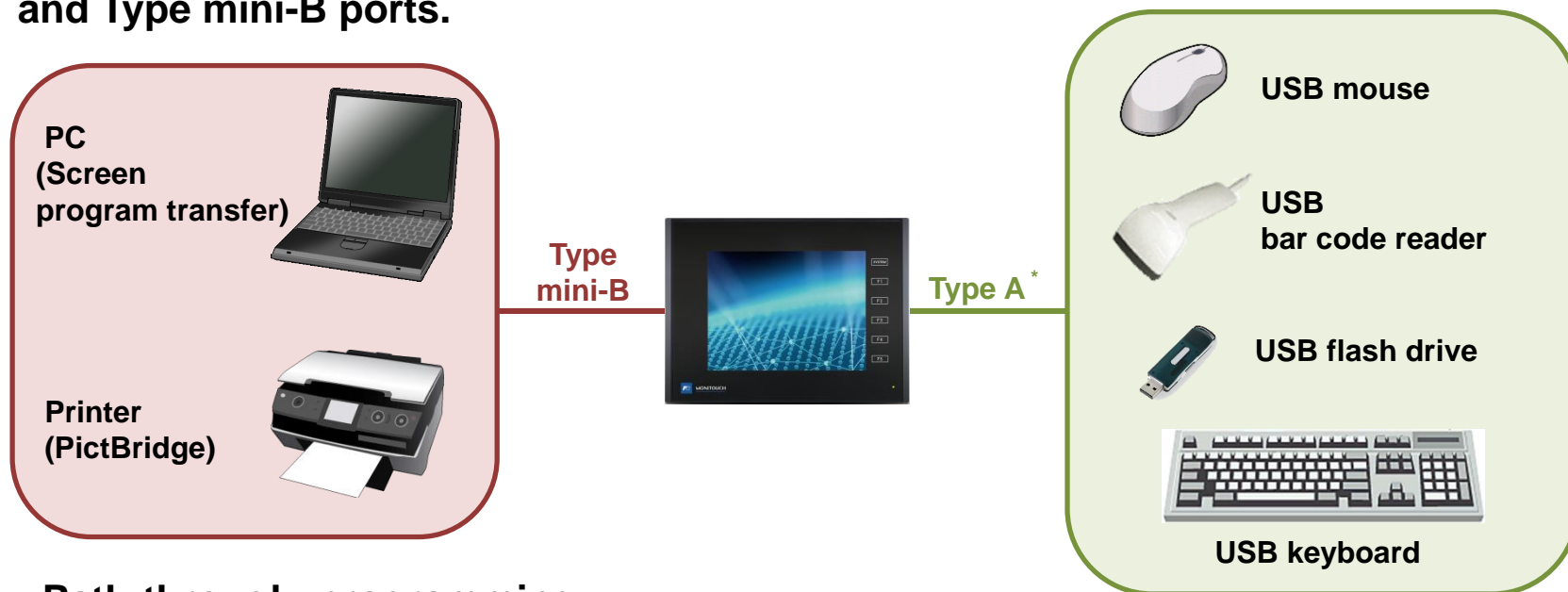


*Only TS2060i

Wide range of communication performance

· USB port (USB Ver. 2.0 compliant)

The unit comes with USB ports. Various devices can be connected using Type A* and Type mini-B ports.



· Path-through programming

PLC program data can be transferred via the USB slave port. There is no need for cable insertion and removal

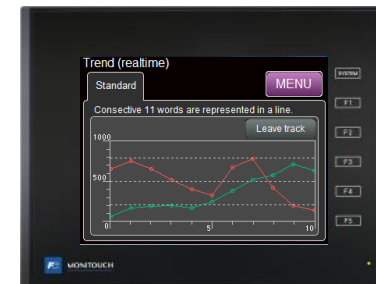


*Only TS2060i

Use of SD cards for greater convenience (only TS2060i)

• Sampling function

Sampling data of the PLC and temperature controller are shown on trend graphs, and saved as CSV files in the SD card.



• Recipe function

Production conditions and parameters are saved as CSV files in the SD card, and read into the PLC when necessary.

	A	B	C	D	E
1	Product	Pressure	Speed	Temperature	Time
2	HA-140426	550	30	200	10
3	HA-140426R	575	25	280	20
4	HA-520128	450	20	150	30
5	HA-520128RX	495	25	180	30
6	HA-8501EXR	600	40	300	40
7	HA-8502EXR	650	40	320	40
8					

Recipe data



Recipe data writing



PLC

Device	Data
D100	450
D101	20
D102	150
D103	40
D104	30

PLC data image

• Screen program transfer

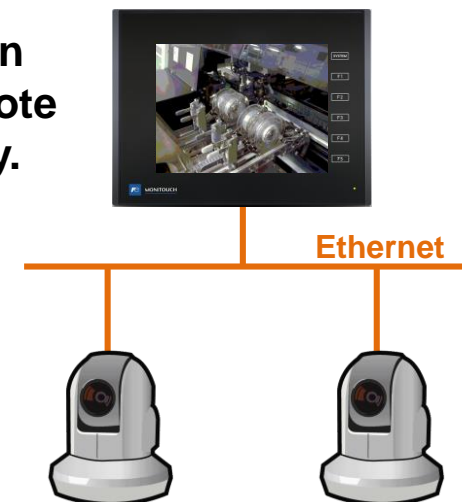
Screen programs are saved in the SD card and transferred without using a PC.

Versatile network functions (only TS2060i)

Compatible with network cameras

Footage from network cameras connected to Ethernet can be displayed on TS2060i and be used for monitoring remote production sites and the whole production line effectively. It is possible for cameras which support move or zoom function to be controlled from TS2060i.

Manufacturer		Type	Protocol
Axis		MOTION-JPEG	HTTP protocol communication (TCP/IP)
Panasonic	BB series		
	BL series		
BANNER	PresencePLUS P4 OMNI	Bitmap (still image)	Dedicated protocol



Compatible with different network protocols

TS2060i can be connected to open networks described in the right table by attaching communication units “CUR-xx”.

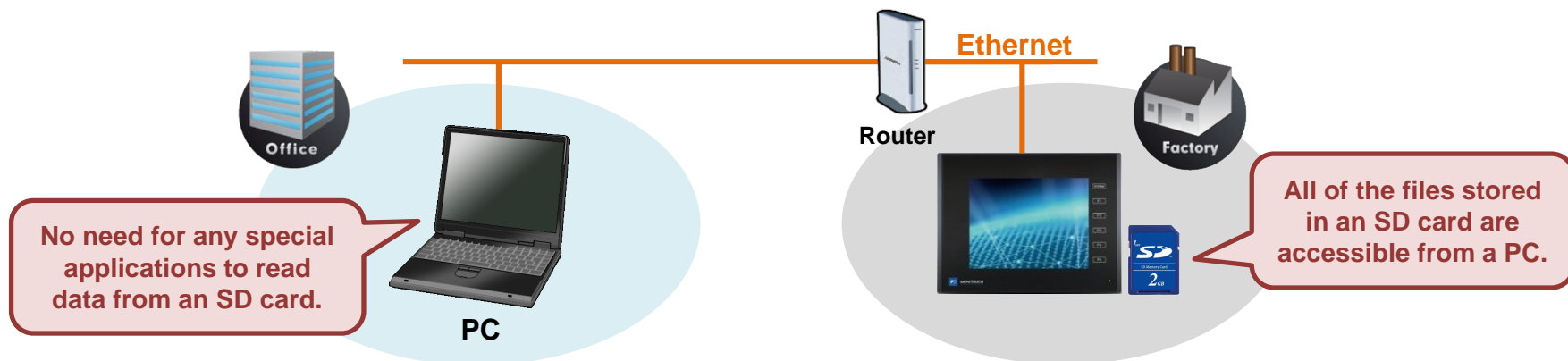


Model name	Network
CUR-00	OPCN-1
CUR-01	T-link
CUR-02	CC-Link
CUR-03	Ethernet
CUR-04	PROFIBUS-DP
CUR-06	SX bus
CUR-07	DeviceNet
CUR-08	FL-net

Versatile network functions (only TS2060i)

FTP server function

Data stored in an SD card of TS2060i in a remote place can be read out and modified.

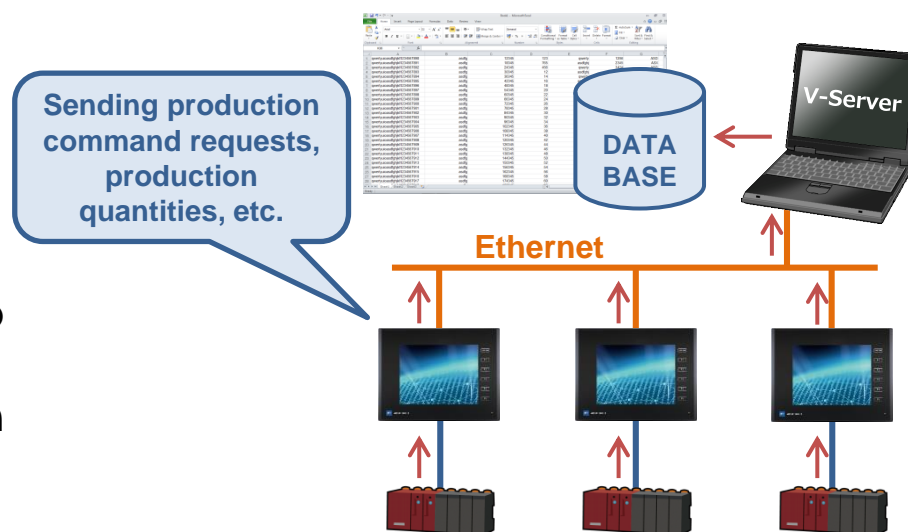


MES interface function

Various kinds of information such as production quantity, number of defective products and cause of production stoppage are sent in SQL from TS2060i to the database via V-Server.

No program is needed for communication with the database.

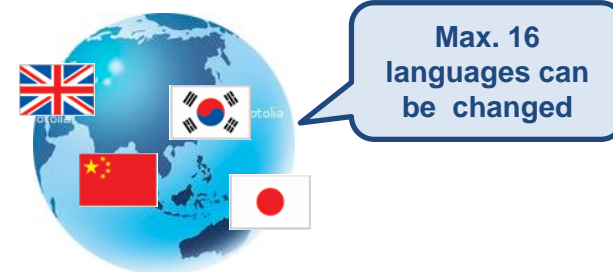
(MES: Manufacturing Execution System)



Functions for User-friendliness

• Multilanguage

You can change the language displayed on the screen to one of 16 languages. You do not need to manage files for each other.



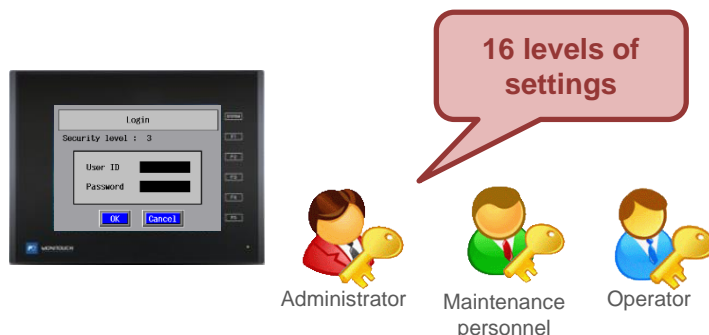
Compatible language fonts

Japanese, English/Western European, Chinese (traditional and simplified), Korean, Central European, Cyrillic, Greek, Turkish and Baltic

(Other languages can be displayed by using Windows fonts.)

• Security function

By setting a function limit according to the user level, a high-security environment can be established.



• Operation log*

You can view log data for operations such as pushing of buttons and entering of values to analyze the causes of failure.



*Only TS2060i

A product line that meets a wide variety of needs

• Special models

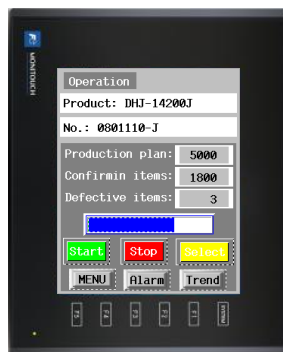
Special models of the TS2000 series are available according to customer needs.

***Please ask our sales department about the delivery and price.**

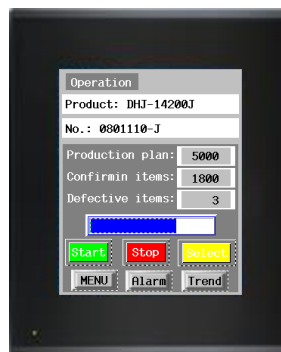
Model	Specifications
TS2060x-U003	Without function switches and “Fe-MONITOUCH” logo
TS2060x-U150	Without “Fe-MONITOUCH” logo
TS2060x-004	Sulfidizing-gas resistant

• Vertical installation

**Vertical screen layout (90° rotation) is available for display and editing.
The viewing angle is 80° and it is easy to see the screen even when it is installed vertically.**



TS2060x



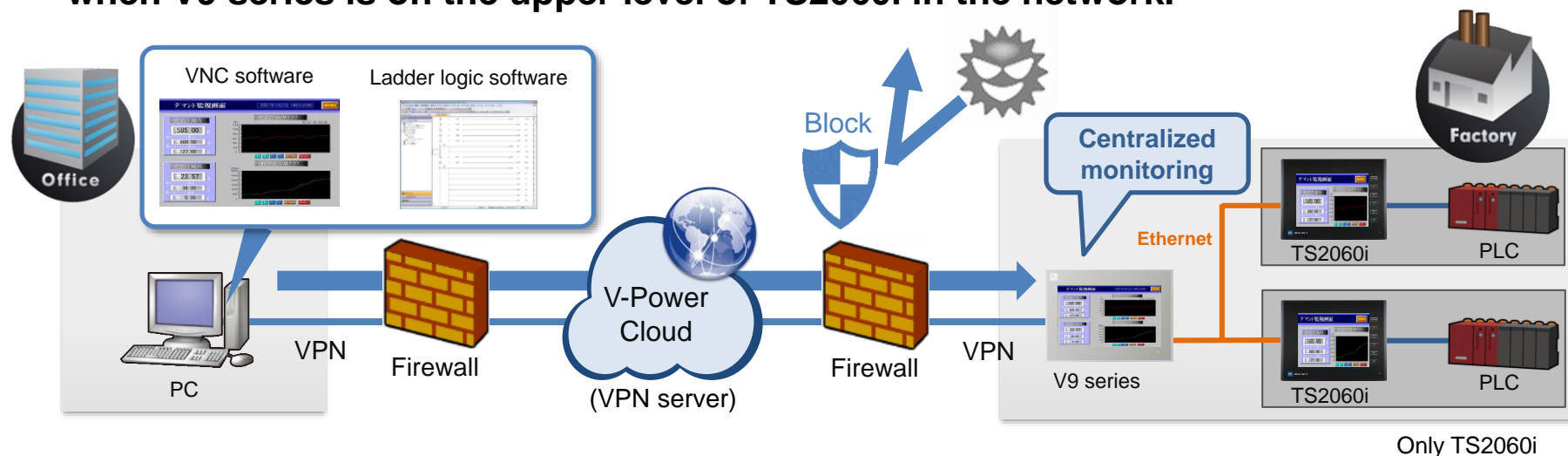
TS2060x-U003

(Without function switches and “Fe-MONITOUCH” logo)

Simple layout with TS2060x-U003 in vertical installation.

VPN remote access system available with V9 series

You can have secure, easy and low cost remote control through VPN when V9 series is on the upper level of TS2060i in the network.



- Announcement of brochures relating to V9 series

MONITOUCH V9 series
About a lineup of V9 series and a wide variety of the functions

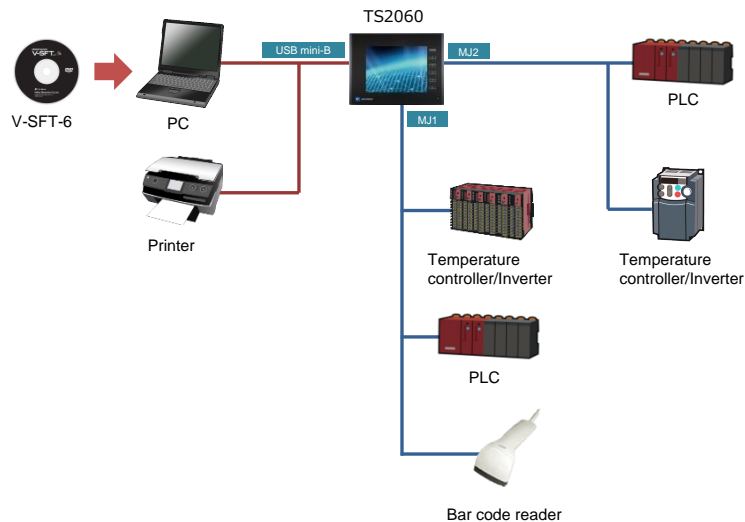


Web Machine Interface
About VPN functions of V9 series and the licenses

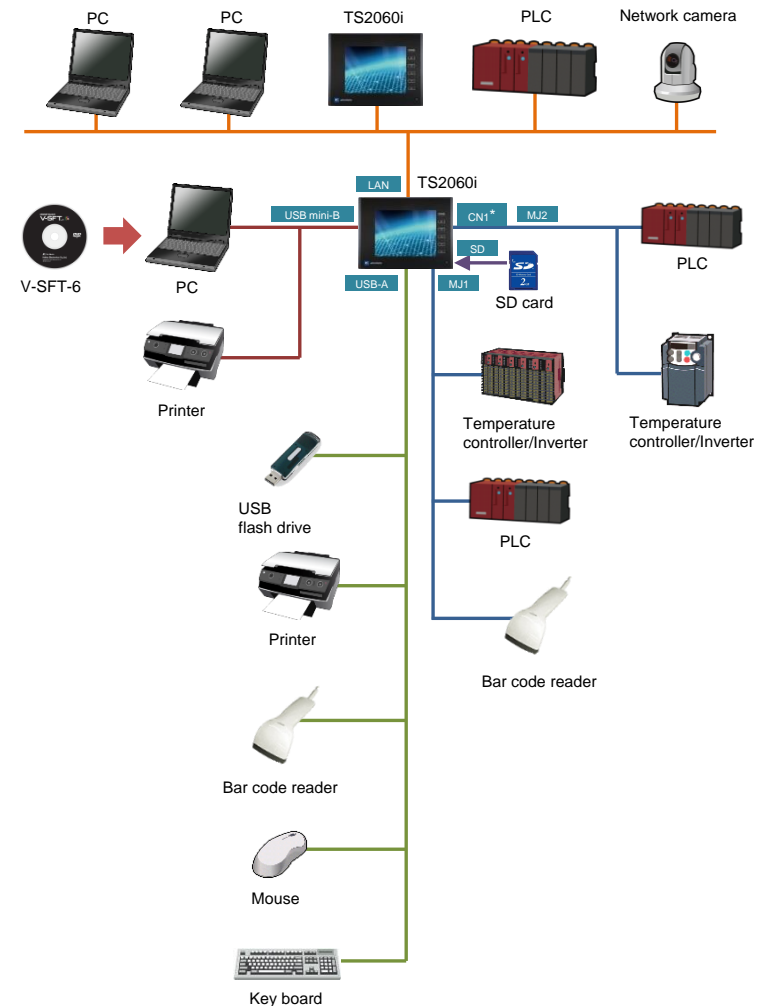


System configuration

- TS2060



- TS2060i



*CN1 is available only when the unit is with "DUR-00".

Optional accessories

- V-SFT-6 (Configuration software)

Compatible OS: Windows XP / XP 64 Edition / Vista (32bit, 64bit)
Win7 (32bit, 64bit) / Win8 (32bit, 64bit)
Win8.1 (32bit, 64bit) / Win10 (32bit, 64bit)



- TC-D9 * (Terminal Converter)

RS-422/ 485 terminal converter to connect DUR-00 and a communication unit



- UA-FR * (USB-A port cable)

Cable to connect to the USB-A (master) port



- V906T-GS, V906T-GSN10

Protection sheet (5 sheets)
Glare type: V906T-GS
Anti-glare type: V906T-GSN10



*Only TS2060i

Model name list

Name	Model name	Description
MONITOUCH	TS2060	Programmable operator interface TECHNOSHOT
	TS2060i	
Configuration software	V-SFT-6	Configuration software Ver. 6 for TS2060 / V8 / V9 series
	V-SFT-5(CD)	Configuration software Ver.5 for TS2060 / V4 to V8 series (to be compatible with TS series in February, 2017)
Optional unit	DUR-00	TS2060i / V907xiW / V9060iTD optional unit
Communication unit (for TS2060i/V9 series)	CUR-00	OPCN-1 (slave)
	CUR-01	T-link (slave)
	CUR-02	CC-Link (slave)
	CUR-03	Ethernet
	CUR-04	PROFIBUS-DP (slave)
	CUR-06	SX bus (slave)
	CUR-07	DeviceNet (slave)
	CUR-08	FL-net
Cable	MJ2-PLC	MJ2-Dsub25 conversion cable
	UA-FR	USB-A extension cable (1m)
Terminal block for communication	TC-D9	Terminal converter for TS2060 / V9 / V8 series
Battery	TS-BT	Replacement battery for TS2060 series
Protection sheet	V906T-GS	TS2060 series / V9060iTD Surface protection sheet
	V906T-GSN10	TS2060 series / V9060iTD Surface protection sheet (Anti-glare)