

Programmable Operator Interface

# MONITOUCH

**Edge-computing accelerates  
the transition to smart production sites**



**X1** STANDARD MODEL  
*Series*

# The X1 series features the broad FA and IT connectivity and flexibility to digitize your factory.

## Integration with IT systems



In addition to the HMI functions for operating and monitoring production machines, the X1 achieves data linkage between FA and higher level IT or cloud systems via OPC UA and MQTT connections.

By connecting with MES and ERP systems, data visualization, improvement of productivity and optimization of production management can be conducted.

## Visibility and User-friendliness



A high speed CPU, high resolution LCD and PCAP touchscreen improve visibility and operability.

A vectorized rendering engine allows for high quality scaling. Beautiful high quality screens can be created regardless of the display resolution.



## Utilization of User Applications



Since Windows is installed, Windows applications and user applications can be used at production sites.

Applications can be run by switches on the HMI display and used freely at production sites.

Data collection, processing and analysis can be conducted between production sites and host systems, contributing to the digitization of your factory.

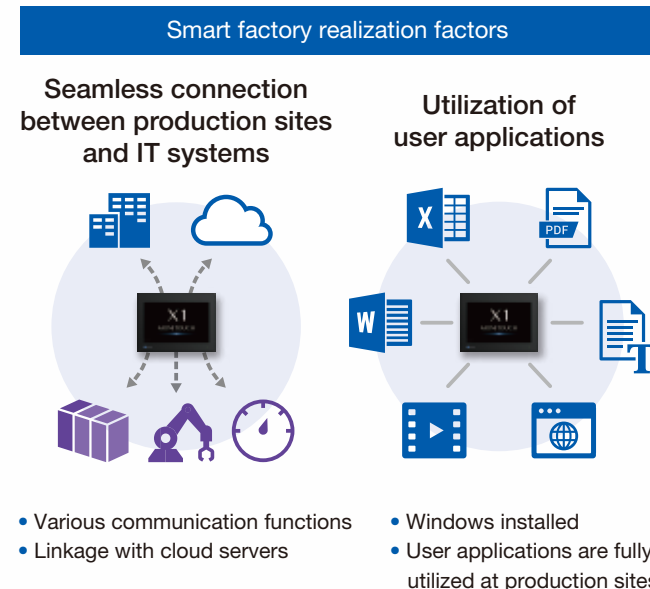
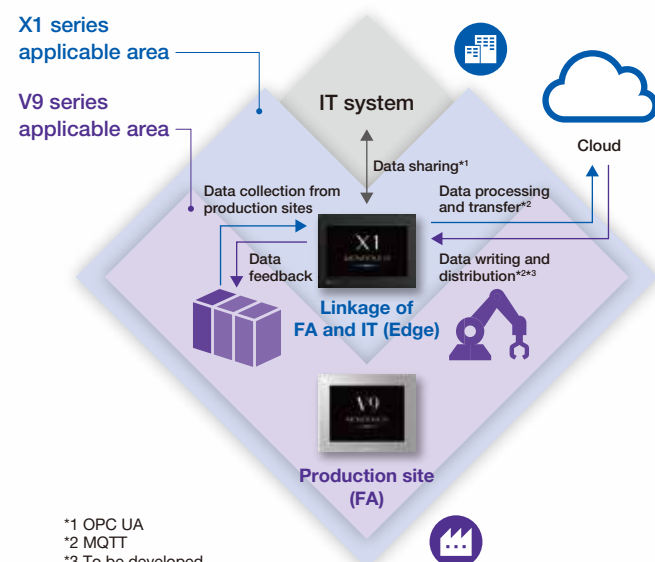
## Inheritance of V-series Screen Assets



Screen assets created for the V-series can be converted for use in the X1 series. The configuration software V-SFT Ver.6 can be used as well.

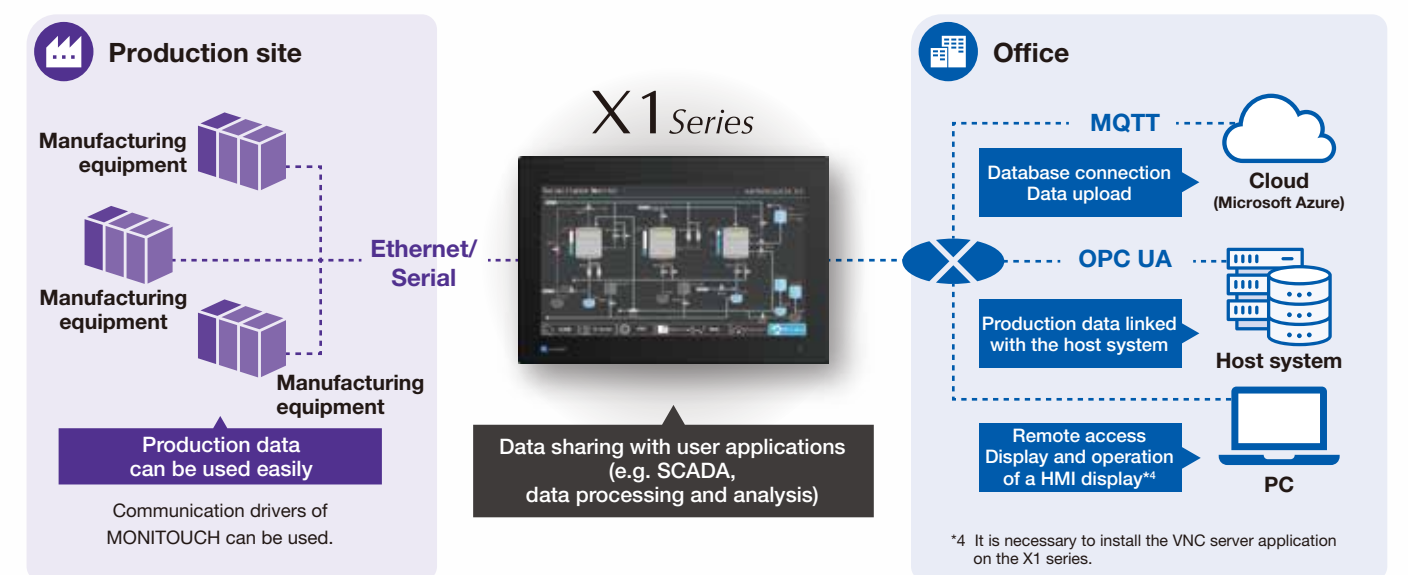
MONITOUCH's highly-developed communication drivers can be used for connection with various equipment without programming.

## Positioning



## Operation Scheme

In addition to the communication and display functions of the MONITOUCH HMI, data processing and analysis are available through connecting with user applications and the host system.

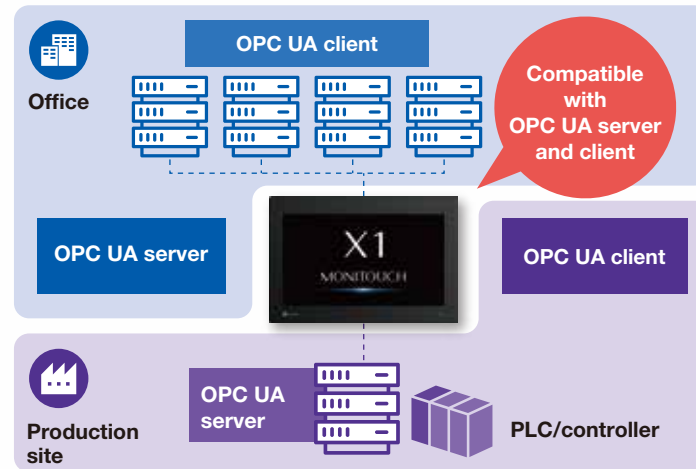




# The X1 series facilitates the implementation of smart factories that effectively utilize data.

## Compatible with OPC UA Server and Client

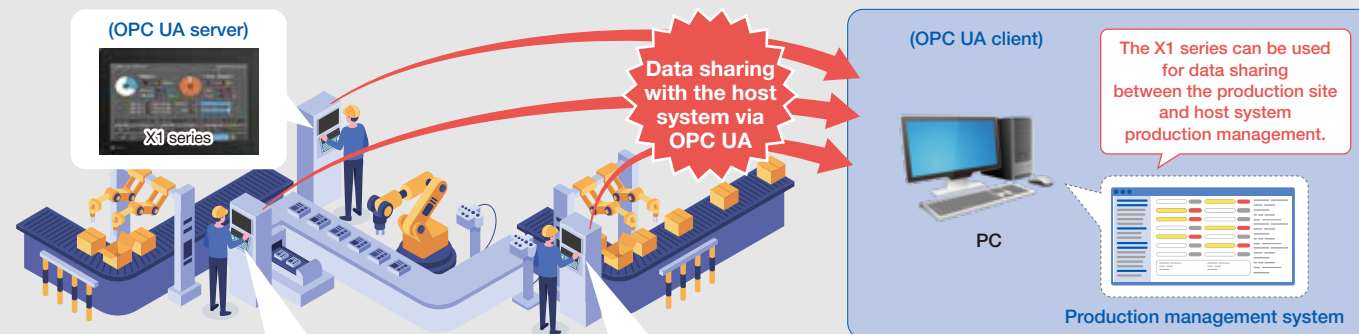
- The X1 series is equipped with OPC UA server and client, so data can be collected by connecting to both offices and production sites.
- Even if devices at the production site are incompatible with OPC UA, the X1 series can fulfil the role of a gateway to OPC UA in order to transfer data to OPC UA clients in the host system.
- OPC UA enables data sharing between production sites and the host system, and facilitates the standardization of equipment.



## Application example

### Workpiece conveyor

The X1 series collects data from multiple machines at production sites and shares it with the host system via OPC UA. This helps to improve productivity and product quality, and it facilitates the standardization of equipment. Adoption of the X1 series for devices equipped with industrial robots adds further value to the robots that contribute to factory automation.



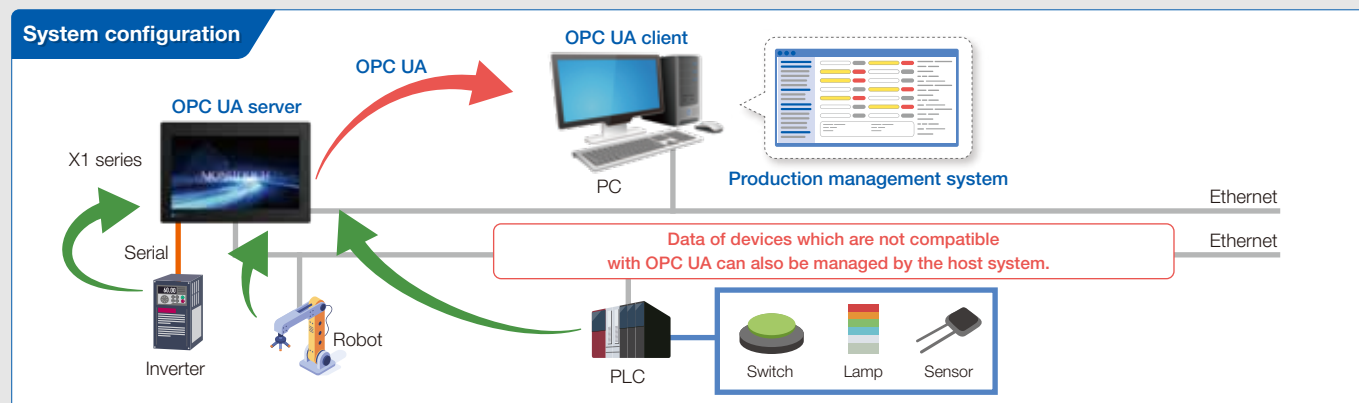
**Engineering tool**

If engineering tools of connected devices are installed, it is possible to edit and monitor the programs of robots or PLCs through the X1 series. Bringing a PC into the production site is no longer necessary.

**Data collection using Excel**

Operation data of transfer robots can be linked to Excel on the X1 via V-Server (our data collection software). Graphs created by Excel can be displayed on the X1 by installing and linking Excel and V-Server.

It is possible to use applications such as Excel on the X1 at the production sites.



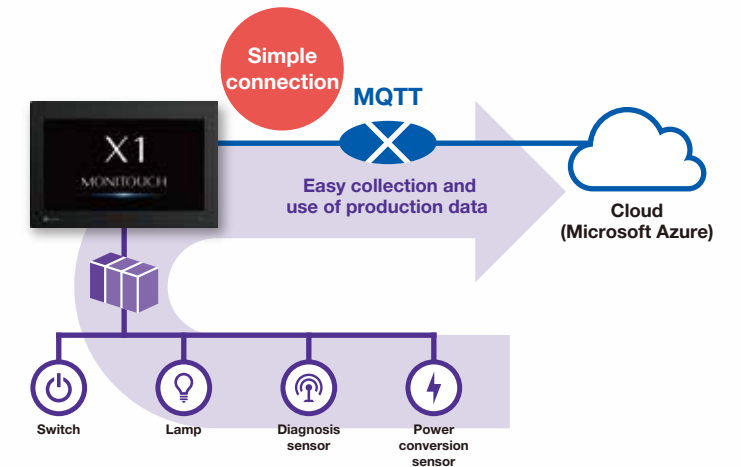
## Cloud (MQTT) Compatible

- Operation data, production data, status data, etc. are sent to the cloud system via MQTT for collection and storage. It contributes to the visualization and improvement of the factory.
- Since the system is linked with the Microsoft Azure platform, various tools and frameworks of the cloud service can be used.

Linkage with Microsoft services via Azure IoT Hub is possible

Visualization, analysis, AI / Machine learning

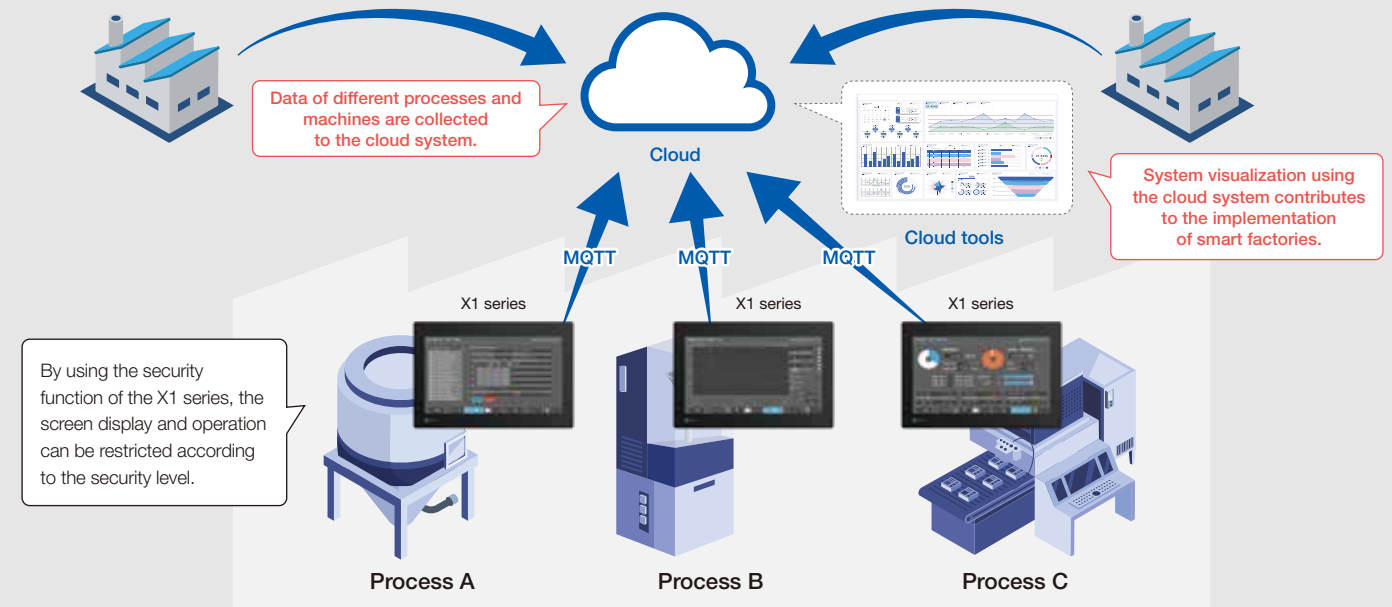
- Visualization
- Progress management
- Diagnosis / Analysis
- Prediction / Status detection
- Cause analysis
- KPI management



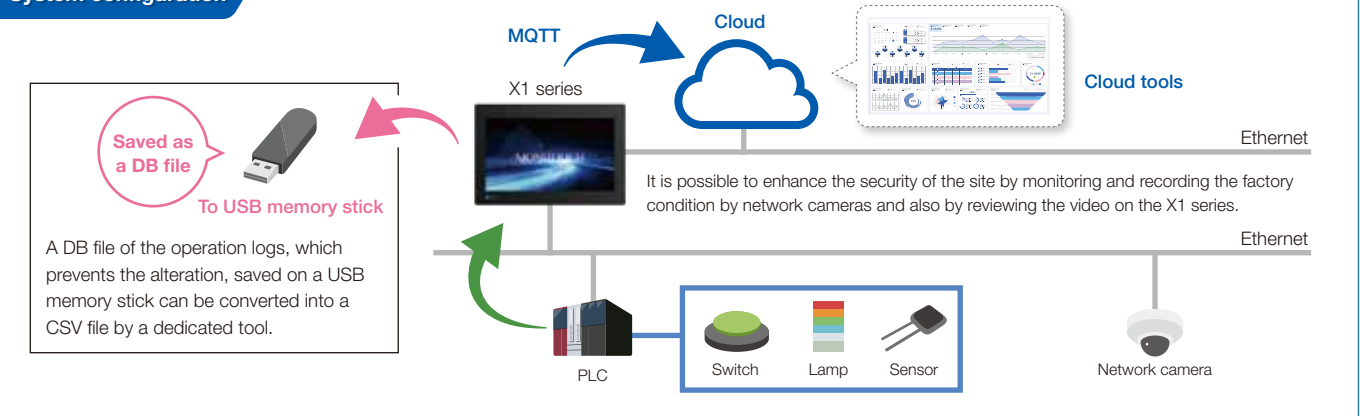
## Application example

### Pharmaceutical equipment

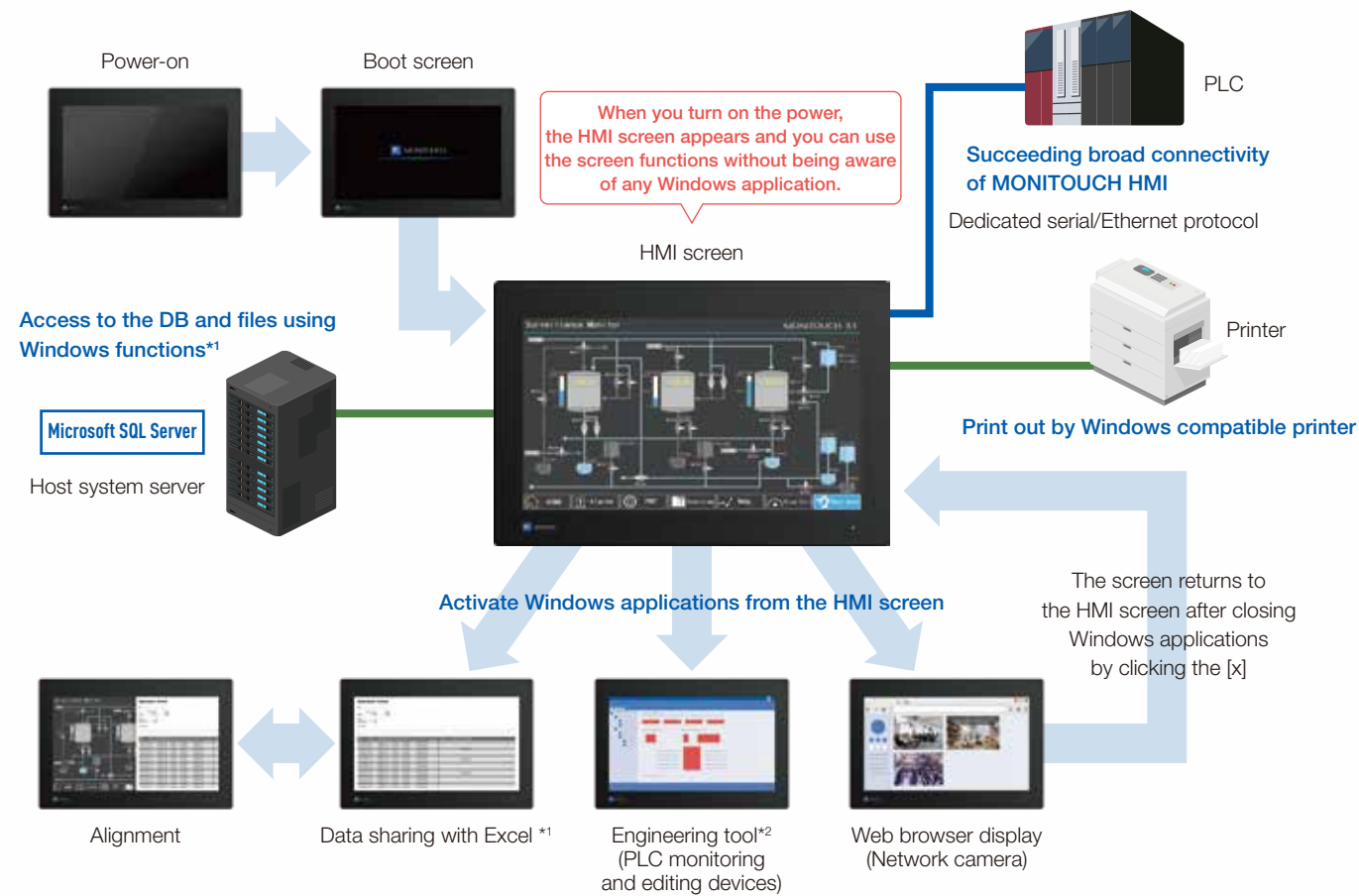
Increased efficiency and improvement of the production system is realized by connecting to the cloud and analyzing, visualizing and identifying trends of the collected data. Besides, it contributes to ensuring the security in pharmaceutical manufacturing by installing the X1 series on pharmaceutical equipment that requires high-level security management.



### System configuration



## Operation



\*1 V-Server (our data collection software) is necessary.  
\*2 Engineering tools of the connected devices are necessary.

## Utilization of User Applications

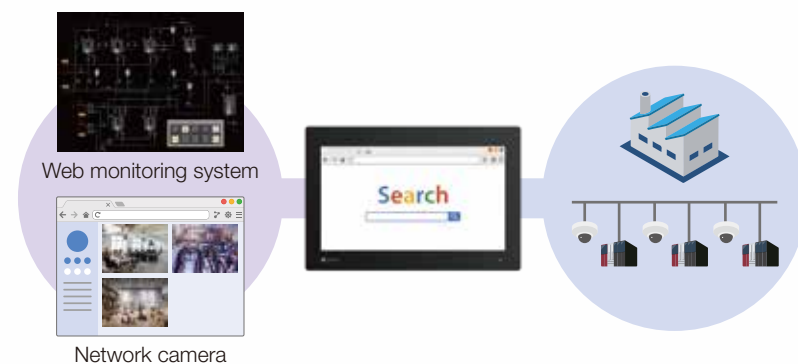


Since Windows is installed on the X1 series, Windows applications can be used, meaning there is no need to bring your computer to the manufacturing site. The display position and window size of the application can also be specified, allowing for operation with a display position and size suited to the X1 series screen layout.

In addition, it is possible to reduce maintenance tasks and the space required for PCs at the production site by integrating PCs with the X1 series.

The X1 series with Windows applications improve versatility and expandability, as well as functioning of HMIs.

## Standardized Web Browser

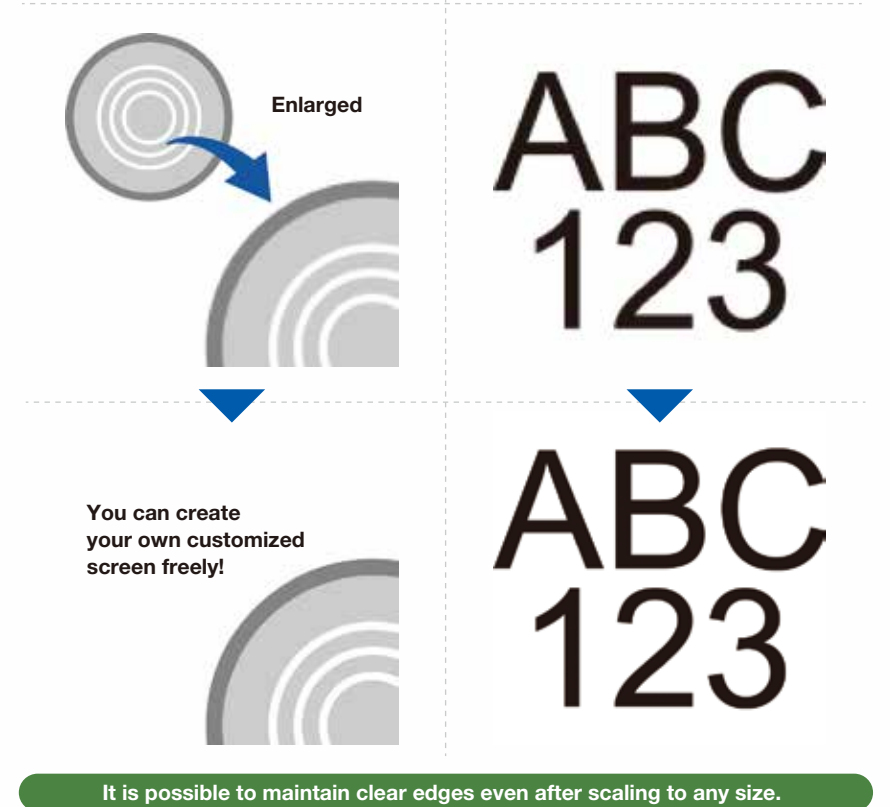
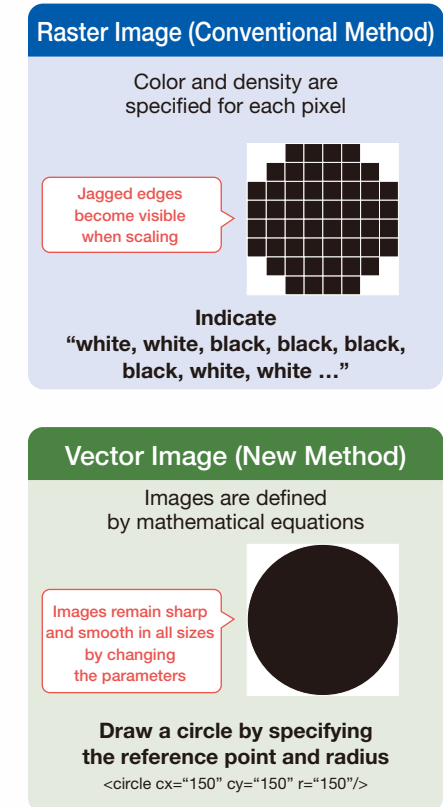


Since the X1 series is equipped with a web browser as standard, it is possible to use the browser function in applications and IT systems.

When combined with a monitoring system or network cameras, it is possible to monitor different machines on the network, and to check each status easily.

## Vector Graphics

Vector graphics enable high quality and tailored screen creation as it allows the enlargement/reduction of parts while maintaining a clear image.

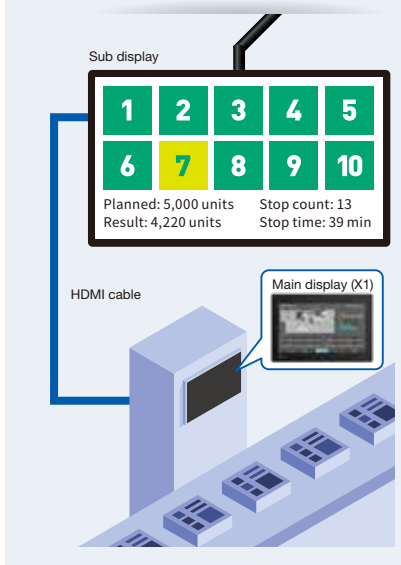


## Multi-Display

Two screens can be used simultaneously, each with independent display and operation. A different screen can be displayed on a large external monitor, or 2-split screen is available. Since the X1 series display and the external display can be positioned in landscape or portrait mode, setups matching the on-site environment and space are possible.

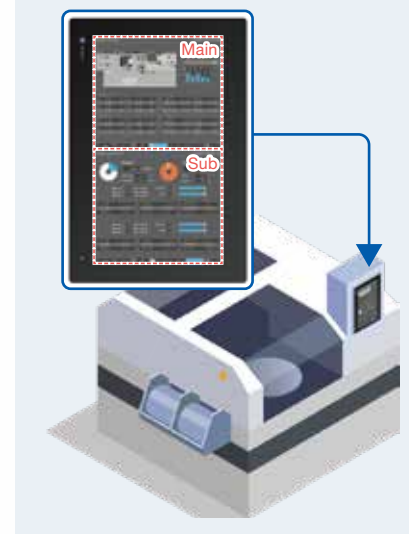
### Andon monitor display

It's possible to visualize the operating status of equipment and share information by displaying details such as production plans and results on an Andon monitor (large display) connected via an HDMI cable. There is no need to prepare a computer for the Andon display; the X1 series alone can display and operate as an HMI as well as displaying information on an Andon monitor.



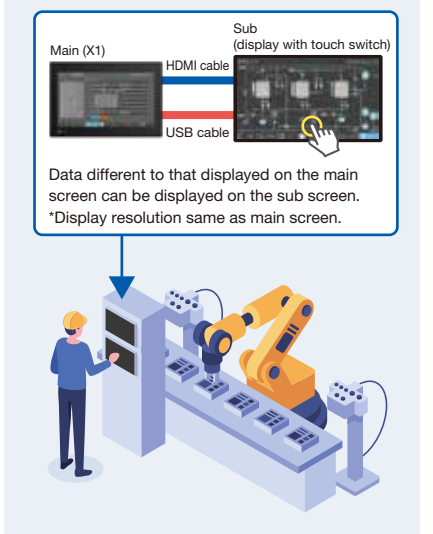
### 2-split screen

Two X1 applications (main & sub) can be run on the X1 series and displayed and operated on the same screen simultaneously by splitting the screen horizontally or vertically. In addition to displaying data from the same or a different screen, it also supports the display of user applications such as engineering tools, displaying information with a high degree of density and freedom.



### Expansion of the display / operation screen

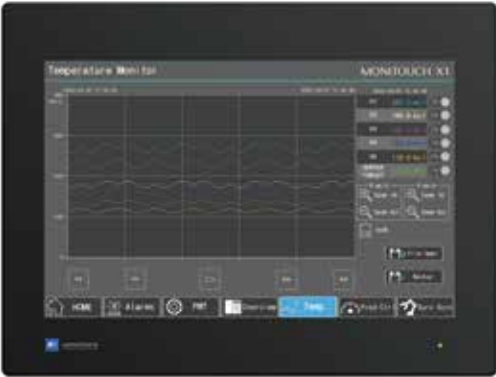
To improve work efficiency, the amount of information that can be checked at one time can be increased by using the X1 series with an external display. Touch operation is also possible on external displays with a touch switch, via connection using a USB cable. One X1 series unit can be used for HMI display and operation equivalent to two units.





The X1 series with Windows performs as a gateway from the production sites to the IT systems. It contributes to efficient communication between the factory and management office or cloud system.

X1121iSD / X1121iSRD

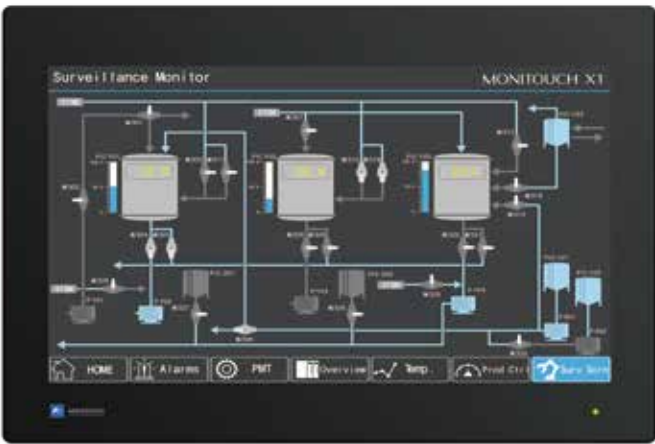


12.1" wide screen Resolution: WXGA 1,280 × 800 Dimensions (W×H×D): 320 × 241 × 66.7 mm

- PCAP (Capacitance)
- 16.7M colors <sup>\*1</sup>
- Ethernet 2ch
- Wireless LAN <sup>\*2</sup>
- Bluetooth <sup>\*2</sup>
- USB-A 3.0×2 2.0×2
- HDMI 1ch
- Serial 1ch
- IP66
- Sound output 1ch

<sup>\*1</sup> Only pictures and 3D parts available for HMI screens <sup>\*2</sup> Only R-type available

X1151iSD / X1151iSRD



15.6" wide screen Resolution: FHD 1,920 × 1,080 Dimensions (W×H×D): 406 × 271 × 68.2 mm

Model X1  1iS D

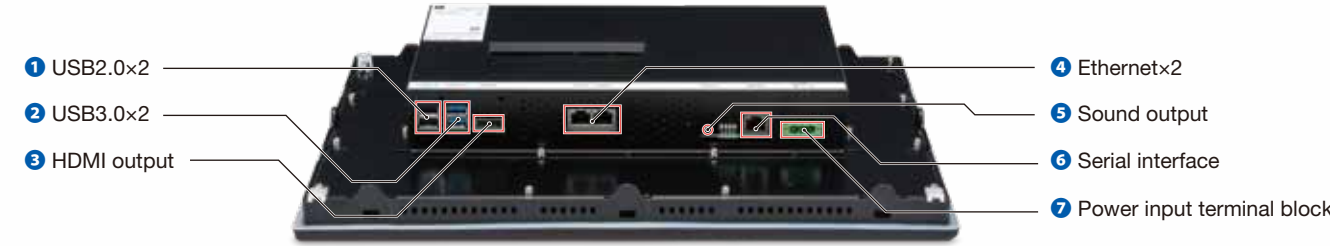
Display size  
12: 12.1" wide screen  
15: 15.6" wide screen

Functions  
R: with WLAN and Bluetooth  
N/A: without WLAN and Bluetooth

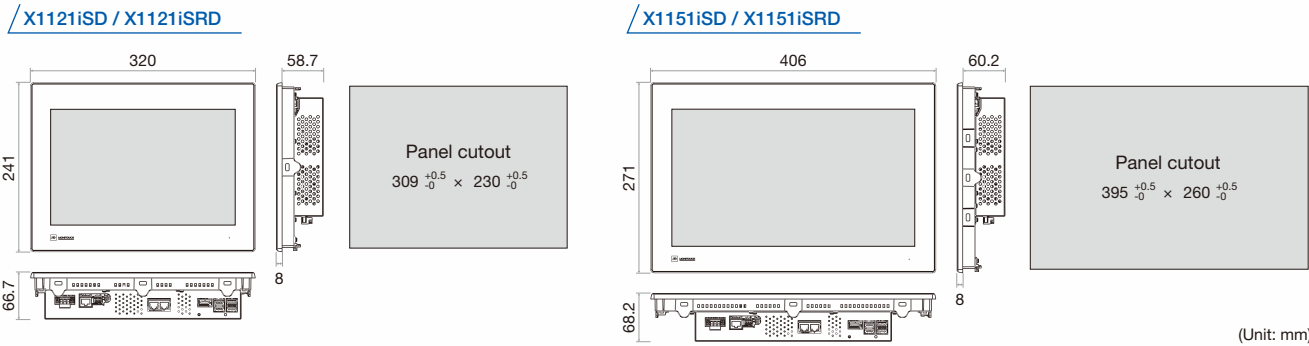
General Specifications

Item		X1121iSD	X1121iSRD	X1151iSD	X1151iSRD
Power Supply	Rated Voltage	DC24V			
	Permissible Range of Voltage	±10%			
	Permissible Momentary Power Failure	Within 1ms			
	Power Consumption (Max. Rating)	41W or less		51W or less	
	Rush Current	24A or less, 6ms (Ambient temperature 25°C)			
Insulation Resistance		Between DC external terminal and FG: DC500V 10MΩ or higher			
Physical Environment	Ambient Temperature	0 to 45°C			
	Ambient Humidity	85%RH or less (without dew condensation, max. wet-bulb temperature: 39°C or lower)			
	Operating Altitude	2,000m or less			
	Operating Atmosphere	No exposure to corrosive gas or conductive dust			
	Storage Ambient Temperature	-10 to 60°C			
	Storage Ambient Humidity	85%RH or less (without dew condensation, max. wet-bulb temperature: 39°C or lower)			
	Contamination Level	2			
Mechanical Operating Conditions	Resistance to Oscillation	JIS B 3502 (IEC61131-2) compliant Vibration frequency: 5 to 9 Hz, Half amplitude: 3.5 mm, 9 to 150 Hz, Constant acceleration 9.8 m/s² (1G) X, Y, Z: 3 directions (10 times each)			
	Resistance to Shock	JIS B 3502 (IEC61131-2) compliant Peak acceleration: 147 m/s² (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 (by noise simulator)			
	Resistance to Static Discharge	Complies with IEC61000-4-2, contact: 6kV, air: 8kV			
Installation Conditions	Grounding	D class grounding (3 <sup>rd</sup> -class grounding) FG/SG is internally connected in the X1 series.			
	Protection Structure	Front case: IP66 (when water-proof gasket is used), Rear case: IP20			
	Cooling System	Natural air cooling			
	Dimensions W*H*D (mm)	320 × 241 × 66.7 mm		406 × 271 × 68.2 mm	
	Panel Cutout (mm)	309 × 230 mm		395 × 260 mm	
	Weight	Approx. 3.2 kg		Approx. 3.9 kg	
Case	Color	Black			
	Material	PBT and GF30 resin (front part)			

Interface Various interfaces for achieving edge-computing



Dimensions and Panel Cutout



Performance Specifications

Item		X1121iSD	X1121iSRD	X1151iSD	X1151iSRD
Hardware	Processor	Intel Atom® x5-E3940			
	Number of Cores / Number of Threads	4/4			
	Main Memory	4GB			
	Internal Storage	SSD(3D NAND): 64GB (free space 30GB)			
Software	OS	Windows 10 IoT Enterprise 2019 LTSC (64bit)			
Display	Display Device	TFT color			
	Resolution	WXGA: 1,280 × 800		FHD: 1,920 × 1,080	
	Display Size	12.1" widescreen		15.6" widescreen	
	Colors	16.7 million colors (for HMI screens, pictures and 3D parts only)			
	Contrast Ratio	1,000:1			
	Backlight	LED			
	Backlight Life	Approx. 50,000 hours			
Touch Switch		PCAP (Capacitive type)			
External Interface	Ethernet (RJ-45) × 2	10BASE-T/100BASE-TX/1000BASE-T			
	Serial Port (RJ- 45) × 1	Asynchronous: RS-232C/RS-422/RS-485 (switchable) Data length: 7, 8 bits Parity: Even, odd, none Stop bit: 1, 2 bits Baud rate: 4800, 9600, 19200, 38400, 57600, 76800, 115200 bps			
	USB-A Ver. 3.0 × 2	Ver.3.0 (Low speed: 1.5Mbps, Full speed: 12Mbps, High speed: 480Mbps, Super speed: 5.0Gbps)			
	USB-A Ver. 2.0 × 2	Ver.2.0 (Low speed: 1.5Mbps, Full speed: 12Mbps, High speed: 480Mbps)			
	Sound Output (AUDIO) × 1	3.5φ stereo mini jack, line output			
	Wireless LAN (WLAN)	—	1 × WLAN IEEE 802.11 ac/a/b/g/n	—	1 × WLAN IEEE 802.11 ac/a/b/g/n
	Bluetooth	—	1 × Bluetooth	—	1 × Bluetooth
	HDMI	1,280 × 800		1,920 × 1,080	
	Clock	Backup Period	3 years (Ambient temperature 25°C)		
Standard	CE Marking	Compatible			
	UL / cUL	UL61010-1/UL61010-2-201			
	KC	Compatible			
	Radio Act <sup>*1</sup>	Japan: MIC, USA: FCC, Canada: ISED, Europe: RED, South Korea: KC, Taiwan: NCC			

<sup>\*1</sup> Models with wireless LAN only.

## Configuration Software

Achieve Sleeker Screens with Simple, Easy-to-Understand Operations



### V-SFT Ver. 6

Computer	PC/AT compatible computer running Windows
OS*	Windows Vista(32bit, 64bit)/Windows 7(32bit, 64bit)/Windows 8(32bit, 64bit)/Windows 8.1(32bit, 64bit)/Windows 10(32bit, 64bit)/Windows 11 (64bit)
CPU	Pentium 4 2.0 GHz or higher is recommended
Memory	1.0 GB or higher (2.0 GB or higher is recommended)
Hard disk	When installed: 4.0 GB or higher
Disc drive	DVD-ROM drive
Display	1024 x 768 (XGA) resolution or higher
Display colors	High color (16 bits) or higher
Others	Microsoft .NET Framework 4.0 or 4.5 (Microsoft .NET Framework 4.0 is installed automatically on computers that do not have either Microsoft .NET Framework 4.0 or 4.5 installed.)

\*Administrator privileges are required for installation.

## Vector format SVG parts are installed as standard

Since vector format SVG parts are provided with the unit, image quality is maintained regardless of scaling. Beautiful high quality screens can be created.



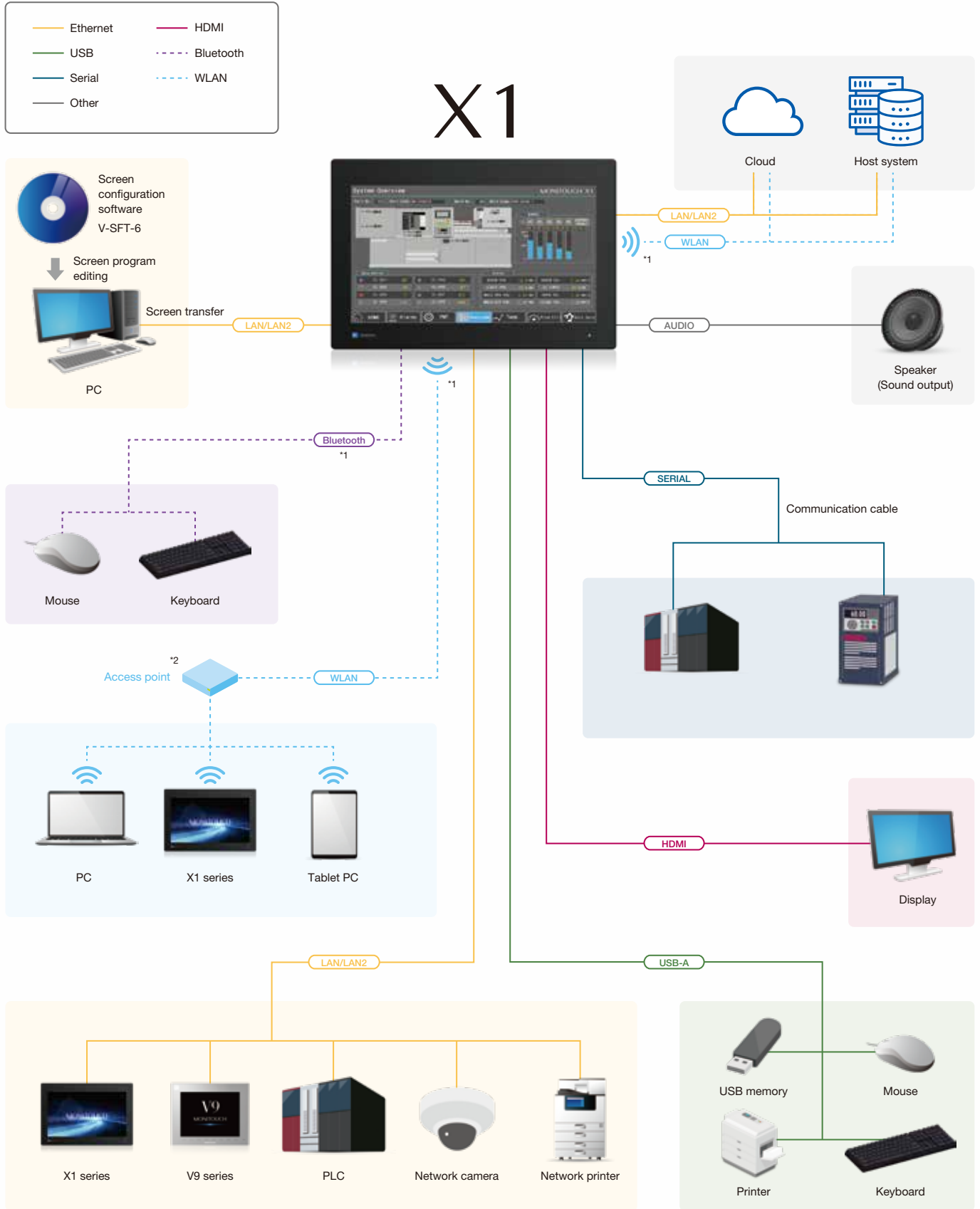
## Product List

Model	Display Size	Resolution	Specifications		
			Touch Switch	Wireless LAN	Bluetooth
X1121SD	12.1" wide screen	1,280 × 800	PCAP (Capacitive type)	-	-
X1121SRD				✓	✓
X1151SD	15.6" wide screen	1,920 × 1,080		-	-
X1151SRD				✓	✓

## Optional Accessories List

Model	Description
V-SFT-6	Configuration software for MONITOUCH Ver.6
X1-BT	Replacement lithium battery for X1 series
X1-SS	Security software for X1 series

## System Configuration



\*1 Models with wireless LAN only.

\*2 An access point is necessary.

Industry-leading number of connectable equipment

\* According to our own research

# Outstanding connectability with multiple devices for simultaneous communication and data transfer

## PLC Connection

Manufacturer	Models
Fuji Electric	MICREX-F series
	MICREX-F series V4 Compatible
	SPB (N mode) & FLEX-PC series
	SPB (N mode) & FLEX-PC CPU
	MICREX-SX SPH/SPB/SPM/SPE/SPF series
	MICREX-SX SPH/SPB/SPM/SPE/SPF CPU
	MICREX-SX (Ethernet)
Allen-Bradley	PLC-5
	PLC-5(Ethernet)
	SLC500
	SLC500 (Ethernet TCP/IP)
	NET-ENI (SLC500 Ethernet TCP/IP)
	NET-ENI (MicroLogix Ethernet TCP/IP)
	MicroLogix
	MicroLogix(Ethernet TCP/IP)
	ControlLogix/CompactLogix
	ControlLogix/CompactLogix Tag
	ControlLogix/CompactLogix(Ethernet)
	ControlLogix/CompactLogix Tag(Ethernet TCP/IP)
	Micro800 Controllers
	Micro800 Controllers Tag
	Micro800 Controllers(Ethernet TCP/IP)
	Micro800 Controllers Tag(Ethernet TCP/IP)
	Direct LOGIC(K-Sequence)
Automationdirect	Direct LOGIC(Ethernet UDP/IP)
	Direct LOGIC(MODBUS RTU)
	Direct LOGIC(MODBUS RTU)
	Direct LOGIC(MODBUS RTU)
Azbil	MX series
Baumuller	BMx-x-PLC
BECKHOFF	ADS Protocol(Ethernet)
Tag ADS Protocol(Ethernet)	
CIMON	BP Series
	CP Series
	XP Series
	S Series
	S Series (Ethernet)
	CP3E
DELTA	DVP series
	DVP-SE(MODBUS ASCII)
	DVP-SE(MODBUS TCP/IP)
	DVP-SE(MODBUS TCP/IP)
EATON Outler-Hammer	ELC
EMERSON	EC10/EC20/EC20H (MODBUS RTU)
FANUC	Power Mate
FATEC AUTOMATION	FACON FB series
FESTO	FEC
FUFENG	APC Series Controller
GE Fanuc	90 series
	90 series (SNP-X)
	90 series (SNP)
	90 series(Ethernet TCP/IP)
Hitachi	RX3i (Ethernet TCP/IP)
	HIDIC-S10/2alpha,S10mini
	HIDIC-S10/2alpha,S10mini(Ethernet)
	HIDIC-S10/4alpha
	HIDIC-S10/ABS
	iQ-R series(Built-in Ethernet)
Hitachi Industrial Equipment Systems	HIDIC-S10V (Ethernet)
	HIDIC-H <sup>*1</sup>
	HIDIC-H (Ethernet)
HIDIC-EHV <sup>*1</sup>	
HYUNDAI	HIDIC-EHV (Ethernet)
	HIDIC-EHV (Ethernet)
H4 Robot (MODBUS RTU)	
IDEC	Hi5 Robot (MODBUS RTU)
	Hi4 Robot (MODBUS RTU)
	MICRO3
	MICRO Smart
MICRO Smart pentra	
MICRO Smart (Ethernet TCP/IP)	
JTEKT	TOYOPUC
	TOYOPUC (Ethernet)
	TOYOPUC (Ethernet TCP/IP)
	TOYOPUC-Plus
	TOYOPUC-Plus (Ethernet)
	TOYOPUC-Nano (Ethernet)
KEYENCE	KZ series link
	KZ/KV series CPU
	KZ24/300 CPU
	KV10/24 CPU
	KV-700
	KV-700(Ethernet TCP/IP)
	KV-1000
	KV-1000(Ethernet TCP/IP)
	KV-1000(Ethernet TCP/IP)
	KV-1000(Ethernet TCP/IP)

Manufacturer	Models
KEYENCE	KV-3000/5000
	KV-3000/5000(Ethernet TCP/IP)
	KV-7000/8000(Ethernet TCP/IP)
	KV Nano
KV Nano (Ethernet TCP/IP)	
KOYO ELECTRONICS INDUSTRIES	SU/SG
	SU/SG(K-Sequence)
	SU/SG(MODBUS RTU)
	SU/SG(MODBUS RTU)
LS	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/XGK series (Ethernet)	
MITSUBISHI ELECTRIC	A series link
	QnA series link
	QnA series(Ethernet)
	QnH(Q) series link
	QnH(Q) series CPU
	QnU series CPU
	QX0J/00/01 CPU
	QnH(Q) series(Ethernet)
	QnH(Q) series link (Multi CPU)
	QnH(Q) series (Multi CPU) (Ethernet)
QnH(Q) series CPU (Multi CPU)	
QnH(Q) series(Ethernet ASCII)	
QnU series(Built-in Ethernet)	
QnU series(Multi CPU) (Built-in Ethernet)	
QnU series(Built-in Ethernet ASCII)	
L series link	
L series(Built-in Ethernet)	
L series CPU	
FX series CPU <sup>*2</sup>	
FX2N/1N series CPU	
FX1S series CPU	
FX series link(A protocol)	
FX-3U/3UC/3G series CPU	
FX-3U/3GE series(Ethernet)	
FX-3U/3UC/3G series link(A protocol)	
FX-5U/5UC series	
FX-5U/5UC series(Ethernet)	
Alink + Net10	
Q170MCPU(Multi CPU)	
Q170 series(multi CPU)(Built-in Ethernet)	
Q170 series(Multi CPU) (Ethernet)	
iQ-R series(Built-in Ethernet)	
iQ-R serieslink	
iQ-R series(Ethernet)	
MODICON	Modbus RTU
	Modbus RTU
MOELLER	PS4
	PS4
OMRON	SYSMAC C
	SYSMAC CV
	SYSMAC CS1/CJ1/CJ2
	SYSMAC CS1/CJ1/CJ2 DNA
	SYSMAC CS1/CJ1/CJ2/CP series(Ethernet)
	SYSMAC CS1/CJ1/CJ2/CP series(Ethernet Auto)
	SYSMAC CS1/CJ1/CJ2/CP series DNA(Ethernet)
	NJ Series (EtherNet/IP)
	FP Series(RS232C/422)
	FP Series(TCP/IP)
FP Series(UDP/IP)	
FP-X(TCP/IP)	
FP7 Series(RS232C/422)	
FP7 Series(Ethernet)	
NX7/NX Plus Series(70P/700P/CCU+)	
N7/NX Series(70/700/750/CCU)	
NX700 Series(Ethernet)	
X8 Series	
X8 Series(Ethernet)	
PCD S-BUS(Ethernet)	
SAIA	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
	PCD S-BUS(Ethernet)
SAMSUNG	SPC series
	SPC series
	SPC series
	SPC series
	SPC series
	SPC series
	SPC series
	SPC series
	SPC series
	SPC series

As of May 2022

Manufacturer	Models
SAMSUNG	N_plus
	SECNET
SHARP	JW series
	JW100/70H COM port
	JW20 COM port
	JW series(Ethernet)
	JW300 series
	JW311/312/321/322 series(Ethernet)
	JW331/332/341/342/352/362 series(Ethernet)
	MASTER-KxxxS
	MASTER-KxxxS CNET
	MASTER-K series(Ethernet)
Siemens	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/XGK series (Ethernet)
	XGT/XGK series (Ethernet)
	XGT/XGK series (Ethernet)
SINFONA TECHNOLOGY	SELMART
	SELMART
TECO	TP03(MODBUS RTU)
	TP03(MODBUS RTU)
TOSHIBA	T series/V series(T compatible)
	T series/V series(T compatible)(Ethernet UDP/IP)
TOSHIBA MACHINE	EX series
	nv series(Ethernet UDP/IP)
TOYO DENKI	TC200
	TC200
TURCK	µGPCsx series
	µGPCsx series (Ethernet)
Ultra Instruments	µGPCsx series (Ethernet)
	µGPCsx series (Ethernet)
UNITRONICS	BL Series Distributed I/O(MODBUS TCP/IP)
	UIC CPU(MODBUS ASCII)
VIGOR	M90/M91/Vision Series(ASCII)
	Vision Series(ASCII) Ethernet TCP/IP
WAGO	M series
	M series
XINJE	750 series(MODBUS RTU)
	750 series(MODBUS Ethernet)
Yaskawa Electric	XC Series(MODBUS RTU)
	XC Series(MODBUS Ethernet)
MEMOBUS	CP9200SH/MP900
	MP2300(MODBUS TCP/IP)
	CP/MP EXPANSION MEMOBUS (UDP/IP)
	MP2000 series
	MP2000 series(UDP/IP)
	MP3000 series
	MP3000 series (Ethernet UDP/IP)
	MP3000 series EXPANSION MEMOBUS (Ethernet)
	MP3000 series EXPANSION MEMOBUS (Ethernet)
	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)
	FA-M3/FA-M3R(Ethernet TCP/IP ASCII)
	FA-M3V
	FA-M3V(Ethernet )
	FA-M3V(Ethernet ASCII)



# Worldwide service network for trouble-free operations

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Global Sales Network

Our distributors are ready to support your worldwide business.

[www.monitouch.com/site/distributors-e/distributors-oversea-01.html](http://www.monitouch.com/site/distributors-e/distributors-oversea-01.html)



To the purchasers:

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 Fuji Electric/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 our 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 Fuji Electric/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 Fuji Electric/Hakko Electronics product.
  - 4) The malfunction occurs due to an alteration or repair that was not performed by Fuji Electric/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 Fuji Electric/Hakko Electronics are 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 Fuji Electric/Hakko Electronics or our 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 Fuji Electric/Hakko Electronics.

## 2 Liability for Opportunity Loss

Regardless of the time of occurrence, Fuji Electric/Hakko Electronics are not liable for damage caused by factors that Fuji Electric/Hakko Electronics are not responsible for, opportunity loss on the part of the purchaser caused by the malfunction of a Fuji Electric/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 Fuji Electric/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 Fuji Electric/Hakko Electronics or our 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. Fuji Electric/Hakko Electronics are 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 Fuji Electric/Hakko Electronics or our 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 Fuji Electric/Hakko Electronics product is purchased. Please consult your local supplier or Fuji Electric/Hakko Electronics for details.



### Operating system and performance guarantee

- The X1 series is equipped with Microsoft's Windows 10 IoT Enterprise 2019 LTSC. Fuji Electric/Hakko Electronics shall not be held responsible for any damages resulting from problems caused by Microsoft products. For problems and specifications of Microsoft products, refer to Microsoft's user manual or contact Microsoft support in your country.
- You can operate your own Windows applications on the X1 series. However, we will not guarantee the performance of applications installed by the customer. Please use them after verifying the performance.





## 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

- Appearance and specifications are subject to modification without prior notice due to technical improvements.
- Colors in the catalog may differ from the actual colors due to printing inaccuracies.
- Consult your distributor or us for further information about products in this catalog.

**[www.monitouch.com](http://www.monitouch.com)**

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Distributor

\* Product specifications and design are subject to modification.

\* Combined images are used for the screen images.

\* Product colors may differ from colors in brochure photos due to printing.

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