

## Gateway with Touch Panel Accelerate DX in Manufacturing!

Contributing to the resolution of various issues

Add on to equipment for data collection  
In the PLC without the Ethernet

### Production site data collection

- For collecting data from PLCs of multiple manufacturers in existing equipment.
- There is existing PLC without the Ethernet port.
- There is a PC board produced in our company.
- For separating office and factory LANs.

Send data from equipment and production site  
Reading and writing to various databases

### Sending data to higher-level system

- For compatibility with European standard OPC UA
- For SQL access to databases
- For use of external servers (cloud)
- To use the memory media during until higher-level systems construction

Data collection

Data transferring

Solved with WH!

Visualization

Report creation

Real-time production site signage  
Screen sharing in the production site and an office

### Visualization / Monitoring

- For remote surveillance and monitoring
- For implementing production site signage without using PC
- I want to be notified of abnormalities even when not looking at the monitor screen.
- I want to create a monitoring screen, but I lack drawing skills. It also takes a lot of man-hours.
- I want to let me know by E-mail.

### Ledger creation

Even in cell production processes without the use of PLC

### Ledgers / Daily reports creation

- For switching to automated ledgers creation in order to avoid handwritten mistakes
- For simplify the creation of daily reports even in processes without PLC
- I want to store ledgers in PDF. I want to digitize it.



## Data collection

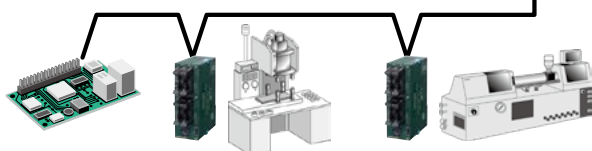


### Collection and storage of production site data

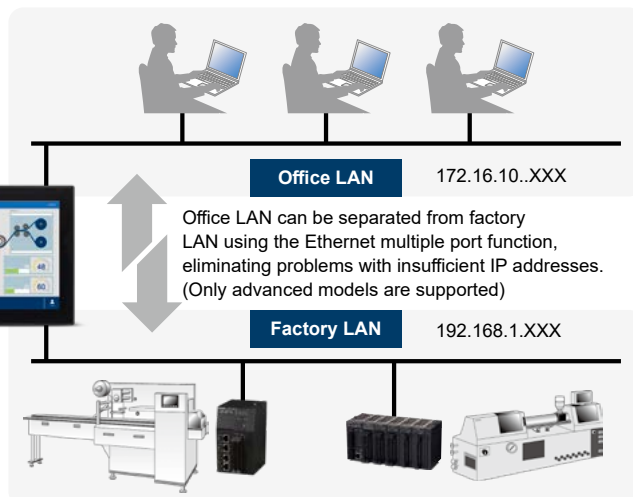
**International standard IEC 61131-3 compliant, Global variable imports**

By importing a PLC's global variable file, there is no need to set tags in WH, making loading data simple.

**Data can be collected from existing PLC without the Ethernet via RS-232C or RS-485 serial communication.**



**Data can be collected from the microcomputer board using general-purpose serial communication and JavaScript program.**



**Supports the protocol of major PLC manufacturers  
Data collection is performed without program coding.**

\*Please refer to "Supported protocols" on back.



## Visualization



### Visualization / Monitoring

#### Gateway with touch panel

- Real-time visualization production site.
- It is available for use as signage with a lineup of up to 21.5 inches in size.

#### Production site can be checked from anywhere

- Even in a remote location, if you have a browser, you can share the same screen as the site and visualize it.
- Web server screen viewing is OK, if you have a browser on the PC. No special software required.

#### Share the same screen as the production site

- The screen for the touch panel drawn with the tool software **xAscender Studio** can be used as it is as a monitoring screen for the Web server. Full-fledged Web server screens can also be created without need for HTML knowledge.

#### Quickly notify by E-mail

- Operators want to know as soon as possible when an abnormality occurs. Even if do not see the monitor screen, you will be notified immediately to a PC or smartphone by E-mail. It is possible to create a message according to the content of the a momentary stop or error, and attach a screenshot of screen at the timing of the occurrence. It accelerates recovery and contributes to reducing downtime.





# Data transferring



## Sending data to higher-level system

Supports OPC UA that is expanding globally due to Industry 4.0	<b>Server/Client function</b> <ul style="list-style-type: none"> <li>It is supported the connection with the OPC UA server by OPC UA client function</li> <li>Collect data from edge devices and receive production data from higher-level system</li> </ul>	<b>OPC UA</b> 
Write directly to the database with SQL	<ul style="list-style-type: none"> <li>It is available for access for a database directly in <b>xAscender Studio</b> (Ver.4.5 or later) Supported databases: MS SQL Server, MySQL, PostgreSQL, Maria DB, MS Access (reading)</li> <li>Supports Japanese data such as product and error names Supported databases: MySQL, PostgreSQL, Maria DB</li> </ul>	<b>SQL DB</b> 
Data management in the cloud / Easy connection to AWS, etc.	<ul style="list-style-type: none"> <li>Data transmit to a cloud in MQTT protocol</li> <li>Connection to clouds such as AWS (Amazon Web Service) can be set up without programming on a dedicated screen.</li> </ul>	<b>MQTT AWS</b> 
FTP client support	<ul style="list-style-type: none"> <li>Transfer CSV of logged data or PDF created forms to higher-level FTP servers (FTP server function is also supported)</li> </ul>	<b>FTP</b> 
Built-in SD memory card slot (Only advanced models are supported)	<ul style="list-style-type: none"> <li>While the network construction to the higher-system has not been completed, CSV and PDF files can be transferred to the SD memory card.</li> </ul>	<b>SD memory card</b> 
Built-in FRAM for data communication (Only advanced models are supported)	<ul style="list-style-type: none"> <li>Reading and writing data at high speed and with low power consumption</li> <li>Durability allowing for over 1 trillion 0/1 reversal operations</li> </ul>	<b>FRAM</b> 

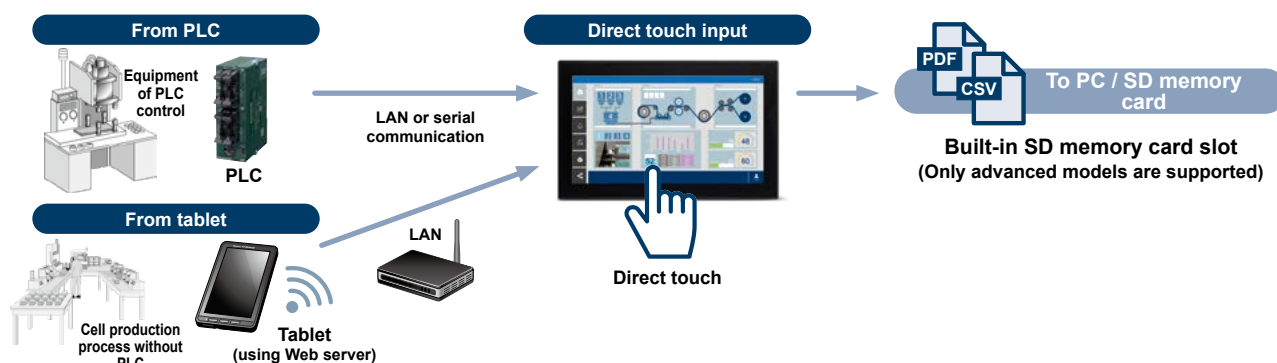


# Report creation



## Ledgers, Creation of daily reports and PDF output

Digitization and automatic creation of ledgers	<p>Creation of ledger data based on collected data, elimination of handwritten errors and calculation errors</p> <p>It is paperless and reduces filing space by digitization</p> <p>By setting the date and time, whether or not there is a repetition, etc., you will not forget to create it.</p>	<b>Electronic ledgers</b> 
PDF output	<p>The created ledgers are output to a PC as PDF.</p> <p>It is available for layout editing of the PDF to output</p> <p>Saved to SD memory card without using PC (Only advanced models are supported)</p>	<b>PDF output</b> 
Data collection with 3 inputs	<p>(1) From PLC (2) From tablet (3) Direct touch input</p> <p>It can also be used in cell production processes without a controller and in parts acceptance inspections.</p>	



Company name	PLC model	Ethernet	Serial (Note 1)	Protocol name in xAscender Studio
Panasonic Industry	FP7, FP0H, FP-XH, FP0R, FP-X0	✓	✓	Panasonic FP/FP7
	GM1	✓	✓	Modbus TCP, CODESYS V3 ETH
ABB	Sattcon PLC		✓	Modbus RTU
	ABB Mint Controller		✓	ABB SattCon COMLI
Beckhoff	BC/BX, PC/CX	✓		ABB Mint Controller HCP
3S	Intel, Motorola	✓	✓	Beckhoff ADS
	CODESYS 3	✓		CODESYS V2 ETH
Delta	DELTA DVP-PLC		✓	CODESYS V2 SER
ESTA	—		✓	CODESYS V3 ETH
Eaton	PS4, PS341, PS306-316, PS416		✓	Delta Modbus RTU
Fatek	FB Series	✓		DMX512 Digital Multiplex
			✓	Eaton Suconet-K
GE	90 series, VersaMax series, etc.	✓	✓	Fatek FACON ETH
				Fatek FACON SER
Hitachi Industrial Equipment Systems	EH150 CPU316/CPU516/CPU548, EHV CPU16.32.64/CPU128, EH-W 10.23, MicroEH 20.40.64	✓		GE Intelligent Platforms SNP
	EH150 CPU104/208/316/516/548, EHV CPU16.32.64/CPU128, EH-W 10.23, MicroEH 10.14.23.28/20.40.64		✓	GE Intelligent Platforms SRTP, GE SRTP
IDEC	FC6A-MicroSmart/MicroSmart Plus, FC5A-MicroSmart Pentra, FC4A-MicroSmart, FT1A-SmartAxis	✓	✓	Hitachi ETH
Jetter	JetControl 3xx pcom7	✓		Hitachi SER
KEYENCE	KV10/16/24/40/80/300/700/1000/3000/5000/5500/7300/7500/8000	✓	✓	IDEC Maintenance
JTEKT ELECTRONICS CORPORATION	DL105/240/250/260/340/440/450		✓	Jetter Ext ETH
	ECOM, EBC	✓		Keyence KV
Mitsubishi Electric	FX1N, FX2N, FX3G, FX3U	✓		Koyo DL
	FX, FX0/FX0S, FX0N, FX1N, FX1S, FX2N, FX3G, FX3U		✓	Koyo DL ETH
	iQ-FX5U, iQ-R, Q00J/Q00/Q01, Q02/Q02H/Q06H/Q12H/Q25H, QnU, Q170M-PLC CPU, Q170M-Motion CPU, L02CPU, L26CPU-BT	✓		Mitsubishi FX ETH
	Q00J/Q00/Q01, Q02/Q02H/Q06H/Q12H/Q25H		✓	Mitsubishi FX SER
Nidec/Control Techniques	—	✓		Mitsubishi iQ/Q/L ETH
		✓		Mitsubishi iQ/Q/L SER
Omron	CJx/CS1x/CP1x	✓		Control Techniques Modbus TCP
	NJ/CJ Series	✓	✓	Omron FINS ETH
Rockwell Automation (Allen-Bradley)	PLC3, PLC5/10/12/15/25/40/40L/60/60L, SLC500 Fixed I/O, Modular I/O, Micrologix 1000/1500, Ultra 5000		✓	Omron FINS SER
	SLC500 Fixed I/O, Modular I/O, Micrologix 1000/1500		✓	Ethernet/IP CIP
	PLC5 via NET-ENI, PLC5/10-25, Micrologix 1100/1400, SLC500/Micrologix 1000/1200/1500 via NET-ENI	✓		A-B DF1
	Logix 5000, Micro800		✓	A-B DH-485
SAIA	PCD1/2/3		✓	A-B ENET
	PCD3	✓		Ethernet/IP CIP
Siemens	S7-313/314/315/317/318/319/412/413/414/416/417, S7-1200 CPU 1211/1212/1214/1215/15xx, LOGO! 0BAx/S7-200 SMART	✓		SAIA S-BUS
	S7-313/314/315/317/318/319/412/413/414/416/417		✓	SAIA S-BUS ETH
	S7-212/214/215/216/221/222/224/226/226MX		✓	Simatic S7 ETH
	S7-1200/1500	✓		Simatic S7 MPI
			✓	Simatic S7 PPI
				Siemens S7 Optimized

Supported protocols

Protocol	Descriptions	Ethernet	Serial (Note 1)	Protocol name in xAscender Studio
Modbus	Modicon Modbus (1-based), Generic Modbus (0-based), Enron Modbus (1-based/0-based) with 32bit registers		✓	Modbus RTU, Modbus RTU Server
		✓		Modbus TCP, Modbus TCP Server
BACnet	—	✓	✓	BACnet
OPC	—	✓		OPC UA Client

Notes: 1) The serial conforms to the serial port (RS-232C, RS-422 or RS-485) of the other device. 2) Some of the supported protocols are given in the list. Refer to the manual for more details.  
3) Using PLCs other than the **FP** series of our company may restrict the types of devices and addresses that can be used. Refer to the manual for more details.  
4) Communication may not be possible when using RS-485, depending on the transmission and reception timing with the other device. Check with actual devices such as samples in advance.

Order guide

Main unit

Type	Descriptions							Part No.
	Display	Touch switch	Power supply	Communication		USB	SD	
Standard model	4.3 inch wide TFT	Resistive film type	24 V DC	Ethernet	Serial	1 port	—	AWHS1R043
	7 inch wide TFT			1 port	1 port RS-232C / RS-422 / RS-485 *Software configurable			AWHS1R070
	10.1 inch wide TFT			2 ports	1 port			AWHS1R101
Advanced model	5 inch wide TFT	Capacitive type		3 ports	2 ports	2 ports	1 slot	AWHA1C050
	7 inch wide TFT							AWHA1C070
	10.1 inch wide TFT							AWHA1C101
	15.6 inch wide TFT							AWHA1C156
	21.5 inch wide TFT							AWHA1C215

WH series

Scan here for specification descriptions.

Tool software

Product name	Descriptions	Remarks
xAscender Studio	Screen configuration tool for WH series programmable displays	You can download “xAscender Suite” for free from our website. (Membership registration is required.) “xAscender Suite” includes “xAscender Studio” and “xAscender Client”.
xAscender Client	Tool to enable remote viewing of WH series programmable displays	

Note: **GT** series “Terminal GTWIN” programmable display software cannot be used with the **WH** series.  
In addition, **WH** series cannot be detected with our IP address search tool, “Configurator WD”.

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