



Pro-face ST6000 and BLUE IoT Solution

Making machine data visible and connectable for increased efficiency

HMI Centric Concept

Pro-face Industrial IoT Solution

Reposition the human in the center of the automation architecture. Interactive and intuitive operations help to make sharp and timely decisions by everyone – everywhere at every place. By connecting to devices from various manufacturers, we enable new optimization potential with Industrial IoT solutions and architectures with a peace of mind on the site. An HMI with Visibility, Flexibility, and Reliability opens the window to information for you. HMI Centric Solutions make the best of the human workforce with digital technology.

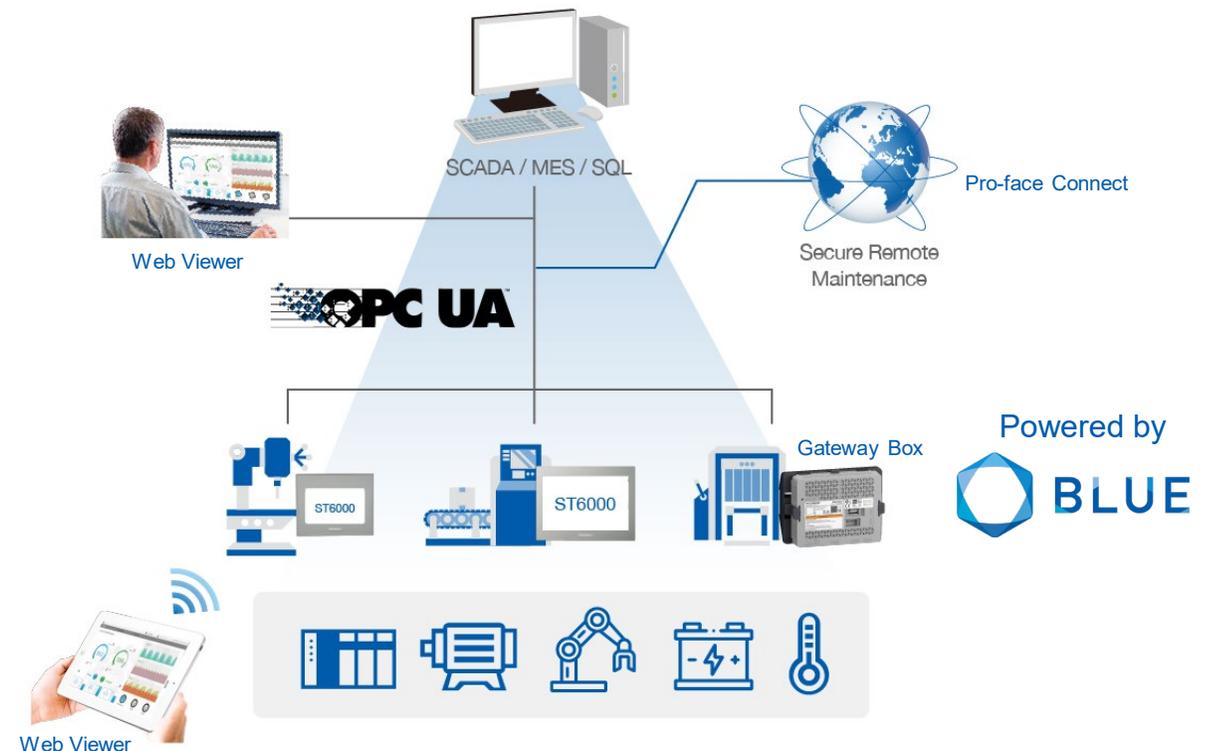
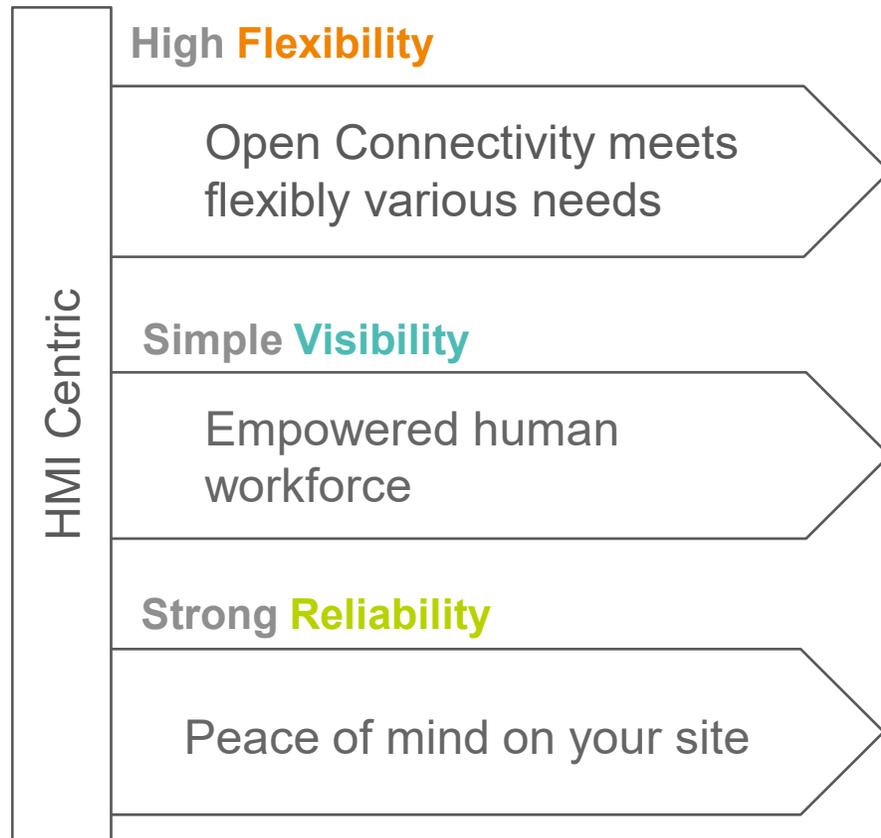


https://www.proface.com/en/hmi_centric



Optimize your machine with IoT connectivity and architectures, leveraging HMI Centric Concept

The basic HMI ST6000 Series is ideal for OEMs supplying simple industrial machines.



Pro-face's nine unique solutions quickly realize secure IoT environments.

HMI Centric: Making machine data visible and accessible for optimized manufacturing

High Flexibility



Realize IoT with minimal development time and cost

[Link](#)

Simple Visibility



Increased operation efficiency with intuitive HMI

[Link](#)

Strong Reliability



Realize a secure system with embedded cyber security

[Link](#)



Flexible selection of features and unit types

[Link](#)



Creating information effectively

[Link](#)



Worldwide support from dedicated HMI and IoT experts

[Link](#)



Secure remote connectivity without special H/W

[Link](#)



Modern design to enhance your machine value

[Link](#)



Step by step migration utilizing your existing assets

[Link](#)

Realize IoT with minimal development time and cost



- ✓ Customers want to integrate every machine to production management S/W
- ✓ We have not enough manpower to make special settings for each customer
- ✓ Different markets and geographics demand different controller types

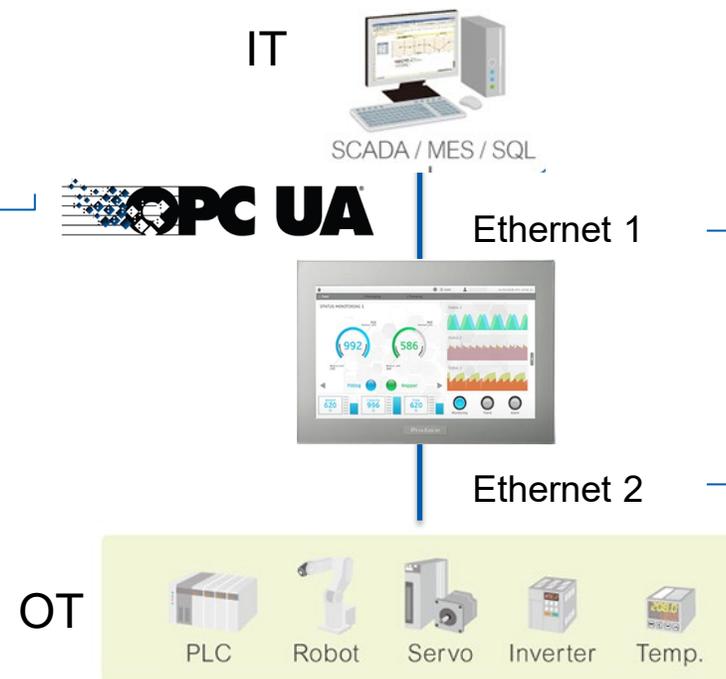


ST6000 & BLUE Series can do it, because...

Easy, better performance and secure for communication to IT layer

OPC UA Server

[Link](#)



Interface ready: two Ethernet ports, one for OT and one for IT

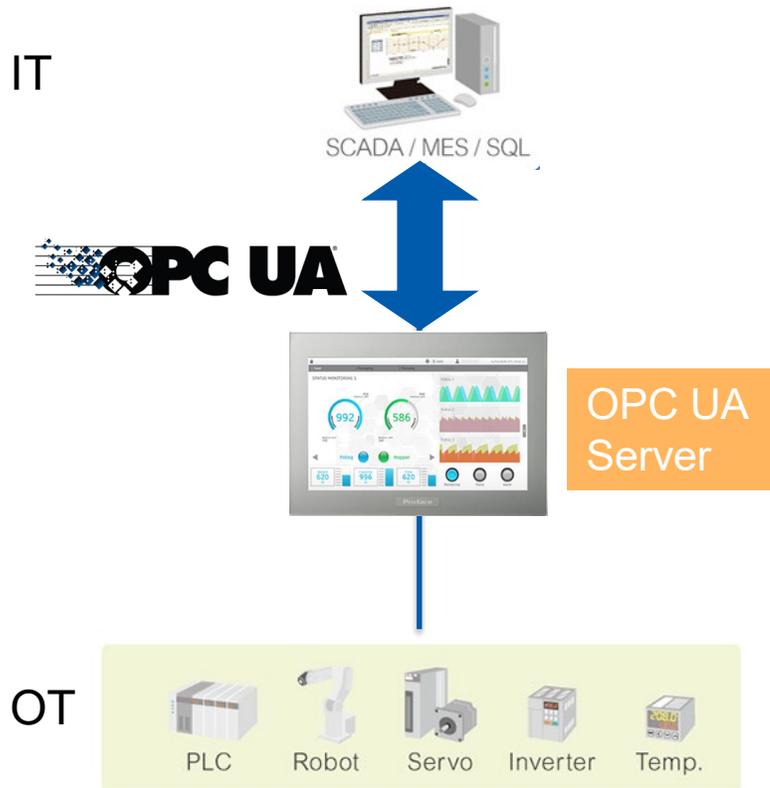
2 Ethernet ports

Freedom of device selection

Pro-face Connectivity

Realize IoT with minimal development time and cost!

Easy, Better performance and Safe for communication to IT layer



Easier to use

No need to sync OT an IT data structure. Simply enable OPC UA Server and make the setting for each variable (hidden, read only, read write), password, user level.

Better performance

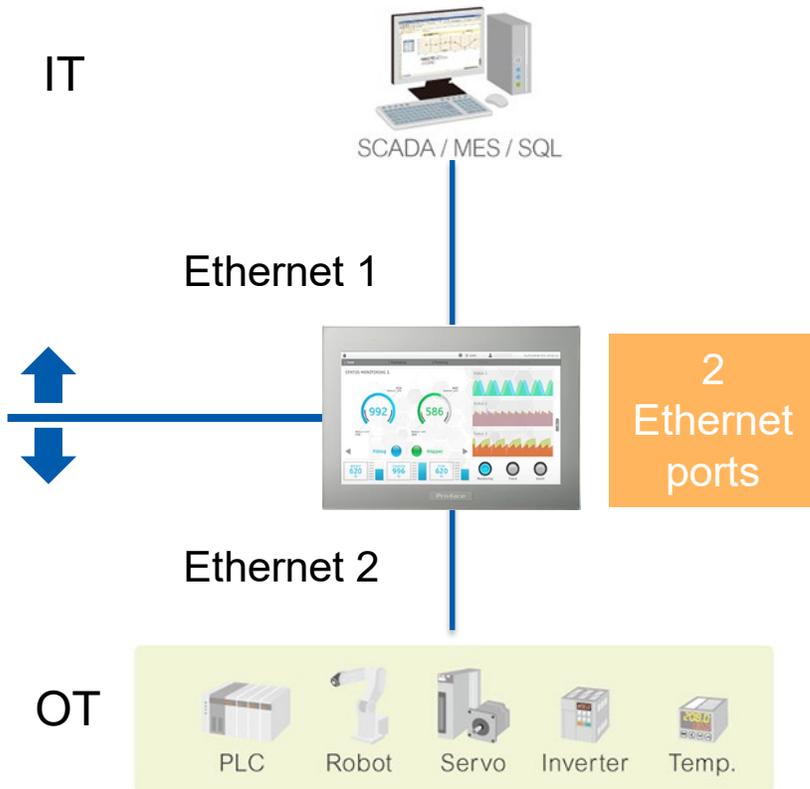
Instead of periodic polling of data from the client to the server, OPC UA server in BLUE supports the subscription service in which data is automatically sent. This reduces network load and saves performance on the client side for more important tasks.

Secure

Embedded OPC UA cybersecurity with encryption supports secure local data exchange and cloud services.

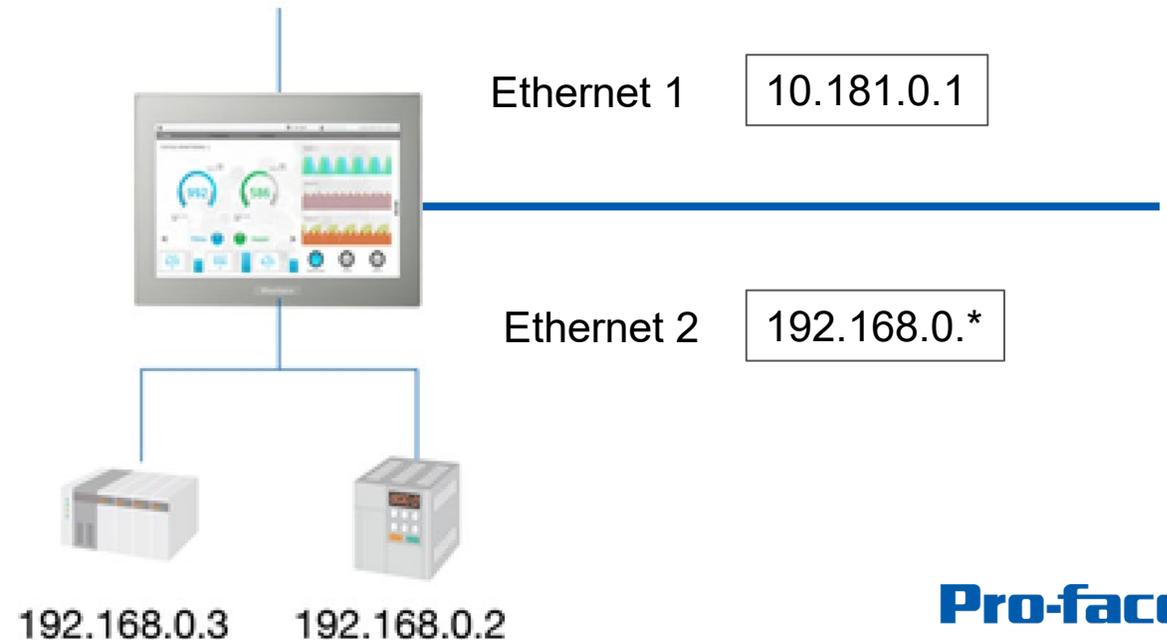
Realize IoT with minimal development time and cost!

Interface ready: two Ethernet ports, one for OT and one for IT



Simplified machine integration into customers' network

When connecting new equipment to the customers' network, you only have to change one IP address on the ST6000 Series. There is no need to reassign the IP addresses of all devices at the time of delivery because they can be added on a module-by-module basis.



Realize IoT with minimal development time and cost!

Freedom of equipment selection

IT



SCADA / MES / SQL



Ethernet / Serial

Pro-face
Connectivity

OT



Connect to up to 4 drivers at the same time

You can choose the best fitting devices from various manufacturers and exchange data with a simple configuration. Supporting 4 simultaneous drivers promotes data exchange between field devices and flexible architectures. Hence reducing engineering spend and increasing reliability.



PLC

Mitsubishi Electric
Siemens
OMRON



Inverter

Hitachi
Mitsubishi Electric
YASKAWA



Robot

YASKAWA
FANUC
DENSO WAVE



Temp.

Azbil
OMRON

And more Device/PLC Connections are available,

<https://www.pro-face.com/manual/blue/3.2.100/en/device/maker.htm>

Flexible selection of features and unit types



- ✓ Need to reduce engineering for machine customizations.
- ✓ Project variations and versions are becoming increasingly difficult to manage.
- ✓ Existing customers looking to update existing machine with IoT capability.



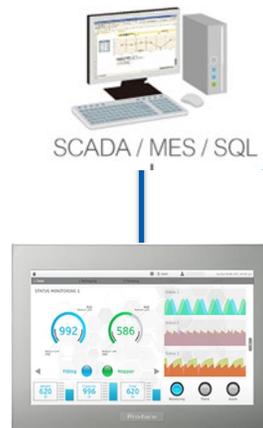
ST6000 & BLUE Series can do it, because...

Optimized data gateway for retrofit and simple usage

Gateway Box



or



Reduced engineering with responsive design and dynamic projects

5 display sizes and Web based concepts



PLC



Robot



Servo

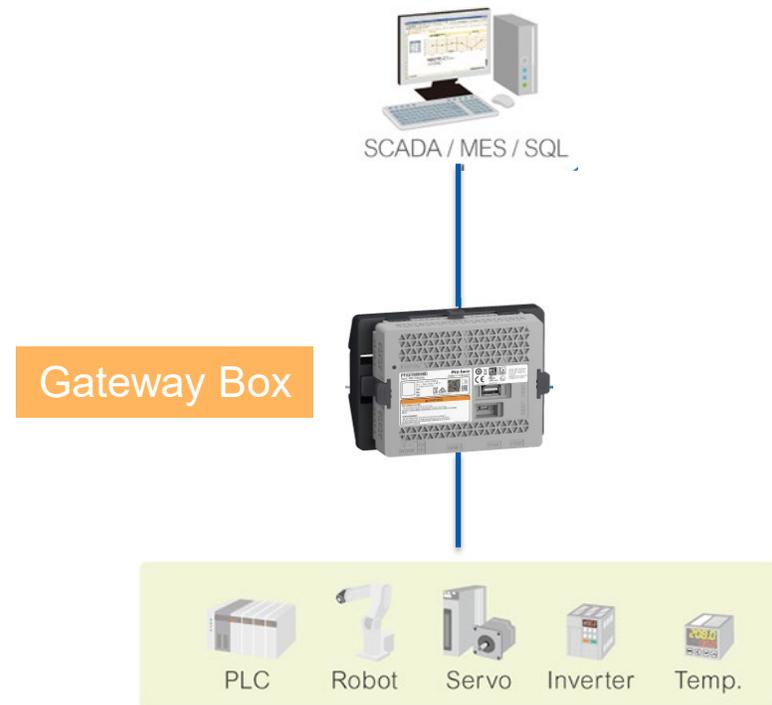


Inverter



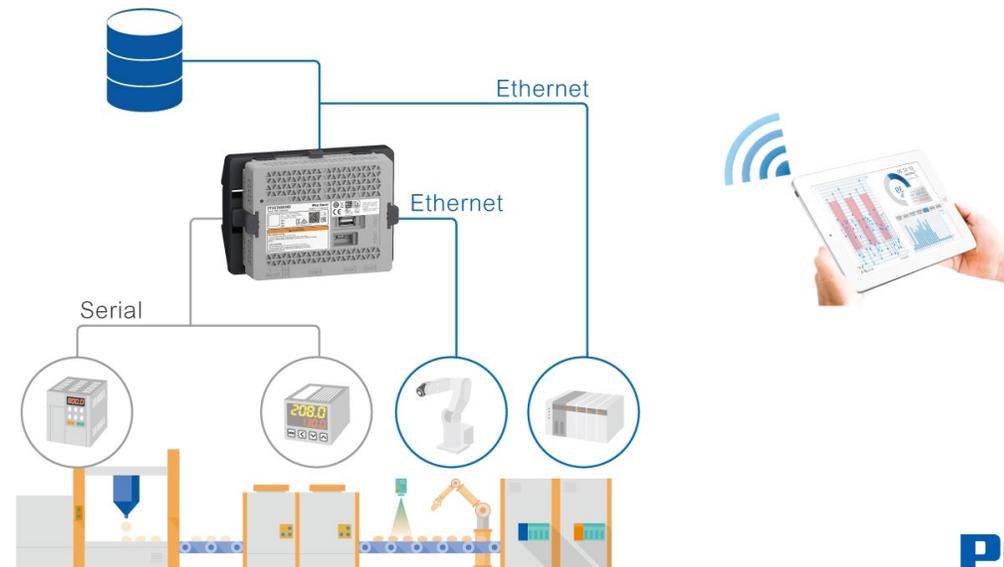
Temp.

Optimized data gateway for retro fit and simple usage



Protocol Converter + On-demand HMI

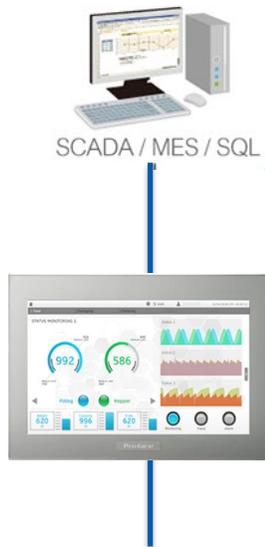
Collect data from different devices and protocols. Collect and share data efficiently for to discover new improvement potentials. On top of this, the embedded HTML5 web server makes those insights also directly available via standard web browsers by using Web Viewer.



Flexible selection of features and unit types

Reduced engineering with responsive design and dynamic projects

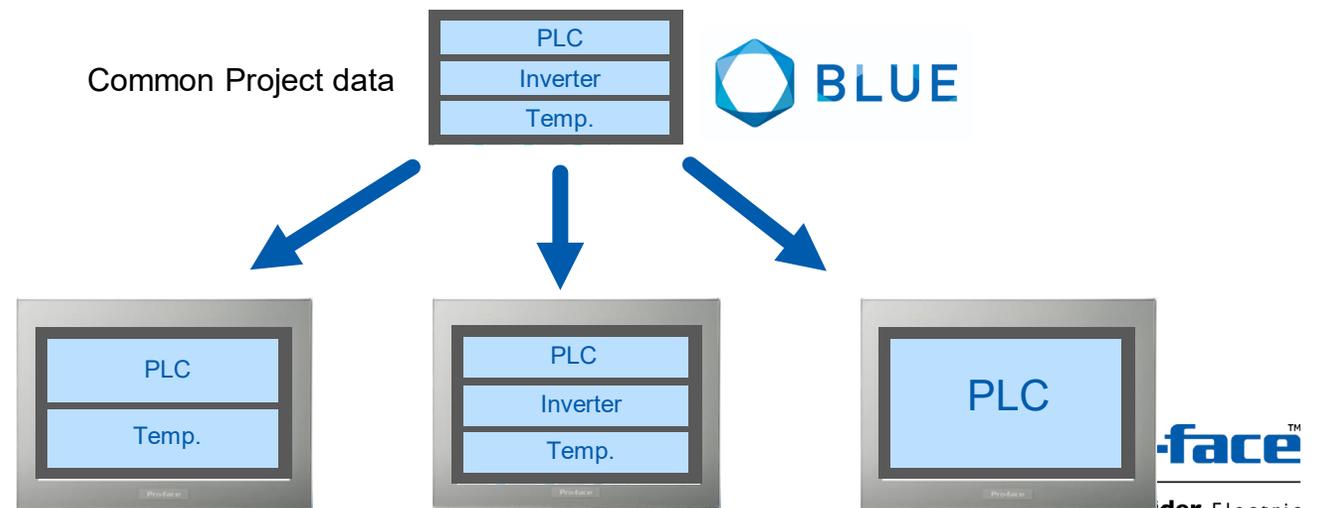
15" wide
12" wide
10" wide
7" wide
4" wide



Various communication options

Responsive Design

Apply the best fitting screen based on your customer request or change the layout without changing the project. Thanks to its modern screen concept, BLUE enables to creation of dynamic screens with various panel types and free of resolution issues. This is done by utilizing the power of WPF(Windows Presentation Foundation) natively in BLUE.



Secure remote connectivity without special H/W



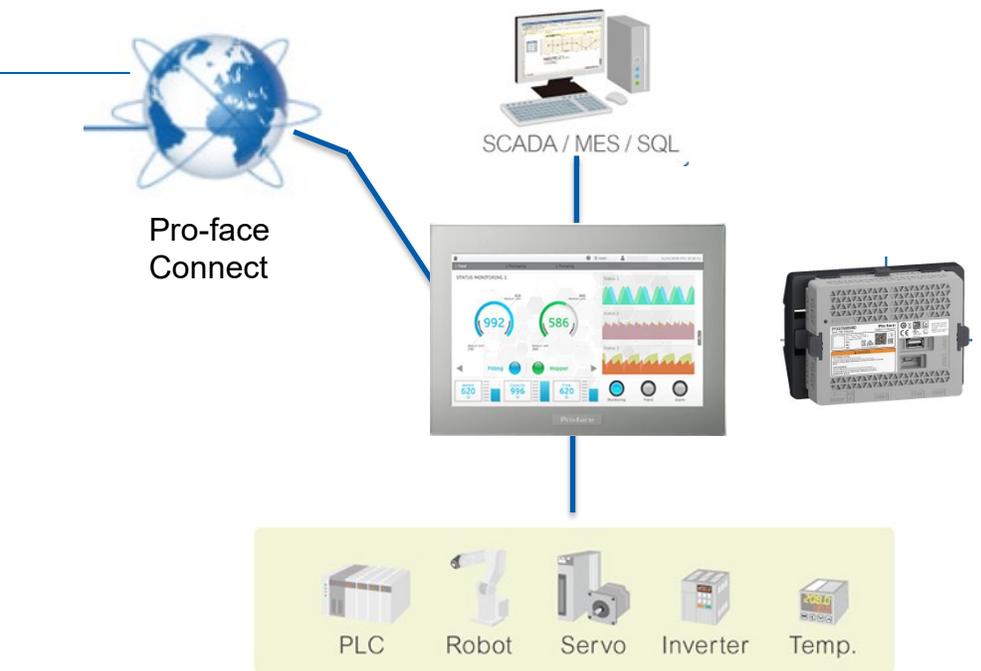
- ✓ Traveling to customer is difficult with COVID-19.
- ✓ Customers do demand service contract with quick maintenance and updates.
- ✓ Remote communication solution must be secure, easy to setup and scalable



ST6000 & BLUE Series can do it, because...

The certified HTTPs encrypted communication eases setup at end user side

Pro-face Connect



Oriented documentation for quick results

*Available from around October 2021

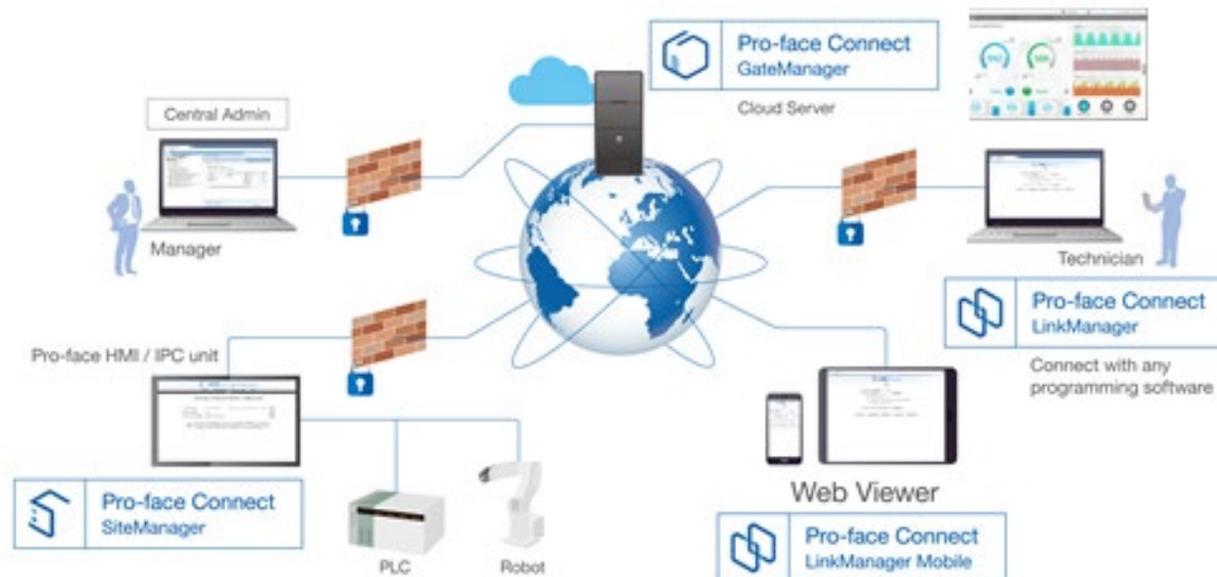
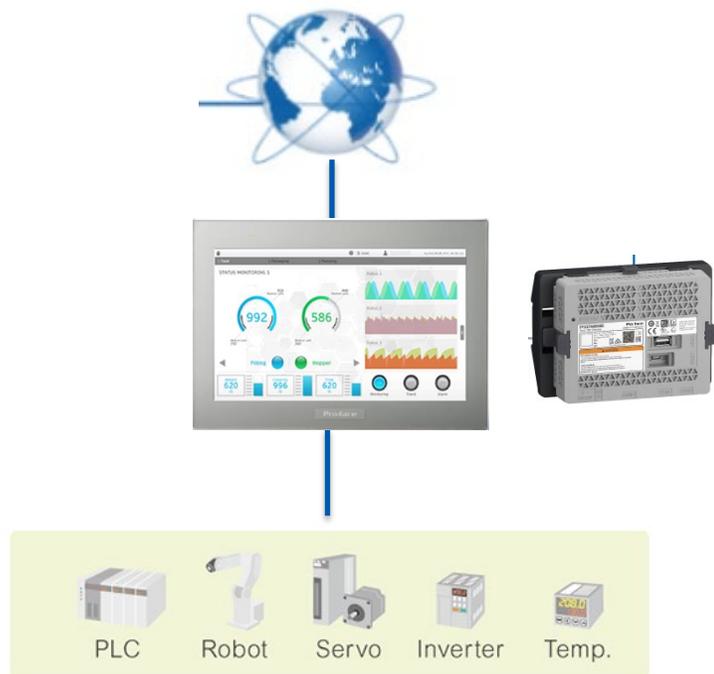
HMI Centric Architecture

Secure remote connectivity without special HW

The certified HTTPs encrypted communication eases setup at end user side.

Secure remote solution

Securely access your HMI and connected devices without the need for a dedicated VPN router. The certified HTTPs encrypted communication reduces the setup at the customer as no special ports have to be configured by the IT department. Access is not limited to programming but also the HMI can be operated via a standard web browser.



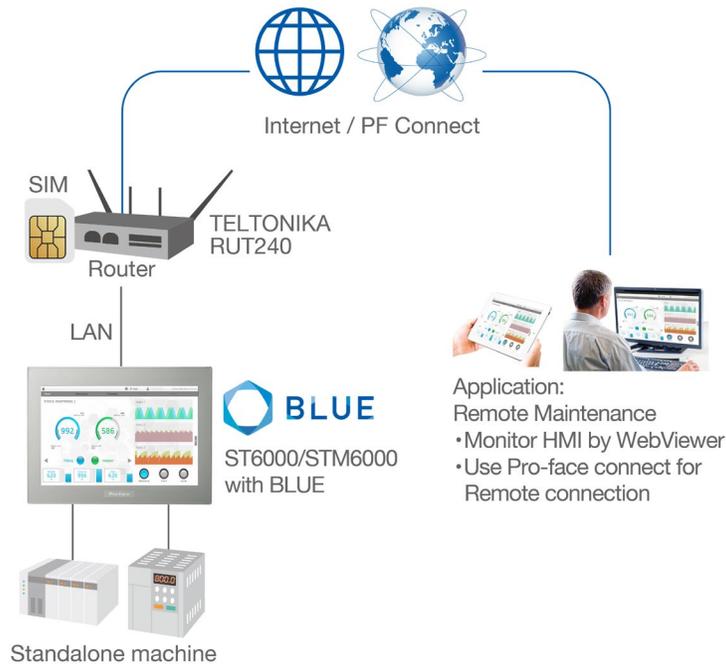
Secure remote connectivity without special HW

Get started quickly remote solution by combining validated router with Pro-face HMI documented samples!



HMI Centric Architecture for realizing Industrial IoT

Quick testing and setup with larger investment or long-lasting contracts. The HMI Centric Architecture saves time and effort when developing your system.



[Link](#)

Link functional after release of TVDA

Increased operation efficiency with intuitive HMI



- ✓ I want the best interface so that operators can make the most of the machine.
- ✓ Creating great projects must be feasible without loads of scripting or complexity



ST6000 & BLUE Series can do it, because...

Quickly access desired information



Multi - Screen



Download template to make it quickly

[Link](#)



PLC



Robot



Servo



Inverter



Temp.

Display whatever data you want whenever desired



Dock panel



Download template to make it quickly

[Link](#)



Pro-faceTM
by Schneider Electric

Increased operation efficiency with intuitive HMI

Quickly access desired information / Display whatever data you want whenever desired

Intuitive HMI to empower operator workforce on your machine

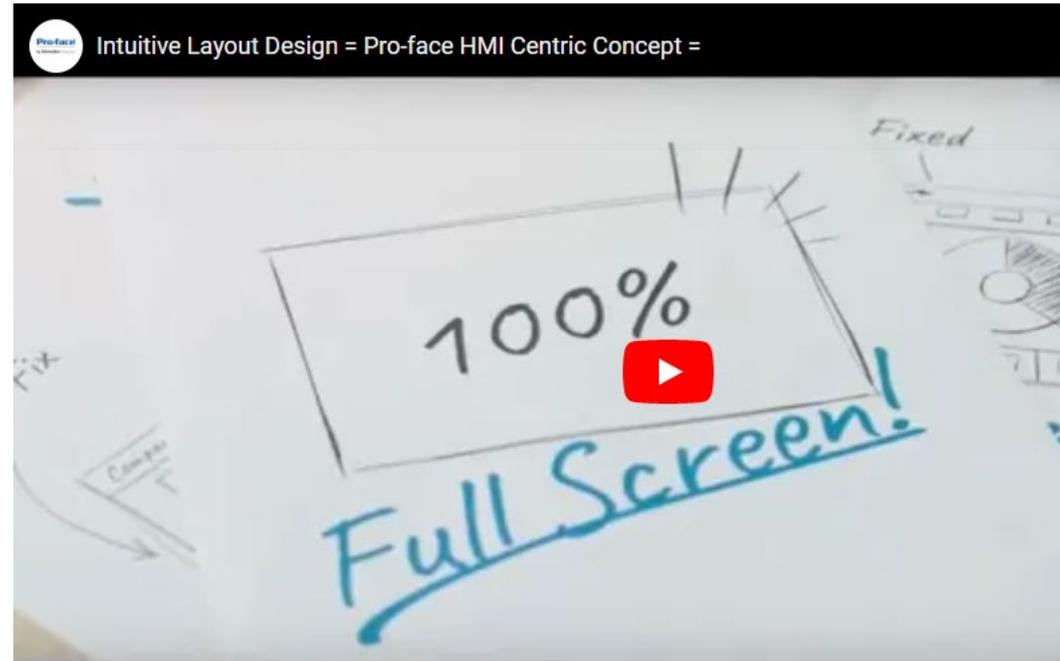
Operational efficiency is enhanced in many ways. Preference settings allow easy customization for each operator, such as by displaying frequently accessed content and layouts. Flexible scripting and powerful binding features make it easy to design intelligent UIs that meet specific operator needs and display as much information as larger screens (or multiple screens) while remaining easy to read.



HMI Design Studio web helps you and your team create HMI applications easier.

Download various ready-made templates.

[Link](#)



[Link](#)



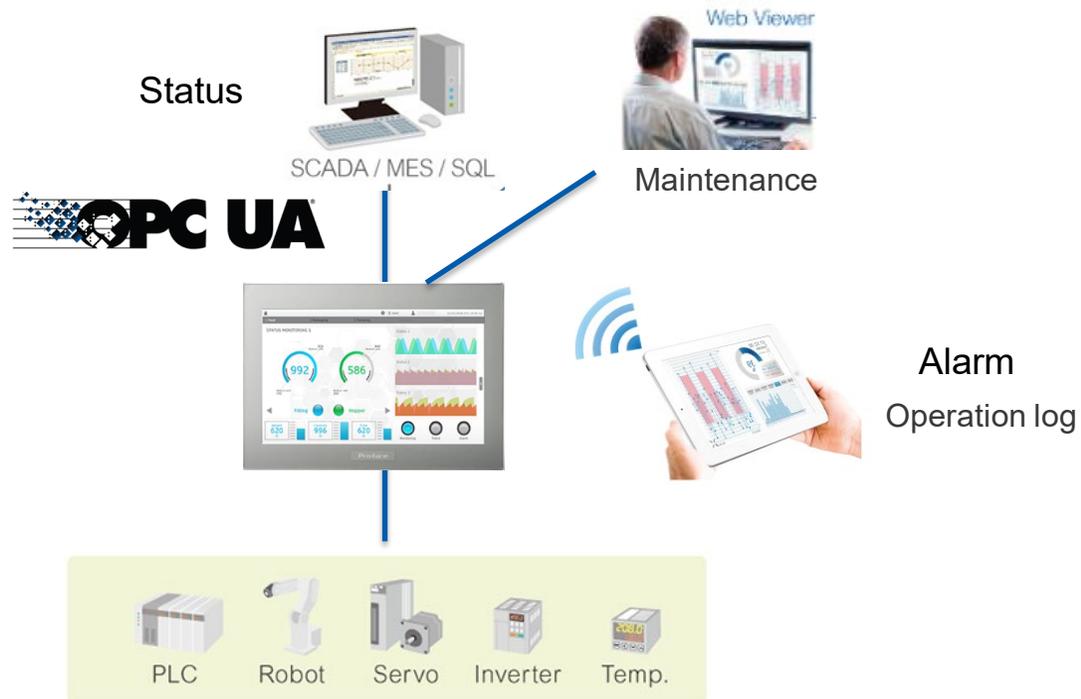
Creating information effectively



- ✓ Need to provide the right information for fast and correct decisions.
- ✓ Data must be mobile and in the right context to become valuable information.



ST6000 & BLUE Series can do it, because...



Monitor various data at once, such as operation logs, alarms, and device status.

Web Viewer

Pro-face Connectivity

OPC UA with easy-to-understand data structures and names

OPC UA

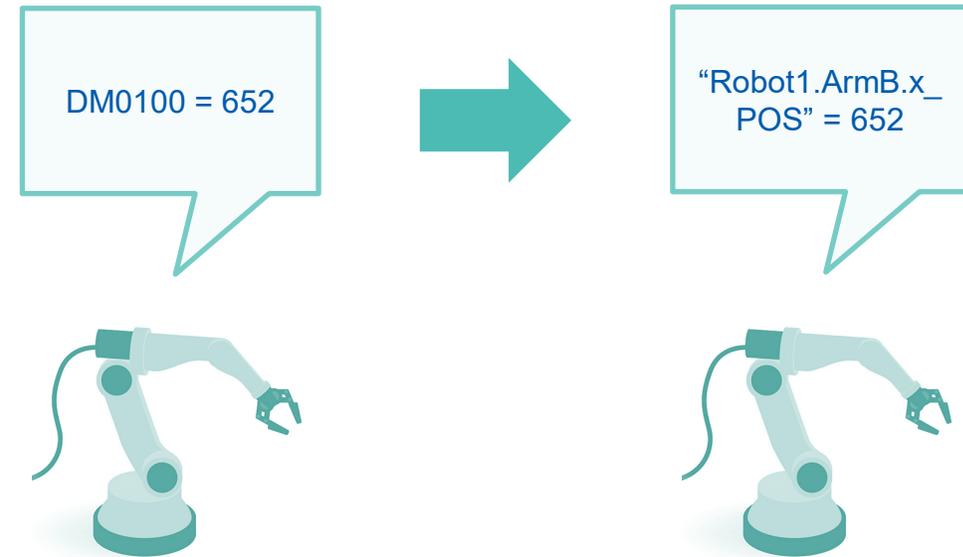
Monitor various data at once, such as operation logs, alarms, and device status.



Data collected from the HMIs is put in context and made available to machine operators, maintenance staff, line managers or supervisors. For each group, the information is available via PC's, tablets, and even smartphones. Stay informed and connected to your manufacturing equipment regardless of your job task.

OPC UA with easy-to-understand data structures and names

OPC UA with easy-to-understand data structures and names supports a quick integration into open systems and reduces documentation needs.



Modern design to enhance your machine value



- ✓ The look & feel of the HMI interface allows us to differentiate from the competition.
- ✓ Customers demand an appealing design even for price-sensitive machines.



ST6000 & BLUE Series can do it, because...

Attractive high-resolution screens



High resolution with 16M colors

[Link](#)



SCADA / MES / SQL



Stylish design



Better Graphics and Font

[Link](#)



HMI Design Studio helps you and your team create HMI applications easier.

Attractive high- resolution screens / Stylish design

Basic yet luxurious HMI

A superior quality display improves operability and data visualization. An innovative HMI with a sophisticated design that transforms simple machines.



Better Graphics and Fonts

Display beautiful fonts with anti-aliasing. Customize gradation and transparency to meet your needs.



HMI Design Studio web helps you and your team create HMI applications easier.

Download ready to use stylish images. [Link](#)



Realize a secure system with embedded cyber security



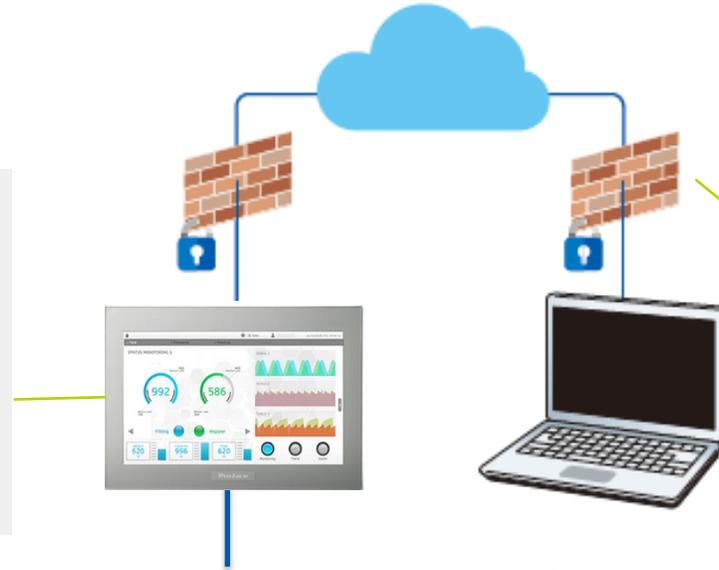
- ✓ Customers are asking for new and up to date cyber security certifications.
- ✓ The requirements are not only for remote connection but also standard devices.



ST6000 & BLUE Series can do it, because...

Certified cybersecurity against basic intentional attacks

Achilles Level1



Secure remote communication solution with ready to use Security Certificated architecture

Cyber Security with Pro-face Connect



Certified cybersecurity against basic intentional attacks

- Need admin rights to download project to HMI target
- Auto user logout after predefined idle time
- Security check when booting
- Secure Ethernet download supported by IPsec and password protected project file

➔ For further details about cyber security, please refer to this best practice document for details.

[LINK](#)



➔ Register to our cyber security notification service to stay updated and secure.

[LINK](#)



[LINK](#)



Realize a secure system with embedded cyber security

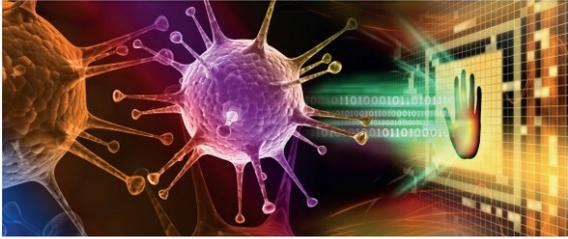
Secure remote communication solution with ready to use Security Certificated architecture

Security Certificate

Pro-face Connect offers an encrypted, IEC 62443-3-3 certified architecture and can centrally manage users with different access levels.

Pro-face Security Certificate
by Schneider Electric

Security Audit 2021



Tested Products: Pro-face GateManager 8250, GateManager API, Secure Connect SiteManager, SiteManager Embedded, LinkManager and LinkManager Mobile based on System Version based on System Version 9.3.

Audit Process: Modified NIST SP800-115. Audit is partially based on applicable test results from SECOMEA security audit 2021 of 08.01.2021.

Concept Audit: Generic Risk Analysis, BSI Grundschrift Compendium, IEC62443-3-3, IEC62443-4-2, OWASP Top10.

Component Audits: Vulnerability assessment, exploitation with standard tools, fuzzing on Ethernet interface, firmware signature evaluation, analysis of communication principle.

System Audit: Security assessment of end-to-end reference setup, threat assessment of 3rd party components based on CVEs, OWASP Top 10 threat analysis.

Test results: Tests passed, some with recommendations. A detailed report has been issued.

Successfully Passed

Deggendorf 01.03.2021

Ralf Haberman
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Geschäftsführer

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Laurin Dörr, M.Sc.
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www.tgalpha.de



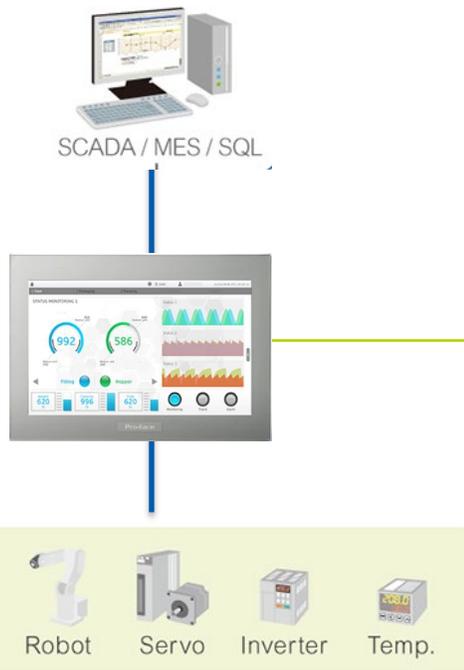
Worldwide support from dedicated HMI and IoT experts



- ✓ We need help from experts as a single point of contact to create a secure system
- ✓ Our business is global and so is our need for support



ST6000 & BLUE Series can do it, because...



For over 30 years, Pro-face technical support specialists have worldwide taken advantage of their knowledge and experience to respond to questions, concerns, and problems of our customers. Speeding up your IoT journey in a cyber secure manner.



Global Specialist technical support

Worldwide support from dedicated HMI and IoT experts.

The performance you need for a successful IoT implementation

Pro-face Specialists Story

Our global specialists support customer's challenges and make the best-in-class solution for customers in the whole world.

Appearance country (In alphabetic order)

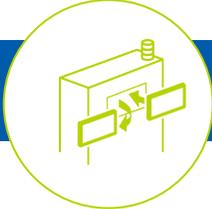
- 1) Canada (00:38)
- 2) China (01:12)
- 3) Denmark (01:45)
- 4) Germany (02:35)
- 5) India (03:34)
- 6) Italy (04:19)
- 7) Japan (05:03)
- 8) Poland (05:42)
- 9) Singapore (06:23)
- 10) Spain (07:06)
- 11) Taiwan (07:37)
- 12) UK (08:22)



[Link](#)

Step by step migration utilizing your existing assets

ST6000 Series can do it, because...

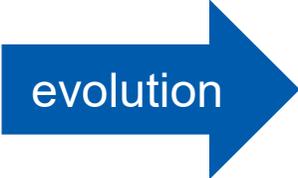


Migrate to new hardware utilizing your existing assets

GP4000W



Screen Editor
GP-Pro EX



ST6000 + GP-Pro EX



Screen Editor
GP-Pro EX

Migrate to
new software



ST6000 + BLUE



 **BLUE**

Product Specifications



Achieve a high level of visualization

ST6000 Series Lineup



Basic HMI
ST6000 Series

The basic HMI model with standard 2 Ethernet ports, high-resolution screen, 16M colors, and aluminum front bezel raises the level of simple machines. 5 different displays of 4 ~ 15" width can be selected depending on the end user's demands.

[Link](#)



Basic Modular HMI
STM6000 Series

The 22mm hole installation type dramatically reduces installation time. Just make a 22mm hole and attach the HMI to it. The display width is 4 or 7 inches with high resolution, 16M colors, and standard 2 Ethernet ports.

[Link](#)



Basic Web HMI
STW6000 Series

A new type of HMI, Basic Web HMI, is suitable for controller embedded HTML5 Server. This one software dramatically reduces both development and maintenance time. Several controllers can be set and easily switched by touch in one Basic Web HMI. [Link](#)



Basic STM6000
Gateway

A GatewayBOX without a display is ready to meet the demand to just upload production data to the IT layer as a multi-converter. With the WebViewer function, on demand HMI is available to check the HMI screen anywhere and anytime. [Link](#)

ST6000

The basic HMI model with standard 2 Ethernet ports, high-resolution screen, 16M colors and aluminum front bezel raises the level of simple machines. 5 different displays of 4 ~ 15" width can be selected depending on the end-user's demands.



Watch video



[Link](#)

	ST-6200WA	ST-6400WA	ST-6500WA	ST-6600WA	ST-6700WA
Model No.	PFXST6200WAD	PFXST6400WAD	PFXST6500WAD	PFXST6600WAD	PFXST6700WAD
Display	4.3" Wide (480 x 272)	7.0" Wide (800 x 480)	10.1" Wide (1024 x 600)	12.1" Wide (1280 x 800)	15.6" Wide (1366 x 768)
	16M colors White LED 16 level brightness control				
Touch Panel	Type: Resistive film (analog) , Serve life: 1,000,000 time or more				
Interface	COM1 RS-232C/485 RJ45 Ethernet1 IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX USB host type A, USB device Micro B	COM1: RS-232C D-Sub9 COM2 : RS-232C/485 D-Sub9 Ethernet1 : IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX Ethernet2 : IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX USB host type A, USB device Micro B			
Memory	Application memory : FLASH EPROM:128MB, Backup memory : NVRAM 500KB Battery : Replaceable battery / Primary battery for clock data backup (5 years or more at room temperature)				
Input voltage	19.2 to 28.8V DC				
Certifications	IP65, NEMA #250 TYPE4X/13, CE, UL and cUL, RMC, KCC, EAC, RoHS, WEEE				

STM6000

The 22mm hole installation type dramatically reduces installation time. Just make a 22mm hole and attach the HMI to it. The display width is 4 or 7 inches with high resolution, 16M colors, and standard 2 Ethernet ports.



Watch video



[Link](#)

	STM-6200WA	STM-6400WA
Model No.	PFXSTM6200WAD	PFXSTM6400WAD
Display	4.3" Wide (480 x 272)	7.0" Wide (800 x 480)
	16M colors White LED 16 level brightness control	
Touch Panel	Type: Resistive film (analog) , Serve life: 1,000,000 time or more	
Interface	COM1 RS-232C/485/422 SubD9 Ethernet1 : IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX Ethernet2 : IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX USB host type A, USB device Micro B	
Memory	Application memory : FLASH EPROM:128MB, Storage memory : FLASH EPROM : 500MB , Backup memory : NVRAM 500KB Battery : Unreplaceable battery by the customer/ Primary battery for clock data backup	
Input voltage	19.2 to 28.8V DC	
Certifications	IP65F, UL 50/50E, Type 1, Type 4X (indoor use only), Type 12, Type 13, CE, UL and cUL, RMC, KC, EAC, RoHS, WEEE, UL Class1 Div2, ATEX/IECE*, Marine*	

*Please visit our website for the latest available certifications.

STW6000

A new type of HMI, Basic Web HMI, is suitable for controller embedded HTML5 Server. This one software dramatically reduces both development and maintenance time. Several controllers can be set and easily switched by touch in one Basic Web HMI.



Watch video



[Link](#)

	STW-6200WA	STW-6400WA	STW-6500WA	STW-6600WA	STW-6700WA
Model No.	PFXSTW6200WAD	PFXSTW6400WAD	PFXSTW6500WAD	PFXSTW6600WAD	PFXSTW6700WAD
Display	4.3" Wide (480 x 272)	7.0" Wide (800 x 480)	10.1" Wide (1024 x 600)	12.1" Wide (1280 x 800)	15.6" Wide (1366 x 768)
	16M colors White LED 16 level brightness control				
Touch Panel	Type: Resistive film (analog) , Serve life: 1,000,000 time or more				
Interface	Ethernet: IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX x1 USB : Type A (Host) x 1	Ethernet1 & Ethernet2 with Switch function : IEEE802.3i / IEEE802.3u, 10BASE-T / 100BASE-TX USB : Type A (Host) x 1			
Input voltage	19.2 to 28.8V DC				
Certifications	IP65, NEMA #250 TYPE4X/13, CE, UL and cUL, RMC, KCC, EAC, RoHS, WEEE				

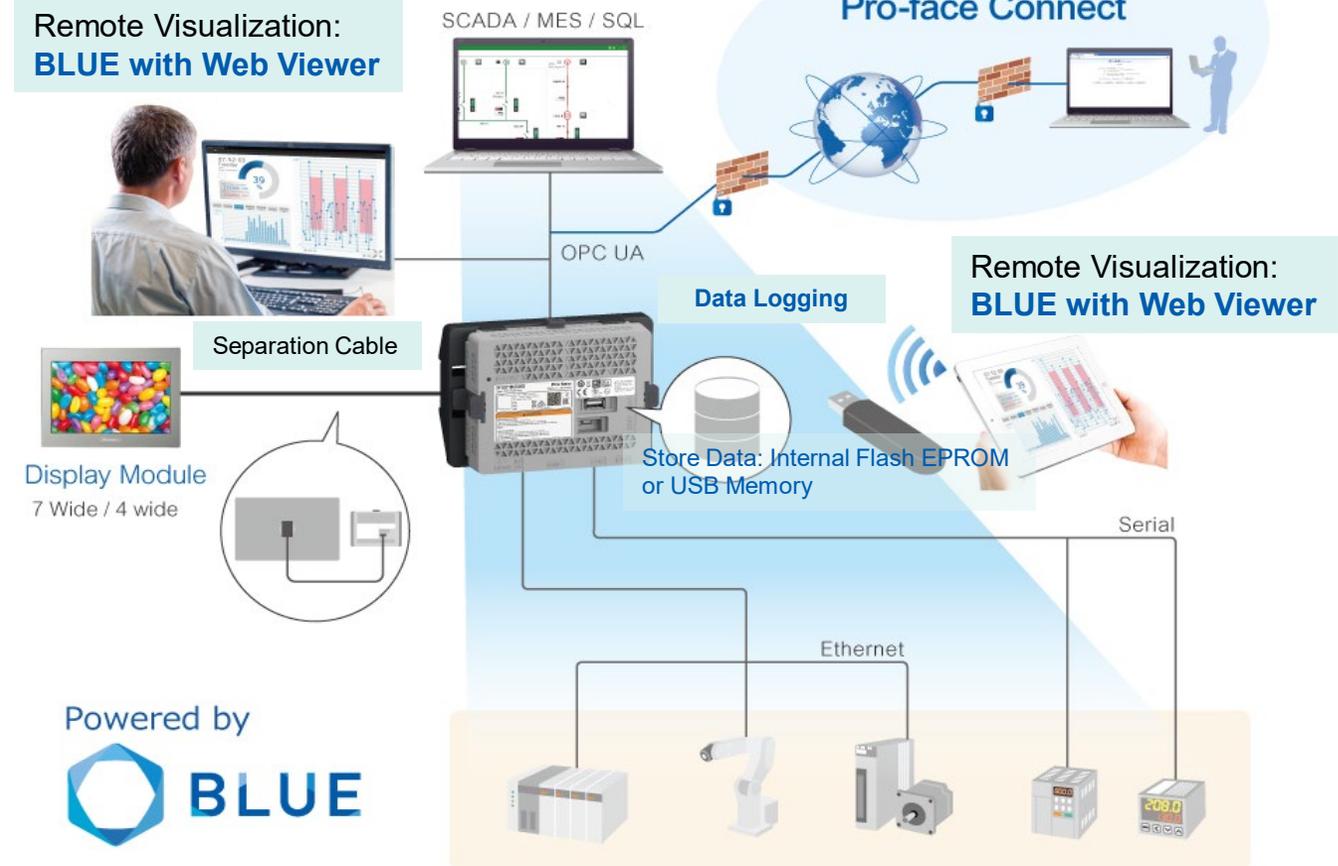
Multi-Converter for STM6000

A Gateway BOX without a display is ready to meet the demand to just upload production data to the IT layer as a multi-converter. With the Web Viewer function, on demand HMI is available to check the HMI screen anywhere and anytime.

	STM6000 Gateway
Product image	
Model no.	PFXSTM6B00D
Input Voltage	19.2 to 28.8V DC
Application memory	FLASH EPROM 128MB
Local Storage	FLASH EPROM 467MB
Backup memory	NVRAM 500KB
No. of connected drivers	4
Resolutions	800 x 480 pixels (WVGA)
Interfaces	Serialx1 Ethernetx2 USB (Type A) x1 USB (micro-B)x1 Extension Display port x1
Mounting	Din Rail

System Configuration

Remote Visualization:
BLUE with Web Viewer



BLUE V3.x

Features:

	ST6000	STM6000	STM6000 Gateway
Number of drivers	4 (multi equipment supported)		
OPC-UA Server connections	5 (independent of drivers)		
Number of Variables	32,768 (array with 5 dimensions, 8 layers in structures, max 2048 elements per structure/array)		
Number of logging variables per group & groups	512 variables per 80 groups		
User project size	128MB		
Local data storage size (logging, alarms, etc)	4"W: 63MB 7"W or larger: 467MB	467MB	
Web Viewer support	Optional license		Enabled
Supported Web Viewer connections	3 simultaneous connections		

Alarm ✓ Recipe ✓ Multilanguage ✓ Usermanagement ✓ Scripting ✓

Licenses:

License type	Supported models	Remarks
Basic	ST(M)6000, GP4100 Color model	Not support WEB API and OPC-UA
Professional	ST(M)6000, GP4100 Color model, SP5000, IPC	

