



# Pro-face Segmented Approach Solution Guide for Semiconductor

Jan 2023

# 3 Key Points

## HMI Specialist Values



### Connectivity

Easy connect to major PLC and devices

### Reliability

Peace of mind with long life and availability.

### Effectivity

One software covers all hardware and application

**+ Pro-face Solution**  
(Customization services and Secure remote monitoring and smart operation)

# HMI Specialist Values: Connectivity

Easy connect to major PLC and devises in Semiconductor

## OMRON Corporation [Link](#)



- **C/CV Series HOST Link**  
(SYSMAC C,SYSMAC α,SYSMAC CV)

- **CS/CJ Series HOST Link**  
(CS1,CJ1,CJ2,CP1,CP1E)

- **CS/CJ Series Ethernet**  
(CS Series, CJ1 Series, CJ2 Series, CP1 Series)

- **CS/CJ/NJ Series EtherNet/IP**  
(CS1 Series, CJ2 Series, NJ Series)



- **Temperature Controllers MODBUS SIO**  
(DB, KP, LT, JU, JW)

## Siemens AG [Link](#)



- **SIMATIC S7 MPI Direct**  
(SIMATIC S7-200 Series, SIMATIC S7-300 Series, SIMATIC S7-400 Series, SIMATIC S7-1200 Series)

- **SIMATIC S7 3964(R)/RK512**  
(SIMATIC S7-300 Series, SIMATIC S7-400 Series)

- **SIMATIC S5 CPU Direct**  
(Series 90U-115U, Series 135U/155U)

- **SIMATIC S5 3964(R)**  
(SIMATIC S5 Series)

- **SIMATIC S7 Ethernet**  
(SIMATIC S7-200 Series, SIMATIC S7-300 Series, SIMATIC S7-400 Series, SIMATIC S7-1200 Series, SIMATIC S7-1500 Series, LOGO! Series)

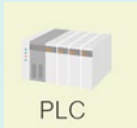
- **Ethernet Gateway for SIMATIC MPI/PROFIBUS**  
(SIMATIC S7-200 Series, SIMATIC S7-300 Series, SIMATIC S7-400 Series)

- **TIA Portal Ethernet**  
(SIMATIC S7-1500 Series, SIMATIC S7-1200 Series)

# HMI Specialist Values: Connectivity

Easy connect to major PLC and devises in Semiconductor

Mitsubishi Electric Corporation [Link](#)



## - A Series CPU Direct

(MELSEC AnA Series, MELSEC AnN Series, MELSEC Q Series A Mode)

## - A Series Computer Link

(MELSEC AnA Series, MELSEC AnN Series, MELSEC QnA Series, MELSEC Q Series)

## - Q Series CPU Direct

(MELSEC Q Series)

## - Q/QnA Serial Communication

(MELSEC Q, MELSEC QnA, MELSEC iQ-R, MELSEC iQ-F, MELSEC L)

## QUTE Series CPU Direct

(MELSEC Q Series)

- QnA Series CPU Direct  
(MELSEC QnA Series)

- FX Series CPU Direct  
(MELSEC FX Series)

- FX Series Computer Link  
(FX Series)

- A Series Ethernet  
(MELSEC A Series)

- Q/QnA Series Ethernet  
(MELSEC Q Series, MELSEC iQ-R Series, MELSEC iQ-F Series)

- Q Series QnU CPU Ethernet  
(MELSEC-Q Series)

- FX Series Ethernet  
(MELSEC-FX)

- General MODBUS SIO Master  
(MELSEC FX)

- iQ-R/F Ethernet  
(MELSEC iQ-R, MELSEC iQ-F)



## - FREQROL Inverter

(FR-A700, FR-A701, FR-E700, FR-F700, FR-A500, FR-C500, FR-A500L, FR-E500, FR-F500, FR-F500J, FR-F500L, FR-S500, FR-V500, FR-V500L, FR-B,B3(A500), FR-B,B3(A700))

# HMI Specialist Values: Reliability

Peace of mind with long life and availability.

## Partially coated

against high humidity and dust as a standard.

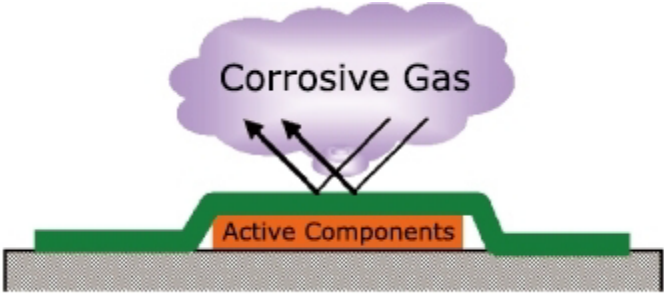
ST6000/ET6000



## Full PCBA coating

against corrosive gas

SP5000, GP4000  
(Coated models available)



## ATEX Certification

SP5000, GP4000





# HMI Specialist Values: Reliability

Peace of mind with long life and availability.

## Customized Overlay + LED Coating model

Model: GP4501TADFZ26 & GP4601TADFZ26

### Special usage environment of customer

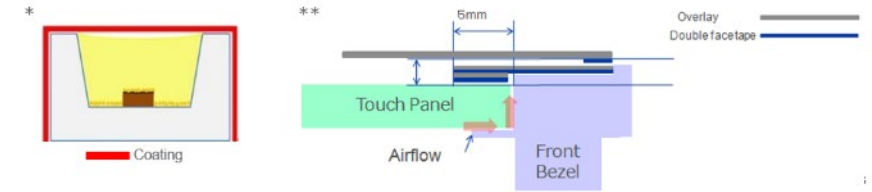
- Equipment purged by High pressure of N2
- Semi-con Product Manufacturing machine, Gas Cabinet, VMB etc



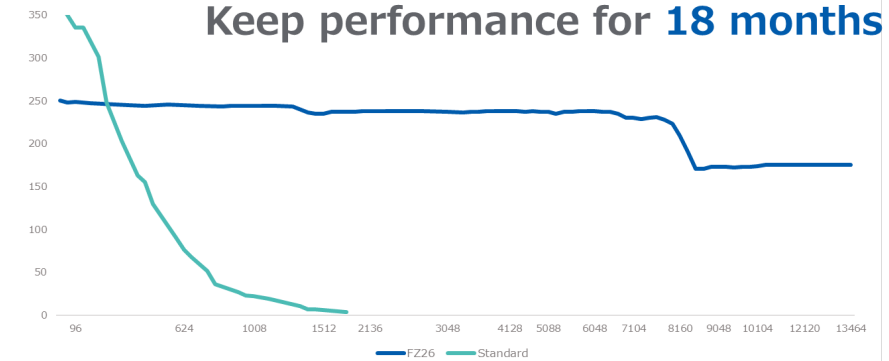
Before

HMI (LCD with LED backlight) cannot be used under N2 environment.

Part	Details
Backlight	Coating added on LED to isolate N2 gas to LED surface *
Brightness	Set around 220 cd as initial setting by Software to reduce current to LED (2 levels down from the original)
Overlay	Added 2 layers of overlays in addition to the original sheet, to hold the purge pressure **



**20 times longer**  
Keep performance for **18 months**



# HMI Specialist Values: Effectivity

One software (GP-Pro EX) cover all hardware and application.



## Leverage existing assets

Pro-face offers HMIs and industrial computers suitable for simple and complex devices as well as line management. Customers can adapt the human interface to several kinds of automation/machine architecture while using standard pieces from our portfolio and without complexifying the management of their assets.

About GP-Pro EX

Siemens TIA Portal vs Pro-face Comparison Presentation [Link](#)

## Remote monitoring system



Control center



Remote Control center PC

Pro-face Remote HMI  
Remote Monitoring Software for mobile



Line Status monitoring



Field Equipment

IPCs & HMI



Remote HMI  
Remote IPC (Remote HMI Server)



## Embedded Camera Application

Gas Cabinet in Semi-con industry

Request from End-User to improve Security

- Record while operation to identify who operated machine when trouble occurred
- Record when the error is happened to find the situation in front of machine

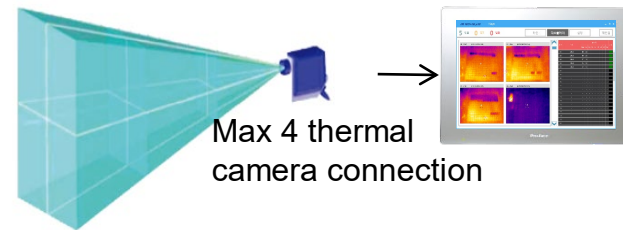


## Thermal Camera Monitoring System

Chiller, Gas Cabinet and Scrubber

Monitor the temperature of machines.  
When the temperature is higher than limitation,  
alarm will be occurred various data is  
displayed.

- Temperature
- Alarm
- Trend Graph
- Save CSV
- JPG file



Monitor on site



Main Monitor in the office

### Target Model

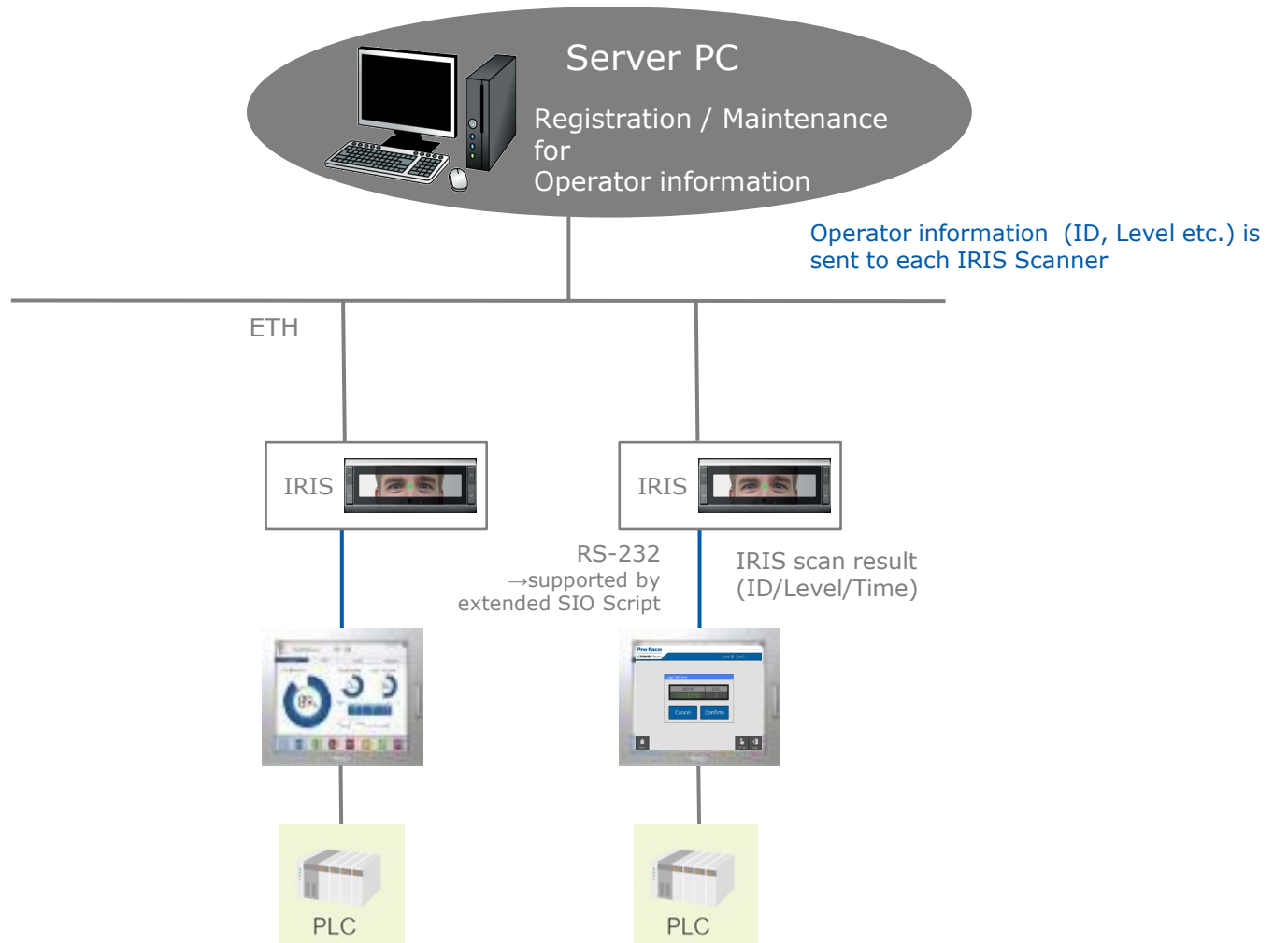
- SP5000 Series, GP4000 Series(except for GP4100 monochrome), ST/STM6000 Series, LT4000 Series, GP4000E Series, ET6000 Series.
- Software : GP-Pro EX V4.09.300 or later

# Customization

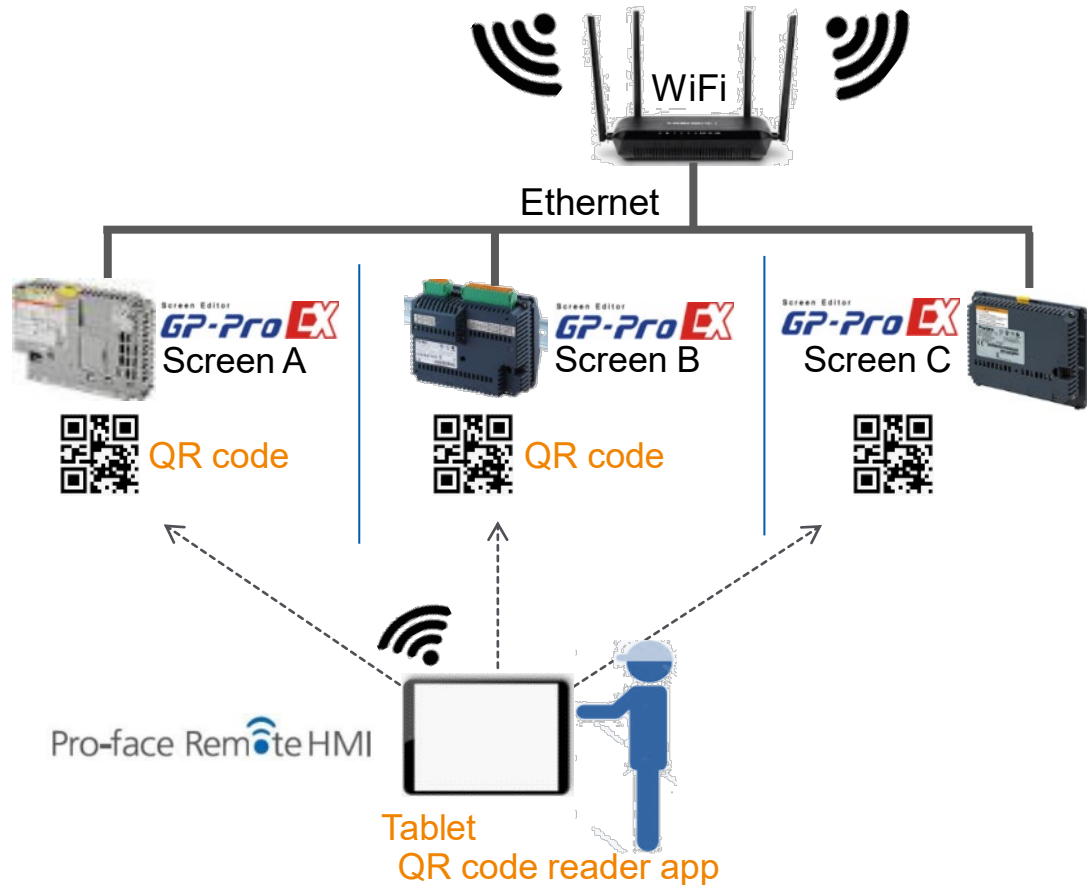
Model number	Customization description
PFXGP4601TADFZ17	Base model: PFXGP4601TAD 1) Remove PF logo 2) Paste COM1&2 stickers 3) Add 3rd party connector instead of the standard power connector 4) Remove yellow caution label from protection sheet
PFXGP4311HTADRFZ04	Base model: PFXGP4311HTADER 1) Paste ROBOT STOP label on front sheet 2) Pack Sticker together with the main unit
PFXSP5700TPDFZ53	Base model: PFXSP5700TPD 1) Add 3rd party connector instead of the standard power connector
PFXGP4301TADWFZ28	Base model: PFXGP4301TADW 1) Screen data install (27385082) 2) Add customer specified document (with installation date & serial number) in the package box 3) Add customer specified info on package label
PFXGP4301TADWFZ29	Base model: PFXGP4301TADW 1) Screen data install (27385083) 2) Add customer specified document (with installation date & serial number) in the package box 3) Add customer specified info on package label
PFXGP4301TADWFZ34	Base model: PFXGP4301TADW 1) Screen data install (27385088) 2) Add customer specified document (with installation date & serial number) in the package box 3) Add customer specified info on package label
PFXGP4301TADWFZ31	Base model: PFXGP4301TADW 1) Screen data install (27385085) 2) Add customer specified document (with installation date & serial number) in the package box 3) Add customer specified info on package label
PFXGP4311HTADRFZ05	Base model: PFXGP4311HTADER 1) Paste label on front sheet

## IRIS scanner

- IRIS scan result (ID/Level/Time) is sent to SP5000 10" or larger display + Power Box + GP-Pro EX
- Log-in with the level sent from IRIS Scanner
- Change operation range according to login level
- Save operation log with operator information sent from IRIS Scanner
- Now HMI is separated from Network but will join for remote monitoring/control application such as GP-ViewerEX / RemoteHMI for Win



## HMI Box+ QR code + Tablet for mobile HMI operation



### Effective & Mobile operations

- **Movable**  
Come close to the places to check (defected places or critical places)
- **Save space**  
No need space to mount HMI
- **Cost effective**  
Manage multiple machines or stations by one tablet + Multiple HMI Boxes
- **Secure**  
By using QR code, operator can make sure to connect targeted HMI Box



Get your effective and mobile operations started with the combination of our validated equipment and Pro-face products.

[Learn more](#)



## E-Mail transmission feature

- Alarm messages
- Log data attachment feature
- Quick and easy update
- Compatible with encryption and SSL certificate
- Emails can be sent using To, Cc and Bcc fields
- The subject and body can be freely edited
- Remote HMI link



