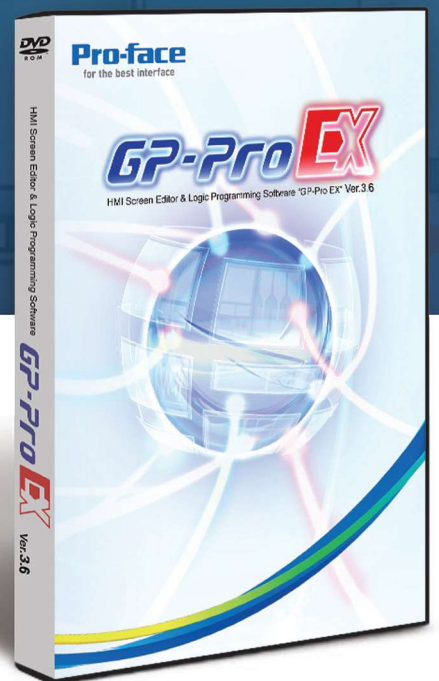
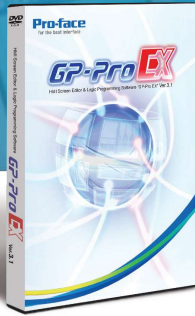


Pro-face

Software Guide





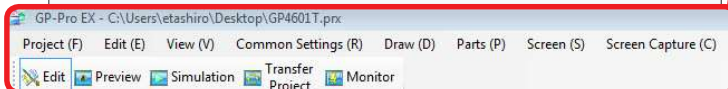
GP-Pro EX

GP-Pro EX is the easy-to-use development software for Pro-face HMI and IPC. With a wide array of development tools, expanded diagnostic and simulation capabilities, GP-Pro EX is capable of handling the most demanding applications.

GP-Pro EX

HMI Screen Editor & Logic Programming Software

Create Your Application in Only Minutes



1. Set-up Communications

- Choose and set up PLC and third-party devices effortlessly
- System settings are logically arranged and easy to find

2. Design Application / Screens

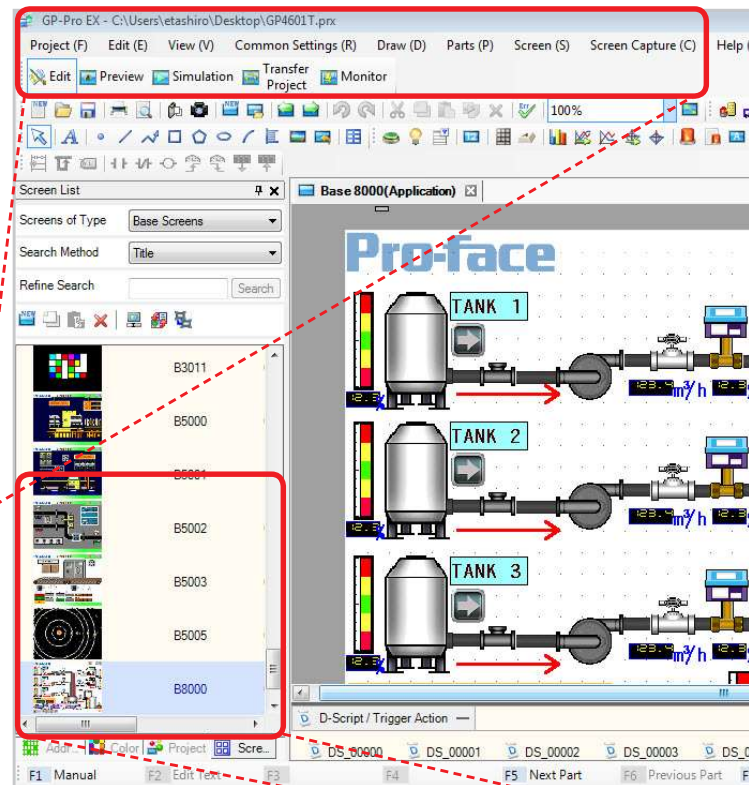
- Drag-and-drop addressing, parts and colors
- Efficient features to reduce development time
- Create consistent look and feel using the user-defined templates

3. Simulate and Test

- Verify before you travel
- Debug your application without hardware
- Test without downloading

4. Download / Transfer

- Tamper-proof HMI application – password-protected project source



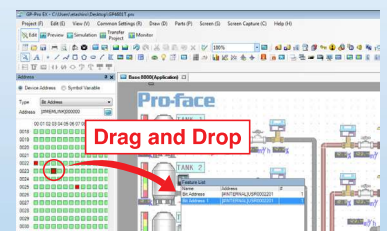
Thumbnail View

- Visually select the screens you need
- Updated instantly
- Screen number and descriptive label are shown for clarity



Visual PLC Addressing

- ✓ Smart visual address mapping for fast PLC-address-to-part communication connections
- Drag and drop PLC address onto part to quickly link controller address to push button, tank, graph, etc.
- Gives a quick visual check on how each part is mapped to controller or I/O device
- Significantly reduces screen development time
- Quick indication of what controller addresses are still available



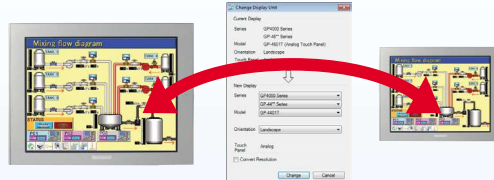
One development software for both dedicated and open windows-based operator interfaces

Extensive Time-Saving Features

Create consistent look and feel, detailed applications in minutes!

Resolution Conversion

- Adjusts HMI application to different screen sizes



Search & Replace

- Easily find text anywhere in the application
- Quickly replace addresses or text throughout.



Templates

- Reuse complete screens with addressing
- Build entire applications by using templates



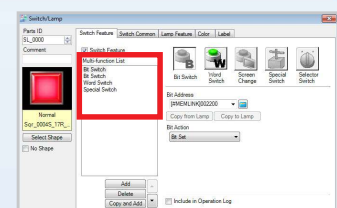
Headers and Footers

- One-click access to multiple user-defined headers (e.g. title) and footers (e.g. menu) for perfect placement. Edits to headers/footers update all screens simultaneously!



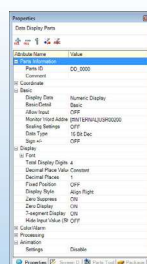
Multifunction Switches

- Execute multiple actions with one switch
- No need to stack switches, leading to possible operator error
- Choose Bit Switch, Word Switch, Special Function, change screen, etc.



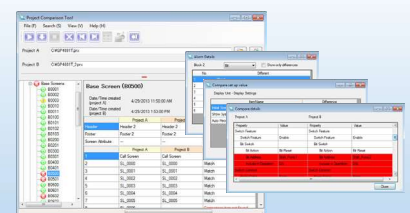
Property Window

- Quickly make changes to multiple objects with a single mouse click



Project Comparison Tool

- You can check the details to see if there are any differences between project files at a glance



Our **FREE** Technical Support site is a vast resource of product and application knowledge to help you maximize your HMI

- Videos
- Application Notes
- Certifications
- Driver Downloads
- FAQs
- Manuals
- Sample Downloads
- Screen Development Techniques



GP-Pro EX HMI Development Software

Application Investment Protection Import older project files

Project Converter

Import and convert project data created with previous versions of GP-Pro to upgrade to the latest hardware. You can also save projects created in GP-Pro EX 3.1 or later to be read by 3.0 with the version reverter tool.

GP510



1990s

GP2000



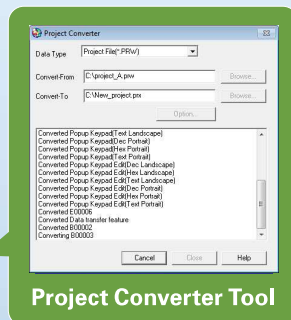
AGP3000



GP4000



TODAY

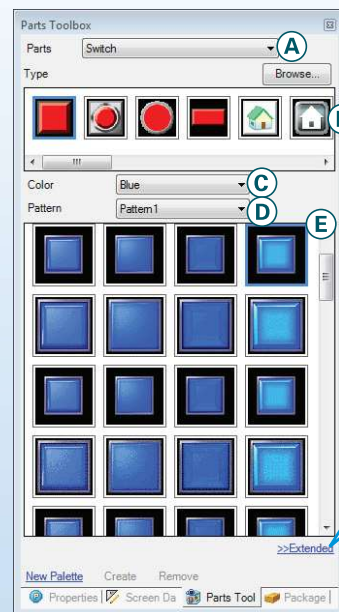


Project Converter Tool

Powerful Parts Toolbox allows for part customization and expansion

Parts Toolbox

Create more intuitive screens by understanding how parts are used at the site. Easy search system leads you to the right drawing.



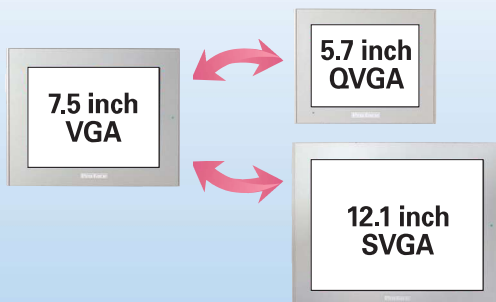
- A Category selection**
Select from switch/lamp/
data display/graph/etc.
- B Type (shape)
selection**
- C Color selection**
- D Pattern selection**
0-256/interface lock/delay
- E Parts display
based on category**
- F Color number
selection**
Select from 65535
colors/256 colors/etc.
- G Part drawing ID**

Plus!

- Select shape and format of parts already in place by opening the editing screen (shape browser).
- Register your own parts and group together for quick part placement

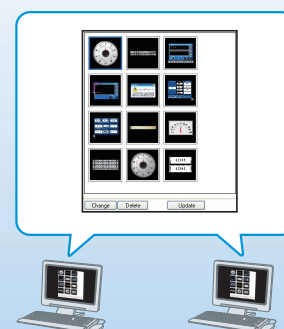
Auto Screen Scaling

Built-in Resolution Converter automatically converts project files to different resolutions. Significant time savings in changing screen sizes.



Share Images and Parts

Register your own parts and save them as a template on the server to share. Group together for quick part placement.

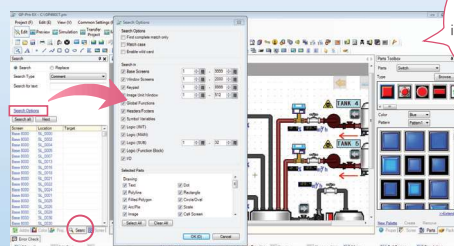


GP-Pro EX HMI Development Software

Maximize the value of your HMI and do more than before.

Quick Search Window

Search for parts information by item in the project. Edit groups of devices, labels, and parts by using the search results. You can also search and replace text on screens.



Search/exchange the logic programs instruction vocabulary and variables.

Perform bulk replacement if necessary.

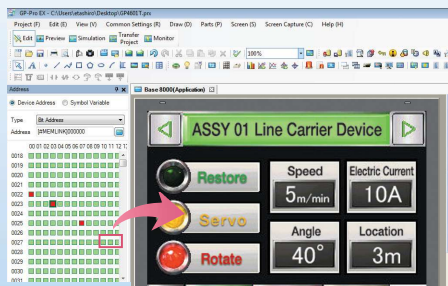
Simultaneous Part Address Changing

Change selected part addresses simultaneously. Duplicating similar screens is ultra fast and easy.



Fast Address Mapping

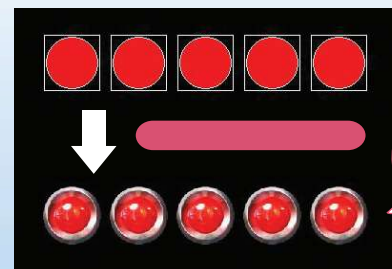
Drag and drop logic addresses onto graphic images for fast linking and reduce logic control mistakes.



Call up parts by clicking a parts ID.

Multiple Part Editing

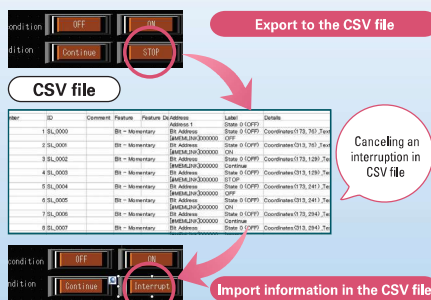
Change the shape of multiple parts at one time. Easily re-create images from past project files.



Alignment can be performed all at once using right/left & up/down position adjustments.

Import/Export the Part List in CSV

Export a parts information record to CSV file. Make changes using Excel and import information back into the project. Make fast label changes to a large number of parts.



Canceling an interruption in CSV file

Display CAD Images

Write DXF, DWF files downloaded using Visio to GP-Pro EX project files. You can also use CAD data on screens.

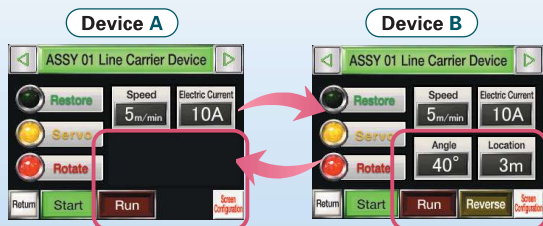


GP-Pro EX HMI Development Software

Reduce number of screens with extensive animation features

Part Visibility On/Off

Control part visibility by device or operator. Save development time and reduce project file size.



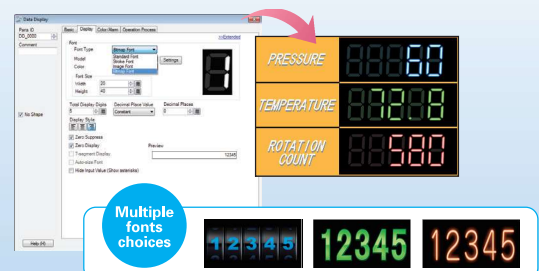
Use the same base screen

Reduce work by eliminating need to create new screens.

Functional parts simplify screen design and enhance readability

Font Choices for Data Display (Bitmap)

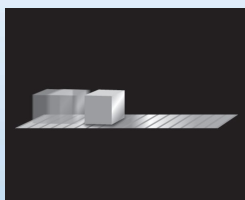
7 segment feature on data display provides for easy readability and visibility.



Move/Rotate Graphics

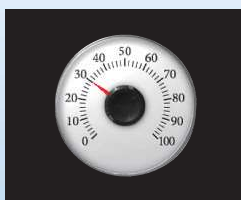
Move and rotate drawings and images to reduce design time when creating call-up screens.

Horizontal/vertical transfer



Express progress and movements on a conveyor.

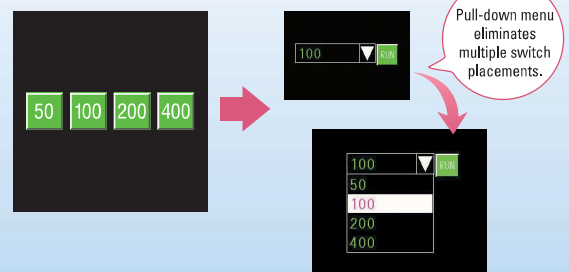
Rotate



Animate meters to display realistic situations.

Pull Down Selector List

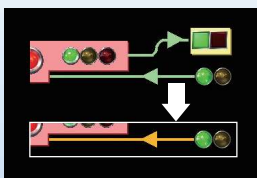
Reduce the number of switches installed using pull-down selection parts to save display space and development time.



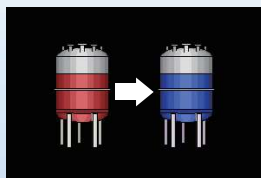
Convenient switch to change screens.

Control Graphic Colors

Vary the color of drawings and images, to eliminate work involved in creating call-up screens.



Change the colors via various control parameters



Color change showing current operating conditions

Change the color of lines, drawings, letters, graph lines, background, etc.

Scalable Numeric Entry Display

Numbers entered using the numeric keypad are displayed on the keyboard to prevent incorrect data entry.



Key size may be scaled easily to match display criteria

GP-Pro EX HMI Development Software

Easy language setup according to the operator

Create Multi-Language Applications

Use Excel to create multi-country text tables to allow the HMI operator to easily switch between display languages.

	A	B	C	D	E
1	English	Spanish	German	Chinese (Simplified)	Japanese
2	Return to origin	Retorno al origen	Retour au point d'origine	リターン原点	リターン原点
3	Slow Run	Retorno del funcionamiento lento	Retour au ralenti	スローラン	スローラン
4	Increased with parts	Retorno con partes	Retour avec pièces	リターン増速	リターン増速
5	Decreased with parts	Retorno sin partes	Retour sans pièces	リターン減速	リターン減速
6	Pump started	Inicio de la bomba	Start der Pumpe	ポンプ起動	ポンプ起動
7	Stop	Parada	Stop	ストップ	ストップ
8	English	Spanish	German	Chinese (Simplified)	Japanese
9	Spanish	Spanish	Spanish	Spanish	Spanish
10	Spanish	Spanish	Spanish	Spanish	Spanish
11	Chinese	Chinese	Chinese	Chinese	Chinese
12	Chinese	Chinese	Chinese	Chinese	Chinese
13	Change language	Cambiar la lengua	Ändern Sprache	言語変更	言語変更
14	Alarm	Alarma	Alarm	アラーム	アラーム
15	Task #1 Level Critical	Nivel del tanque #1 crítico	Niveau des Bâches #1 critique	タスク#1レベル危険	タスク#1レベル危険

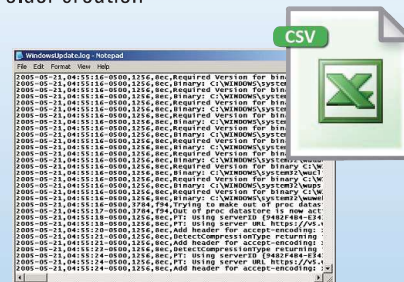
Input in Excel, copy and paste into GP-Pro EX.

Table	Table Name	Table Language	Table Title	Table Content
1	1-ASCI English	English	1-ASCI English	1-ASCI English
2	2-ASCI Spanish	Spanish	2-ASCI Spanish	2-ASCI Spanish
3	3-ASCI German	German	3-ASCI German	3-ASCI German
4	4-ASCI Chinese	Chinese	4-ASCI Chinese	4-ASCI Chinese
5	5-ASCI Japanese	Japanese	5-ASCI Japanese	5-ASCI Japanese
6	6-ASCI Korean	Korean	6-ASCI Korean	6-ASCI Korean
7	7-ASCI Russian	Russian	7-ASCI Russian	7-ASCI Russian
8	8-ASCI Arabic	Arabic	8-ASCI Arabic	8-ASCI Arabic
9	9-ASCI Hindi	Hindi	9-ASCI Hindi	9-ASCI Hindi
10	10-ASCI Thai	Thai	10-ASCI Thai	10-ASCI Thai
11	11-ASCI Vietnamese	Vietnamese	11-ASCI Vietnamese	11-ASCI Vietnamese
12	12-ASCI Indonesian	Indonesian	12-ASCI Indonesian	12-ASCI Indonesian
13	13-ASCI Malay	Malay	13-ASCI Malay	13-ASCI Malay
14	14-ASCI Tagalog	Tagalog	14-ASCI Tagalog	14-ASCI Tagalog
15	15-ASCI Filipino	Filipino	15-ASCI Filipino	15-ASCI Filipino

Extended alarm functions for reduced labor thanks to added enhanced functions

Export Alarm and Sampling Data to CSV

- Any international date format available
- Multi-Language Text Table feature is supported
- Improved performance when saving files with New Folder creation



Use Windows™ Fonts for Readability

Windows™ computer fonts may be used for the data display, text table, and alarm. Anti-aliasing support in labels for smooth font display.

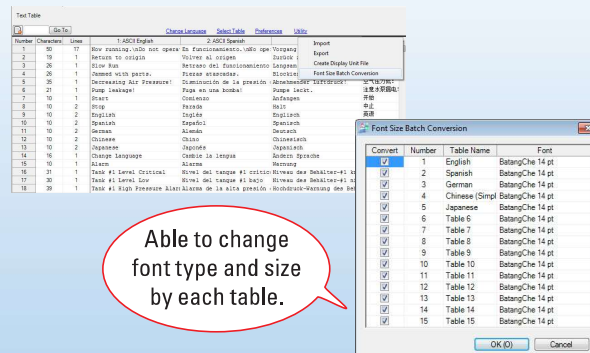


Responds to multiple languages.

The font and size of the text table and label of the switch/lamp can be setup individually.

Batch Conversion of Text Table Font

Able to change the font setting for each language at one time.



Able to change font type and size by each table.

Automatic Font Size Adjustment

Switching languages when multiple-languages are used automatically adjusts font sizes according to the size of the switches, lamps and message displays.



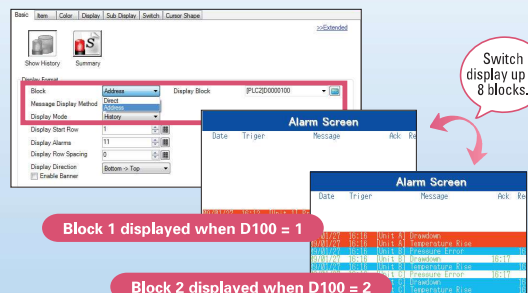
Japanese

Character size will be enlarged or reduced if the number of characters decreases or increases when switching languages.

English

Control Alarm Indication

Reduce screen design and save time by using alarm blocks that display alarms based on the device or level of importance on one alarm indicator.



Switch display up to 8 blocks.

Block 1 displayed when D100 = 1

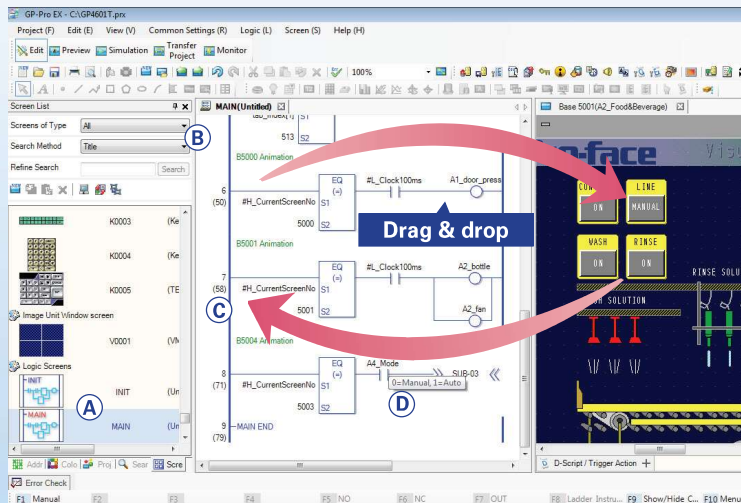
Block 2 displayed when D100 = 2

GP-Pro EX HMI Development Software

Unburden your PLC with built-in control

Ladder Logic Control Programming See supported instruction notation list

GP-Pro EX provides a built-in logic editor to create an all-in-one HMI plus Control application. Using one software for both screen development and ladder logic ensures glitch free operations and tighter revision control.



A Block-structured Subroutine

Initialization logic, main logic and subroutines can be blocked, enabling smooth editing.

B Logic search/replace

Search or replace the indefinite numbers of logic with the search window.

C Number of steps displayed

The size of a logic program is easily viewed with the number of steps displayed up to 60,000 steps. The internal memory is reduced to 1MB for 60,000 steps (screen data).

D Tip Display for Comments

Displaying comments as tips makes a program clear. Comments can be displayed at any time.

Use the logic program for controlling external devices!

*Not available on all models.

*Not compatible with some connection device address specifications

Maintenance Features allow monitoring of logic under operation

• Logic Display

You can check the operation of a logic program within the system on site.

• Address Display

The logic address is displayed, enabling you to check variable names and their current values.

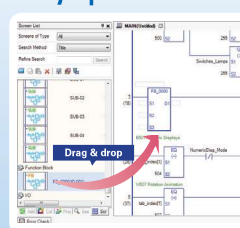
• Online Editing

You can change a logic program even while the control function is operating without stopping work.

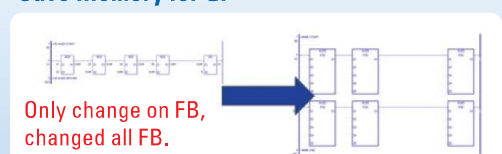
Function Block

You can reuse logic programs by making them into a component, which drastically reduces development hours and mistakes in programming.

Easy Operation for EX



Save Memory for GP



Easy to place FB to Ladder by Drag & Drop.
Able to reduce memory when same FB used.

Create your own functions or write a simple communication driver

Develop a program or simple communication driver using Pro-face D-Script simplified language.

Re-use previous revisions of D-Scripts created by user, no need to re-create work previously done.

Function

Bit operation ON, OFF, clear
Memory operation Copy and shift, etc.
CF/SD file operation File access, delete list output, etc.
USB file operation File access, delete list output, etc.
SIO port operation Send/receive data
Printer operation Send data
Draw Call screen, circle, straight line, square, etc.
Others Debug message and exit WinGP

Tool Conditional

Branching IF, LOOP, etc.
Comparison AND, OR >, =, <, etc.
Operation +, x, bit operator, etc.

Configure the settings on a trigger condition such as "Continuous Action", "Timer-Bit change" and "When condition is satisfied". Additionally, a wide variety of functions such as search (searching and replacing strings in a script) and debugging functions (displaying messages and addresses on the system), etc., are provided.

GP-Pro EX HMI Development Software

Security Controls Prevent Unauthorized Access

A variety of security controls are available to allow operators access to select HMI screens while preventing unauthorized access to password protected screens such as recipes and alarm screens.

Define Access and Restrictions per User

Access rights consisting of user names, passwords, fingerprints*, and their assigned access level are determined for each operator interface.



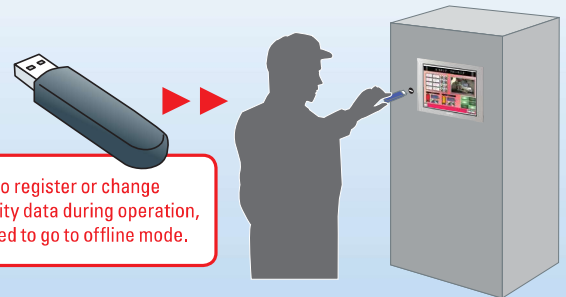
* Requires EZ Series Fingerprint Reader

Fingerprint Recognition			
[X] Enable Security Function			
[X] Add User ID			
Level	ID	Password	Fingerprint
1	OPER1	123	
1	OPER2	234	
5	MAINT	ABC	
5	SHIFT SUP	ABC1	
10	REMOTE	CDE	
11	REMOTE (V)	CDE1	
15	PLANT SUP	XYZ	
15	OEM	OEM	

Set Security Level For Each Feature			
Item	Level	Disable	
Offline Mode	0		
Logic Monitor	0		
Online Logic Editing	0		
Read GP-Viewer Data	5		
Write GP-Viewer Data	5		
New Web Server Contents	10		

Security Maintenance

Quickly and easily change passwords for each machine operator. Passwords may be changed or added using a memory card, USB stick, or by FTP!



Delete files after changes to ensure security.

Operator Safety (Security Per Part)

Configure access and authority parameters per part by requiring a certified ID or password for parts that are controlled by different security levels.



Security levels may be set for each part for operator safety. Combined with the animation function, some parts may become inactive or hidden if they require a higher authority level after operator log-in

Project Security

Set passwords for each screen or script to prevent accidental unauthorized access. Use security features to protect intellectual property rights.



Investment Protection: Protect your data assets even when exporting the system overseas.

No PC on site Required

Use a USB memory stick for daily, weekly or monthly security changes, performing part label changes, transferring screens, setting recipes or collecting log data from the HMI.

Perform secure project updates for OEMs and System Integrators



GP-Pro EX HMI Development Software

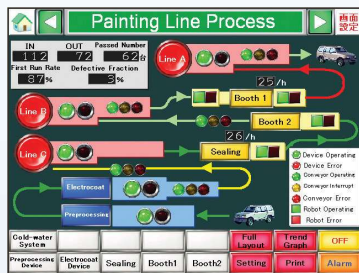
Verify Performance and Operation Without Hardware

GP-Pro EX HMI Screen and Logic Simulation

A pseudo-environment created on your PC. Prevent errors in operation by allowing confirmation and debugging before transfer.

Screen Operation Check

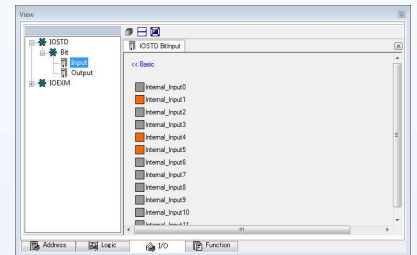
Confirm screen performance before transfer without connecting to PLC. Check actions performed using the touch panel installed by clicking with the mouse.



Do a screen capture to use for creating specifications.

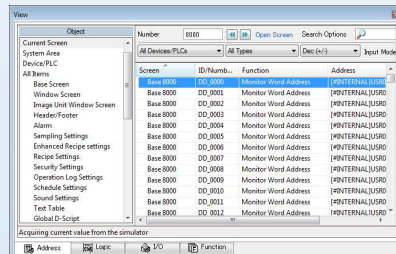
I/O Operation Check

Confirm current values for addresses allocated to I/O driver terminal in order to control external I/O. Some I/O drivers allow switching between ON/OFF state or change current values.



Controller Address Check

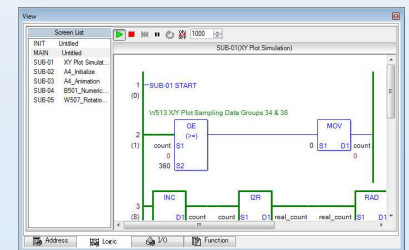
Display and edit the list of present values of virtual connected devices.



Perform intuitive operation debugging using the screen view or logic view.

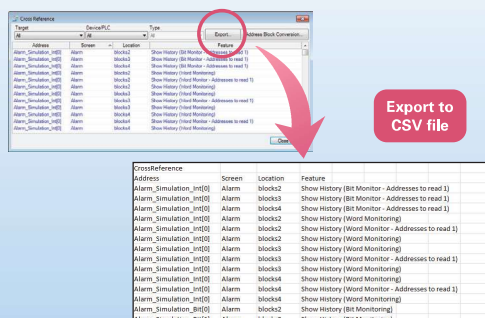
Logic Operation Check

Confirm present values and ON/OFF status of symbol variables and addresses before transferring the project file. Minimize time in logic program debugging.



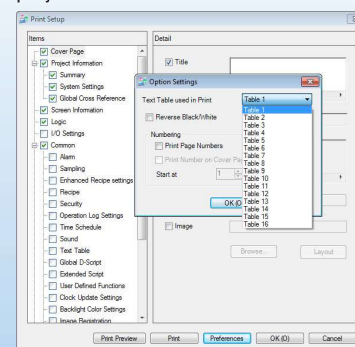
Cross Reference CSV Export

Output the list of used addresses as a CSV file to perform a cross reference check. You can select to output either individual screens or all screens.



Print Out Settings

Select and print required setup information of the project file. Minimize documentation labor.

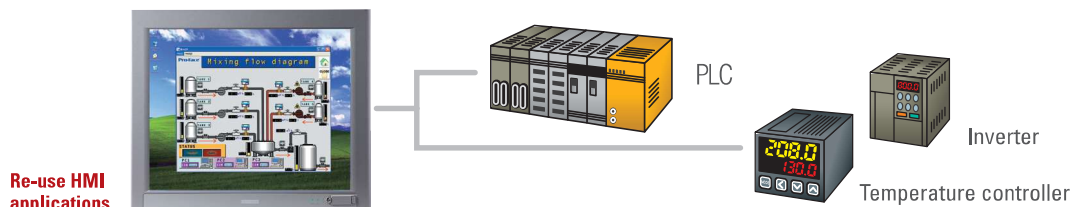


RTF format output option

GP-Pro EX HMI Development Software

WinGP Maximizing Your Industrial Computer Potential

WinGP is runtime software for GP-Pro EX HMI created applications. Pro-face dedicated operator interfaces are quickly installed on an industrial touch screen computer creating an On-Demand Windows-based HMI.



Run a GP-Pro EX HMI application and communicate with various controllers using a Pro-face industrial computer.

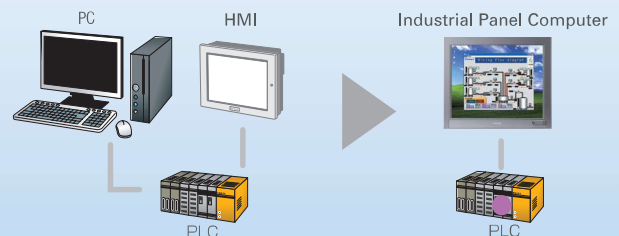
Pro-face Industrial Computers

UL Class 1 Div 2 certified industrial computers with built-in health monitoring to maximize process uptime. A wide variety of solid state drives, fanless, RAID and other options are available.



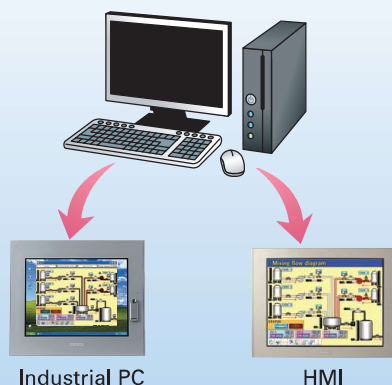
Reduce System Space

Conventional systems that combine a PC, a graphic operator interface and a PLC can be simplified to an industrial PC and a PLC. Reduced components reduces maintenance time and costs.



Re-use Existing HMI Applications

Stay flexible with your choice of technology.



3rd Party Application Flexibility

Communicate to WinGP runtime using a flexible link to user applications.

Link to User Database using the Handling API

Enables a user application to receive WinGP status and to change its setup. (Provided as the DLL file).

Control from User Application using Device Address API

Enables a user application to read/write devices on controllers connected with WinGP. (Provided as the DLL file).

Supported Languages

• Visual C++ • Visual Basic • C# • VB.NET • VBA

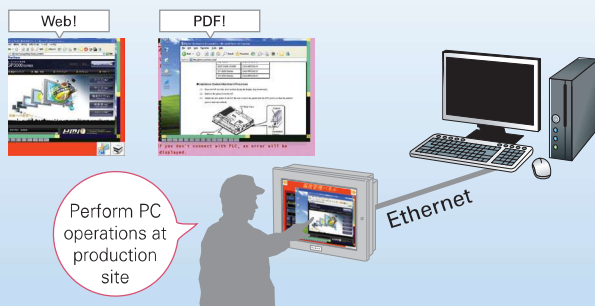
GP-Pro EX HMI Development Software

Remote PC Access (RPA) Full Power of a PC Available to your HMI over the Internet/Network

Remote PC Access (RPA) brings full PC functionality to a dedicated operator interface. Open any document such as PDFs, CAD, JPEGs, etc. or hot link to the machine builder's web site from the display screen of the operator interface.

Remote PC Access

Interact with a remote server PC using the operator interface. The Operator Interface shows the same PC server display on its screen.



Only for Ethernet TFT HMIs with VGA graphics and higher

Application and Benefits

Updating Machine Documentation

- Store machine manuals in one location on a remote PC server.
- All HMIs with RPA will automatically see the latest version posted.

Design Internet Hot Links to OEM Site

- Create HMI buttons that open up OEM web site to get latest machine updates.

Review Work Process and Reports

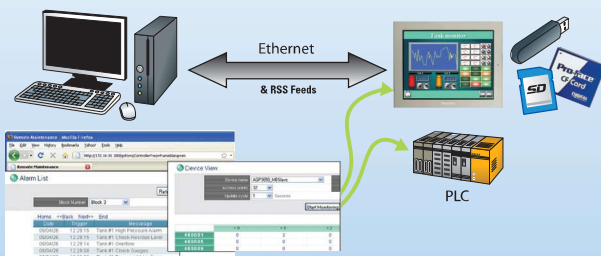
- Keep current with production changes, supply demand, and productivity reports.

WebServer RSS Feed Alarm Monitoring and Launch GP-Viewer EX with Browser

FREE WebServer provides OEMs, System Integrators and End-users to automatically receive alarm notifications through RSS feeds, or launch GP-Viewer EX to monitor the machine operator activities.

Use standard web browser to:

- Access the Operator interface via IP Address
- View Active and Historical Alarms
- Read and Write data to Operator Interface
- Read and Write data to PLC memory
- Launch additional HMI software tools



Application and Benefits

Remote Alarm Monitoring

- Automatic notification via RSS feeds
- Review and prioritize daily alarms to reduced maintenance costs.

Update PLC Data

- Optimize machine performance using web-based monitoring and updating PLC data values.

Update Operator Interface Data

- Reduce individual operator alarm inspections to increase maintenance efficiency.

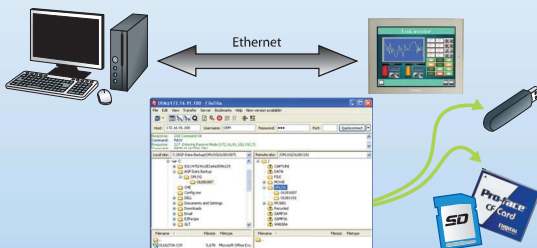
GP-Pro EX HMI Development Software

FTP Server Upload and Download Data Files to the Operator Interface Data over the Internet

FREE FTP Server provides OEMs and System Integrators the ability to access an operator interface to perform remote routine maintenance or online customer support without the need to travel on-site.

Use any FTP Client to:

- Access the Operator interface via IP Address.
- Upload Diagnostics Data:
 - Alarms, Operation Log, Event Recorder Video
- Perform Remote Maintenance:
 - Upload and Download Operational Data
 - Training Videos, Recipe Data, Security Settings



Application and Benefits

Reduce travel cost

- Acquire alarm logs, event recorder, video captures and data files over the internet.

Save Travel Time

- Perform remote diagnostics and phone support in your office, eliminating on-site travel time.

Easy Field Maintenance

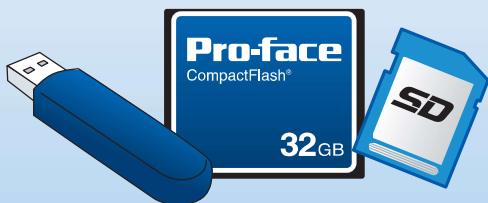
- Update recipe data, security settings and language settings without on-site plant floor visit.

Transfer Tool Field Maintenance and backup with data protection

FREE Transfer Tool allows application upgrades to the operator interface in the field without the need for development software. Ideal solution for OEMs or system integrators looking for an easy field upgrade solution.

Use Transfer Tool on site to:

- Update and backup HMI and logic projects
- Download recipe, video, security and language updates to the CF/SD card.
- Compare differences between two HMI applications
- Upload log data from the HMI CF/SD card or USB.
- Maintain information transfer flexibility via:
Ethernet / USB Port / Serial Port



Application and Benefits

HMI Application verification (revision control)

- Check for application tampering by comparing HMI application project on unit to a known good project.

Intellectual Rights Protection

- Allow others to perform field updates without the ability to access proprietary project information.

Access CF/SD or USB Data Storage Device

- Retrieve or store log, recipe, other files etc. using any of the three transfer methods.

* This is the same transfer utility used in GP-Pro EX.

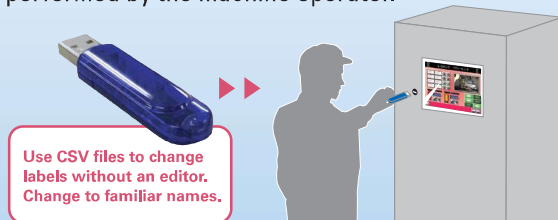
GP-Pro EX HMI Development Software

Memory Loader Field Maintenance and Backup with Data Protection

FREE Memory Loader tool stores project, drivers or images to upload to one or multiple HMIs using a simple USB or CF / SD storage device. Eliminates the need for HMI development software and a laptop on site.

Use Memory Loader to:

- Prepare a CF / SD / USB image to load on HMI.
 - Includes Project, Driver and System updates
 - Multiple Projects can be stored simultaneously
- Download project to HMI without using a PC.
- Back-up existing project in HMI before updating.
- Offer a simple update procedure that can be performed by the machine operator.



Application and Benefits

Remote Field Upgrades

- E-mail edited project file to site location for technician to store on USB stick and upload to operator interface.

Project Backup and Recovery

- Backup existing HMI application before updating to restore HMI to previous state if necessary.

Update Multiple HMIs (portability)

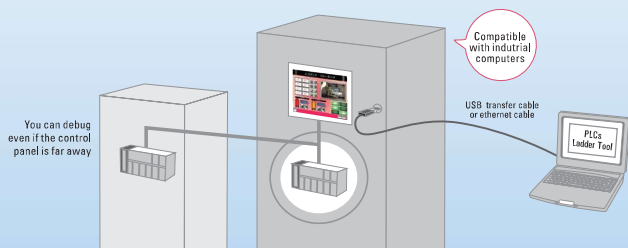
- Use CF / SD card or USB memory stick to update all HMIs using the same application.

Pass Through Programming and Monitoring PLC via Operator Interface

FREE Pass Through tool allows you to program the PLC through the operator interface. PLC access is provided through the Ethernet connection on the HMI. Ideal for quick programming changes to optimize system performance.

Use Pass Through to:

- Program or monitor PLC via HMI.
- Eliminate need to connect a PLC Programming cable.
- Take advantage of existing HMI to PLC communication cable connection.
- Access PLC remotely through HMI's Ethernet or USB.
- Save travel expenses with remote maintenance.



Application and Benefits

On site PLC Diagnostics

- No need for PLC programming cable. Use the USB or Ethernet port on the HMI to obtain communication access to the PLC.

Off site Remote PLC Diagnostics

- Use the Ethernet port on HMI to gain PLC access remotely. Even if PLC normally programs through a serial connection.

Update PLC without disruption

- Diagnose and perform PLC maintenance without disrupting communications to the HMI.