

# Pro-face

AGP3000 Series

## Advanced Operator Interface



### Corporate Overview

Pro-face America

### HMI Solutions Overview

Total HMI Solutions Package

### HMI Software

GP-Pro EX

### Data Management Software

Pro-Server EX

### Operator Interface & Operator Interface Plus Control

AGP3000 Series

AST3000 Series

LT3000 Series

### HMI Connectivity

Drivers and Accessories

Third-Party Support

CELEBRATING  
**35+** Years  
of Industrial  
Automation  
Solutions

## About Pro-face



# Pro-face

**Globally Recognized,  
Globally Supported,  
Globally Trusted.**

- We are the leading independent global supplier of industrial computing and visualization solutions for automation and manufacturing applications.
- We are recognized worldwide for innovative designs with the industry's highest quality and reliability.
- We offer the most extensive product offering of HMI touch screens available with the highest levels of system and network connectivity.

## Pro-face: A Company You Can Depend On

- More than 35 years providing industrial Human Machine Interface (HMI) technology
- Pro-face and Xycom brands: the most trusted names in the industry
- Worldwide applications support teams ready to help you
- Serving more than 50 countries, Pro-face has 17 main offices with 1200+ employees
- We speak your language:  
*English, Spanish, Japanese*
- We have a vast distribution network to provide products quickly anywhere



**Pro-face**

Operator Interfaces,  
Industrial PCs & Monitors

**X**YCOM™

Industrial PCs & Monitors

***Right-size, Right-technology Visualization Solutions***

# A Choice of HMI Technology Solutions

## Dedicated Operator Interfaces

- Performance-built, factory workhorse graphical touch screens
- Extensive hardware and software connectivity
- Use for maximum reliability and dependability of HMI applications
- 100% solid-state design

## Open-Platform Industrial PCs

- Windows® XP, 2000-based industrial PC touch-screen systems
- Built to withstand high-vibration, -shock and -temperature environments
- Built-in redundancy using RAID-enabled option
- New innovative technology sends alert when PC system status is out of tolerance
- Solid-state drive options available

## The Right HMI for the Right Application

## Operator Interface Plus Control

- Combined operator interface and PLC logic control in one package
- Supported by one software package
- Offers significant reduction in system cost and panel space
- Ultra-low maintenance

## Flat-Panel Touch-Screen Monitors

- Highly detailed graphical interface with built-in touch screen
- Sizes from 10" to 19" plus built-in keypad option on some models
- Sleek, innovative styling
- Global certifications and ratings

## Investment Protection

Built into every unit is investment protection. Our investment protection is all about keeping your machine current with the latest technologies while minimizing migration costs and disruptions to the existing installation.

### Minimize your total cost of ownership:

- Pro-face and Xycom brand products have maintained cutout compatibility for more than 21 years
- Upgrade your machine with more capabilities without altering the original design
- Recognized by the industry for providing significant savings to our customers
- It's all included – no product migration service contracts required

No other industrial PC and operator interface supplier can guarantee long-term investment protection value backed by a 21-year track record.

**Lowering your total cost of ownership!**

**Celebrating more than 21 years of cutout compatibility!**



# More Than an Operator Interface...

## HMI Solutions for OEMs, System Integrators and End Users

### OEM/System Integrator

#### Design

- Tools for rapid development
- Integrated solution
- Multiplatform development software
- Data management software

#### After-the-sale support

- Remote servicing
- Extensive diagnostic features

HMI for standalone machines

HMI for extensive networking

**Work smarter,  
be informed,  
make the  
right choices**

Instructional HMI for a safe  
and informed workforce

# An Enterprise-Wide Solution



# Innovative Operator Interface Solutions

## Extensive Family of Operator Interface Solutions



### ✓ All the standard HMI features you expect and more . . .

- High-reliability graphic touch screens
- Sizes from 3.8" to 15" (more than 75 units)
- Direct camera input, view live video, capture images
- USB and CompactFlash® ports
- 10/100 Base-T
- RS-232/422/485 and MPI serial ports
- Up to four active protocols simultaneously

## Advanced Solutions

### ✓ Extensive features, including:

- Built-in security tracks system changes by user ID
- Event recorder captures video of machine faults
- Device gateway: share data between different PLC vendors and other fieldbus equipment using the AGP3000 operator interface
- Built-in logic control eliminates PLC while cutting system costs
- Built-in discrete and distributed I/O options
- Real-time logic and device monitoring features help diagnose system problems

## Remote PC Access Solutions

### ✓ RPA

- Use AGP3000 operator interface to access and control a remote computer/server
- View PDF, CAD, DOC, XLS or any file type located on a remote server PC
- Instantly update documentation to an entire plant by storing manual, data sheet, help files on one server
- Link directly to OEM Web pages for machine updates
- Remotely monitor SCADA programs while reducing SCADA licensing costs

## Third-Party Device Support Solutions

### ✓ More than 100 drivers supported, including:

- AB native tag support for EtherNet/IP
- Modbus, Modbus Plus and Modbus/TCP
- Siemens, including PROFIBUS and MPI
- GE serial and ethernet
- Mitsubishi, Automation Direct/Koyo, Omron
- Bar-code and 2-D readers
- PLCs, temperature controllers, inverters and drives
- Fieldbus support: CANopen, DeviceNet

And many more . . .

## From the Factory Floor to the Control Room

## AGP3000 Operator Interfaces & LT3000 Logic Controllers



## Advanced HMI Development

- ✓ One HMI development package
- ✓ Includes built-in logic editor for HMI Plus Control models
- ✓ Multiplatform solution: Supports both dedicated operator interfaces and open-platform industrial PCs

**GP-Pro EX**



***A complete, out-of-the-box, multiplatform solution***

# Corporate Enterprise and Beyond



## Enterprise-wide Data Management

- ✓ Cost-effective data connectivity solution
- ✓ Data collection and data sharing
- ✓ Internet data access and monitoring



Data management software

# Pro-Server EX

**tiplatform HMI solution package**

## Enterprise-wide Data Management Solutions

### ✓ Pro-Server EX

- Use Pro-Server EX to enable multiple AGP HMI units to share PLC, fieldbus or HMI data over an ethernet network
- Upload log data, recipes, images and production data to a back-office computer/server
- Integrate shared data into Excel®, Access™ or ODBC databases, such as Oracle, wherever it is needed in the enterprise
- Supports DDE, DLL, Access™, Excel®, OPC, SMTP e-mail, ODBC, SQL, MES and API interfaces
- Pro-Server includes 29 predefined Excel® productivity reports
- Use Pro-Server's API to integrate HMI data into your in-house Visual Studio™ application
- Take advantage of instant health-alert system from select Pro-face industrial computers, reducing unscheduled system shutdowns

## Internet-Based HMI Solutions

### ✓ FTP server (built-in for ethernet models)

- Upload or download recipes, log files, sampling data, images, etc. to AGP CompactFlash® or USB memory device using a Web browser or FTP client
- Secured file access using user ID and password features
- Reduce travel costs by making maintenance changes remotely without having to be on-site

### ✓ Web server (built-in for ethernet models)

- View active and historical alarms
- Modify PLC tag or HMI symbol values
- Use RSS alarm feed feature. Sends alarm data updates to you without the need to be logged into the AGP HMI unit.
- View AGP HMI driver and runtime versions
- Launch an FTP connection to the AGP to download or upload files
- Launch GP-Viewer EX (if installed)

### ✓ Remote access and control (GP-Viewer EX)

- Monitor, interact and control multiple AGP operator interfaces on a factory floor from a remote PC
- View the same or different AGP HMI screens as the local operator
- Remotely view production line status or diagnose problems without expense of traveling to site
- Used as a remote operator training tool by equipment builders

## Easy Maintenance Solutions

Update AGP3000 units in the field using multiple cost-effective methods. Updates can be done in the field without need for software on-site.

### ✓ Updating field-installed HMIs

- Via USB memory device or CompactFlash® memory card
- Via ethernet, USB cable, modem, serial port



# Powerful Networking at Your Fingertips

## HMI software solutions

Screen Editor

### GP-Pro EX

Friendly HMI development environment software

GP-Pro EX software supports:

- All AGP3000 units
- All LT3000 units
- All AST3000 units
- Built-in logic editor for C-Class models
- PS3000 with WinGP



### Pro-Server EX

Enterprise-wide data collecting, sharing, connectivity solution

Application software for sharing user-defined factory-floor data throughout the corporate enterprise



#### ✓ GP-Viewer EX

- Remotely monitor and control HMI unit screens from the Internet or via an intranet

#### ✓ WinGP

- On-demand operator interfaces
- GP-Pro EX runtime for Pro-face PS3000 Windows®-based PCs

#### ✓ RPA software

- Harness the power of a PC through your dedicated HMI
- Access files and documentation located on a remote PC

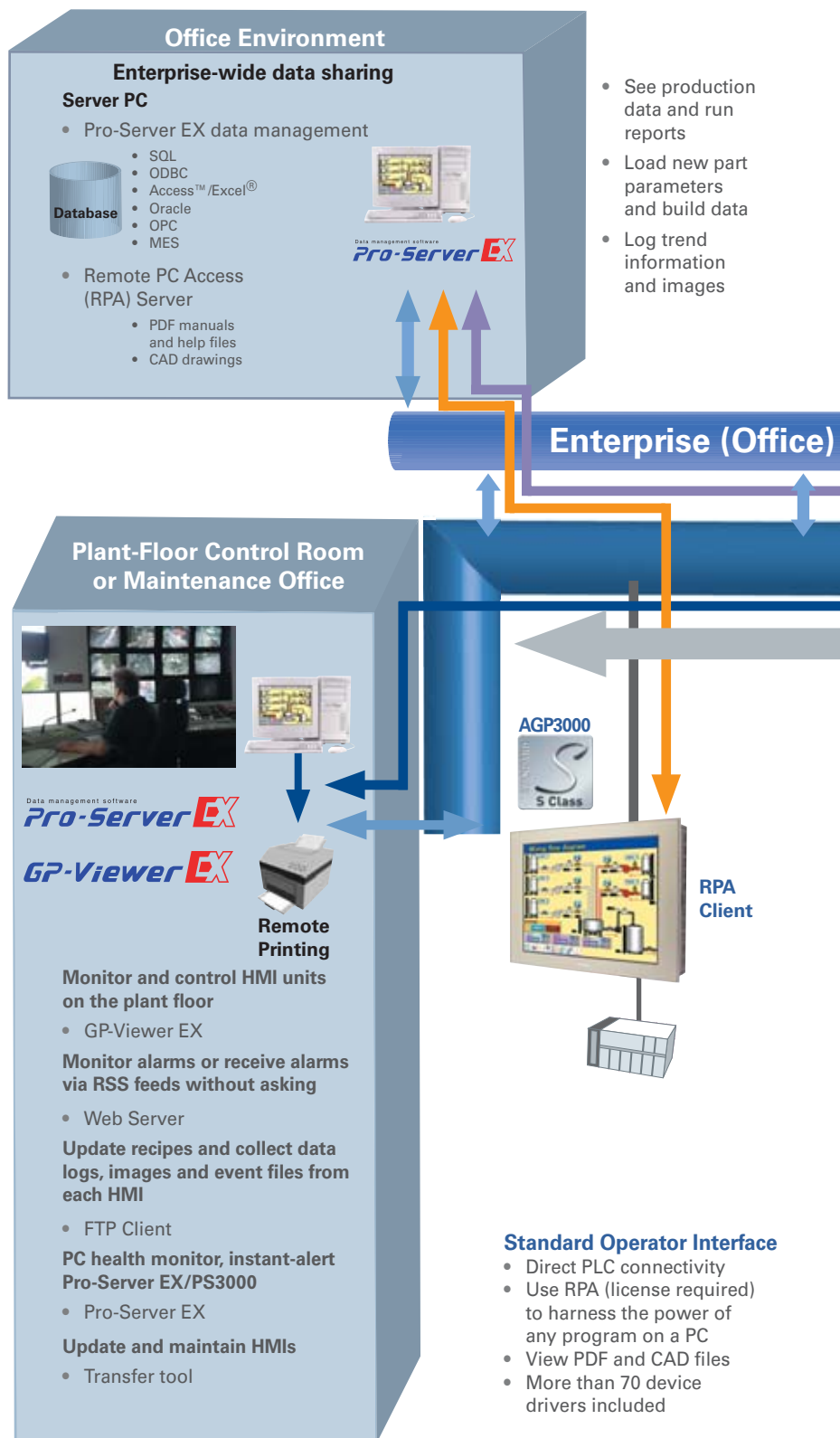
#### ✓ Movie converter

- Convert training and maintenance videos for viewing on AGP3000 displays

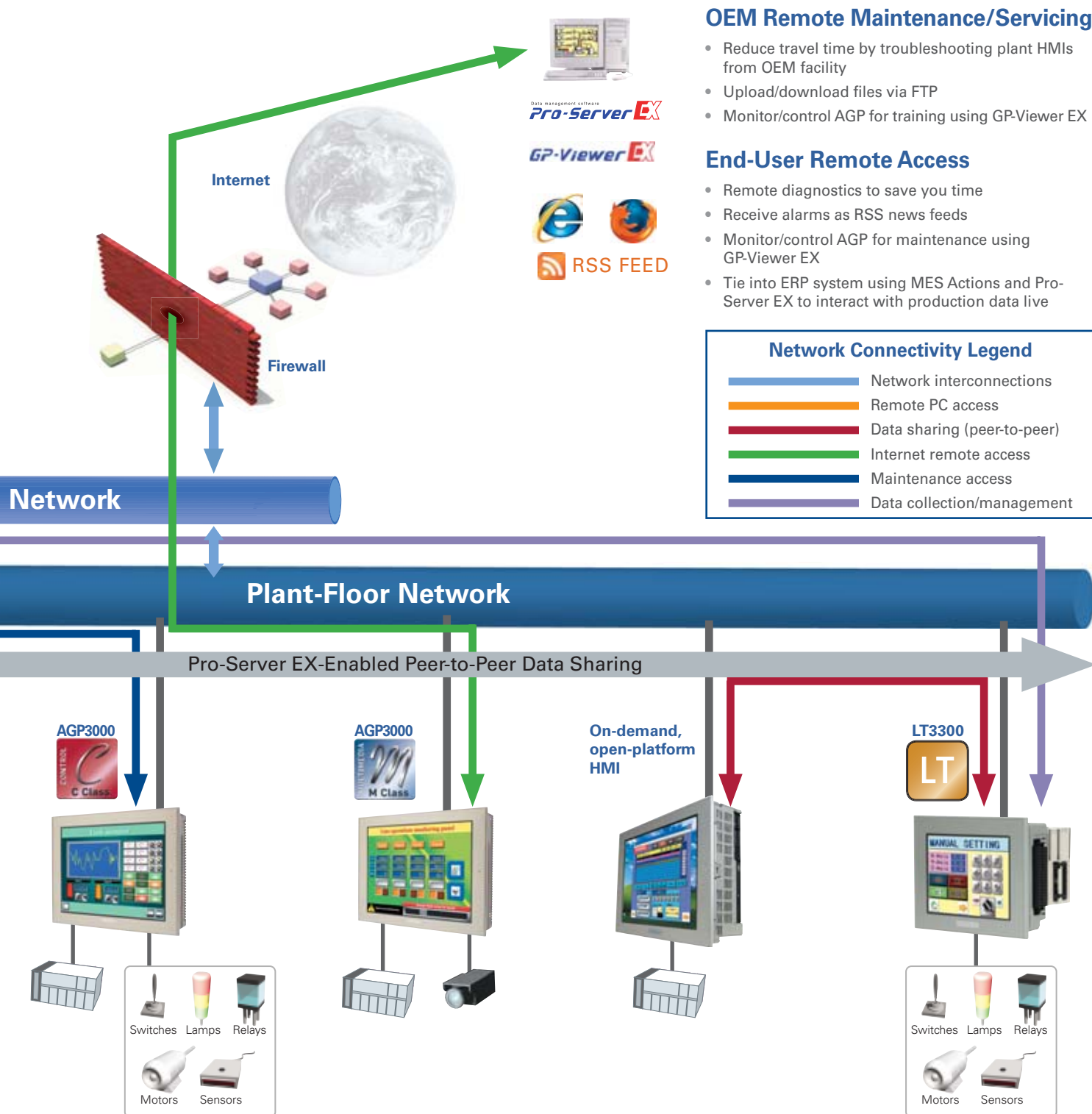
#### ✓ MES license software

- Manufacturing Execution System license for Pro-Server EX

## Right technology, right solutions







## OEM Remote Maintenance/Service

- Reduce travel time by troubleshooting plant HMIs from OEM facility
- Upload/download files via FTP
- Monitor/control AGP for training using GP-Viewer EX

## End-User Remote Access

- Remote diagnostics to save you time
- Receive alarms as RSS news feeds
- Monitor/control AGP for maintenance using GP-Viewer EX
- Tie into ERP system using MES Actions and Pro-Server EX to interact with production data live

### Operator Interface Plus Control

- Lower installation and setup costs
- Built-in ladder logic to enhance or replace the PLC
- Logic to reduce PLC processor loading

### Operator Interface Plus Multimedia

- Video recording and playback across the network
- Inform operators and keep them safe

### Open-Platform HMI: WinGP

- Pro-face PS3000 Series with WinGP
- Direct PLC connectivity
- Interact with Windows programs
- Perform "data concentrator" functions
- Instant-alert PC health monitoring

### Standalone Operator Interface Plus Control

- Built-in and expansion I/O to replace the PLC
- Operator interface functions
- Powerful data collection

# Building a Complete HMI Solution

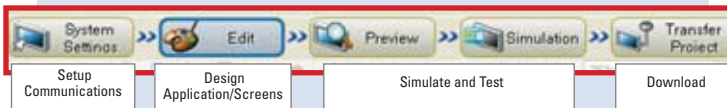
## Start With the HMI Development Software

Create Your Application  
in Minutes

Easy as 1, 2, 3, 4

Four Simple Steps

Development



### 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

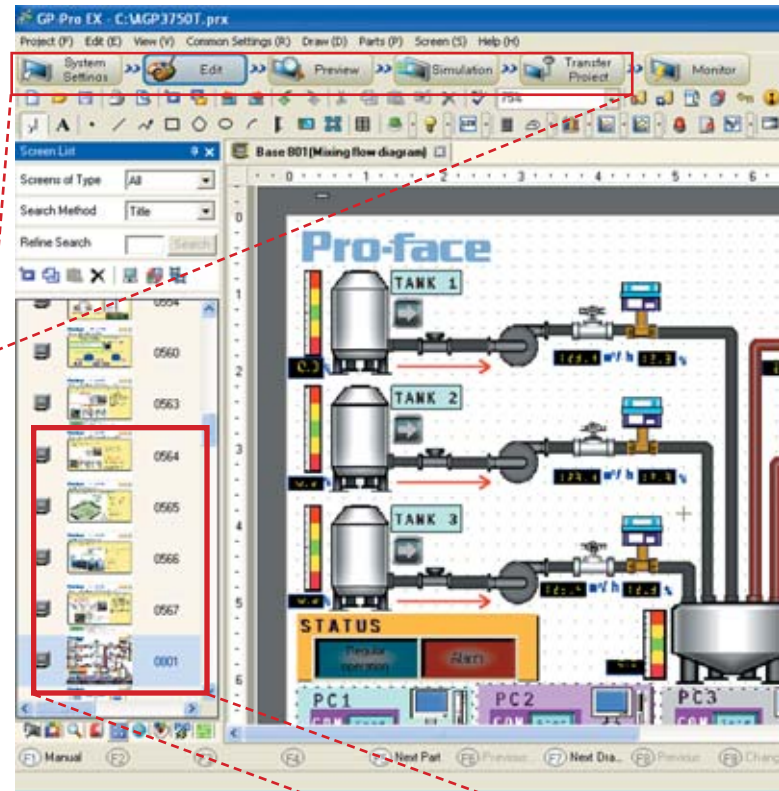
- Drag-and-drop addressing, parts and colors
- Efficient features to reduce development time
- Create consistent look and feel using the user-defined templates

### 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



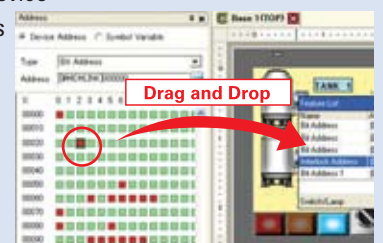
#### Thumbnail View

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



#### Visual PLC Addressing

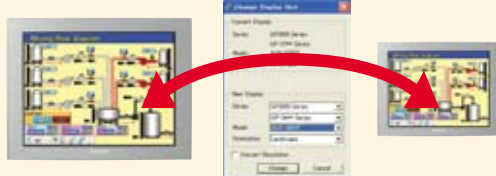
- ✓ Smart visual address mapping for fast PLC-address-to-part communication connections
- Drag and drop PLC address onto part to quickly link controller address to push button, tank, graph, etc.
- Gives a quick visual check on how each part is mapped to controller or I/O device
- Significantly reduces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





### Resolution Conversion

- Adjusts HMI application to different screen sizes



### Configurable Toolbars

- Show the toolbars you use most frequently; hide the ones you don't to free up more workspace



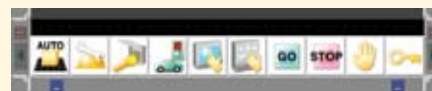
### Workspace Tabs

- The tools you need at your fingertips
- Quickly see screen thumbnails, system settings, properties, address map, search-and-replace and more



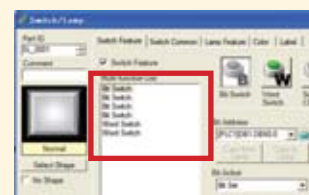
### Headers and Footers

- 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



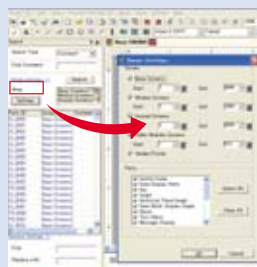
### Templates

- Reuse complete screens with addressing
- Create your own
- Build entire applications by using templates
- Perfect for OEMs



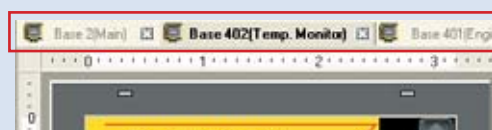
### Search and Replace

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



### Tabbed Interface

- Just like your Internet browser, tabs allow you to keep multiple screens, settings and other windows ready to use





# Tools to Build an Expandable HMI

## Complete tools for the job...

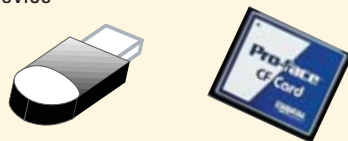
### Easy Bar-code and 2-D Matrix Setup

- As simple as enabling the COM port the reader is connected to
- Data is instantly displayed on the screen or can be logged
- Use for parts tracking or identifying machine operator



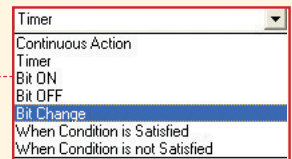
### CF/USB Memory Support

- OEM machine field upgrades – no software needed
- Log critical data for later retrieval and analysis
- Store images and movies



### Powerful D-scripting

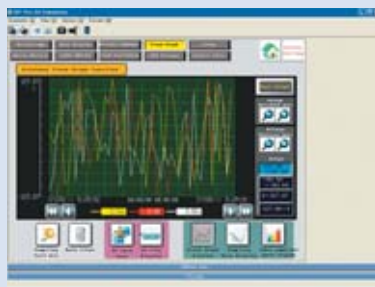
- Extend your serial communications capabilities!
- Write your own simple ASCII protocol to communicate to custom controllers and third-party I/O boards and interface to legacy plant-floor equipment
- Create data logging algorithms – log to internal memory, CompactFlash®, or print directly from AGP's touch screen, etc.
- Develop custom functions (macros) to execute a sequence of events



Select from various types of triggers for maximum flexibility of operations.

### Trending

- Logging to internal memory, CF card or USB memory
- Historical or real-time
- Up to 16 pens per trend
- One-touch trend to see value
- Pause
- Zoom
- Scroll



### Alarms

- Quick visual of current, event-triggered and historical alarms
- Alarm summary
- Acknowledge alarms
- Trigger help images or movies



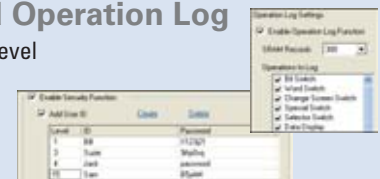
### Recipes

- ✓ Create hundreds of recipes and load them from internal memory or CompactFlash® (CF) card
- View all recipes on one screen, or use multiple screens
- Transfer recipe values to and from PLC
- Create recipes via CSV files and transfer to AGP3000, or write recipes in Excel® or other documents



### Security and Operation Log

- Log user ID and level to track changes



### Pop-up Keypads

- Prebuilt, or design your own pop-up keypads
- Use with touch-screen or USB keyboard
- Numeric or alpha-numeric





## Extensive Image Parts and Symbol Library

- More than 1,800 high-quality 3-D parts provide international recognition, overcoming language barriers
- Users can use the predefined parts or create their own
- Drag and drop directly from the library to the screen, reducing the number of mouse clicks required to create a screen
- Import JPG and BMP image files to create highly detailed HMI machine applications



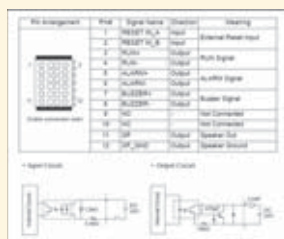
## Image Import

- Show machine graphics
- Help diagrams
- Exact location of maintenance zones

.JPG,

.BMP,

and .PNG



## Choice of technology: Pick the right HMI for the application

Dedicated operator interfaces  
for the factory floor:

- ✓ AGP3000
- ✓ LT3000
- ✓ AST3000

Windows-based for on-demand HMI:

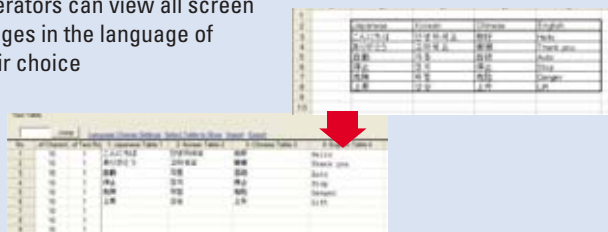
- ✓ PS3000 Series with WinGP
- ✓ Works with third-party SCADA/  
vision/motion and SPC

**GP-Pro EX**



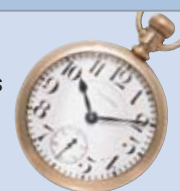
## Multilanguage

- Supports up to 16 different languages simultaneously
- English, French, German, Russian, Spanish, Japanese, Chinese languages, and more
- Operators can view all screen images in the language of their choice



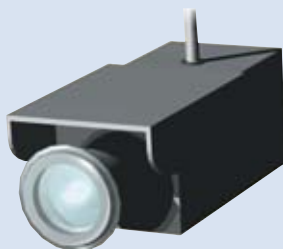
## Time Scheduling

- Standardize equipment start-up times
- Monitor productivity from each production shift
- Set up periodic routine maintenance schedules
- Use time scheduler to limit access to machine operations



## Cameras

- Stream video via NTSC/PAL video or over ethernet<sup>1</sup>
- Collect pass/fail and other data via ethernet



<sup>1</sup> Check driver list for supported cameras

## Putting It Together

- ✓ AGP3000 or AST3000 S Class, or PS3000 with WinGP installed
- ✓ GP-Pro EX software
- ✓ PLC cable:  
see Accessories

## The Value of a Multimedia HMI

Multimedia adds video and audio recording and playback

### Efficient information at your fingertips!

#### ✓ Reduce downtime

- By recording video, find the cause, not the symptoms, quickly
- Any alarm can trigger a movie playback to show operators how to resolve problems in the shortest time possible

#### ✓ Educate the workforce

- Reduce damaging mistakes, put training at their fingertips

#### ✓ Training where/when operators need it

- Make training available any time
- New operators can rewind and playback training examples as often as needed

#### ✓ Faster maintenance

- Show maintenance staff the exact repair location and proper procedures

#### ✓ Improve communication

- Allow operators to leave messages for other shifts
- Keep an online journal of machine activities

#### ✓ Improved safety

- Keep operators away from potential hazards
- Put a camera where a person shouldn't be, remote monitoring

**Make your workforce more efficient and cut down on costly 24/7 on-site technical support and training.**



#### ✓ Capture the moment

Record the events that lead to machine breakdown

#### ✓ Keep operators trained

Provide the latest procedures at their fingertips

#### ✓ Convey information fast

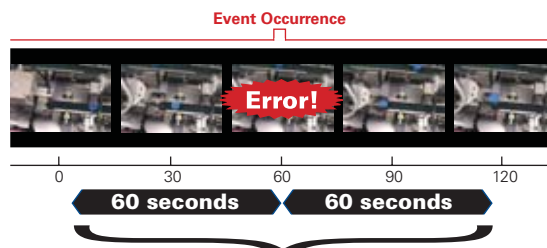
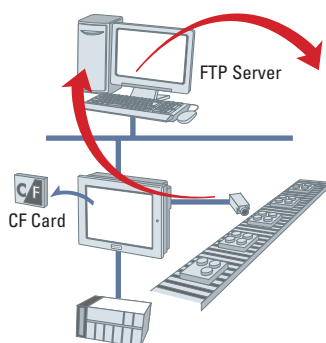
A picture is worth a thousand words; a video is worth a thousand pictures

**Provide clear instructions to operators and maintenance personnel**

## Find root causes fast – see what happened before it happened

### Reduce Downtime

- Like an airplane “black box,” record the events that led up to a fault, before the fault occurred
- The Event Recorder feature reduces the time required to find the root cause, and not the symptoms



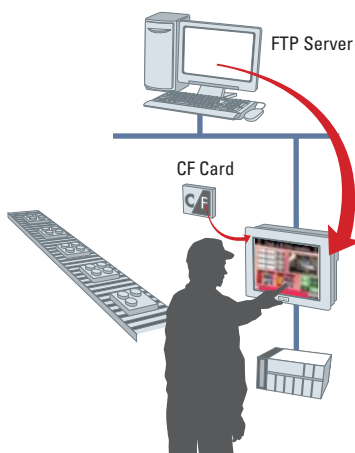
Occurrence of a predefined event triggers GP-Pro EX to record and store videos of events before and after the occurrence (max. 120 sec.)

**Fast & accurate troubleshooting**

## Safe and informed employees work better

### Educate the Workforce

- Provide training any time, with no need for a special time or classroom.
- Refresher instructions are an easy way to keep production running smoothly
- Provide critical safety information in a clear way, right at their fingertips



It's easy to add movies to on-site instruction screens for better comprehension.



And now, you can create movie files with commercially available video software.

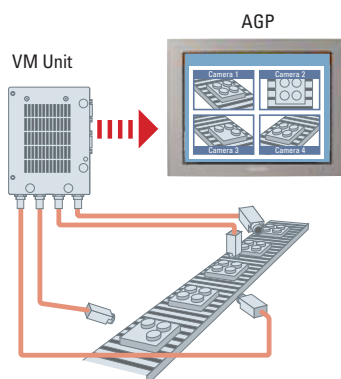
Note: Movie files you create must be converted with the Movie Converter EX converter tool, which requires the purchase of a license.

## Whoever said, “You can’t be in two places at once” didn’t have a Pro-face AGP3000

### Keep Operators Efficient

- With four camera inputs, the video mix unit keeps operators in a central location and visually shows how the rest of the machine is running
- Reduce walking time around long or large machines
- See into otherwise uninhabitable locations

*Note: Not all models can connect the VM unit. Supported by AGP 10.4" and 12.1" TFT-type M, C and S classes.*



## Putting It Together

- ☒ AGP3000 M Class
- ☒ GP-Pro EX software
- ☒ PLC cable
- ☒ Movie Converter software (optional)
- ☒ Camera & microphone
- ☒ User-created training/help videos

# Tools to Lower Overall System Cost

## Grow Your HMI Functionality: The Operator Interface Plus Control

Ladder logic and I/O directly from the HMI reduces the number of components to purchase, install and learn

### Reduce system costs

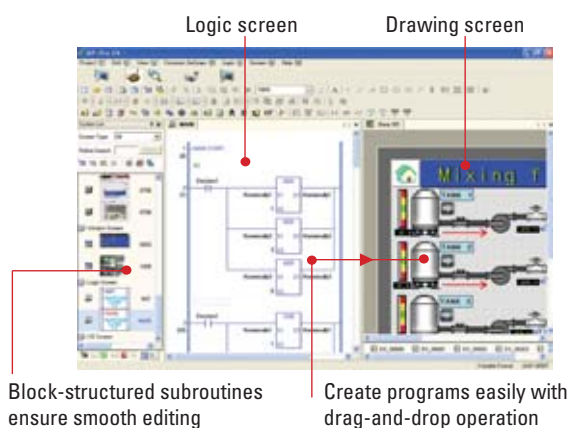
- ✓ **Eliminate the PLC**
  - Combine HMI and PLC functionality into one platform
  - Several I/O types to choose from
- ✓ **One software for HMI and logic**
  - IEC61131-3-compliant ladder logic
  - More than 100 ladder instructions supported, including PID, trigonometric and program control functions
- ✓ **Reduce part count**
  - Reduce the time to install
    - Hardware
    - Software
    - Wiring
- ✓ **Easier development and troubleshooting**
  - One database for all variables
  - No need for exporting and importing between packages

**Save time and \$\$\$.**

**Simplify your system without losing speed and functionality.**

### Develop logic and HMI screens side-by-side

- ✓ Drag and drop between logic and screens
- ✓ Save costly "fat-finger" mistakes
- ✓ See everything you need without switching programs
- ✓ One database to save you time

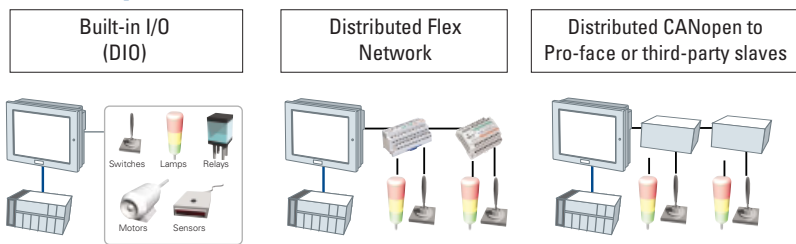


**NEW! Added instructions for greater ease of use**

Block-structured subroutines ensure smooth editing

Create programs easily with drag-and-drop operation

### 3 I/O options to choose from:

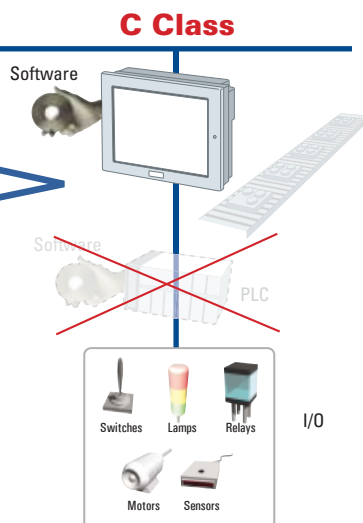


### Reduce costs by reducing component count

#### EXAMPLE SAVINGS:

|                 |    |       |
|-----------------|----|-------|
| PLC             | \$ | 600   |
| PLC Software    | \$ | 600   |
| Annual Contract | \$ | 1,500 |
| Labor           | \$ | 500   |
| Training        | \$ | 2,000 |

**TOTAL \$ 5,200**



### Putting It Together

- ✓ AGP3000 C Class
- ✓ GP-Pro EX software
- ✓ PLC cable
- ✓ Flex Network modules or HTB (CANopen slave) modules
- ✓ Flex Network or CANopen cables



# Powerful Ladder Logic Instructions

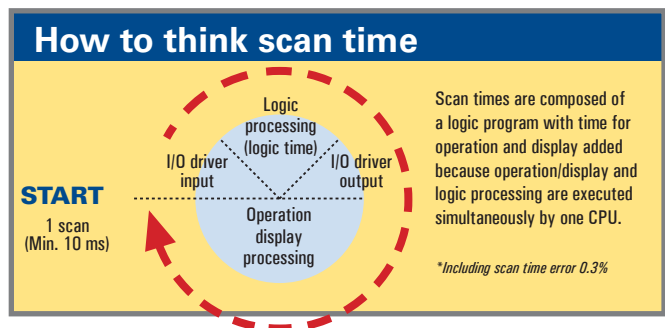
| Category              | Instruction Name           | Instruction Notation          | Ladder Symbol |                     |
|-----------------------|----------------------------|-------------------------------|---------------|---------------------|
| Basic Instruction     | Bit Basic                  | Normally Open                 | NO            |                     |
|                       |                            | Normally Closed               | NC            |                     |
|                       |                            | Out                           | OUT           |                     |
|                       |                            | Negative Out                  | OUTN          |                     |
|                       |                            | Set                           | SET           |                     |
|                       |                            | Reset                         | RST           |                     |
|                       | Pulse Basic                | Positive Transition           | PT            |                     |
|                       |                            | Negative Transition           | NT            |                     |
|                       | Program Control            | Jump                          | JMP<br><P>    | →) LABEL NAME       |
|                       |                            | Jump to Subroutine            | JSR<br><P>    | →) SUBROUTINE NAME< |
|                       |                            | Return                        | RET           |                     |
|                       |                            | Repeat number of times (For)  | FOR           |                     |
|                       |                            | Repeat number of times (NEXT) | NEXT          |                     |
|                       |                            | Inverse                       | INV           | -/-                 |
|                       |                            | Exit                          | EXIT          |                     |
|                       |                            | Power Bar Control             | PBC           |                     |
|                       |                            | Power Bar Reset               | PBR           |                     |
|                       |                            | Logic Wait Instruction        | LWA           |                     |
| Timer Instruction     | On Delay Timer             | TON                           |               |                     |
|                       | Off Delay Timer            | TOF                           |               |                     |
|                       | Pulse Timer                | TP                            |               |                     |
|                       | Accumulate On Delay Timer  | TONA                          |               |                     |
|                       | Accumulate Off Delay Timer | TOFA                          |               |                     |
| Counter Instruction   | Up Counter                 | CTU<br><P>                    |               |                     |
|                       | Down Counter               | CTD<br><P>                    |               |                     |
|                       | Up/ Down Counter           | CTUD<br><P>                   |               |                     |
| R/W Instruction       | Time Read/Write            | Time Read                     | JRD<br><P>    |                     |
|                       |                            | Time Set                      | JSET<br><P>   |                     |
|                       | Date Read/Write            | Date Read                     | NRD<br><P>    |                     |
|                       |                            | Date Set                      | NSET<br><P>   |                     |
| Operation Instruction | Arithmetic Operation       | Add                           | ADD<br><P>    |                     |
|                       |                            | Subtract                      | SUB           |                     |
|                       |                            | Multiplication                | MUL<br><P>    |                     |

| Category              | Instruction Name       | Instruction Notation         | Ladder Symbol |
|-----------------------|------------------------|------------------------------|---------------|
| Operation Instruction | Arithmetic Operation   | Division                     | DIV           |
|                       |                        | Modulation                   | MOD           |
|                       |                        | Increment                    | INC           |
|                       |                        | Decrement                    | DEC           |
|                       |                        | Time Addition                | JADD          |
|                       | Time Operation         | Time Subtraction             | JSUB          |
|                       |                        | Logical AND                  | AND           |
|                       | Logical Operation      | Logical OR                   | OR            |
|                       |                        | Logical XOR                  | XOR           |
|                       |                        | Logical NOT                  | NOT           |
|                       | Transfer               | Move (Copy)                  | MOV           |
|                       |                        | Block Move (Block Copy)      | BLMV          |
|                       |                        | Fill Move                    | FLMV          |
|                       | Shift                  | Exchange                     | XCH           |
|                       |                        | Shift Left                   | SHL           |
|                       |                        | Shift Right                  | SHR           |
|                       |                        | Arithmetic Shift Left        | SAL           |
| Function Instruction  | Rotation               | Arithmetic Shift Right       | SAR           |
|                       |                        | Rotate Left                  | RCL           |
|                       |                        | Rotate Right                 | ROR           |
|                       |                        | Rotate Left with Carry Over  | RCL           |
|                       | Calculate Function     | Rotate Right with Carry Over | RCR           |
|                       |                        | Sum                          | SUM           |
|                       |                        | Average                      | AVE           |
|                       | Trigonometric Function | Square Root                  | SQRT          |
|                       |                        | Bit Count                    | BCNT          |
|                       |                        | PID                          | PID           |

| Category             | Instruction Name       | Instruction Notation                  | Ladder Symbol |
|----------------------|------------------------|---------------------------------------|---------------|
| Function Instruction | Trigonometric Function | Cosine                                | COS           |
|                      |                        | Tangent                               | TAN           |
|                      |                        | Arc Sine                              | ASIN          |
|                      |                        | Arc Cosine                            | ACOS          |
|                      |                        | Arc Tangent                           | ATAN          |
|                      |                        | Cotangent                             | COT           |
|                      | The other Function     | Exponential                           | EXP           |
|                      |                        | Logarithm                             | LN            |
|                      |                        | Log Base 10                           | LG10          |
|                      | Arithmetic Compare     | Equal                                 | EQ            |
|                      |                        | Greater Than                          | GT            |
|                      |                        | Greater Than Or Equal To              | GE            |
|                      |                        | Less Than                             | LT            |
|                      |                        | Less Than Or Equal To                 | LE            |
|                      |                        | Not Equal                             | NE            |
|                      | Time Compare           | Time Compare Equal                    | JEQ           |
|                      |                        | Time Compare Greater Than             | JGT           |
|                      |                        | Time Compare Less Than                | JLT           |
|                      |                        | Time Compare Greater Than Or Equal To | JGE           |
|                      |                        | Time Compare Less Than Or Equal To    | JLE           |
|                      |                        | Time Compare Not Equal                | JNE           |

| Category            | Instruction Name | Instruction Notation                  | Ladder Symbol |
|---------------------|------------------|---------------------------------------|---------------|
| Compare Instruction | Data Compare     | Date Compare Equal                    | NEQ           |
|                     |                  | Date Compare Greater Than             | NGT           |
|                     |                  | Date Compare Greater Than Or Equal To | NGE           |
|                     |                  | Date Compare Less Than                | NLT           |
|                     |                  | Date Compare Less Than Or Equal To    | NLE           |
|                     |                  | Date Compare Not Equal                | NNE           |
|                     | Data Convert     | BCD Convert                           | BCD           |
|                     |                  | BIN Convert                           | BIN           |
|                     |                  | Encode                                | ENCO          |
|                     |                  | Decode                                | DECO          |
|                     |                  | Convert to Radian                     | RAD           |
|                     |                  | Degree Convert                        | DEG           |
|                     | Type Convert     | Scale                                 | SCL           |
|                     |                  | Convert Integer to Float              | I2F           |
|                     |                  | Convert Integer to Real               | I2R           |
|                     |                  | Convert Float to Integer              | F2I           |
|                     |                  | Convert Float to Real                 | F2R           |
|                     |                  | Convert Real to Integer               | R2I           |

\*Instructions with <P> correspond to positive transition instructions (differential transition). By adding P to the end of each instruction notation (LMP, etc.), you can use the instruction as a positive transition instruction (e.g., JMPP, JSRP, etc.).



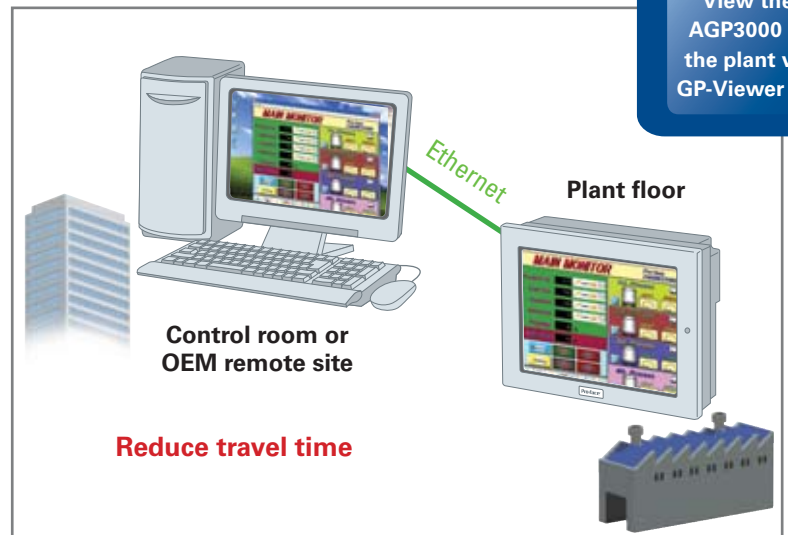
# Tools for Remote Connectivity and Access

## Internet HMI solutions: Your global connection!

Off-site OEM or on-site control room remote access tools, saves you time. Don't travel to the plant or walk to the production floor when you can access the information you need from your office.

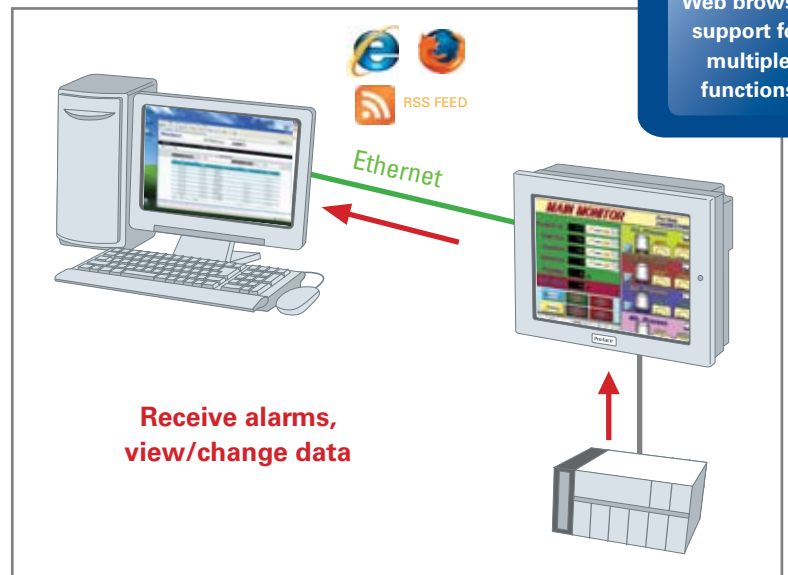
### GP-Viewer EX

- ✓ Remotely access and control AGP unit screens
  - View HMI screens remotely: synchronously (same screen as operator) or asynchronously (independent screens from local operator)
  - Great for OEM remote troubleshooting and travel reduction
  - Great for control room supervisor access, viewing alarms or graphs
  - Easy screen-capture capability for project documentation. Access audio and image files on CF/USB storage



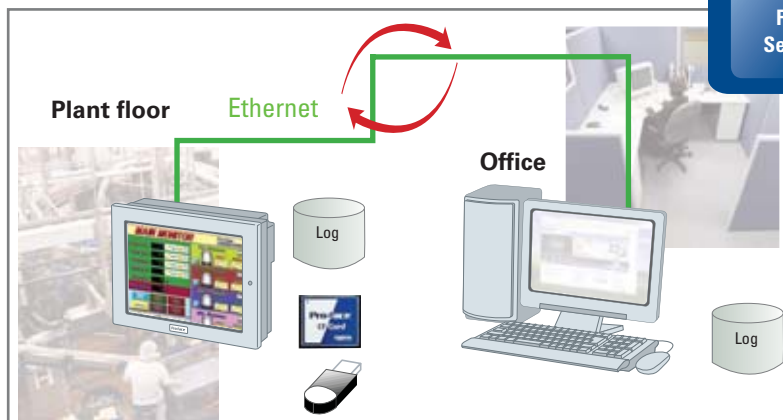
### Web Server

- ✓ View AGP information and alerts through a Web browser
  - View AGP alarms on any PC via Web browser or RSS reader
  - Remote troubleshooting, Web viewing of alarms; subscribe to alarm RSS feeds
  - View PLC and internal addresses for troubleshooting
  - View the screens in GP-Viewer EX while monitoring values on the AGP in a Web browser



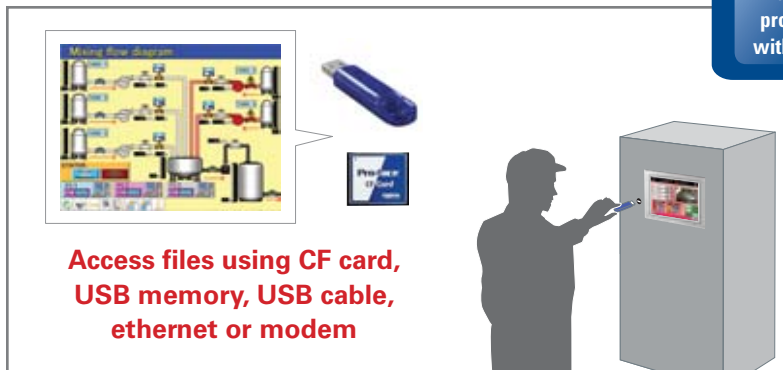
## FTP Server

- ✓ Use a standard FTP client to update/retrieve data
  - Remotely read/write alarm, image, sampling data, recipe and video files on the CF card or USB memory
  - Remotely collect alarm or log information
  - Reduce travel to customer site



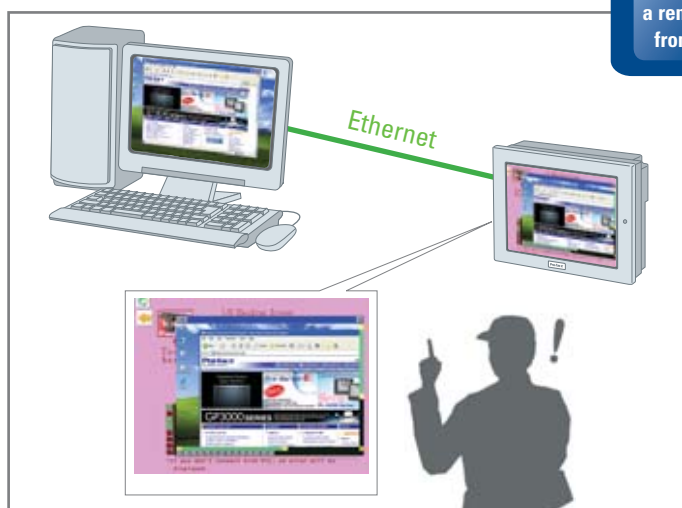
## Transfer Tool

- ✓ Included and freely distributable project download utility
  - Great tool for maintenance personnel to transfer project to or from the HMI
  - Upload/download files from CF/USB storage
  - Allows OEM to transfer projects to end users without providing development software
  - Display model, driver & project information for troubleshooting



## Remote PC Access (RPA)

- ✓ Harness the power of a PC from your dedicated HMI
  - View PDF, CAD, DOC, XLS or any file type located on a remote server PC
  - Instantly update documentation to an entire plant by storing manual, data sheet, help files on one server
  - Link directly to OEM Web pages for machine updates
  - Remotely monitor SCADA programs while reducing SCADA licensing costs



**Stop traveling to remote sites –  
update and troubleshoot from your office!**

# Enterprise-wide Data Management Solutions

Data management software

## Pro-Server<sup>EX</sup>

### Enhanced data collection and connectivity software

#### ✓ Applications

- Share data with production and maintenance groups
- Share HMI data with another HMI
  - Peer-to-peer
- Write/log data to/from PLC
- Send instant e-mail alerts
- Collect and write data to Excel®, CSV or databases

#### ✓ Collect and manage data

- Up-to-the-minute production data
- Upstream status information
- Necessary raw material requirements
- Snapshot images of machine faults or instructions

#### ✓ Connectivity Support

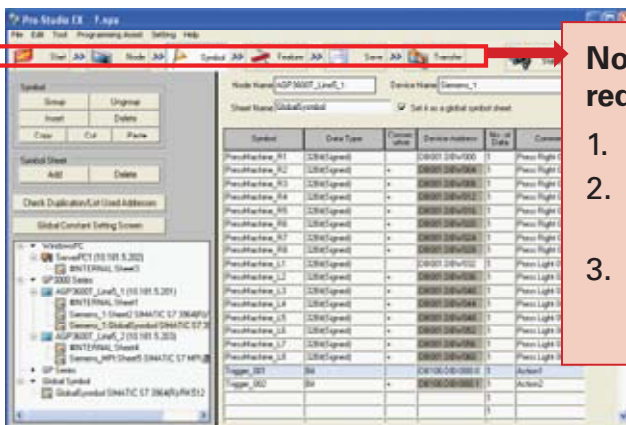
- OPC DA server
- DDE
- DLL
- API (VB, VB.NET, VC, C#.NET)
- Access™/Excel®
- ODBC, SQL, Oracle
- E-mail via SMTP
- MES actions

**Collect and view up-to-the-minute, accurate data to optimize your productivity.**

### Information where you want it, when you want it

- ✓ Data collection/management
- ✓ Reporting
- ✓ Data sharing
- ✓ Remote IPC health monitoring
- ✓ Enterprise integration
- ✓ Save thousands of dollars per year

### Fast and simple



#### No programming required

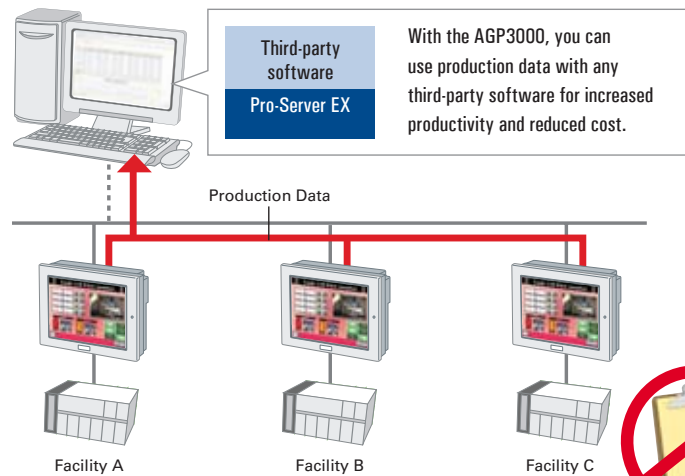
1. Select data
2. Choose data operation
3. Update network

- ✓ Fill in the blank data configuration, no programming!
- ✓ Built-in templates save you time and get you started quickly
- ✓ Share data with Windows®-based applications
- ✓ Automatically puts DDE scripts into clipboard, ready to paste directly into Excel®



## Data collection/management

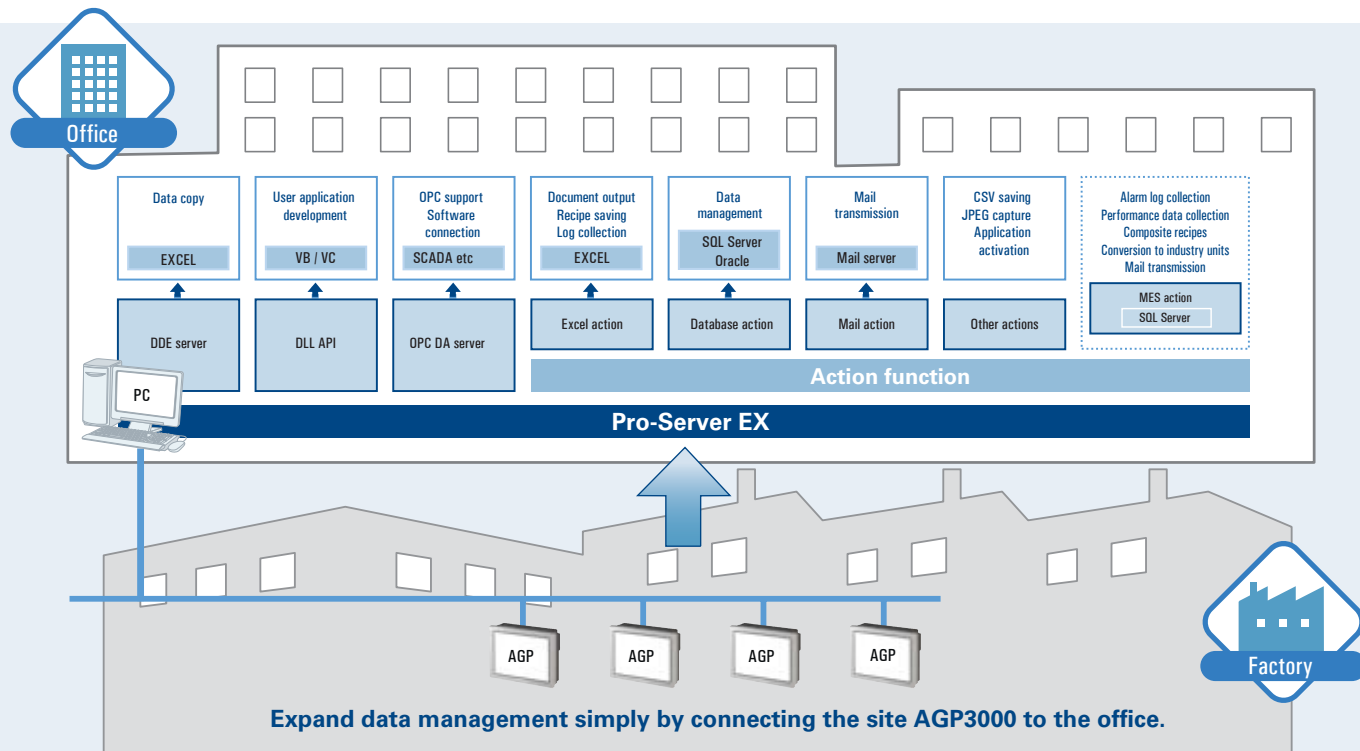
- Collect data on a remote server
- In plant or across the Internet
- Send data to another department or around the world in real-time
- Update recipes/production parameters remotely
- No more clipboard collection of data



## Enterprise integration

- Connect to existing enterprise system
- Enhance existing designs
- Use common communication methods

|                                |                     |
|--------------------------------|---------------------|
| ✓ OPC DA server                | ✓ DDE               |
| ✓ API (VB, VB.NET, VC, C#.NET) | ✓ DLL               |
| ✓ Access™ /Excel®              | ✓ ODBC, SQL, Oracle |
| ✓ Image management             | ✓ PC health         |
| ✓ E-mail via SMTP              | ✓ MES               |



# Data Where You Need It

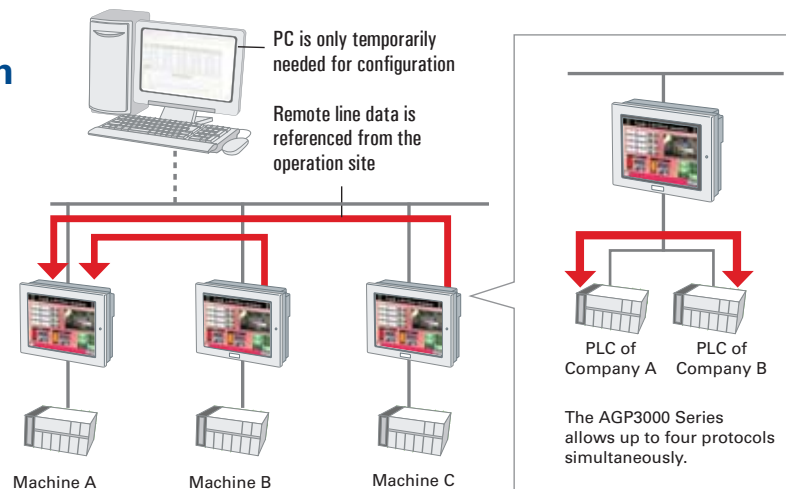
## Reporting

- Includes 29 easy-to-use Excel® report templates
  - ✓ Daily/monthly/yearly reports
  - ✓ Shift downtime
  - ✓ Failure data rates
  - ✓ Preparation time graphs
- Use prebuilt templates or customize



## Data sharing – Interdevice communication

- Enable peer-to-peer data sharing
- Act as a gateway between HMIs or different brand PLCs
- Send build data directly from one HMI to the next



**Across the plant or across the world,  
let Pro-face data management solutions work for you!**

Data management software  
**Pro-ServerEX**

# Pro-Server EX Remote PC Monitoring

## Instant Alert Notification:

*Keep your machine/process running*

## Reduce Downtime:

*Use Pro-face industrial PCs with remote health monitor*

- Instant notification of Pro-face industrial PCs' health status
- Open-platform HMIs alerting you before problems occur
  - ✓ CPU and core voltages
  - ✓ Fan RPM
  - ✓ Temperatures
  - ✓ Backlight
  - ✓ SMART hard-disk monitoring
- Power off the PC remotely in a controlled manner
- The PC knows what's happening before you do – let it tell you!



Control Room

Data management software  
**Pro-Server EX**

Data Management

Plant Floor



Pro-face open-platform HMI

*If you want to learn more about Pro-face industrial PCs with health monitor, please visit [www.profaceamerica.com](http://www.profaceamerica.com)*

# Right-Size Operator Interface Solutions



## Multimedia M Class:

Operator interface with video/audio recording/playback to reduce downtime and increase safety



## Control C Class:

Operator interface and PLC controller all-in-one solution. Simplify your machine design while reducing overall system cost.



|             | 15-inch XGA                                                                     |                                           | 12-inch SVGA                                                                               |                                                                       | 10.4-inch VGA                                                                                                        |                                                                                                                     |                                             | 7.5-inch                                                              |
|-------------|---------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------|
|             | SIO 2ch<br>Ethernet<br>Expansion Unit<br>USB (Host)<br>CF Card<br>AUX Sound Out |                                           | SIO 2ch<br>Ethernet<br>Expansion Unit<br>VM Unit<br>USB (Host)<br>CF Card<br>AUX Sound Out |                                                                       | SIO 2 Ch<br>Ethernet<br>Expansion Unit<br>VM Unit<br>USB (Host)<br>CF Card<br>AUX Sound Out                          |                                                                                                                     |                                             | SIO 2 Ch<br>Ethernet<br>CF Card<br>AUX Sound Out                      |
| AGP3000<br> | TFT 65,536 colors<br>AC<br>AGP3750-T1-AF                                        | TFT 65,536 colors<br>DC<br>AGP3750-T1-D24 | TFT 65,536 colors<br>AC<br>AGP3650-T1-AF                                                   |                                                                       | TFT 65,536 colors<br>AC<br>AGP3550-T1-AF<br>AGP3560-T1-AF                                                            |                                                                                                                     |                                             | TFT 65,536 colors<br>DC<br>AGP3450-T1-D24                             |
| AGP3000<br> |                                                                                 |                                           | TFT 65,536 colors<br>AC<br>AGP3600-T1-AF-D81K<br>AGP3600-T1-AF-D81C                        | TFT 65,536 colors<br>DC<br>AGP3600-T1-D24-D81K<br>AGP3600-T1-D24-D81C | TFT 65,536 colors<br>AC DC<br>AGP3500-T1-AF-D81K<br>AGP3500-T1-AF-D81C<br>AGP3500-T1-D24-D81K<br>AGP3500-T1-D24-D81C | TFT 4,096 colors<br>AC DC<br>AGP3500-S1-AF-D81K<br>AGP3500-S1-AF-D81C<br>AGP3500-S1-D24-D81K<br>AGP3500-S1-D24-D81C | Mono 16 shades<br>DC<br>AGP3500-L1-D24-D81C | TFT 65,536 colors<br>DC<br>AGP3400-T1-D24-D81K<br>AGP3400-T1-D24-D81C |
|             |                                                                                 |                                           | TFT 65,536 colors<br>AC<br>AGP3600-T1-AF-FN1M<br>AGP3600-AF-CA1M                           | TFT 65,536 colors<br>DC<br>AGP3600-T1-D24-FN1M<br>AGP3600-T1-D24-CA1M | TFT 65,536 colors<br>AC DC<br>AGP3500-T1-AF-FN1M<br>AGP3500-T1-AF-CA1M<br>AGP3500-T1-D24-FN1M<br>AGP3500-T1-D24-CA1M |                                                                                                                     |                                             | TFT 65,536 colors<br>DC<br>AGP3400-T1-D24-FN1M<br>AGP3400-T1-D24-CA1M |
| AGP3000<br> |                                                                                 |                                           | TFT 65,536 colors<br>AC<br>AGP3600-T1-AF                                                   | TFT 65,536 colors<br>DC<br>AGP3600-T1-D24                             | TFT 65,536 colors<br>AC DC<br>AGP3500-T1-AF<br>AGP3500-T1-D24<br>AGP3510-T1-AF                                       | TFT 4,096 colors<br>AC DC<br>AGP3500-S1-AF<br>AGP3500-S1-D24                                                        | Mono 16 shades<br>DC<br>AGP3500-L1-D24      | TFT 65,536 colors<br>DC<br>AGP3400-T1-D24                             |
| AST         |                                                                                 |                                           |                                                                                            |                                                                       |                                                                                                                      |                                                                                                                     |                                             |                                                                       |
| LT          |                                                                                 |                                           |                                                                                            |                                                                       |                                                                                                                      |                                                                                                                     |                                             |                                                                       |



### Serial Interface

COM1: RS-232C/RS-422/RS-485 serial interface. D-SUB 9-pin male connector. Communication method can be switched via software.

COM2: RS-422/RS-422/RS-485 serial interface. D-SUB 9-pin female connector.



### USB Interface (Host)

USB interface. Can be connected to USB printers, USB bar-code readers, keyboards, memory and a mouse.



### CF Card Interface

Use CF cards to support data logging, recipe data and "travel-free" field updates.



### Ethernet Interface (LAN)

Ethernet communications (10-BASE-T/100 BASE-TX) interface. IEEE 802.3u-compliant. Accepts RJ-45 modular jack connector (8-pin).



### Expansion Unit Interface

For fieldbus networking modules, e.g. DeviceNet™, PROFIBUS communication.



### Video Mix Unit Interface

The VM unit can be connected through this interface. Four cameras can be connected to one unit.



### AUX/Sound Output Interface

This interface accommodates external reset, alarm output, buzzer output and sound output.





**Standard S Class:**  
Operator interface with  
extensive communications  
and networking capability



## AST and LT Classes:

**AST:** Entry-level operator  
interfaces with serial ports  
and many powerful features

**LT:** OEM HMI touch controllers  
ideal for standalone machines



| 4.3-inch                                                             | 5.7-inch                                                              |                                                                                        |                                                                                      |                                                            | 3.8-inch                               |                                        |                                        |                                                                                       |
|----------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|
| VGA                                                                  | QVGA                                                                  |                                                                                        |                                                                                      |                                                            | QVGA                                   |                                        |                                        |                                                                                       |
| Expansion Unit<br>USB (Host)                                         | SIO 2 Ch<br>Ethernet<br>Expansion Unit<br>USB (Host)<br>CF Card       | SIO 2 Ch<br>Expansion Unit<br>USB (Host)<br>CF Card *                                  |                                                                                      | SIO 1 Ch<br>Ethernet<br>USB (Host)                         |                                        | SIO 2 Ch<br>* USB (Host)               |                                        |                                                                                       |
|                                                                      | *CF not supported; single SIO port only                               |                                                                                        | *Not supported by AGP3302B, AST3301 or LT3301                                        |                                                            |                                        |                                        | *Serial ports not supported by LT3201  |                                                                                       |
|                                                                      |                                                                       |                                                                                        |                                                                                      |                                                            |                                        |                                        |                                        |                                                                                       |
| STN 4,096 colors<br>DC<br>AGP3400-S1-D24-D81K<br>AGP3400-S1-D24-D81C | TFT 65,536 colors<br>DC<br>AGP3300-T1-D24-D81K<br>AGP3300-T1-D24-D81C | STN 4,096 colors<br>DC<br>AGP3300-S1-D24-D81K<br>AGP3300-S1-D24-D81C                   | Mono 16 shades<br>DC<br>AGP3300-L1-D24-D81K<br>AGP3300-L1-D24-D81C                   |                                                            |                                        |                                        |                                        |                                                                                       |
|                                                                      | TFT 65,536 colors<br>DC<br>AGP3300-T1-D24-FN1M<br>AGP3300-T1-D24-CA1M |                                                                                        | Mono 16 shades<br>DC<br>AGP3300-L1-D24-FN1M<br>AGP3300-L1-D24-CA1M                   |                                                            |                                        |                                        |                                        |                                                                                       |
| STN 4,096 colors<br>DC<br>AGP3400-S1-D24                             | TFT 65,536 colors<br>DC<br>AGP3300-T1-D24                             | STN 4,096 colors<br>DC<br>AGP3300-S1-D24                                               | Mono 16 shades<br>DC<br>AGP3300-L1-D24                                               | STN 4,096 colors<br>DC<br>AGP3301-S1-D24<br>AGP3301-L1-D24 | Blue 16 shades<br>DC<br>AGP3302-B1-D24 | TFT 256 colors<br>DC<br>AGP3200-T1-D24 | Amber 8 shades<br>DC<br>AGP3200-A1-D24 |                                                                                       |
|                                                                      |                                                                       |                                                                                        |                                                                                      | STN 4,096 colors<br>DC<br>AST3301-S1-D24                   | Blue 8 shades<br>DC<br>AST3301-B1-D24  |                                        |                                        | Amber 16 shades<br>DC<br>AST3201-A1-D24<br>AST3211-A1-D24                             |
|                                                                      |                                                                       | STN 4,096 colors<br>DC<br>LT3300-S1-D24-C <sup>1</sup><br>LT3300-S1-D24-K <sup>1</sup> | Mono 16 shades<br>DC<br>LT3300-L1-D24-C <sup>1</sup><br>LT3300-L1-D24-K <sup>1</sup> | Mono 16 shades<br>DC<br>LT3301-L1-D24-C<br>LT3301-L1-D24-K |                                        |                                        |                                        | Amber 16 shades<br>DC<br>LT3201-A1-D24-C <sup>*</sup><br>LT3201-A1-D24-K <sup>*</sup> |



### Video Input Interface

Stream or record live video to solve problems quickly. See "inside" the machine or process.



### DIO Interface

Reduce system cost by connecting directly to switches, lamps and stack lights.



### Sound Input Interface

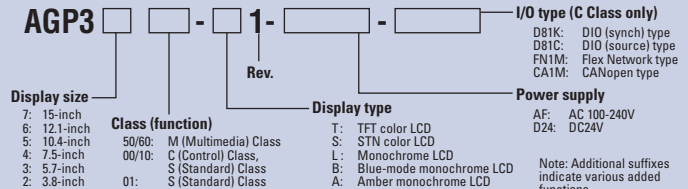
Record audio to leave messages/instructions for other operators.



### FLEX NETWORK/CANopen Interface

Distributed I/O architectures reduce wiring and installation costs by putting I/O where you need it.

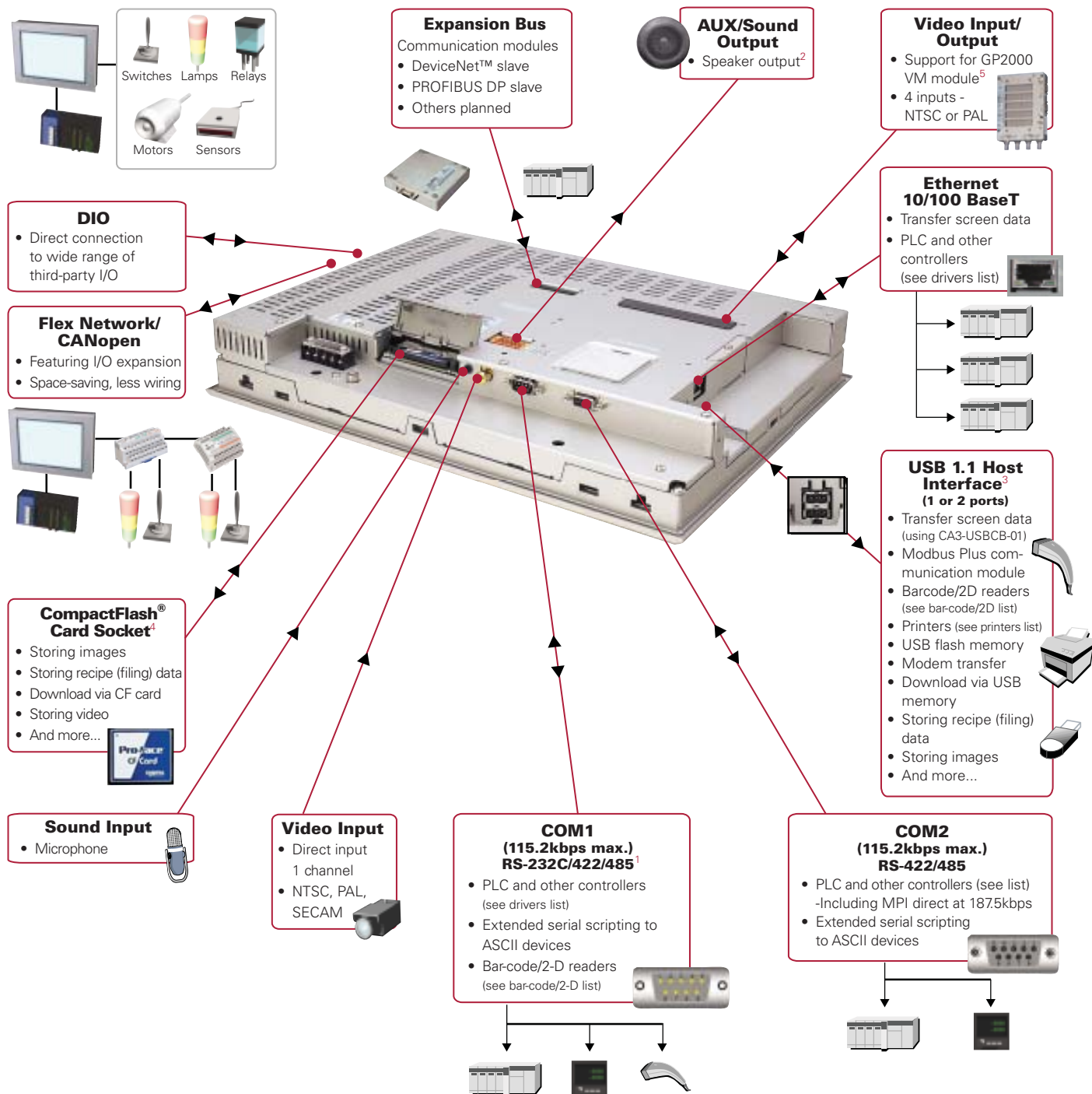
### Model Number Nomenclature



# Interface to Anything on the Factory Floor

## The only HMI you need

*The AGP3000's extensive array of connectivity options makes it easy to standardize on one HMI family*



<sup>1</sup> AGP3302-B type model only has RS-232C asynchronous transmission

<sup>2</sup> AGP34xx, 35xx, 36xx and 37xx models include AUX/sound outputs

Sounds must be converted from .WAV format

<sup>3</sup> Requires CA3-USBCB-01 for transfer of screen data

<sup>4</sup> Not available on 3302B or 32xx

<sup>5</sup> Compatible with AGP35xxT and 36xxT TFT display models only

• These interfaces represent the entire line of AGP3000 products. See data sheets for individual model specifications.  
 • USB - See driver list for supported third-party devices  
 • Up to four PLC protocols simultaneously (AGP33xx supports two).  
 • Please refer to documentation for allowable configurations.

# Operator Interface Plus Multimedia



## AGP 3750T

### Certifications



### Display

- TFT color LCD (65K colors)
- 1024 x 768 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W395 [15.55in] x H294mm [11.57in] x D60mm [2.36in]

### Ports & Interfaces

|               |                       |
|---------------|-----------------------|
| Ethernet      | Com1:                 |
| (2) USB       | RS-232/422/485        |
| CF Type II    | Com2:                 |
| Expansion Bus | RS-422/485            |
| Speaker       | Video: NTSC/PAL/SECAM |
| Microphone    |                       |

### Model Numbers

AGP3750-T1-AF  
AGP3750-T1-D24

## AGP 3650T

### Certifications



### Display

- TFT color LCD (65K colors)
- 800 x 600 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W313mm [12.31in] x H239mm [9.41in] x D56mm [2.2in]

### Ports & Interfaces

|               |                       |
|---------------|-----------------------|
| Ethernet      | Com1:                 |
| (2) USB       | RS-232/422/485        |
| CF Type II    | Com2:                 |
| Expansion Bus | RS-422/485            |
| Speaker       | Video: NTSC/PAL/SECAM |
| Microphone    |                       |

### Model Numbers

AGP3650-T1-AF

## AGP 3550T

### Certifications



### Display

- TFT color LCD (65K colors)
- 640 x 480 pixels (AGP3550)
- 800 x 600 pixels (AGP3560)
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W270.5mm [10.65in] x H212.5mm [8.37in] x D57mm [2.24in]

### Ports & Interfaces

|               |                       |
|---------------|-----------------------|
| Ethernet      | Com1:                 |
| (2) USB       | RS-232/422/485        |
| CF Type II    | Com2:                 |
| Expansion Bus | RS-422/485            |
| Speaker       | Video: NTSC/PAL/SECAM |
| Microphone    |                       |

### Model Numbers

AGP3550-T1-AF  
AGP3560-T1-AF

## AGP 3450T

### Certifications



### Display

- TFT color LCD (65K colors)
- 640 x 480 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W215mm [8.46in] x H170mm [6.69in] x D60mm [2.36in]

### Ports & Interfaces

|               |                       |
|---------------|-----------------------|
| Ethernet      | Com1:                 |
| (1) USB       | RS-232/422/485        |
| CF Type II    | Com2:                 |
| Expansion Bus | RS-422/485            |
| Speaker       | Video: NTSC/PAL/SECAM |
| Microphone    |                       |

### Model Numbers

AGP3450-T1-D24



# Standard Operator Interface

## 12.1"



## 10.4"



## 7.5"



## 5.7"



### AGP 3600

#### Certifications



#### Display

- TFT color LCD (65K colors)
- 800 x 600 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W313mm [12.32in] x H239mm [9.41in] x D56mm [2.2in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (2) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### Model Numbers

AGP3600-T1-AF  
AGP3600-T1-D24

### AGP 3500

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- Monochrome B/W (16 shades)
- 640 x 480 pixels
- 800 x 600 pixel (AGP3510 only)
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: TFT models: W313mm [12.32in] x H212.5mm [8.37in] x D57mm [2.24in]  
STN & Mono models: W313mm [12.32in] x H239mm [9.41in] x D56mm [2.2in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (2) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### Model Numbers

AGP3500-T1-AF  
AGP3500-T1-D24  
AGP3500-S1-AF  
AGP3500-S1-D24  
AGP3500-L1-D24  
AGP3510-T1-AF

### AGP 3400

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- 640 x 480 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W215mm [8.46in] x H170mm [6.69in] x D60mm [2.36in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (1) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### Model Numbers

AGP3400-T1-D24  
AGP3400-S1-D24

### AGP 3300

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- Monochrome B/W (16 shades)
- Blue LCD (16 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W167.5mm [6.59in] x H135mm [5.31in] x D59.5mm [2.34in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (1) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

Note: Ethernet supported only by AGP3300, not 3301 or 3302. AGP3302 Com1 RS-232 only.

#### Model Numbers

AGP3300-T1-D24  
AGP3300-S1-D24  
AGP3300-L1-D24  
AGP3301-S1-D24  
AGP3301-L1-D24  
AGP3302-B1-D24



# 5.7"



# 3.8"



# 3.8"



## AST 3301

### Certifications



### Display

- STN color LCD (256 colors)
- Blue LCD (8 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W167.5mm [6.59in] x H135mm [5.31in] x D59.5mm [2.34in]

### Ports & Interfaces

|              |                  |
|--------------|------------------|
| (1) USB      | Expansion Bus    |
| Com1: RS-232 | Com2: RS-422/485 |

### Model Numbers

AST3301-B1-D24  
AST3301-S1-D24

## AGP 3200

### Certifications



### Display

- TFT color LCD (256 colors)
- Monochrome amber LCD (8 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W130mm [5.12in] x H104mm [4.09in] x D40mm [1.57in]

### Ports & Interfaces

|          |                       |
|----------|-----------------------|
| Ethernet | Com1: RS-232/ 422/485 |
| (1) USB  |                       |

### Model Numbers

AGP3200-T1-D24  
AGP3200-A1-D24

## AST 3201

### Certifications



### Display

- Monochrome amber LCD (8 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W130mm [5.12in] x H104mm [4.09in] x D40mm [1.57in]

### Ports & Interfaces

|                                      |
|--------------------------------------|
| (1) USB                              |
| Com1: RS-232                         |
| Com2 (AST3201): RS-422/485           |
| Com2 (AST3211): Siemens MPI (RS-485) |

### Model Numbers

AST3201-A1-D24  
AST3211-A1-D24

**Right-size,  
right-technology  
solutions**

**Consider your HMI  
requirements for today  
and tomorrow:**

• *What size displays do you need?*

• *What PLCs/protocols will you use?*

• *What ports (serial, ethernet, USB, etc.) do you need?*

• *What other devices will you need, ie bar-code, temperature controllers or other third-party devices?*

## Operator Interface Plus Control: All-in-one-box solution

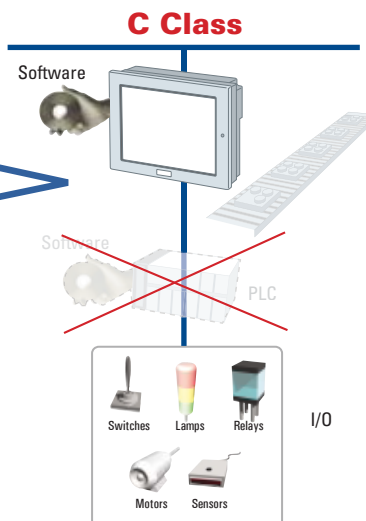
### Reduce cost by reducing component count

- One development software for both ladder logic and screen graphics
- Built-in I/O interface
- Use industry-standard I/O

#### EXAMPLE SAVINGS:

|                 |          |
|-----------------|----------|
| PLC             | \$ 600   |
| PLC Software    | \$ 600   |
| Annual Contract | \$ 1,500 |
| Labor           | \$ 500   |
| Training        | \$ 2,000 |

► **TOTAL \$ 5,200**



### Diagnostics at your fingertips

- Monitor built-in ladder logic without a laptop
- See logic flow and variable values
- No more guessing of the machine's status

#### Logic monitoring for AGP3000 C-Class units



##### Logic Display

Display ladder logic program on the operator interface so you can check status and troubleshoot without a laptop



##### Address Display

Display addresses used in logic program. See current values and real-time updates

### Read/write PLC data directly

- Provides convenient access to PLC behind locked cabinet door
- Increase safety: Eliminate the need for personal protective equipment (PPE)
- Instant access to all I/O by creating only one graphic button



##### PLC Device Monitor

Display I/O from any PLC or controller without creating extra operator interface screens



##### Change PLC Values

Change PLC I/O, bit or word values without the need for a laptop

Not supported by EtherNet/IP™ native tag driver. Check the Pro-face Device PLC manual for details.

# Operator Interface Plus Control



## 12.1"



## 10.4"



## 7.5"



## 5.7"



### AGP 3600

#### Certifications



#### Display

- TFT color LCD (65K colors)
- 800 x 600 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W313mm [12.32in] x H239mm [9.41in] x D56mm [2.2in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (2) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### I/O Architectures

|             |                                              |
|-------------|----------------------------------------------|
| Choose one: | DIO <sup>1</sup> :<br>6 in/2 out             |
|             | Flex Network <sup>2</sup>                    |
|             | CANopen<br>to Pro-face or third-party slaves |

#### Model Numbers

AGP3600-T1-AF-D81K  
AGP3600-T1-AF-D81C  
AGP3600-T1-AF-FN1M  
AGP3600-T1-AF-CA1M  
AGP3600-T1-D24-D81K  
AGP3600-T1-D24-D81C  
AGP3600-T1-D24-FN1M  
AGP3600-T1-D24-CA1M

### AGP 3500

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- Monochrome B/W LCD (16 shades)
- 640 x 480 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: TFT models: W270.5mm [10.65in] x H212.5mm [8.37in] x D57mm [2.24in] STN & Mono models: W313mm [12.32in] x H239mm [9.41in] x D56mm [2.2in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (2) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### I/O Architectures

|             |                                              |
|-------------|----------------------------------------------|
| Choose one: | DIO <sup>1</sup> :<br>6 in/2 out             |
|             | Flex Network <sup>2</sup>                    |
|             | CANopen<br>to Pro-face or third-party slaves |

#### Model Numbers

AGP3500-T1-AF-D81K AGP3500-T1-D24-CA1M  
AGP3500-T1-AF-D81C AGP3500-S1-AF-D81K  
AGP3500-T1-AF-FN1M AGP3500-S1-AF-D1C  
AGP3500-T1-AF-CA1M AGP3500-S1-D24-D81K  
AGP3500-T1-D24-D81K AGP3500-S1-D24-D81C  
AGP3500-T1-D24-D81C AGP3500-L1-D24-D81C  
AGP3500-T1-D24-FN1M

### AGP 3400

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- 640 x 480 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W215mm [8.46in] x H170mm [6.69in] x D60mm [2.36in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (1) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### I/O Architectures

|             |                                              |
|-------------|----------------------------------------------|
| Choose one: | DIO <sup>1</sup> :<br>6 in/2 out             |
|             | Flex Network <sup>2</sup>                    |
|             | CANopen<br>to Pro-face or third-party slaves |

#### Model Numbers

AGP3400-T1-D24-D81K  
AGP3400-T1-D24-D81C  
AGP3400-T1-D24-FN1M  
AGP3400-T1-D24-CA1M  
AGP3400-S1-D24-D81K  
AGP3400-S1-D24-D81C

### AGP 3300

#### Certifications



#### Display

- TFT color LCD (65K colors)
- STN color LCD (4,096 colors)
- Monochrome B/W (16 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W167.5mm [6.59in] x H135mm [5.31in] x D59.5mm [2.34in]

#### Ports & Interfaces

|               |                |
|---------------|----------------|
| Ethernet      | Com1:          |
| (1) USB       | RS-232/422/485 |
| CF Type II    | Com2:          |
| Expansion Bus | RS-422/485     |

#### I/O Architectures

|             |                                               |
|-------------|-----------------------------------------------|
| Choose one: | DIO <sup>1</sup> :<br>6 in/2 out <sup>2</sup> |
|             | Flex Network <sup>2</sup>                     |
|             | CANopen<br>to Pro-face or third-party slaves  |

#### Model Numbers

AGP3300-T1-D24-D81K AGP3300-L1-D24-D81K  
AGP3300-T1-D24-D81C AGP3300-L1-D24-D81C  
AGP3300-T1-D24-FN1M AGP3300-L1-D24-FN1M  
AGP3300-T1-D24-CA1M AGP3300-L1-D24-CA1M  
AGP3300-S1-D24-D81K  
AGP3300-S1-D24-D81C

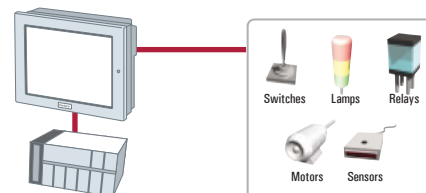
<sup>1</sup>DIO: D81C=Source, D81K=Sink

<sup>2</sup>Flex Network compatible with FN distributed I/O modules

## C-Class models with built-in discrete I/O

### AGP3000 D81C or D81K models

- Reduces system cost by eliminating need for PLC in simple control applications
- I/O is built-in, with no extra modules needed for connection to local I/O
- Directly connect to buttons, limit switches, lamps, sensors or indicators
- Supports
  - 6 inputs/2 outputs (choose sink or source models)
  - I/O update rate = 10ms (minimum)
- Control a stack light or buzzer directly from the HMI

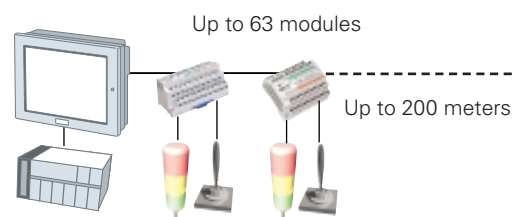


- ✓ Connect directly to I/O
- ✓ Eliminate or enhance the PLC
- ✓ Ladder logic included

## C-Class models with Flex Network interface

### AGP3000 FN1M models

- Pro-face dedicated I/O network for use in distributed I/O applications
- Uses low-cost, industry-standard, twisted-pair network wiring
- Supports:
  - 256 discrete inputs and 256 discrete outputs (512 bits)
  - 64 analog inputs and 64 analog outputs (128 words)
  - I/O update rate = 10ms (minimum)
  - Distance of up to 200 meters
- Reduces system cost by eliminating need for PLC in simple control applications



- ✓ Connect directly to I/O
- ✓ Eliminate or enhance the PLC
- ✓ Ladder logic included

## Use any mix of Flex Network distributed I/O modules

### Flex Network FN modules Discrete I/O

|                     |                                                                                |                     |                                                                                  |
|---------------------|--------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------|
| <b>8-Relay</b><br>  | 8-relay discrete output, 1 common<br><b>FN-Y08RL41</b>                         | <b>16-Point</b><br> | 16-point discrete input, 16-point source transistor output<br><b>FN-XY16SC41</b> |
| <b>16-Point</b><br> | 16-point discrete input, 16-point sink transistor output<br><b>FN-XY16SK41</b> | <b>32-Point</b><br> | 32-point discrete input<br><b>FN-X32TS41</b>                                     |
|                     |                                                                                | <b>32-Point</b><br> | 32-point discrete input, 32-point sink transistor output<br><b>FN-XY32SKS41</b>  |

### Analog I/O modules

|                      |                                                                                 |                      |                                                                                  |
|----------------------|---------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------|
| <b>2-Channel</b><br> | 2-channel analog input: 0-10VDC 0-20ma, 4-20ma<br><b>FN-AD02AH41</b>            | <b>2-Channel</b><br> | 2-channel analog output: 0-10VDC 0-20ma, 4-20ma<br><b>FN-DA02AH41</b>            |
| <b>4-Channel</b><br> | 4-channel analog input: 0-10VDC, +/-10VDC, 0-20ma, 4-20ma<br><b>FN-AD04AH11</b> | <b>4-Channel</b><br> | 4-channel analog output: 0-10VDC, +/-10VDC, 0-20ma, 4-20ma<br><b>FN-DA04AH11</b> |



## NEW!

## C-Class models with CANopen interface for distributed I/O

### AGP3000 CA1M models

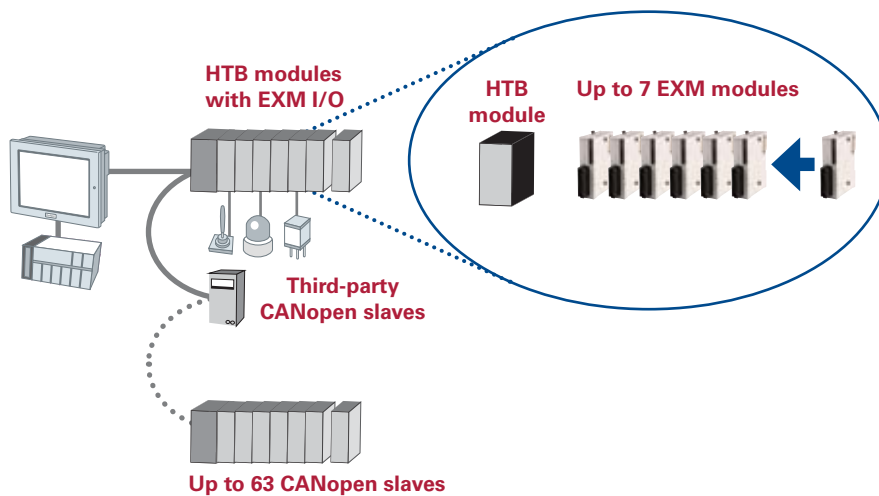
- CANopen-based network for use in distributed I/O applications
- Uses Pro-face CANopen slave (HTB module) or any third-party CANopen slaves
- Supports
  - 256 discrete inputs and 256 discrete outputs (512 bits)
  - 64 analog inputs and 64 analog outputs (128 words)
  - I/O update rate = 10ms (minimum)
  - Distance of up to 1000 meters
- Reduces system cost by eliminating need for PLC in simple control applications

### Pro-face CANopen interface supports:

- Pro-face brand CANopen slaves (HTB)
- OR**
- Third-party CANopen slaves

### Putting It Together

- ✓ AGP3000 CA1M C-Class unit
- ✓ GP-Pro EX HMI software
- ✓ HTB CANopen slave module
  - EXM I/O modules (optional)
- ✓ Third-party CANopen slaves



## EXM analog and discrete I/O modules

Compatible with LT3000 units and AGP3000 C-Class CANopen units

### Discrete input modules

|                 |                                      |
|-----------------|--------------------------------------|
| <b>8-Point</b>  | 8-point input module<br>EXM-DDI8DT   |
| <b>16-Point</b> | 16-point input module<br>EXM-DDI16DT |

### Discrete output modules

|                 |                                              |
|-----------------|----------------------------------------------|
| <b>8-Point</b>  | 8-point relay output module<br>EXM-DRA8RT    |
| <b>16-Point</b> | module<br>EXM-DRA16RT                        |
| <b>8-Point</b>  | 8-point sink output module<br>EXM-DDO8UT     |
| <b>16-Point</b> | 16-point sink output module<br>EXM-DDO16UK   |
| <b>8-Point</b>  | 8-point output source module<br>EXM-DDO8TT   |
| <b>16-Point</b> | 16-point output source module<br>EXM-DDO16TK |

### Mixed discrete I/O modules

|                        |                                                      |
|------------------------|------------------------------------------------------|
| <b>4-Point/4-Point</b> | 4-point input / 4-point output module<br>EXM-DMM8DRT |
|------------------------|------------------------------------------------------|

### Analog I/O modules

|                                            |                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------|
| <b>2-Channel</b>                           | 2-channel analog input module<br>EXM-AMI2HT                                |
| <b>2-Thermocouple or 2-Pt100/1-Channel</b> | 2-channel temperature input / 1-channel analog output module<br>EXM-ALM3LT |
| <b>2-Channel/1-Channel</b>                 | 2-channel analog input / 1-channel analog output module<br>EXM-AMM3HT      |
| <b>1-Channel</b>                           | 1-channel analog output module<br>EXM-AM01HT                               |

# LT3000 Series - Standalone Machine Controller

## Reduce machine costs while increasing performance

- Reduce component count
- Eliminate PLC/custom controls
- Cut remote maintenance costs
- Eliminate multiple software packages and support

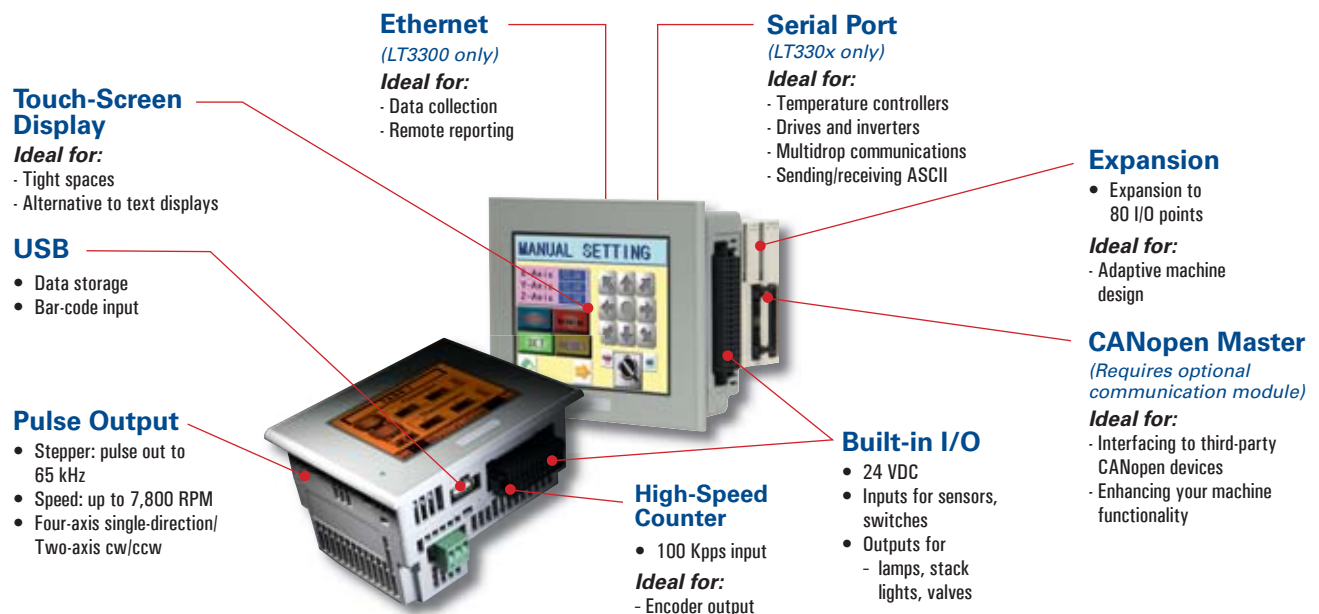
**LT3000 Series - A space-saving control solution**

## Typical applications

- Motor speed control
- Wrapping machines
- Feeder machines
- Inspection systems
- Labeling machines



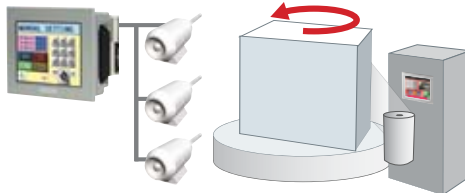
## LT3000 Series Features



## OEM Solution Examples

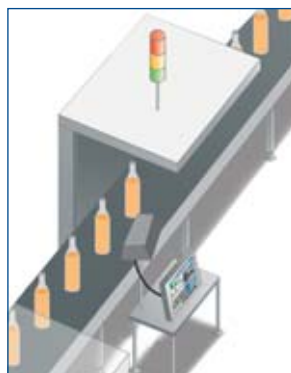
### Stretch wrapping

- Three drives
- Help menus
- Replace the PLC



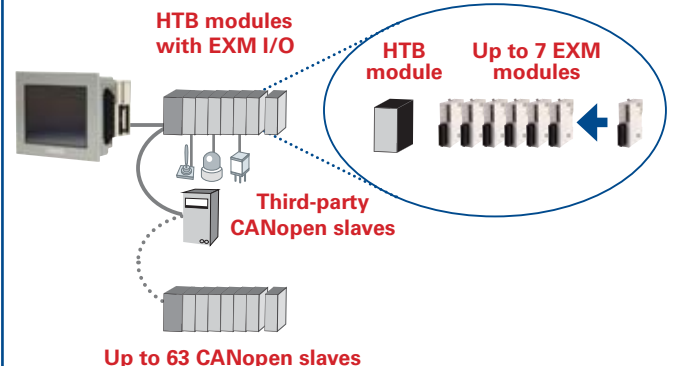
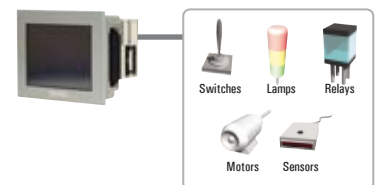
### Inspection system

- Tie into pass/fail vision sensors
- Metal detector
- Drive alarms and stack light



## LT3000 I/O Options

**Use built-in  
or  
CANopen I/O**



# LT3000 OEM HMI Touch Controllers

## 5.7"



### LT 3300

#### Certifications



#### Display

- STN color LCD (4,096 colors)  
Monochrome B/W (16 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:  
10-90% noncondensing
- External Dimensions:  
W167.4mm [6.59in] x H135.0mm  
[5.31in] x D77.6mm [3.06in]

#### Ports & Interfaces

|          |                |
|----------|----------------|
| Ethernet | Com1:          |
| (1) USB  | RS-232/422/485 |

#### I/O Architectures

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Built-in DIO:<br>16 in/16 out <sup>1</sup>                                                  |
| Expansion I/O<br>up to 3 EXM modules                                                        |
| CANopen<br>to Pro-face or third-party slaves<br>(Requires optional<br>communication module) |

#### Model Numbers

LT3300-S1-D24K  
LT3300-S1-D24C  
LT3300-L1-D24K  
LT3300-L1-D24C

## 5.7"



### LT 3301

#### Certifications



#### Display

- Monochrome B/W LCD  
(16 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:  
10-90% noncondensing
- External Dimensions:  
W167.4mm [6.59in] x H135.0mm  
[5.31in] x D77.6mm [3.06in]

#### Ports & Interfaces

|                         |
|-------------------------|
| (1) USB                 |
| Com1:<br>RS-232/422/485 |

#### I/O Architectures

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Built-in DIO:<br>16 in/16 out <sup>1</sup>                                                  |
| Expansion I/O<br>up to 3 EXM modules                                                        |
| CANopen<br>to Pro-face or third-party slaves<br>(Requires optional<br>communication module) |

#### Model Numbers

LT3301-L1-D24K  
LT3301-L1-D24C

## 3.8"



### LT 3201

#### Certifications



#### Display

- Monochrome amber LCD  
(8 shades)
- 320 x 240 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:  
10-90% noncondensing
- External Dimensions:  
W130mm [5.12in] x H104mm  
[4.09 in] x D76.5mm [3.01in]

#### Ports & Interfaces

|         |
|---------|
| (1) USB |
|---------|

#### I/O Architectures

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Built-in DIO:<br>12 in/6 out <sup>1</sup>                                                   |
| Expansion I/O<br>up to 2 EXM modules                                                        |
| CANopen<br>to Pro-face or third-party slaves<br>(Requires optional<br>communication module) |

#### Model Numbers

LT3201-A1-D24K  
LT3201-A1-D24C

## Choose from 13 EXM modules:

#### Discrete input modules

|          |                                     |
|----------|-------------------------------------|
| 8-Point  | 8-point input module<br>EXM-DD18DT  |
| 16-Point | 16-point input module<br>EXM-DD16DT |

#### Discrete output modules

|          |                                              |
|----------|----------------------------------------------|
| 8-Point  | 8-point relay output module<br>EXM-DRA8RT    |
| 16-Point | 16-point relay output module<br>EXM-DRA16RT  |
| 8-Point  | 8-point sink output module<br>EXM-DD08UT     |
| 16-Point | 16-point sink output module<br>EXM-DD016UK   |
| 8-Point  | 8-point output source module<br>EXM-DD08TT   |
| 16-Point | 16-point output source module<br>EXM-DD016TK |

#### Mixed discrete I/O modules

|                     |                                                         |
|---------------------|---------------------------------------------------------|
| 4-Point/<br>4-Point | 4-point input / 4-point<br>output module<br>EXM-DMM8DRT |
|---------------------|---------------------------------------------------------|

#### Analog I/O modules

|                                              |                                                                               |
|----------------------------------------------|-------------------------------------------------------------------------------|
| 2-Channel                                    | 2-channel analog input module<br>EXM-AMI2HT                                   |
| 2-Channel<br>Temp. or<br>1-Channel<br>Output | 2-channel temperature input / 1-channel<br>analog output module<br>EXM-ALM3LT |
| 2-Channel/<br>1-Channel                      | 2-channel analog input / 1-channel<br>analog output module<br>EXM-AMM3HT      |
| 1-Channel                                    | 1-channel analog output module<br>EXM-AMO1HT                                  |

<sup>1</sup>DIO can be configured as standard input/outputs or used for PWM, PLC, HSC or pulse-catch.

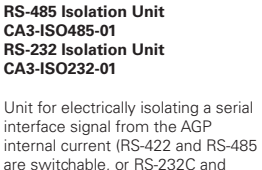
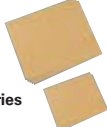
# Software and Accessories

|                                                                                                                                                                                                                                                   |                                                                                                                                                               |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                          |                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>GP-Pro EX HMI Development Software EX-ED-Vxx</b><br/>(Includes one user license)</p> <p><b>Additional GP-Pro EX Development License EX-ED-LICENSE</b></p> | <p><b>Remote PC Access (RPA) EX-RPA (1) runtime license</b></p> <p><b>10-Pack User Licenses: EX-RPA-10</b></p> <p><b>30-Pack User Licenses: EX-RPA-30</b></p> | <p><b>GP-Viewer EX Remote Monitoring Software EX-VIEWER LICENSE</b><br/>(Requirements: One license for each GP3000 Series with Ethernet port)</p> <p><b>10-Pack User Licenses: EX-VIEWER LICENSE-10</b></p> <p><b>30-Pack User Licenses: EX-VIEWER LICENSE-30</b></p> |  <p><b>Pro-Server EX Data Management Software EX-SDV-Vxx</b><br/>(Includes one user license)</p> <p><b>Additional User License EX-SED-LICENSE</b></p> | <p><b>Manufacturing Execution System (MES) Action License EX-MES-LICENSE-Vxx</b><br/>Allows one installation from Pro-Server EX</p> |
|                                                                                                                                                                                                                                                   | <p><b>AGP3000 Movie Converter Software EX-MOVCON-LICENSE</b><br/>M-Class Units: Required to convert videos into AGP3000 Series format</p>                     |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                          |                                                                                                                                     |

|                                                                                                                                   |                                                                                               |                                                                                                                                                                     |                                                                                                                                                                        |                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |              |                                                                                    |                                                                                     |                                                                                                                                 |
| <p><b>AUX Connector CA5-AUXCNALL-01</b><br/>The AUX connector for AGP3000 series required in case an external output is used.</p> | <p><b>Terminal Block Conversion CA3-ADPTRM-01</b><br/>9-pin male D-sub to screw terminal.</p> | <p><b>Siemens COM Port Conversion Adapter CA3-ADPSEI-01</b><br/>9-pin D-sub to MPI adapter. Adapts COM port to accept Profibus MPI-style connectors and cables.</p> | <p><b>COM Port Conversion Adapter CA3-ADPCOM-01</b><br/>9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 1.<br/>Not intended for AGP3302 model.</p> | <p><b>Online Adapter CA4-ADPONL-01</b><br/>9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 2 only.<br/>NOTE: Includes network pull-up/pull-down resistors. Not intended for AGP3302 model.</p> |

|                                                                                     |                                                                                     |                                                                                                                                                                                             |                                                                                                                         |                                                                                                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|  |  |                                                                                                          |                                    |                                    |
| <p><b>DC Power Supply Connector for AGP330x and AGP34x0 models CA5-DCCNM-01</b></p> | <p><b>DC Power Supply Connector for AGP35x0 and AGP36x0 models CA5-DCCNL-01</b></p> | <p><b>Mitsubishi PLC A, QnA, FX Series 2-Port Adapter II GP070-MD11</b><br/>Allows simultaneous use of an AGP3000 Series unit and a Mitsubishi PLC A, QnA, FX series peripheral device.</p> | <p><b>USB Cable Clamp (2-port) CA5-USBATL-01</b><br/>USB cable clamp for 2-port HMI units to prevent disconnection.</p> | <p><b>USB Cable Clamp (1 port) CA5-USBATM-01</b><br/>USB cable clamp for 1-port HMI units to prevent disconnection.</p> |

|                                                                                                                                   |                                                                                                                                                                                                                                                                |                                                                                                                                                        |                                                                                                                       |                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                |                                                                                                                                                                             |                                                                     |                                  |                                                                                                                                                                              |
| <p><b>Installation Fastener CA3-ATFALL-01</b><br/>Used to install the AGP3000 Series into a solid panel (included with unit).</p> | <p><b>PROFIBUS Slave Unit CA5-PFSALL/EX-01</b><br/>PROFIBUS slave communication module for connecting AGP to PROFIBUS DP network.</p> <p><b>DeviceNet™ Slave Unit CA6-DNSALL/EX-01</b><br/>DeviceNet slave module for connecting AGP to DeviceNet network.</p> | <p><b>CompactFlash® card</b><br/>Inserts into the unit's CF card slot.</p> <p><b>512MB CA3-CFCALL/512MB-01</b></p> <p><b>1GB CA6-CFCALL/1GB-01</b></p> | <p><b>CompactFlash® Card Adapter GP077-CFAD10</b><br/>Used for read/write of CF card data via a PC's PCMCIA slot.</p> | <p><b>Panel Cutout Adapter for AGP3500 Series CA4-ATM10-01</b><br/>Panel cutout adapter for mounting in cutout of GP2500 (TFT).</p> <p><b>Panel Cutout Adapter for AGP3300 Series CA4-ATM5-01</b><br/>Panel cutout adapter for mounting in cutout of GP37W2B.</p> |

|                                                                                                                                                                                             |                                                                                                                                                               |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                            |                                                                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                 |
| <b>USB Transfer Cable (1m)</b><br><b>CA3-USBCB-01</b><br>Downloads project data created with GP-Pro EX from PC's USB port to AGP's USB port.                                                | <b>USB Cable (5m)</b><br><b>FP-US00</b><br>Connects a USB printer (Type B) port to AGP's USB port.                                                            | <b>USB Front Cable (1m)</b><br><b>CA5-USBEXT-01</b><br>USB extension cable.                                                                                                                                                                                                       | <b>RS-232 Cable (5m)</b><br><b>CA3-CBL232/5M-01</b><br>Connects Mitsubishi PLC A-Series to the AGP RS-232 COM port.                                                                                                                                                                                                                                                              | <b>GP RS-422 Cable (5m)</b><br><b>CA3-CBL422-01</b><br>Connects the AGP RS-422 COM port 2 via 9-pin plug to host controller via open wires.                                                                                                                                                                                                                                                                                        |
|                                                                                                            |                                                                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                 |
| <b>RS-422 Cable (5m)</b><br><b>CA3-CBL422/5M-01</b><br>Connects the AGP RS-422 COM port 1 via 9-pin socket to host controller via open wires.                                               | <b>Mitsubishi PLC A-Series Connection Cable (5m)</b><br><b>CA3-CBLA-01</b><br>Connects Mitsubishi PLC A-Series and Qn-Series programming console port to AGP. | <b>Mitsubishi PLC Q-Series Cable (5m)</b><br><b>CA3-CBLQ-01</b><br>Connects Mitsubishi PLC Q-Series programming console port to AGP. Connection cable.                                                                                                                            | <b>Mitsubishi PLC Q-Series Cable (5m)</b><br><b>CA3-CBLLNKMQ-01</b><br>Connects Mitsubishi PLC Q-Series to the AGP RS-232C COM port. Link cable.                                                                                                                                                                                                                                 | <b>Mitsubishi PLC FX-Series Cable</b><br><b>CA3-CBLFX/5M-01 (5m)</b><br><b>CA3-CBLFX/1M-01 (1m)</b><br>Connects Mitsubishi PLC FX-Series programming console port to AGP RS-422 COM port.                                                                                                                                                                                                                                          |
|                                                                                                           |                                                                             |                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                |
| <b>Omron PLC SYSMAC Link Cable (5m)</b><br><b>CA3-CBLSYS-01</b><br>Connects Omron PLC SYSMAC Series unit to AGP RS-232C port.                                                               | <b>GP Multi-Link Cable (5m)</b><br><b>CA3-CBLMLT-01</b><br>Connects a host controller to the AGP RS-422 port for multilink (n:1) communication.               | <b>GP 2 Port Adapter Cable (5m)</b><br><b>CA3-MDCB11</b><br>Connects Mitsubishi PLC to the AGP RS-422 port using 2-port adapter II (GP070-MD11).                                                                                                                                  | <b>9-pin-to-25-pin RS-232C Conversion Cable</b><br><b>CA3-CBLCBT232-01</b><br>9-pin D-sub socket to 25-pin RS-232 cable adapter (for use with some HMI-CAB-Cxxx cables).                                                                                                                                                                                                         | <b>9-pin-to-25-pin RS-422 Conversion Cable</b><br><b>CA3-CBLCBT422-01</b><br>9-pin D-sub socket to 25-pin RS-422 cable adapter (for use with some HMI-CAB-Cxxx cables).                                                                                                                                                                                                                                                            |
|                                                                                                          |                                                                            |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                               |
| <b>Allen-Bradley SLC™ 5/03, 5/04 Series Cable</b><br><b>HMI-CAB-ST52</b><br><b>HMI-CAB-ST52-30X</b><br><b>HMI-CAB-ST52-50X</b><br>Connects AGP3000/ST401 to A-B PLC via RS-232 9-pin D-sub. | <b>Ethernet Crossover Cable</b><br><b>HMI-CAB-ETH</b><br>6-ft. HMI to PLC ethernet port or to program HMI.                                                    | <b>MicroLogix™ PLC Cable</b><br><b>HMI-CAB-ST106</b><br>Connects AGP3000/ST401 to PLC RS-232 8-pin DIN port.                                                                                                                                                                      | <b>PLC Adapter Cable</b><br><b>HMI-CAB-ST001</b><br>Connects to AGP3000/ST40x serial port with 9-conductor open-ended wires for connecting to third-party screw terminal devices.                                                                                                                                                                                                | <b>RS-232C Cross-Type Cable (5m)</b><br><b>GP410-IS00-0</b><br>25-pin D-sub connector both ends. Requires CA3-CBLCBT232-01.                                                                                                                                                                                                                                                                                                        |
|                                                                                                          |                                                                            |                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                               |
| <b>Serial USB Cable for Modem Download</b><br><b>CA6-USB232-01</b>                                                                                                                          | <b>1-Amp Power Supply</b><br><b>510-1000-004</b><br><b>2-Amp Power Supply</b><br><b>510-1000-041</b><br>24VDC Din-Rail Mount Class 1 Div 2.                   | <b>RS-485 Isolation Unit</b><br><b>CA3-ISO485-01</b><br><b>RS-232 Isolation Unit</b><br><b>CA3-ISO232-01</b><br>Unit for electrically isolating a serial interface signal from the AGP internal current (RS-422 and RS-485 are switchable, or RS-232C and RS-422 are switchable). | <b>AGP3500T/AGP3550T Backlight Replacement</b><br><b>CA5-BLU10T-01</b><br><b>AGP3750T Backlight Replacement</b><br><b>CA3-BLU15-01</b><br><b>AGP3600T/AGP3650T Backlight Replacement</b><br><b>CA3-BLU12-01</b><br><b>AGP3500S/GP2501S Backlight Replacement</b><br><b>PS501S-BU00</b><br><i>Note: AGP3300, AGP3400 and AGP3500L backlights cannot be replaced in the field.</i> | <b>Protection Sheets</b><br>Disposable, dirt-resistant cover for screen (5 sheets/set)<br><b>15" for AGP3750 series</b><br><b>CA3-DFS15-01</b><br><b>12" for AGP3600 series</b><br><b>CA3-DFS12-01</b><br><b>10" for AGP3500 series</b><br><b>CA5-DFS10-01</b><br><b>8" for AGP3400 series</b><br><b>PS400-DF00</b><br><b>6" for AGP/AST/LT33xx</b><br><b>CA3-DFS6-01</b><br><b>3.8" for AGP/AST/LT 32xx</b><br><b>CA6-DFS4-01</b> |



# Third-Party Device Support

## Drivers

### PLC Drivers

#### Rockwell Automation

DF1  
DH-485  
EtherNet/IP (SLC500/PLC5/  
MicroLogix)  
EtherNet/IP (ControlLogix/  
CompactLogix Tag-Based)  
DeviceNet Slave

#### Siemens AG

SIMATIC S7 3964(R)/RK512  
SIMATIC S7 MPI Direct  
SIMATIC S7 Ethernet  
SIMATIC S5 CPU Direct  
PROFIBUS DP Slave

#### GE Fanuc Automation

Series 90 Ethernet (SRTP)  
Series 90-30/70 SNP  
Series 90-30/70 SNP-X

#### Schneider Electric

Modbus Master (SIO or TCP)  
Modbus Slave (SIO or TCP)  
Modbus Plus  
Uni-Telway

#### FANUC

Power Mate Series

#### FATEK Automation Corporation

FB Series SIO

#### Fuji Electric Corp.

MICREX-F Series SIO  
MICREX-SX Series SIO  
MICREX-SX Series Ethernet

#### Hitachi Industrial Equipment Systems

HIDIC H Series Ethernet  
HIDIC H Series  
S10V Series Ethernet  
S10 Series SIO

#### Hyundai Heavy Industries

Hi4 Robot Driver

#### KEYENCE Corp.

KV-700/1000 Series Ethernet  
KV-700/1000 Series CPU Direct  
KV-10/16/24/40 Series CPU Direct

#### Koyo Electronics Co. Ltd.

KOSTAC/DL Series CCM SIO  
KOSTAC/DL Series Modbus TCP

#### LS Industrial Systems

XGT Series FEnet (Ethernet)  
Master-K Series Cnet

#### Matsushita Electric Works

FP Series Computer Link SIO

#### Meidensha

UNISEQUE Series Ethernet

#### Mitsubishi Electric Corp.

A Series CPU Direct  
A Series Ethernet  
A Series Computer Link  
FX Series CPU Direct  
FX Series Computer Link  
Q Series CPU Direct  
Q/QnA Serial Communication  
Q/QnA Series Ethernet  
QnA Series CPU Direct  
QUTE Series CPU Direct

#### Mitsubishi Heavy Industries

DIASYS Netmaton Modbus TCP

#### OMRON Corp.

C/CV Series Host Link  
CS/CJ Series Host Link  
CS/CJ Series Ethernet  
Temp. Controller CompoWay/F

#### RKC Instrument

Temp. Controller MODBUS SIO  
Temp. Controller SIO

#### Saia-Burgess Controls

SAIA S-Bus SIO

#### Sharp MS Corp.

JW Series Computer Link SIO  
JW Series Computer Link  
Ethernet

#### Toshiba

Computer Link SIO  
PROSEC-T Ethernet

#### Toshiba Machine

PROVISOR TC200 (SIO)

#### TOYODA Machine Works

(JTEKT Corp.)

TOYOPUC CMP-LINK SIO  
TOYOPUC CMP-LINK Ethernet  
TOYOPUC-PC3J Series

#### Yamatake

DMC50, SDC45 SIO

#### YASKAWA Electric Corp.

MEMOBUS SIO  
MEMOBUS Ethernet  
MP Series SIO (extension)

#### YOKOGAWA Electric Corp.

Personal Computer Link SIO  
Personal Computer Link Ethernet  
FA-M3 (Ethernet)

### Temperature Controllers

#### Shinko Technos Co. Ltd.

Indicating Controller SIO

#### Yamatake Corp.

Digital Controller SIO

#### Yokogawa M&C

Personal Computer Link SIO

### Fieldbus Module

#### CC-Link Partner Association

CC-Link Intelligent Device

#### ODVA

DeviceNet Slave

#### PROFIBUS International

PROFIBUS DP Slave

### Other Connections

#### Digital Electronics Corp.

Memory Link (SIO and Ethernet)  
General Ethernet (using D-Script)

#### Banner Engineering Corp.

PresencePlus Ethernet Cameras

#### IAI

X-Sel Controller

*Please visit our web site for the most updated list of device drivers.*

## Bar-Code, 2-D Readers & Printers

|        | Manufacturer    | Model                  | Type                              | Comments                                                                                       |
|--------|-----------------|------------------------|-----------------------------------|------------------------------------------------------------------------------------------------|
| Serial | Aimex Corp.     | BR-530RS               | Pen                               | Requires BB-60 power supply                                                                    |
|        | OPT Electronics | OPT-6125-RS            | Touch scanner (read width: 65mm)  | Requires DC5300T for power                                                                     |
|        | Denso Co.       | HC-36IITR              | Touch scanner (read width: 61mm)  | Requires P-200 for power; also requires KRS-423-XF1K connector cable (from Sanwa Supply)       |
|        | HHP             | IT3800LR-12            | Linear imager                     | Requires cable 42203758-03 (IT3800LR-12 reader has been shown to work but is not fully tested) |
|        | Cognex          | Dataman 7500           | 1-D and 2-D bar-code scanner      | Requires cable 42206139-04E cable, also requires power supply                                  |
|        | Any/All         | Any                    | Printer                           | ASCII text                                                                                     |
| USB    | Aimex Corp.     | BR-530UK               | Pen                               | Power supply not required                                                                      |
|        | OPT Electronics | OPT-6125-USB           | Touch scanner (read width: 65 mm) | Power supply not required                                                                      |
|        | Denso Co.       | HC-36TU-K              | Touch scanner (read width: 61mm)  | Power supply not required                                                                      |
|        | HHP             | IT5800                 | Hand-held industrial scanner      | 5800SR050-0F00 is complete with USB cable                                                      |
|        | Symbol          | LS3408-FZ              | Hand-held industrial scanner      | Part #LS3408-FZ20005 needs cable CBA-U01-S07ZA                                                 |
|        | Symbol          | LS2800                 | 1-D bar-code scanner              |                                                                                                |
|        | Epson           | Stylus Photo R200/R260 | Inkjet printer                    | Use USB cable FP-US00 or commercial type                                                       |
|        | Epson           | Any                    | ECS/P24-J84(C) compatible         | Use USB conversion cable IEE1284 (commercially available)                                      |
|        | NEC             | Any                    | PC-PR201-PL compatible            | Use USB conversion cable IEE1284 (commercially available)                                      |
| ETH    | Any/All         | Any                    | Remote print server               | Use ethernet network to connect to remote print server                                         |
|        | Any/All         | Any                    | Printer                           | ASCII text                                                                                     |

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