Pro-face





Operator Interface & Operator Interface Plus Control

AGP3000 Series AST3000 Series LT3000 Series

HMI Software

GP-Pro EX

HMI Connectivity

Drivers and Accessories Third-Party Support



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







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 RAIDenabled option
- New innovative technology sends alert when PC system status is out of tolerance
- Solid-state drive options available

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!



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

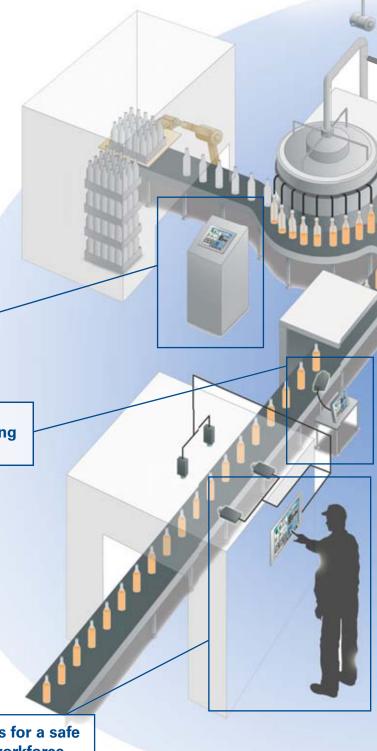
- Remote servicing
- Extensive diagnostic features

HMIs for standalone machines

HMIs for extensive networking

Work smarter, be informed, make the right choices

Instructional HMIs 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 Co

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



A complete, out-of-the-box, mul

rporate Enterprise and Beyond



Enterprise-wide Data Management

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





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



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

Enterprise-wide data collecting, sharing, connectivity solution

Application software for sharing user-defined factoryfloor 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

Office Environment

Pro-Server

Enterprise-wide data sharing Server PC

Server PC

- Pro-Server EX data management
- Detahasa
 - ODBC
 Access[™]/Excel[®]
 - Oracle
 OPC
 - MES
- Remote PC Access (RPA) Server
 - PDF manuals and help files
 - CAD drawings

- See production data and run reports
- Load new part parameters and build data
- Log trend information and images

Enterprise (Office)

Plant-Floor Control Room or Maintenance Office







Printing HMI units

Monitor and control HMI units on the plant floor

GP-Viewer EX

Monitor alarms or receive alarms via RSS feeds without asking

Web Server

Update recipes and collect data logs, images and event files from each HMI

FTP Client

PC health monitor, instant-alert Pro-Server EX/PS3000

Pro-Server EX

Update and maintain HMIs

Transfer tool

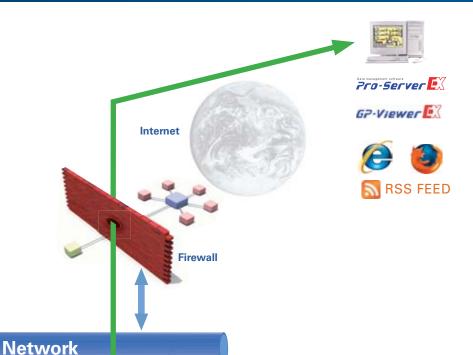






Standard Operator Interface

- Direct PLC connectivity
- Use RPA (license required) to harness the power of any program on a PC
- · View PDF and CAD files
- More than 70 device drivers included

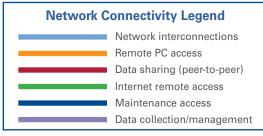


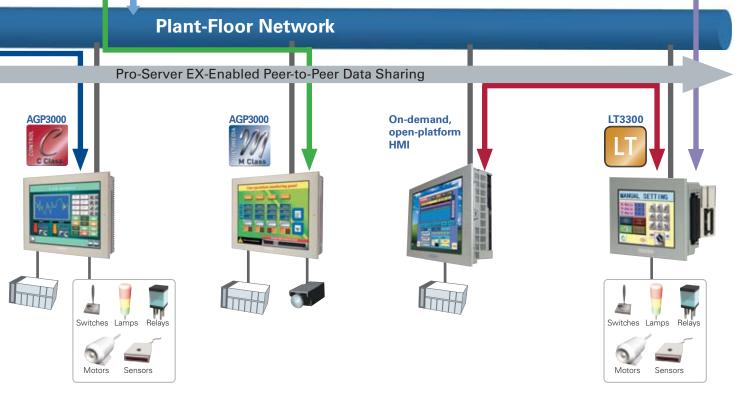
OEM Remote Maintenance/Servicing

- 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



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

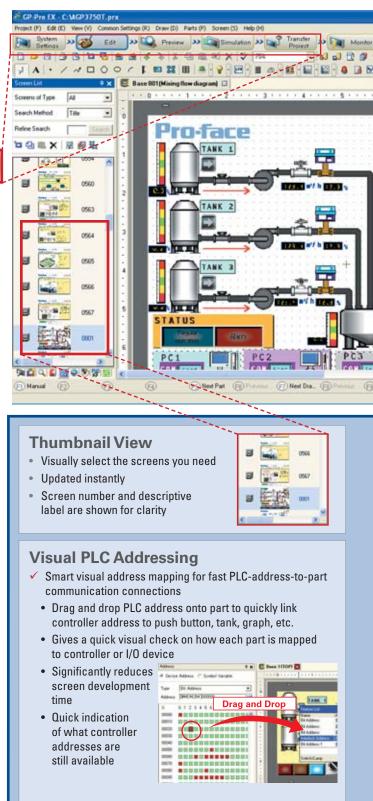
- Drag-and-drop addressing, parts and colors
- Efficient features to reduce development time
- Create consistent look and feel using the user-defined templates

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



Built-in Flexibility



Extensive Time-Saving Features

Create consistent look and feel, detailed applications in minutes!

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

(E) Transfer (E) Simu (A)

E10 Menu

· 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



Time-Saving Features

Right Technology (OEMs)

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







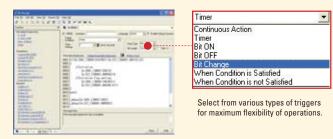
- OEM machine field upgrades no software needed
- · Log critical data for later retrieval and analysis
- Store images and movies





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



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

Right Solution (End Users)

- 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

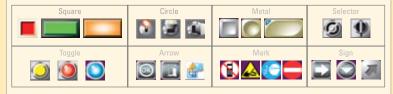


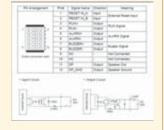
Image Import

- · 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



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



Cameras

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





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



Putting It Together

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



Tools for Training Operators and Efficient Maintenance

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

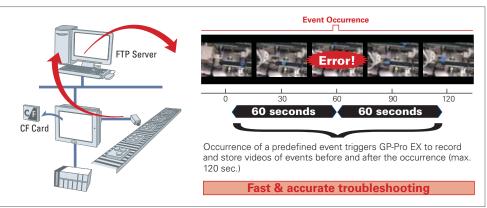
A picture is worth a thousand words; a video is worth a thousand pictures

Provide clear instructions to operators and maintenance personnel

Find root causes fast - see what happened before it happened

Reduce Downtime

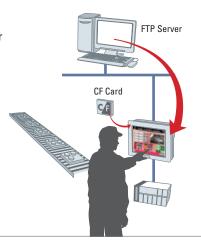
- Like an airplane "black box," record the events that led up to a fault, before the fault occurred
- The Event Recorder feature reduces the time required to find the root cause, and not the symptoms



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.

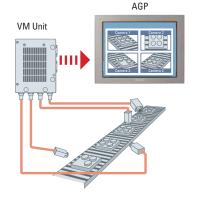
Note: Movie files you create must be converted with the Movie Converter EX converter tool, which requires the purchase of a license.

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

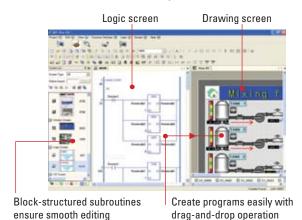
- One database for all variables
- No need for exporting and importing between packages

Save time and \$\$\$.

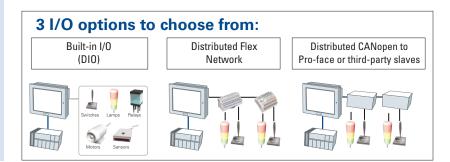
Simplify your system without losing speed and functionality.

Develop logic and HMI screens side-by-side

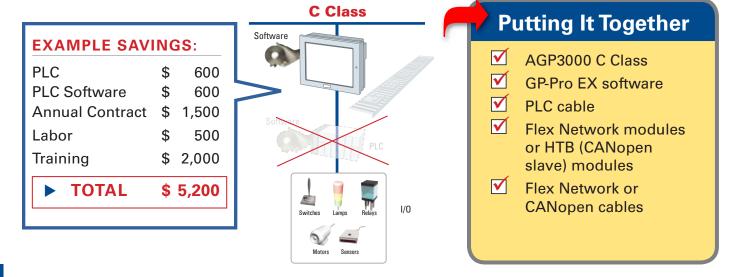
- Drag and drop between logic and screens
- ✓ Save costly "fat-finger" mistakes
- See everything you need without switching programs
- One database to save you time



NEW! Added instructions for greater ease of use



Reduce costs by reducing component count



Powerful Ladder Logic Instructions

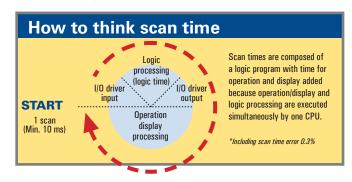
Cate	gory	Instruction Name	Instruction Notation	Ladder Symbol
	90.7	Name Normally Open	Notation	Symbol —
	ic	Normally Closed	NC	
		Out	OUT	
	Bit Basic	Negative Out	OUTN	-0-
	B	_		
		Set	SET	-S-
		Reset Positive	RST	-®-
	Pulse Basic	Transition Negative	PT	<u> </u>
	P. W	Transition	NT	<u> </u>
		Jump	JMP <*P>	-≫LABEL NAME
		Jump to Subroutine	JSR <*P>	->SUBROUTINE NAME«-
ion		Return	RET	RET
Basic Instruction		Repeat number of times (For)	FOR	FOR
Ba	trol	Repeat number of times (NEXT)	NEXT	NEXT
	Program Control	Inverse	INV	-/-
	Pr	Exit	EXIT	- DUT
		Power Bar Control	PBC	PBC S1 D1
		Power Bar Reset	PBR	PBR S1
		Logic Wait Instruction LWA		LWA
		On Delay Timer	TON	TON (ms) Q — PT ET
i.		Off Delay Timer	TOF	TOF (ms) Q PT ET
noitourbationii		Pulse Timer	TP	TP (ms) Q — PT ET
Ė		Accumulate On Delay Timer	TONA	TONA (ms) Q — R PT ET
		Accumulate Off Delay Timer TOFA		TOFA (ms) Q — R PT ET
i to		Up Counter	CTU <*P>	R PV CV
noistern lacturation		Down Counter	CTD <*P>	CTUD R PV CV
	3	Up/ Down Counter	CTUD <*P>	UP QU R QD PV CV
	Fime d/Write	Time Read	JRD <*P>	JRD
/W Instruction	Tim Read/	Time Set JSET		JSET S1 D1
R/W Ir	Date d/ Write	Date Read	NRD <*P>	NRD D1
	Da Read/	Date Set	NSET <*P>	NSET S1 D1
uction	ration	Add	ADD <*P>	ADD S1 D1 S2
Operation Instruction	Arithmetic Operation	Subtract	SUB	SUB S1 D1 S2
Open	Arithm	Multiplication	MUL <*P>	MUL S1 D1 S2

Cate	gory	Instruction Name	Instruction Notation	Ladder Symbol			
	,	Name	Notation	Symbol			
		Division	DIV <*P>	\$1 D1 \$2			
	Arithmetic Operation	Modulation	MOD <*P>	M0DS1 D1 S2			
	etic Op		(7)	S2			
	Arithm	Increment	INC <*P>	DI			
		Decrement	DEC <*P>	DEC D1			
	ime Operation	Time Addition	JADD <*P>	JADD S1 D1 S2			
	Time 0	Time Subtraction	JSUB <*P>	JSUB S1 D1 S2			
		Logical AND	AND <*P>	AND S1 D1 S2			
	Logical Operation	Logical OR	OR <*P>	OR S1 D1 S2			
	Logical	Logical XOR	XOR <*P>	S1 D1 S2			
		Logical NOT	NOT <*P>	NOT S1 S2			
Operation Instruction		Move (Copy)	MOV <*P>	MOV S1 D1			
Operation	Transfer	Block Move (Block Copy)	BLMV <*P>	S1 D1 S2			
		Fill Move	FLMV <*P>	S1 D1 S2			
		Exchange	XCH <*P>	D1 D2			
	Shift	Shift Left	SHL <*P>	SHL S1 D1 S2			
		Shift Right	SHR <*P>	SHRS1 D1 S2			
		Arithmetic Shift Left	SAL <*P>	SAL S1 D1 S2			
		Arithmetic Shift Right	SAR <*P>	SAR S1 D1 S2			
		Rotate Left	ROL <*P>	S1 D1 S2			
	Rotation	Rotate Right	ROR <*P>	R0R S1 D1 S2			
	Ro	Rotate Left with Carry Over	RCL <*P>	S1 D1 S2			
		Rotate Right with Carry Over	RCR <*P>	S1 D1 S2			
		Sum	SUM <*P>	SUMS1 D1 S2			
	ction	Average	AVE <*P>	S1 D1			
Function Instruction	Calculate Function	Square Root	SQRT <*P>	SORT S1 D1			
Function	Ca	Bit Conut	BCNT <*P>	S1 D1			
		PID	PID	S1 D1 S2 S3			
	Trigonometric Function	Sine	SIN <*P>	SIN SI DI			

0.1		Instruction	Instruction	Ladder
Cate	gory	Instruction Name	Instruction Notation	Ladder Symbol
		Cosine	COS <*P>	COS S1 D1
	_	Tangent	TAN <*P>	TAN S1 D1
	ric Functio	Arc Sine	ASIN <*P>	ASIN S1 D1
Function Instruction	Trigonometric Function	Arc Cosine	ACOS <*P>	ACOS S1 D1
Function I		Arc Tangent	ATAN <*P>	ATAN S1 D1
		Cotangent	COT <*P>	COT S1 D1
	tion	Exponential	EXP <*P>	EXP S1 D1
	The other Function	Logarithm	LN <*P>	S1 D1
	The	Log Base 10	LG10 <*P>	LG10 S1 D1
	Arithmetic Compare	Equal	EQ	EQ. (re) S1 S2
		Greater Than	GT	GT (>) S1 S2
		Greater Than Or Equal To	GE	GE (>=) S1 S2
		Less Than	LT	LT (<) S1 S2
		Less Than Or Equal To	LE	LE (co) S1 S2
Compare Instruction		Not Equal	NE	NE (⇔) S1 S2
Compare		Time Compare Equal	JEQ	JEQ (n) S1 S2
		Time Compare Greater Than	JGT	JGT (>) S1 S2
	Time Compare	Time Compare Less Than	JLT	JLT (<) S1 S2
	Time C	Time Compare Greater Than Or Equal To	JGE	JGE (>+) S1 S2
		Time Compare Less Than Or Equal To	JLE	JLE (<=) S1 S2
		Time Compare Not Equal	JNE	JNE (<) S1 S2

Category		Instruction Name	Instruction Notation Notation	
		Date Compare Equal	NEQ	NED (+) S1 S2
		Date Compare Greater Than	NGT	NGT (>) S1 S2
Compare Instruction	Date Compare	Date Compare Greater Than Or Equal To	NGE	NGE (>+) S1 S2
Compare	Date (Date Compare Less Than	NLT	NLT (c) S1 S2
		Date Compare Less Than Or Equal To	NLE	NLE (c+) S1 S2
		Date Compare Not Equal	NNE	NNE (⇔) S1 S2
		BCD Convert	BCD <*P>	S1 D1
		BIN Convert	BIN <*P>	SI DI
	Data Convert	Encode	ENCO <*P>	ENCO S1 D1
		Decode	DECO <*P>	DECO S1 D1
		Convert to Radian	RAD <*P>	RAD S1 D1
		Degree Convert	DEG <"P>	DEG S1 D1
tion		Scale	SCL <*P>	SCL S1 D1
Convert Instruction		Convert Integer to Float	2F 	S1 D1
Com		Convert Integer to Real	I2R <*P>	S1 D1
		Convert Float to Integer	F2I <*P>	F2I D1
	Type Convert	Convert Float to Real	F2R <*P>	F2R S1 D1
	Type Co	Convert Real to Integer	R2I <*P>	R2I S1 D1
		Convert Real to Float	R2F <*P>	R2F S1 D1
		Convert Seconds	H2S <*P>	H2S S1 D1
		Convert Seconds to Time	S2H <*P>	S2H S1 D1

*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.).



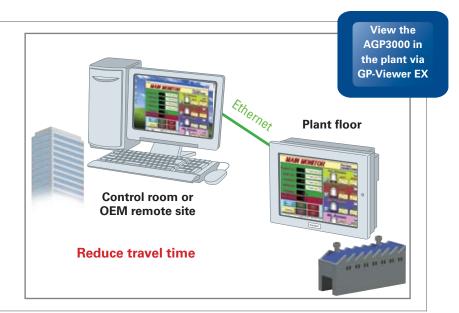
Tools for Remote Connectivity and Access

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.

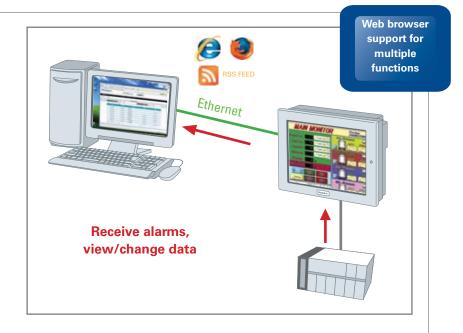
GP-Viewer EX

- ✓ 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

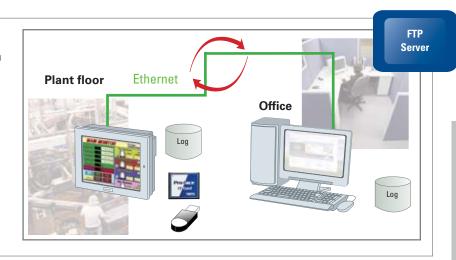
- View AGP information and alerts through a Web browser
 - View AGP alarms on any PC via Web browser or RSS reader
 - Remote troubleshooting, Web viewing of alarms; subscribe to alarm RSS feeds
 - View PLC and internal addresses for troubleshooting
 - View the screens in GP-Viewer EX while monitoring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





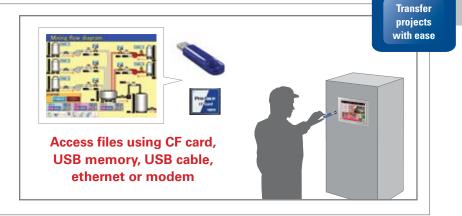
FTP Server

- ✓ 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



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

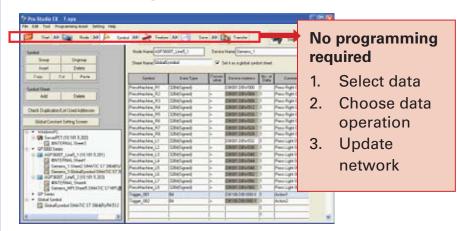
- OPC DA server
- DDE
- DLL
- API (VB, VB.NET, VC, C#.NET)
- Access[™]/Excel[®]
- ODBC, SQL, Oracle
- E-mail via SMTP
- MES actions

Collect and view up-to-theminute, 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

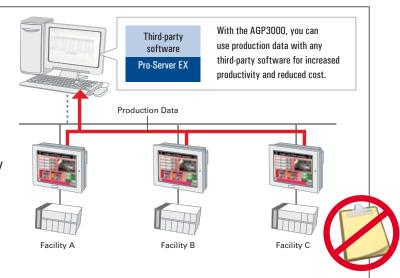
Fast and simple



- ✓ 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

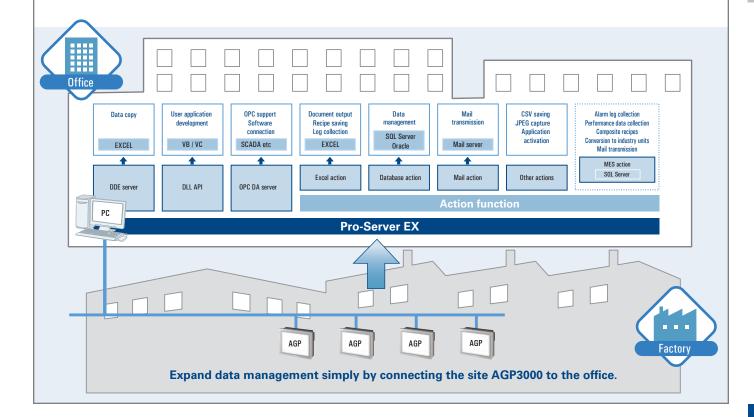
- · Collect data on a remote server
- In plant or across the Internet
- Send data to another department or around the world in real-time
- Update recipes/production parameters remotely
- · No more clipboard collection of data



Enterprise integration

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

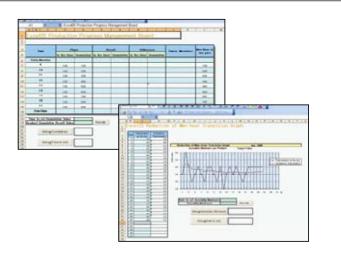
✓ OPC DA server	✓ DDE
✓ API (VB, VB.NET, VC, C#.NET)	✓ DLL
✓ Access [™] /Excel [®]	✓ ODBC, SQL, Oracle
✓ Image management	✓ PC health
✓ E-mail via SMTP	✓ MES



Data Where You Need It

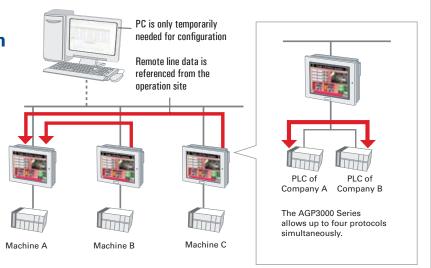
Reporting

- 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!



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!









Pro-face openplatform HMI

If you want to learn more about Pro-face industrial PCs with health monitor, please visit 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-i	nch XGA	12-i	nch SVGA		10.4-inch	VGA	7.5-i
	S10 Ethernet Expansi Unit AUX SoundOut	on USB CF (Host) Card	SIO Ethernet Expansion Unit USB (Host) CF AUX Card SoundOut		SIO Ethernet Expansion Unit VM USB Unit (Host) Card AUX SoundOut Sign Ethernet Expansion Unit (Host) Card AUX SoundOut		SIO Ethernet CF Card SoundOut	
AGP3000	AC AGP3750-T1-AF	TFT 655.5 color	AGP3650-T1-AF		ACP3550-T1-AF AGP3550-T1-AF			GE AGP3450-T1-D24
AGP3000			AGP3600-T1-AF-D81C	AGP3600-T1-D24-D81K AGP3600-T1-D24-D81C	AGP3500-T1-AF-D81K AGP3500-T1-AF-D81C AGP3500-T1-D24-D81K AGP3500-T1-D24-D81C	AC OC AGP3500-S1-AF-D81C AGP3500-S1-D24-D81K AGP3500-S1-D24-D81C	Mono 15 shades OC AGP3500-L1-D24-D81C	AGP3400-T1-D24-D81K AGP3400-T1-D24-D81C
C Class			AGP3600-TI-AF-FN1M AGP3600-AF-CA1M	AGP3600-T1-D24-FN1M AGP3600-T1-D24-CA1M	AC OC AGP3500-T1-AF-FN1M AGP3500-T1-AF-CA1M AGP3500-T1-D24-FN1M AGP3500-T1-D24-CA1M			GE AGP3400-T1-D24-FN1M AGP3400-T1-D24-CA1M
AGP3000			65.53 50 00 60 AGP3600-T1-AF	00 AGP3600-T1-D24	AC OD AGP3500-T1-AF AGP3500-T1-D24 AGP3510-T1-AF	AGP3500-S1-AF AGP3500-S1-D24	Mono 16 shades AGP3500-L1-D24	65.556 column DC AGP3400-T1-D24
AST								



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

COM2: RS-422/RS-422/RS485 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



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

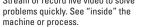
ideal for standalone machines



nch VGA			5.7-inch	QVGA			3.8-inch	QVGA
Expansion USB (Host)	SIO Ethernet Departsion USB CF (Host) 1°CF not supported; single SIO port only		SIO Expansion USB (Host) *Not supported by AGP3.		SIO 1 Ch Ethernet USI (Hos	3 11)	SIO * USB (Host) *Serial ports not supported by LT3201	
AGP3400-S1-D24-D81C	AGP3300-T1-D24-D81C	AGP3300-S1-D24-D81C	Monp 15 shades 0C AGP3300-L1-D24-D81C AGP3300-L1-D24-D81C					
	TF 6555 2007 AGP3300-T1-D24-FN1M AGP3300-T1-D24-CA1M		Mono 13 states AGP3300-L1-D24-FN1M AGP3300-L1-D24-CA1M					
AGP3400-S1-D24	TF 65.53 color 100 AGP3300-T1-D24	AGP3300-S1-D24	Mono 16 shades AGP3300-L1-D24	AGP3301-S1-D24 AGP3301-L1-D24	Blue 16 shades AGP3302-B1-D24	1F1 25 colo	Amber shades OC AGP3200-A1-D24	
				AST3301-S1-D24	Blue shades AST3301-B1-D24			Amber 16 shades AST3201-A1-D24 AST3211-A1-D24
		LT3300-S1-D24-K ¹	Mono 19 19 19 19 19 19 19 19 19 19 19 19 19	Mono 13 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15				Amber to the state of the state



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





Record audio to leave messages/ instructions for other operators.

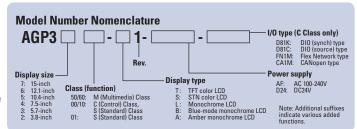


DIO Interface

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



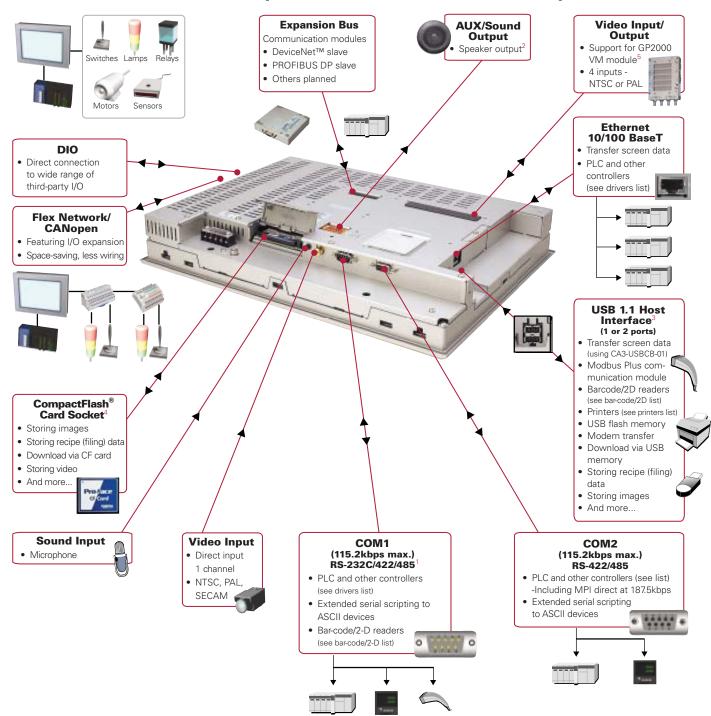
Distributed I/O architectures reduce wiring and installation costs by putting I/O where you need it.



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



AGP3302-B type model only has RS-232C asynchronous transmission

- 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.

² AGP34xx, 35xx, 36xx and 37xx models include AUX/sound outputs Sounds must be converted from .WAV format

Requires CA3-USBCB-01for transfer of screen data

Not available on 3302B or 32xx

Compatible with AGP35xxT and 36xxTTFT display models only

Operator Interface Plus Multimedia







AGP 3650T

Certifications

9) 1R; **1R**

(UL) ;(UL) **(SP**· (€





AGP 3750T

Certifications













Display • TFT color LCD (65K colors)

• Analog touch screen (no grid)

Environmental

• Operating temp. 0 ° to 50 °C

• Ratings: NEMA, 4x/13, IP65f

10-90% noncondensing

[9.41in] x D56mm [2.2in]

W313mm [12.31in] x H239mm

• External Dimensions:

DC24V

• 800 x 600 pixels

• Humidity:

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

Display

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/		
Microphone	PAL/SECAM		

Ports & Interfaces

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

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-232/422/48!	
CF Type II	Com2:	
Expansion Bus	RS-422/485	
Speaker	Video: NTSC/	
Microphone	PAL/SECAM	

Model Numbers

AGP3550-T1-AF AGP3560-T1-AF

Certifications

AGP 3450T







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/	
Microphone	PAL/SECAM	

Model Numbers

AGP3450-T1-D24

Model Numbers

AGP3750-T1-AF AGP3750-T1-D24



Standard Operator Interface









AGP 3600

AGP 3500

Certifications

AGP 3400 AGP 3300

Certifications

DC24V













DC24V



Certifications



Certifications









Display

Environmental

• Operating temp. 0 ° to 50 °C

• Ratings: NEMA, 4x/13, IP65f

10-90% noncondensing

[9.41in] x D56mm [2.2in]

W313mm [12.32in] x H239mm

External Dimensions:

- TFT color LCD (65K colors)
- 800 x 600 pixels

· Humidity:

• Analog touch screen (no grid)

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)

• Operating temp. 0 ° to 50 °C

Environmental

- 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]

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]

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:
(2) USB	RS-232/422/48
CF Type II	Com2:
Expansion Rus	RS-422/485

Ports & Interfaces

Ethernet	Com1:
(2) USB	RS-232/422/485
CF Type II	Com2:
Eunanaian Bua	RS-422/485

Ports & Interfaces

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

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

AGP3600-T1-AF AGP3600-T1-D24

Model Numbers

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

Model Numbers

AGP3400-T1-D24 AGP3400-S1-D24

Model Numbers

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









AST 3301

AGP 3200

Certifications

AST 3201

Certifications

Right-size, right-technology solutions

Consider your HMI requirements for today and tomorrow:

What size displays do you need?

Certifications



DC24V











Display

- STN color LCD (256 colors) Blue LCD (8 shades)
- 320 x 240 pixels

DC24V

Analog touch screen (no grid)

Display

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

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: W167.5mm [6.59in] x H135mm [5.31in] x D59.5mm [2.34in]

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]

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]

• What PLCs/protocols will you use?

Ports & Interfaces

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

Ports & Interfaces

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

Ports & Interfaces

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

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

Model Numbers

AST3301-B1-D24 AST3301-S1-D24

Model Numbers

AGP3200-T1-D24 AGP3200-A1-D24

Model Numbers

AST3201-A1-D24 AST3211-A1-D24 What other devices will you need, ie bar-code, temperature controllers or other third-party devices?

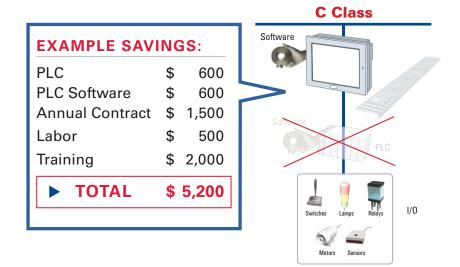


Control Class: Lowering Overall System Cost

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

Reduce cost by reducing component count

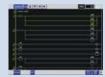
- One development software for both ladder logic and screen graphics
- Built-in I/O interface
- Use industry-standard I/O



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











AGP 3600

AGP 3500

AGP 3400

AGP 3300

Certifications







Display



DC24V



• TFT color LCD (65K colors)

• 640 x 480 pixels

STN color LCD (4,096 colors)

· Analog touch screen (no grid)



Certifications

Display

Monochrome B/W LCD (16 shades)



(I) (II) (II)

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

• 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

	DIO ¹ :
one:	6 in/2 out
Choose or	Flex Network ²
	CANopen 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

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

DIO ¹ :
6 in/2 out
Flex Network ²
CANopen
to Pro-face or third-party slaves

Model Numbers

AGP3500-T1-AF-D81K	AGP3500-T1-D24-CA1N
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-D810
AGP3500-T1-D24-D81C	AGP3500-L1-D24-D81C
AGP3500-T1-D24-FN1M	

Certifications

Display

- STN color LCD (4,096 colors)

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-232/422/48
CF Type II	Com2:
Expansion Bus	RS-422/485

I/O Architectures

		DIO ¹ :
	one:	6 in/2 out
Choose or	Flex Network ²	
	Chc	CANopen to Pro-face or third-party slave

Model Numbers

AGP3400-T1-D24-D81K
AGP3400-T1-D24-D81C
AGP3400-T1-D24-FN1N
AGP3400-T1-D24-CA1N
AGP3400-S1-D24-D81K
\GP3400-S1-D24-D81C

Certifications



3) IR: IR



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

I/O Architectures

one:	DIO ¹ : 6 in/2 out ²
Choose or	Flex Network ²
Chc	CANopen 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-FN1N
AGP3300-T1-D24-CA1M	AGP3300-L1-D24-CA1N
AGP3300-S1-D24-D81K	
AGP3300-S1-D24-D81C	

¹DIO: D81C=Source, D81K=Sink

²Flex Network compatible with FN distributed I/O modules

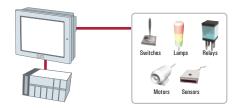


Operator Interface Plus Control...

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
- 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
- - 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



8-relay discrete output, 1 common



FN-Y08RL41

16-point discrete input. 16-point sink transistor output FN-XY16SK41



16-point discrete input, 16-point source transistor output FN-XY16SC41

32-Point

32-point discrete input FN-X32TS41



32-point discrete input, 32-point sink transistor output FN-XV32SKS41

Analog I/O modules



2-channel analog input: 0-10VDC 0-20ma. 4-20ma FN-AD02AH41



4-channel analog input: 0-10VDC, +/-10VDC, 0-20ma, 4-20ma FN-AD04AH11



2-channel analog output: 0-10VDC 0-20ma, 4-20ma FN-DA02AH41



4-channel analog output 0-10VDC, +/-10VDC 0-20ma 4-20ma FN-DA04AH11

...With Local and Distributed I/O Solutions

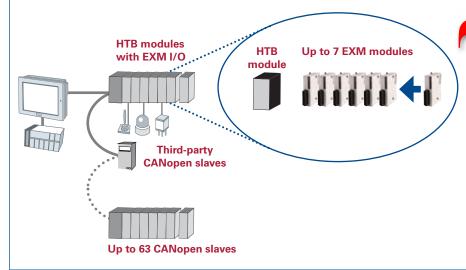


NEW!

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



8-point input module **EXM-DDI8DT**

16-point input module **EXM-DDI16DT**

Discrete output modules



8-Point

16-Point

8-point relay output module

EXM-DRA8RT

module EXM-DRA16RT

8-point sink output module

EXM-DD08UT16-point sink output

module EXM-DD016UK

module

EXM-DD08TT

8-Point

16-Point

16-point output source

8-point output source

EXM-DD016TK

Mixed discrete I/O modules



4-point input / 4-point output module **EXM-DMM8DRT**

Analog I/O modules



2-channel analog input module **EXM-AMI2HT**

2-Thermocouple or 2-Pt100/ 1-Channel 2-channel temperature input / 1-channel analog output module **EXM-ALM3LT**



2-channel analog input / 1-channel analog output module **EXM-AMM3HT**



1-channel analog output module 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

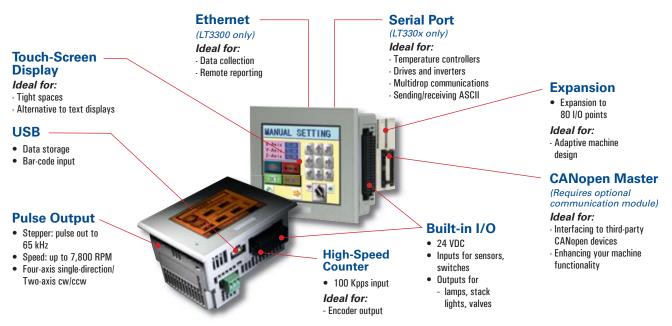
LT3000 Series - A space-saving control solution

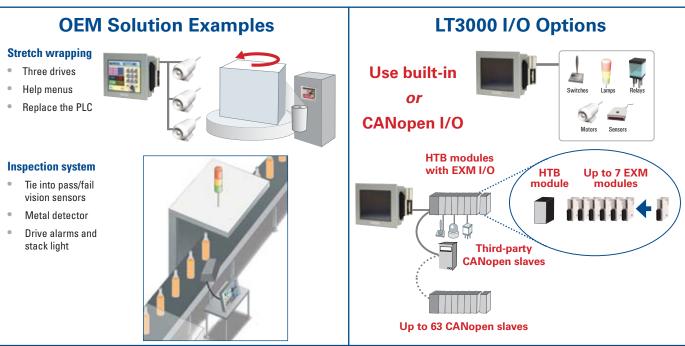
Typical applications

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



LT3000 Series Features











LT 3300

LT 3301

LT 3201

Certifications

Display

Monochrome B/W (16 shades)

Analog touch screen (no grid)

• STN color LCD (4,096 colors)

DC24V

• 320 x 240 pixels













Display

- Monochrome B/W LCD
- 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:

RS-232/422/485 (1) USB

I/O Architectures

Built-in DIO: 16 in/16 out1

Expansion I/O up to 3 EXM modules

CANopen to Pro-face or third-party slaves (Requires optional

Model Numbers

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

Certifications

DC24V





- (16 shades)

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: RS-232/422/485

I/O Architectures

Built-in DIO: 16 in/16 out1

Expansion I/O up to 3 EXM modules

CANopen to Pro-face or third-party slaves (Requires optional

Model Numbers

LT3301-L1-D24K LT3301-L1-D24C

Certifications

(Jr) (Jr) (Jr) (Jr) DC24V



- (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: 12 in/6 out1

Expansion I/O up to 2 EXM modules

CANopen to Pro-face or third-party slaves

(Requires optional

Model Numbers

LT3201-A1-D24K LT3201-A1-D24C

Choose from 13 EXM modules:

Discrete input modules



8-point input module EXM-DDI8DT



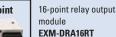
16-point input module FXM-DDI16DT

Discrete output modules



8-point relay output module

EXM-DRA8RT



8-point sink output 8-Point



module EXM-DD08UT 16-point sink output

module EXM-DD016UK



8-point output source module

EXM-DD08TT



16-point output source

EXM-DD016TK

Mixed discrete I/O modules



4-point input / 4-point output module EXM-DMM8DRT

Analog I/O modules



2-channel analog input module EXM-AMI2HT

2-Channel Temp. or 1-Channel Output

2-channel temperature input / 1-channel analog output module EXM-ALM3LT

2-Channel/ 1-Channel

2-channel analog input / 1-channel analog output module **FXM-AMM3HT**



1-channel analog output module EXM-AM01HT

 $^1\!\text{DIO}$ can be configured as standard input/outputs or used for PWM, PLC, HSC or pulse-catch.

Software and Accessories



GP-Pro EX HMI Development Software EX-ED-Vxx (Includes one user license)

Additional GP-Pro EX Development License EX-ED-LICENSE Remote PC Access (RPA) EX-RPA (1) runtime license

10-Pack User Licenses: FX-RPA-10

30-Pack User Licenses: EX-RPA-30

AGP3000 Movie Converter Software EX-MOVCON-LICENSE

M-Class Units: Required to convert videos into AGP3000 Series format

GP-Viewer EX Remote Monitoring Software EX-VIEWER LICENSE

(Requirements: One license for each GP3000 Series with Ethernet port)

10-Pack User Licenses: EX-VIEWER LICENSE-10

30-Pack User Licenses: EX-VIEWER LICENSE-30



Pro-Server EX Data Management Software EX-SDV-Vxx

(Includes one user license)

Additional User License EX-SED-LICENSE



Manufacturing Execution System (MES) Action License EX-MES-LICENSE-Vxx

EX-MES-LICENSE-Vxx
Allows one installation from
Pro-Server EX



AUX Connector CA5-AUXCNALL-01

The AUX connector for AGP3000 series required in case an external output is used.



Terminal Block Conversion CA3-ADPTRM-01

9-pin male D-sub to screw terminal



Siemens COM Port Conversion Adapter CA3-ADPSEI-01

9-pin D-sub to MPI adapter. Adapts COM port to accept Profibus MPIstyle connectors and cables.



COM Port Conversion Adapter CA3-ADPCOM-01

9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 1.

Not intended for AGP3302 model.



Online Adapter CA4-ADPONL-01

9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 2 only.

NOTE: Includes network pull-up/pulldown resistors. Not intended for AGP3302 model.



DC Power Supply Connector for AGP330x and AGP34x0 models CA5-DCCNM-01



DC Power Supply Connector for AGP35x0 and AGP36x0 models CA5-DCCNL-01



Mitsubishi PLC A, QnA, FX Series 2-Port Adapter II GP070-MD11

Allows simultaneous use of an AGP3000 Series unit and a Mitsubishi PLC A, QnA, FX series peripheral device.



USB Cable Clamp (2-port) CA5-USBATL-01 USB cable clamp for

2-port HMI units to prevent disconnection.



USB Cable Clamp (1 port) CA5-USBATM-01

USB cable clamp for 1-port HMI units to prevent disconnection.



Installation Fastener CA3-ATFALL-01

Used to install the AGP3000 Series into a solid panel (included with unit).



PROFIBUS Slave Unit CA5-PFSALL/EX-01

PROFIBUS slave communication module for connecting AGP to PROFIBUS DP network.

DeviceNet™ Slave Unit CA6-DNSALL/EX-01

DeviceNet slave module for connecting AGP to DeviceNet network.



CompactFlash® card Inserts into the unit's CF card slot.

512MB CA3-CFCALL/512MB-01

1GB CA6-CFCALL/1GB-01



CompactFlash[®] Card Adapter GP077-CFAD10

Used for read/write of CF card data via a PC's PCMCIA slot.



Panel Cutout Adapter for AGP3500 Series CA4-ATM10-01

Panel cutout adapter for mounting in cutout of GP2500 (TFT).

Panel Cutout Adapter for AGP3300 Series CA4-ATM5-01

Panel cutout adapter for mounting in cutout of GP37W2B.



USB Transfer Cable (1m) CA3-USBCB-01

Downloads project data created with GP-Pro EX from PC's USB port to AGP's USB port.



USB Cable (5m) FP-US00

Connects a USB printer (Type B) port to AGP's USB port.



USB Front Cable (1m) CA5-USBEXT-01

USB extension cable.



RS-232 Cable (5m) CA3-CBL232/5M-01

Connects Mitsubishi PLC A-Series to the AGP RS-232 COM port.



GP RS-422 Cable (5m) CA3-CBL422-01

Connects the AGP RS-422 COM port 2 via 9-pin plug to host controller via open wires.



RS-422 Cable (5m) CA3-CBL422/5M-01

Connects the AGP RS-422 COM port 1 via 9-pin socket to host controller via open wires.



Mitsubishi PLC A-Series Connection Cable (5m) CA3-CBLA-01

Connects Mitsubishi PLC A-Series and QnA-Series programming console port to AGP.



Mitsubishi PLC Q-Series Cable (5m) CA3-CBLQ-01

Connects Mitsubishi PLC Q-Series programming console port to AGP. Connection cable.



Mitsubishi PLC Q-Series Cable (5m) CA3-CBLLNKMQ-01

Connects Mitsubishi PLC O-Series to the AGP RS-232C COM port. Link cable.



Mitsubishi PLC FX-Series Cable CA3-CBLFX/5M-01 (5m) CA3-CBLFX/1M-01 (1m)

Connects Mitsubishi PLC FX- Series programming console port to AGP RS-422 COM port.



Omron PLC SYSMAC Link Cable (5m) CA3-CBLSYS-01

Connects Omron PLC SYSMAC Series unit to AGP RS-232C port.



GP Multi-Link Cable (5m) CA3-CBLMLT-01

Connects a host controller to the AGP RS-422 port for multilink (n:1) communication.



GP 2 Port Adapter Cable (5m) CA3-MDCB11Connects Mitsubishi PLC to the

AGP RS-422 port using 2-port adapter II (GP070-MD11).



9-pin-to-25-pin RS-232C Conversion Cable CA3-CBLCBT232-01

9-pin D-sub socket to 25-pin RS-232 cable adapter (for use with some HMI-CAB-Cxxx cables).



9-pin-to-25-pin RS-422 Conversion Cable CA3-CBLCBT422-01

9-pin D-sub socket to 25-pin RS-422 cable adapter (for use with some HMI-CAB-Cxxx cables).



Allen-Bradley SLC™ 5/03, 5/04 Series Cable HMI-CAB-ST52 HMI-CAB-ST52-30X HMI-CAB-ST52-50X

Connects AGP3000/ST401 to A-B PLC via RS-232 9-pin D-sub.



Ethernet Crossover Cable HMI-CAB-ETH

6-ft. HMI to PLC ethernet port or to program HMI.



MicroLogix™ PLC Cable HMI-CAB-ST106

Connects AGP3000/ST401 to PLC RS-232 8-pin DIN port.



PLC Adapter Cable HMI-CAB-ST001

Connects to AGP3000/ST40x serial port with 9-conductor open-ended wires for connecting to third-party screw terminal devices.



RS-232C Cross-Type Cable (5m) GP410-IS00-O

25-pin D-sub connector both ends. Requires CA3-CBLCBT232-01.



Serial USB Cable for Modem Download CA6-USB232-01



1-Amp Power Supply 510-1000-004

2-Amp Power Supply 510-1000-041 24VDC Din-Rail Mount Class 1 Div 2.

RS-485 Isolation Unit CA3-ISO485-01 RS-232 Isolation Unit CA3-ISO232-01

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).

AGP3500T/AGP3550T Backlight Replacement CA5-BLU10T-01

AGP3750T Backlight Replacement CA3-BLU15-01

AGP3600T/AGP3650T Backlight Replacement CA3-BLU12-01

AGP3500S/GP2501S Backlight Replacement PS501S-BU00

Note: AGP3300, AGP3400 and AGP3500L backlights cannot be replaced in the field.

Protection Sheets Disposable, dirt-

resistant cover for screen (5 sheets/set)



15" for AGP3750 series CA3-DFS15-01

12" for AGP3600 series CA3-DFS12-01

10" for AGP3500 series CA5-DFS10-01

8" for AGP3400 series PS400-DF00

6" for AGP/AST/LT33xx CA3-DFS6-01

3.8" for AGP/AST/LT 32xx CA6-DFS4-01

Third-Party Device Support

Drivers

PLC Drivers

Rockwell Automation

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 Netmation 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

Yokogowa 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	Туре	Comments				
	Aimex Corp.	BR-530RS	Pen	Requires BB-60 power supply				
	OPT Electronics	OPT-6125-RS	Touch scanner (read width: 65mm)	Requires DC5300T for power				
Serial	Denso Co.	HC-36IITR	Touch scanner (read width: 61mm)	Requires P-200 for power; also requires KRS-423-XF1K connector cable (from Sanwa Supply)				
	ННР	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				
	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				
	ННР	IT5800	Hand-held industrial scanner	5800SR050-0F00 is complete with USB cable				
USB	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)				
H	Any/All	Any	Remote print server	Use ethernet network to connect to remote print server				
<u> </u>	Any/All	Any	Printer	ASCII text				

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- Pro-face Australia



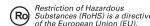












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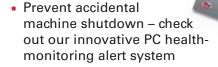
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