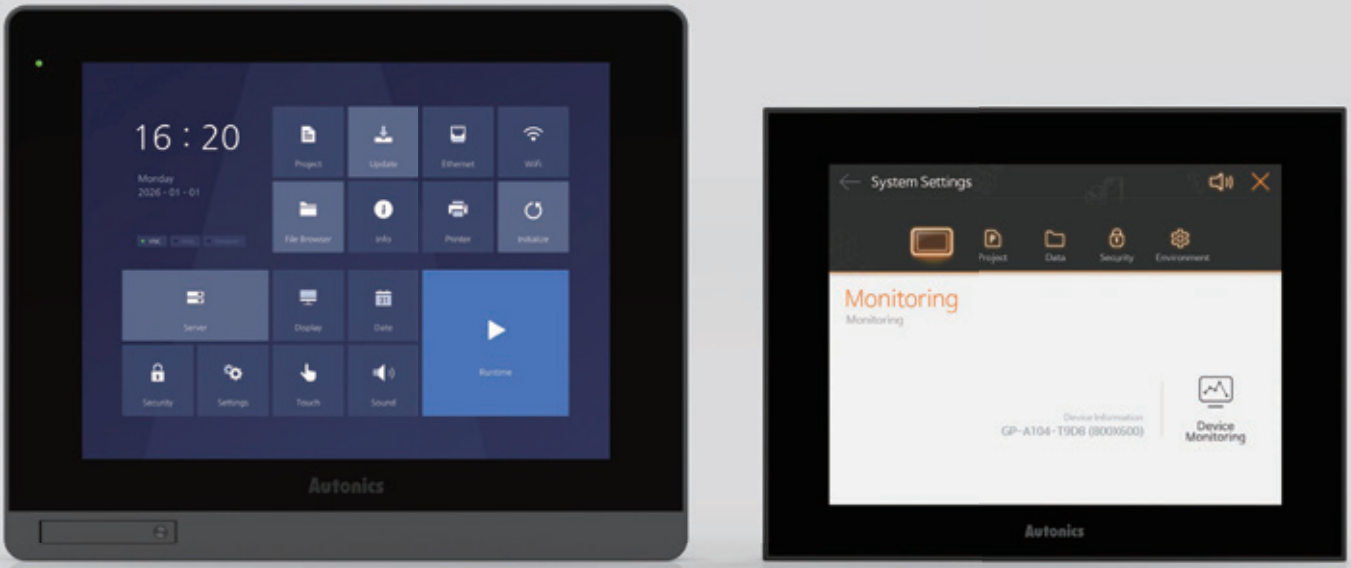

HMIs

A New Standard for HMI

www.autonics.com

Autonics

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Autonics HMI for Efficient Control of Various Automation Systems

The importance of HMIs grows as automation data becomes increasingly critical in industrial processes. HMI serves as an interface device that allows users to set, monitor, and operate various production equipment on-site with a touch screen, receiving real-time data and interacting through device control.

HMIs are essential for monitoring and controlling data from multiple connected devices on-site across diverse industries.

Autonics HMIs are designed to flexibly meet diverse field requirements, offering models from high-performance to standard depending on user needs such as control complexity and processing speed. With various screen sizes for small to large equipment and multiple communication protocols, HMIs provide excellent compatibility and scalability, offering optimal solutions for any industrial environment.

Discover the convenience of equipment operation with Autonics HMI solutions for all automation systems.

HMIs Line-up

Advanced Graphic Panel
iTP Series

Model	iTP-084-□	iTP-104-□	iTP-121-□	iTP-150-□	iTP-GW-□ (Gateway)
Screen size	8.4 inch	10.4 inch	12.1 inch	15.0 inch	-
LCD type	TFT Color LCD				-
Resolution	800×600 pixel	1024×768 pixel			-
Display color	16,777,216 colors				-
Touch	Analog resistive film method				-
Serial interface (COM1/2)	RS-232C / RS-422 / RS-485 (set via SCADAMaster DS) D-sub 9-pin (Female) × 2 (bottom)				
USB interface	Host: USB 2.0 (Type A) × 1 (front [01]), USB 3.0 (Type A) × 2 (side) Device: USB 2.0 (mini B) × 2 (front 1 [01] + rear 1, NOT be used simultaneously) Supported file system: exFAT				
Ethernet interface	IEEE802.3 10BASE-T/100BASE-TX/1000BASE-T, RJ45 × 2 (bottom)				
Audio out	Line output, rated load: > 10 kΩ, 3.5 mm audio jack (side)				
WiFi	IEEE 802.11 b/g/n, 2.4GHz , SMA Female × 1 (side)				
External memory	SD Card × 1 (rear), max. 256 GB (SDXC, SDHC) Supported file system: exFAT				
Processor	Cortex-A53, Quad Core, 1.6GHz				
Memory	System: DDR4 4GB, Storage: eMMC 16GB				
Hazardous location certified model class	Class I, Division 2, Group A, B, C, D, T5 Class II Division 2, Group F, G, T85°C IECEx UL 25.0006 X Ex ic ec IIC T5 Gc Ex tc IIIC T60°C Dc UL 25 ATEX 3333 X UL25UKEX3024X Ex II 3 G Ex ic ec IIC T5 Gc, Ex II 3 D Ex tc IIIC T60°C Dc KCs				Class I, Division 2, Group A, B, C, D, T5 IECEx UL 25.0006 X Ex ec IIC T5 Gc UL 25 ATEX 3333 X UL25UKEX3024X Ex II 3 G Ex ec IIC T5 Gc KCs
Material	Case: Aluminum (die casting)				
Protection structure	IP66 (front panel, IEC standard)				IP20 (IEC standard)
Software	SCADAMaster-Designer				

01) Gateway model does not have front interface.

Basic Logic Panel
LP-A Series

Model	LP-A070-T9D□-C5□	LP-A104-T9D□-C6□
Screen size	7.0 inch	10.4 inch
LCD type	TFT Color LCD	
Resolution	800×480 pixel	800×600 pixel
Display color	16,777,216 colors	
Touch	Analog resistive film method	
Serial interface	RS232C, RS422 (Half Duplex)	
USB interface	Host: USB 2.0 (Type A) × 1 , Device: USB 2.0 (mini-B) × 1	
Ethernet interface	Ethernet: IEEE802.3(U), 10/100Base-T, connector: RJ45	
CAN interface	24V CAN transceiver	
Processor	ATMEL ARM Cortex-A5 Single core (536 MHz)	
Memory	DDR2 133 MHz 256 MB	
Memory for user screen	64MB	
Material	Case: ABS flame retardant	
Software	atDesigner, atLogic	

Basic Graphic Panel
GP-A Series

Model	GP-A046	GP-A057	GP-A070	GP-A104
Screen size	4.6 inch	5.7 inch	7.0 inch	10.4 inch
LCD type	TFT Color LCD			
Resolution	800×320 pixel	640×480 pixel	800×480 pixel	800×600 pixel
Display color	16,777,216 colors	262,144 colors	16,777,216 colors	16,777,216 colors
Touch	Analog resistive film method			
Serial interface	RS232C, RS422 (Half Duplex)			
USB interface	Host: USB 2.0 (Type A) × 1 , Device: USB 2.0 (mini-B) × 1			
Ethernet interface	Ethernet: IEEE802.3(U), 10/100Base-T, connector: RJ45			
CAN interface	24V CAN transceiver			
Processor	ATMEL ARM Cortex-A5 Single core (536 MHz)			
Memory	DDR2 133 MHz 256 MB			
Memory for user screen	64MB			
Material	Case: ABS flame retardant			
Software	atDesigner			

Advanced HMI

iTP-084

iTP-104

iTP-GW

iTP-150

iTP-121

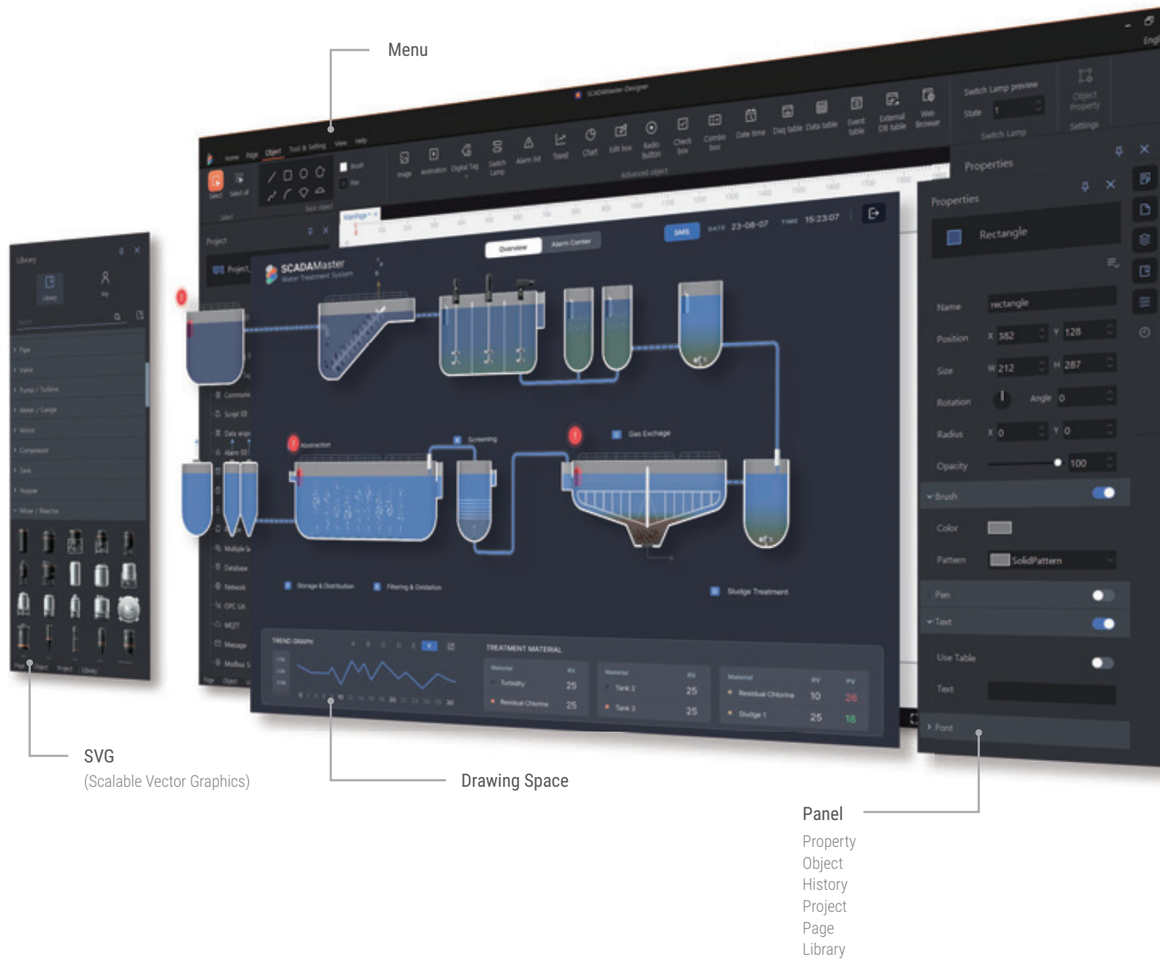
Advanced Graphic Panel

iTP Series

The iTP series advanced graphic panels feature fast processing speeds with a quad-core CPU as well as various display sizes, explosion-proof and Gateway models. The iTP series support various user interfaces, including WiFi, serial, Ethernet, and USB for user convenience. The dedicated software SCADAMaster-Designer for the HMI provide an intuitive and user-friendly graphic user interface that users can easily operate with a modular panel box and easy screen configuration.

Intuitive and User-friendly Graphic User Interface

SCADAMaster-Deigner



Dedicated Software SCADAMaster-Designer

SCADAMaster-Designer, screen editor software, provide an intuitive and user-friendly graphic user interface that users can easily use with a modular panel box and easy screen configuration. It provides an image library of SVG (Scalable Vector Graphics) files that consider various industrial sites so that users can draw similarly to actual sites.

Various Models

The iTP Series are available in Display, Gateway, and Explosion-proof models. The Display model features an all-in-one design with display and processor, offered in multiple sizes: 8.4 / 10.4 / 12.1 / 15 inches. The Gateway model, without a display, provides various communication interfaces.

Display Model (Display + Processor)

Gateway Model (Processor)

The iTP series have acquired explosion-proof certification which guarantees quality even in environments with explosion risks.

Explosion-proof model

User-friendly and Intuitive Display Experience

HMIs must provide key manufacturing information quickly and accurately, making excellent display quality, simple operation, and immediate responsiveness essential. Autonics iTP series provide excellent visibility from any angle with a high-resolution LCD supporting a wide color range, combined with resistive touch for intuitive operation.

Vivid Color

Equipped with an LCD capable of full-color display, it can reproduce approximately 16.77 million colors in detail. The vibrant screen enhances control and monitoring accuracy while maximizing visual satisfaction.

Excellent Visibility

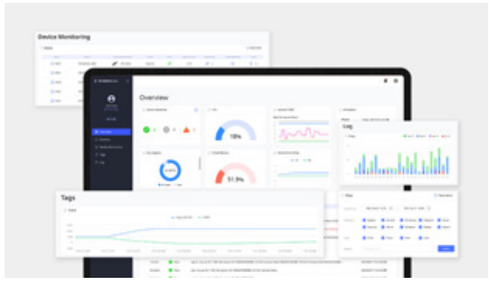
With a high-resolution display and a horizontal viewing angle of over 80°, users can clearly see screen information from any viewing angle. The display maintains excellent visibility even in confined installation spaces.

Precise Touch Input

The resistive touchscreen supports various input tools including bare hands, gloves, and styluses, and enables pixel-level precision for high-accuracy work environments.

Various Functions

The iTP series enable system monitoring and remote control through web tools and VNC, while horizontal / vertical installation options and an IP66 protection structure ensure efficient, flexible operation across various industrial environments.



Web Tool Function

While the animation is running, users can access the iTP series via the web to check CPU and network status, device connection, memory and RAM capacity, log records, and more. Users can monitor devices, set hardware using web tool function.

VNC Function

The iTP series provide VNC (Virtual Network Computing) function to monitor and control from mobile device or PC. With remote control capability, it saves time and improves work efficiency.

Horizontal/Vertical Installation

Users can utilize horizontal and vertical display based in installation environment. Various installation arrangements improve space efficiency and usability.

IP66 Protection Structure

IP66 protection structure allows the units to be safely applied in environments with dust or water.

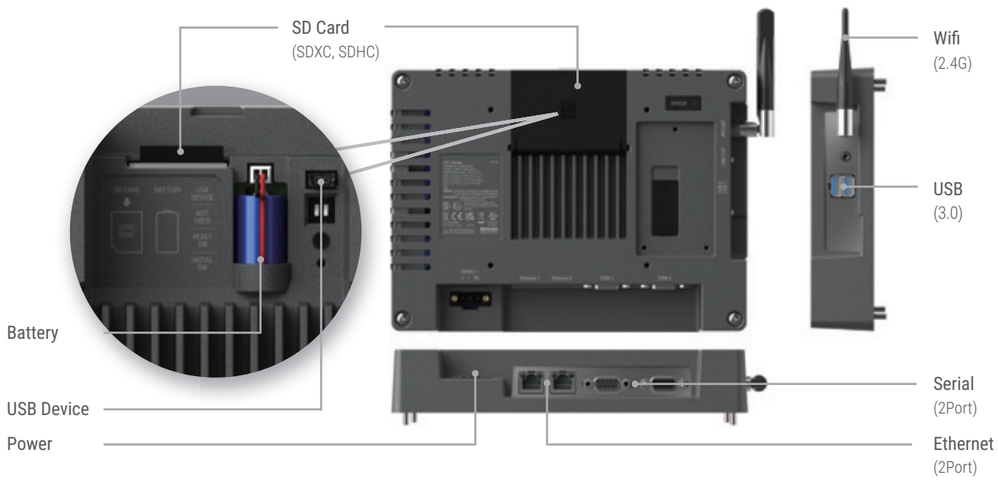
Various Communication Interfaces

The iTP series support various communication interfaces including serial (2 ports), USB (2.0/3.0), Ethernet (2 ports), Wi-Fi (2.4G, antenna supported) and 256GB SD card (SDXC, SDHC) to maximize usability with external devices depending on the user environment.

* Based on iTP-150 model

iTP Models

iTP-GW Models



Advanced
Graphic Panel

iTP Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

iTP - ❶ - ❷

❶ Screen size
084: 8.4 inch
104: 10.4 inch
121: 12.1 inch
150: 15.0 inch
GW: Gateway

❷ Hazardous-location certified
No mark: Not applicable
Ex: Certified

Product Components

- Main unit
  (+ built in battery + power connector)
- Instruction manual
- WiFi antenna
- Panel bracket (varied by models)
  [8.4 inch model] ×4
  [10.4 inch model] ×8
  [12.1 / 15 inch model] ×10
- [Gateway model] DIN rail bracket×2,
  Bolt (M3×8) for DIN rail bracket
  (M3×8) ×4,
  Bolt (M4×45) for wall mount
  (M4×45) ×4

View product details

Manuals and Software

For the detailed information and instructions, please refer to the manuals, and be sure to follow cautions written in the technical descriptions. Visit Autonics website to download manuals and software.

■ iTP Series User manual

It describes general information about system of iTP Series.

■ SCADAMaster

SCADAMaster is the software that monitors and controls the operation of processes, facilities, and equipment consisting of various PLCs and control devices, and acquires data. The acquired data is converted into a form such as trends and charts so that users can understand it, or is accumulated in a connected database and used for trend analysis, etc. SCADAMaster manual describes how to design user screen and how to use HMI function and connect with external devices such as PLC.

Specifications

Model	iTP-084-□	iTP-104-□	iTP-121-□	iTP-150-□
Screen size	8.4 inch	10.4 inch	12.1 inch	15.0 inch
LCD type	TFT Color LCD			
Resolution	800×600 pixel	1024×768 pixel		
Pixel pitch (W×H)	0.213 × 0.213 mm	0.206 × 0.206 mm	0.240 × 0.240 mm	0.297 × 0.297 mm
Display area	170.4 × 127.8 mm	211.2 × 158.4 mm	245.7 × 184.3 mm	304.1 × 228.1 mm
Display color	16,777,216 colors			
LCD view angle (top/bottom/left/right)	Within 80° / 60° / 80° / 80° of each	Within 85° / 85° / 85° / 85° of each	Within 89° / 89° / 89° / 89° of each	Within 88° / 88° / 88° / 88° of each
Back light	White LED			
Back light life cycle	≥ 50,000 hours 01)			
Luminance adjustment	0 to 100 level (set via iTP system setting menu / SCADAMaster-DS)			
Touch	Analog resistive film method			
Touch panel resolution	800 × 600 cell	1024 × 768 cell		
Touch panel life cycle	≥ 1 million times			
Buzzer	Magnetic buzzer (≥ 85 dB)			
Certification	[Standard models] CE EAC UKCA cULus KC [Hazardous-location certified models] CE EAC UKCA cULus KC IECEx			
Hazardous location certified model class	Class I, Division 2, Group A, B, C, D, T5 Class II Division 2, Group F, G, T85°C IECEx UL 25.0006 X Ex ic ec IIC T5 Gc Ex tc IIIC T60°C Dc UL 25 ATEX 3333 X UL25UKEX3024X Ex II 3 G Ex ic ec IIC T5 Gc, Ex II 3 D Ex tc IIIC T60°C Dc KCs			
Protection structure	IP66 (front panel, IEC standard)			
Material	Case: Aluminum (die casting)			
Unit weight (packaged)	≈ 2.58 kg (≈ 3.065 kg)	≈ 3.18 kg (≈ 3.81 kg)	≈ 3.86 kg (≈ 4.6 kg)	≈ 5.24 kg (≈ 6.1 kg)

01) Based on 25 °C, time until brightness reaches 50% when continuously ON

Model	iTP-GW-□
Screen size	Not supported
Buzzer	Magnetic buzzer (≥ 85 dB)
Certification	[Standard models] CE EAC UKCA cULus KC [Hazardous-location certified models] CE EAC UKCA cULus KC IECEx
Hazardous location certified model class	Class I, Division 2, Group A, B, C, D, T5 IECEx UL 25.0006 X Ex ec IIC T5 Gc UL 25 ATEX 3333 X UL25UKEX3024X Ex II 3 G Ex ec IIC T5 Gc KCs
Protection structure	IP20 (IEC standard)
Material	Case: Aluminum (die casting)
Unit weight (packaged)	≈ 1.22 kg (≈ 1.68 kg)

Serial interface (COM1/2)	RS-232C / RS-422 / RS-485 (set via SCADAMaster DS) D-sub 9-pin (Female) × 2 (bottom)
Comm. distance	RS-232C: < 15 m , RS-422/485: < 500 m
USB interface	Host: USB 2.0 (Type A) × 1 (front 01)), USB 3.0 (Type A) × 2 (side) Device: USB 2.0 (mini B) × 2 (front 1 01) + rear 1, NOT be used simultaneously) Supported file system: exFAT
USB HOST power supply	5 VDC⎓ ±5%
USB HOST output current	500 mA
Comm. distance	Host: < 2 m , Device: < 2 m
Ethernet interface	IEEE802.3 10BASE-T/100BASE-TX/1000BASE-T, RJ45 × 2 (bottom)
Comm. distance	< 100 m
Audio out	Line output, rated load: > 10 kΩ, 3.5 mm audio jack (side)
WiFi	IEEE 802.11 b/g/n, 2.4GHz , SMA Female × 1 (side)
Antenna	External Dipole Antenna (SMA Male), 2.308 dBi (Max Gain)
External memory	SD Card × 1 (rear), max. 256 GB (SDXC, SDHC) Supported file system: exFAT
Printer	HP Printer (USB Host, Ethernet)
Processor	Cortex-A53, Quad Core, 1.6GHz
Memory	System: DDR4 4GB, Storage: eMMC 16GB
Backup memory	eMMC (internal storage)
Backup type	Date/Time data, non-volatile device
Battery life cycle	5 years at 25°C
System menu language	Korean, English
Clock	RTC embedded (lithium battery (1/2 AA))

01) Gateway model does not have front interface.

Power supply	24 VDC⎓
Permissible voltage range	90 to 110% of power supply
Allowable momentary outage time	≤ 10 ms
Power consumption	

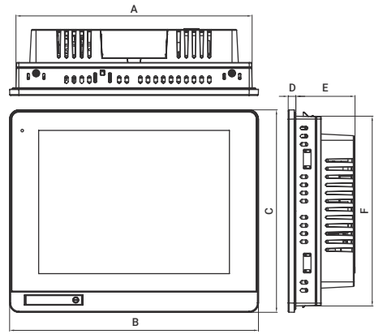
	iTP-084	iTP-104	iTP-121/ 150	iTP-GW
Power consumption	≤ 20 W	≤ 25 W	≤ 30 W	≤ 15 W
Excluding external supply power	≤ 15 W	≤ 20 W	≤ 25 W	≤ 10 W
Back light OFF (standby mode)	≤ 10 W	≤ 12 W	≤ 15 W	-
Back light ON (based on 20% brightness)	≤ 13 W	≤ 16 W	≤ 20 W	-

Inrush current	≤ 20 A
Insulated resistance	Between the charging part and the case: ≥ 100 MΩ (500 VDC⎓ megger)
Surge voltage	Power line: ± 0.5 kV , Power - ground / Signal - ground line: ± 1 kV
Ground	3rd grounding (≤ 100 Ω)
Cooling method	Natural air cooling
Noise immunity	The square wave noise (pulse width: 1μs) by the noise simulator ± 0.5 kV
Static discharge endurance	Contact discharge ± 5 kV
Dielectric strength	Between the charging part and the case: 500 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour
Vibration (malfunction)	0.5 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	147 m/s² (approx. 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (approx. 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-10 < Tamb < 50°C, Storage: -20 < Tamb < 60°C (a non freezing or condensation environment)
Ambient humidity	35 to 85%RH, storage : 35 to 85%RH (a non freezing or condensation environment)

Dimensions

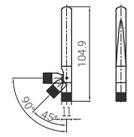
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ Display models

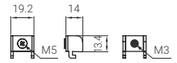


	A	B	C	D	E	F
8.4 inch	234.3	246	187.2	8.5	65	173.9
10.4 inch	262	276	224.5	8.5	65.6	210.5
12.1 inch	306	320	260	8.5	65.6	246
15.0 inch	357.4	369	300	8.5	65.6	288.4

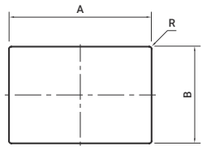
■ WiFi antenna



- Panel bracket

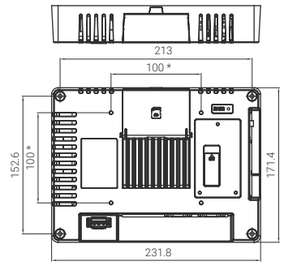


- Panel cut-out

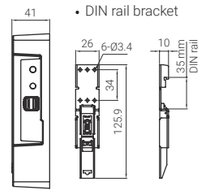


	A	B	R
8.4 inch	$235.5^{+1.0}_{0}$	$175^{+1.0}_{0}$	4-R6 ~ R9
10.4 inch	$263^{+1.0}_{0}$	$211.5^{+1.0}_{0}$	≤ 4-R3
12.1 inch	$307^{+1.0}_{0}$	$247^{+1.0}_{0}$	≤ 4-R3
15.0 inch	$358.5^{+1.0}_{0}$	$289.5^{+1.0}_{0}$	≤ 4-R3

■ Gateway model



- DIN rail bracket



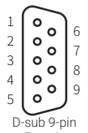
* VESA mount hole size

Interface

Refer to the part description for the each interface position.

■ Serial (COM1/2) connector

Set communication method: RS-232C / RS-422 / RS-485 via SCADAMaster software.
(screw tightening torque: 0.5 N m)

Port	Pin		Name	I/O	Function
 D-sub 9-pin Female	1		RDA (RD+)	Input	RS-422/485 data receive (+)
	2		RD (RXD)	Input	RS-232C data receive
	3		SD (TXD)	Output	RS-232C data transmission
	4		RDB (RD-)	Input	RS-422/485 data receive (-)
	5		SG	-	Signal Ground
	6		SDA (SD+)	Output	RS-422/485 data transmission (+)
	7	COM1	RTS	Output	RS-232C transmission request signal
		COM2	+5VDC	-	External supply power (200 mA)
	8	COM1	CTS	Input	RS-232C transmission available signal
		COM2	GND	-	External supply power ground
	9		SDB (SD-)	Output	RS-422/485 data send (-)

• Communication specification

Max. connections	RS-232C: 1, RS-422/485: 32
Comm. distance	RS-232C: < 15 m , RS-422/485: < 500 m
Baud rate	2,400 / 4,800 / 9,600 / 19,200 / 38,400 / 57,600 / 115,200 bps
Data bit	7 / 8 bit
Parity bit	None /Odd /Even
Stop bit	1 bit / 2 bit

■ USB (HOST) port

- Connects iTP and the storage devices for move/copy data, update firmware, and connect external devices (barcode readers, printers, etc.).
- USB 1/2: USB3.0 (TYPE A), USB3: USB 2.0 (TYPE A)

Port	Pin	Function
 USB 3.0 (Type A)	1	5 VDC⎓
	2	D-
	3	D+
	4	GND
	5	StdA_SSRX-
	6	StdA_SSRX+
	7	GND_DRAIN
	8	StdA_SSTX-
	9	StdA_SSTX+

Port	Pin	Function
 USB 2.0 (Type A)	1	5 VDC⎓
	2	D-
	3	D+
	4	GND

■ USB (Device) port

- Connects iTP and PC to upload / download the project which is designed projects.
- Front / Rear ports cannot be used at the same time.

Port	Pin	Function
 USB 2.0 (Mini-B)	1	5 VDC
	2	D-
	3	D+
	4	-
	5	GND

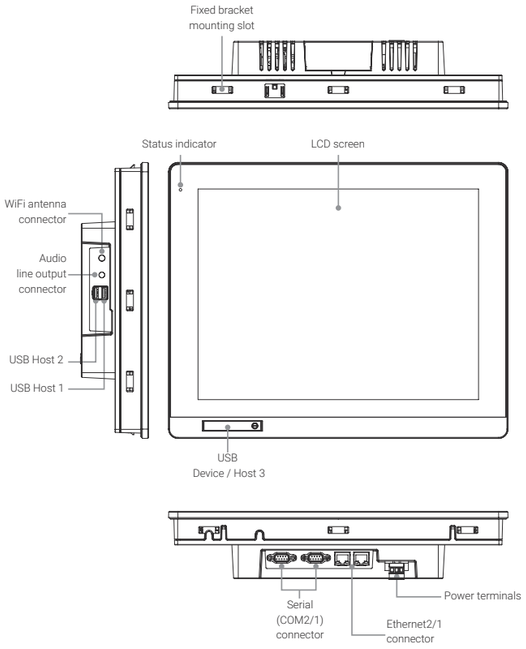
■ Ethernet connector

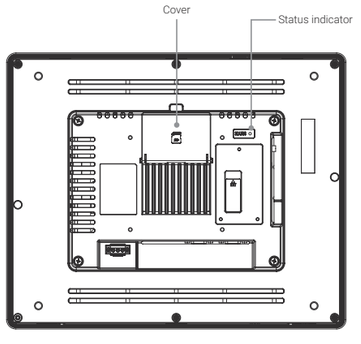
- Connects iTP and PC to upload / download the project which is designed projects.
- Communicates with the PLC which is applied to Ethernet protocol.
- For more information about PLC connection, refer to the SCADAMaster user manual.

Part Description

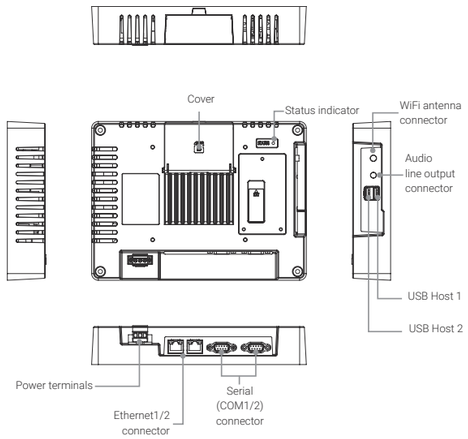
■ Display models

- Based on iTP-150 model.

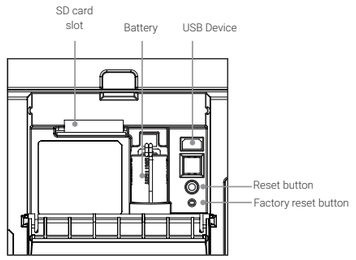




■ Gateway model



■ Inside cover



Basic HMI

LP-A070

LP-A104

GP-A070

GP-A104

GP-A046

GP-A057

Basic Logic Panel

LP-A Series

Autonics LP-A series are a single HMI panel designed to integrate PLC and I/O functions, enabling efficient control in complex industrial environments. The integration of display and control units enables visual monitoring and simultaneous control of multiple devices in limited spaces, saving costs, wiring, space, and simplifying operation.

LP-A series are available in 7-inch and 10.4-inch models, featuring a bright and clear TFT color LCD. PLC / HMI / IO module integrated type provides each 32 I/O points as standard. The analog resistive touchscreen enables flexible tag arrangement, while various interfaces, including USB Host / Device, Ethernet, and CAN, ensure extensive connectivity.

Users can edit user screens and data with the dedicated software atDesigner and atLogic. Users can easily edit object shapes, arrangement, and properties with atDesigner. Users can also monitor or control the devices according to the screen data information after programming PLC logic with atLogic and downloading the data to the LP-A.

Basic Graphic Panel

GP-A Series

It is difficult to monitor critical process values and variables without a visual interface between control devices and users. The GP-A series, graphic panels, enable easy monitoring of control variables and allow screen switching and variable setting through touch operation.

The Autonics GP-A series are available in 4.6-inch, 5.7-inch, 7-inch, and 10.4-inch models, featuring a bright and clear TFT color LCD. The analog resistive touchscreen allows flexible tag arrangement, while the data logging function supports collection and backup of data from multiple control devices.

Users can edit user screens with the dedicated software atDesigner. Users can easily edit and download object shapes, arrangement, and properties and experience convenience in on-site monitoring.

Advanced Display

HMI are designed to quickly offer essential information in production environments, making clear displays, intuitive operation, and fast response. Autonics HMIs feature a True Color LCD with a wide viewing angle for clear visibility from any position, while resistive touchscreen enhances the overall user experience.

True Color

The HMI feature a True Color display capable of reproducing 16,777,216 colors with vivid and clear visuals. It provides an exceptional viewing experience that enhances control and monitoring performance.

Wide Viewing Angle

The high-resolution LCD enhances visibility. Autonics HMIs provide clear images from any perspecitvie with a wide viewing angle of over 80° on both sides.

Precise Touch

The resistive touchscreen supports operation with bare hands, gloves, or a stylus, and enables pixel-level precise touch for outstanding touch performance in environments that require high accuracy.

Simple Installation

Autonics HMIs are available in 4.6-inch, 5.7-inch, 7-inch, and 10.4-inch sizes, allowing installation from small to large equipment. The display can be rotated horizontally or vertically to match the environment, offering installation convenience.

Various Sizes

Available in sizes ranging from 4.6-inche to 10.4-inche, it supports various types of devices, providing a competitive solution.

Horizontal / Vertical Installation

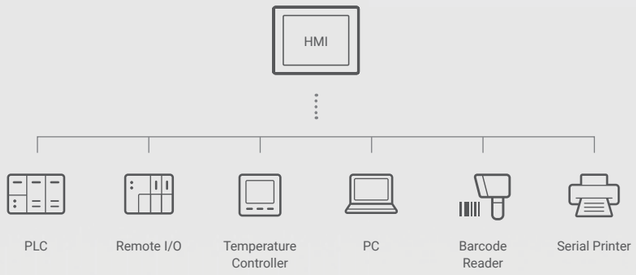
The compact size allows horizontal or vertical installation, enabling flexible adaptation to any application environment.

Family-Look Design

The HMI provide a simple and sophisticated exterior to match its superior performance. The standardized design creates a family look, ensuring a consistent and visually appealing appearance across various application environments.

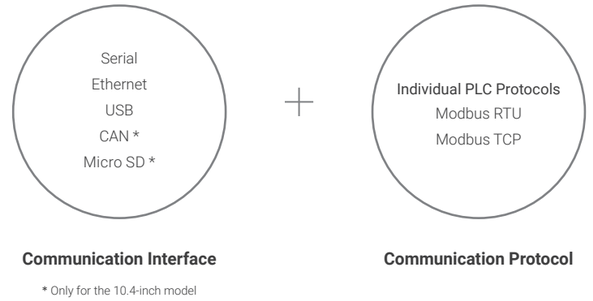
Various Communication Interfaces

Extensive communication interfaces and protocols are essential, as HMI controls and monitors both individual machines and entire production lines. Autonics HMI provides commonly used industrial interfaces, such as Serial and Ethernet, accommodating a wide range of customer requirements.



Various Communication Interfaces and Protocol

Through RS232C and RS422 serial ports, various dedicated control devices such as PCs, PLCs, serial printers, and barcode readers can be connected.
It also provides USB Host/Device, Ethernet, CAN, and Micro SD interfaces. With Modbus RTU and Modbus TCP communication protocols, it can be used in diverse industrial environments.



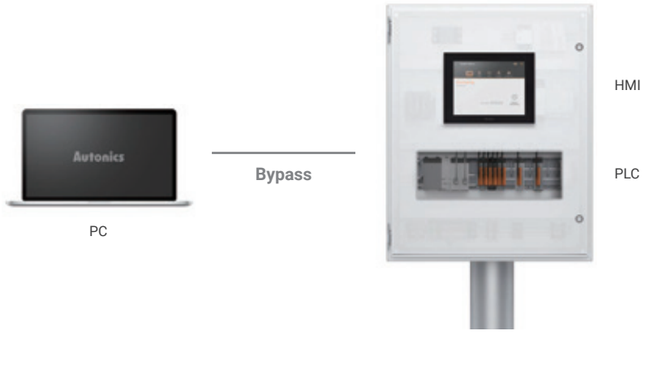
Communication Interface

Communication Protocol

* Only for the 10.4-inch model

Bypass Function

The bypass function serves as a communication relay, enabling ladder programs upload and download via the HMI without directly connecting the PC and PLC. Using this function not only reduces wiring but also frees the PLC communication port for other connections.

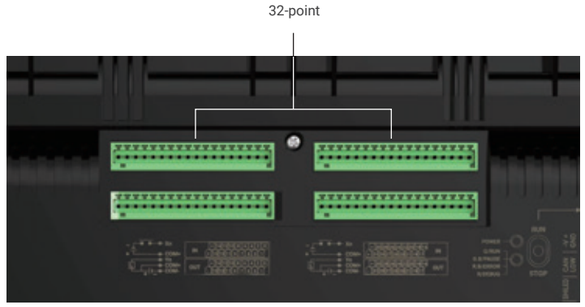


Mirroring Function

By synchronizing two HMIs, the same screens can be monitored and controlled in real time.
Without adding any scripts, HMIs can be installed at the front and rear sides of equipment or production lines for higher efficiency.

32-point I/O (LP-A104)

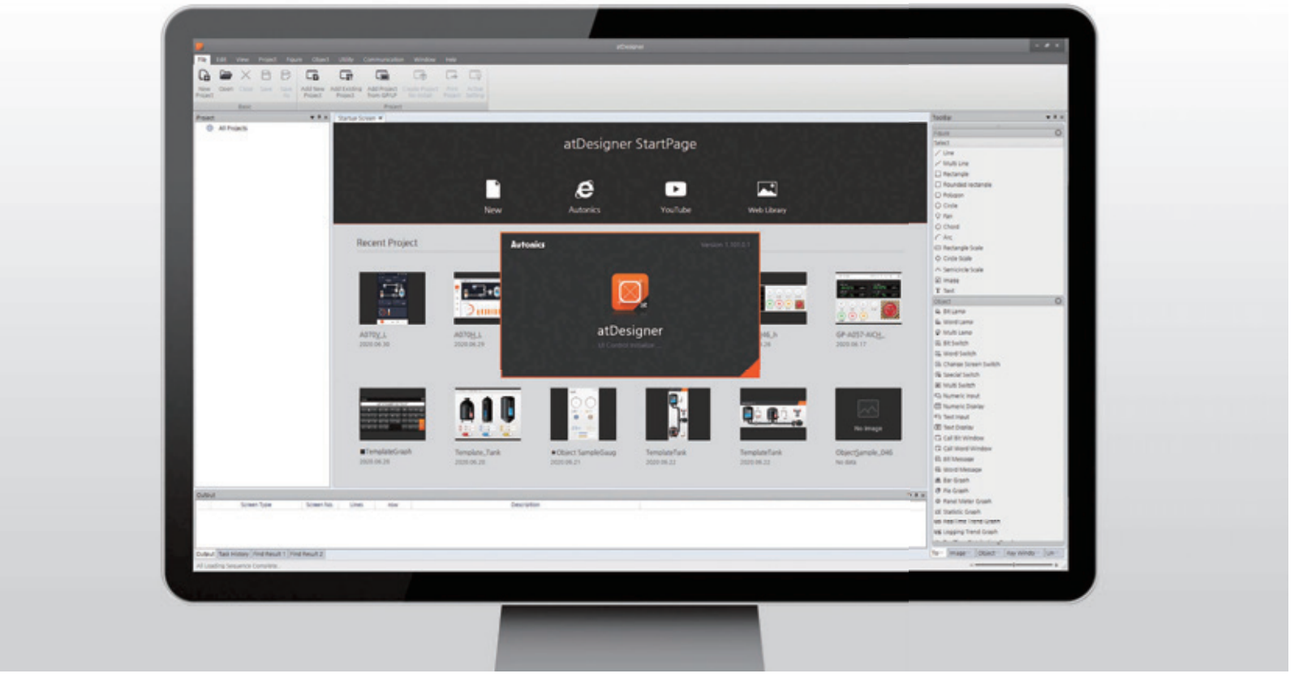
Equipped with I/O, basic PLC functions can be implemented easily.



User-friendly Software

Autonics HMIs offer easy data editing and configuration through the dedicated software atDesigner and atLogic. The intuitive graphic user interface allows user-friendly operation, providing multiple image libraries and screen overlap features.

1. atDesigner | Screen Editor Software



Users can easily edit all user screen data including numeric display/input, lamps, and switches using the dedicated software atDesigner. The software enables editing of object shapes, arrangement, and properties displayed on the screen, as well as configuring project user accounts, security levels, languages, and scripts for download. Convenient user interface offers convenient and intuitive operation, similar to using a smartphone.

Main Features

Supports Windows True Type and various bitmap fonts

Supports GP-A/LP-A firmware download

Convenient user interface and screen configuration

Title bar, ribbon menu, project window, toolbar/library, status bar, etc.

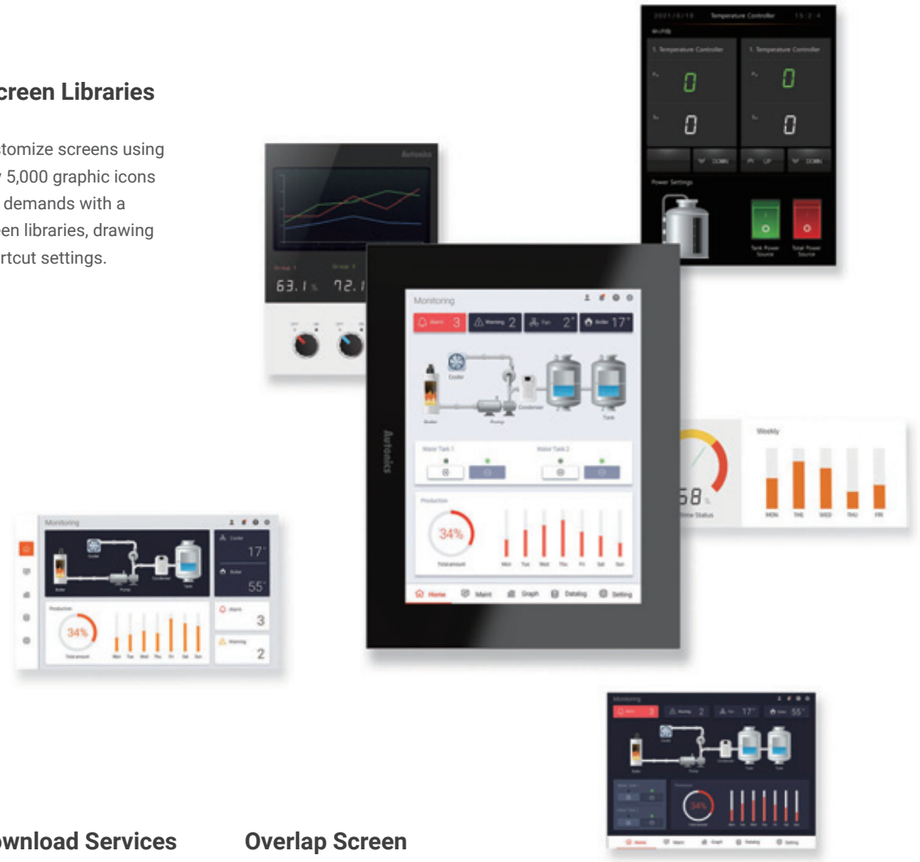
Provides various editing functions such as grouping, alignment, object selection, and drawing

Offers a wide range of libraries

Image/Object/Screen/Key Window

Various Screen Libraries

Users can customize screens using approximately 5,000 graphic icons to match user demands with a variety of screen libraries, drawing tools, and shortcut settings.



Library Download Services

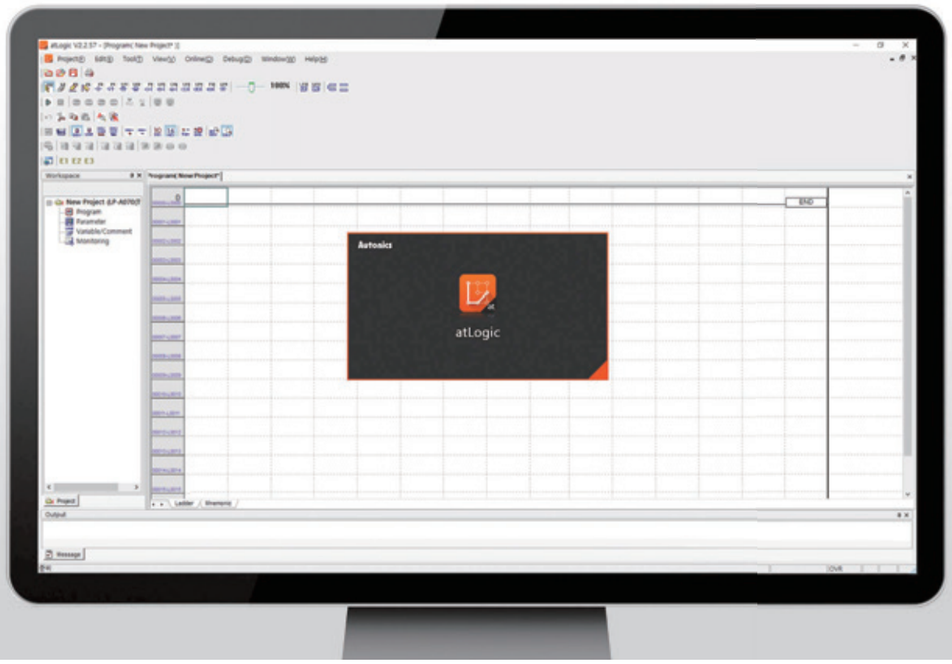
Users can download the necessary images and screen libraries directly from the Autonics website for immediate use, providing convenience for users.

Overlap Screen

Using overlap screens, frequently used shapes and objects can be applied identically across multiple screens, improving editing efficiency and reducing data size.

Simulator

Screen operations can be previewed on a PC without downloading the drawing data to the device.



Dedicated atLogic software is provided for the LP-A series logic panels, allowing programming and debugging. It supports simultaneous editing of up to 5 projects and offers a variety of editing functions to enhance user convenience.

Main Features

Supports Multi Projects
Simultaneous creation and editing of up to 5 projects

User-friendly Program Editing
Cell-level block and screen-split editing
Various viewing functions including variables and descriptions
Simultaneous operation of ladder program editor and mnemonic program editor

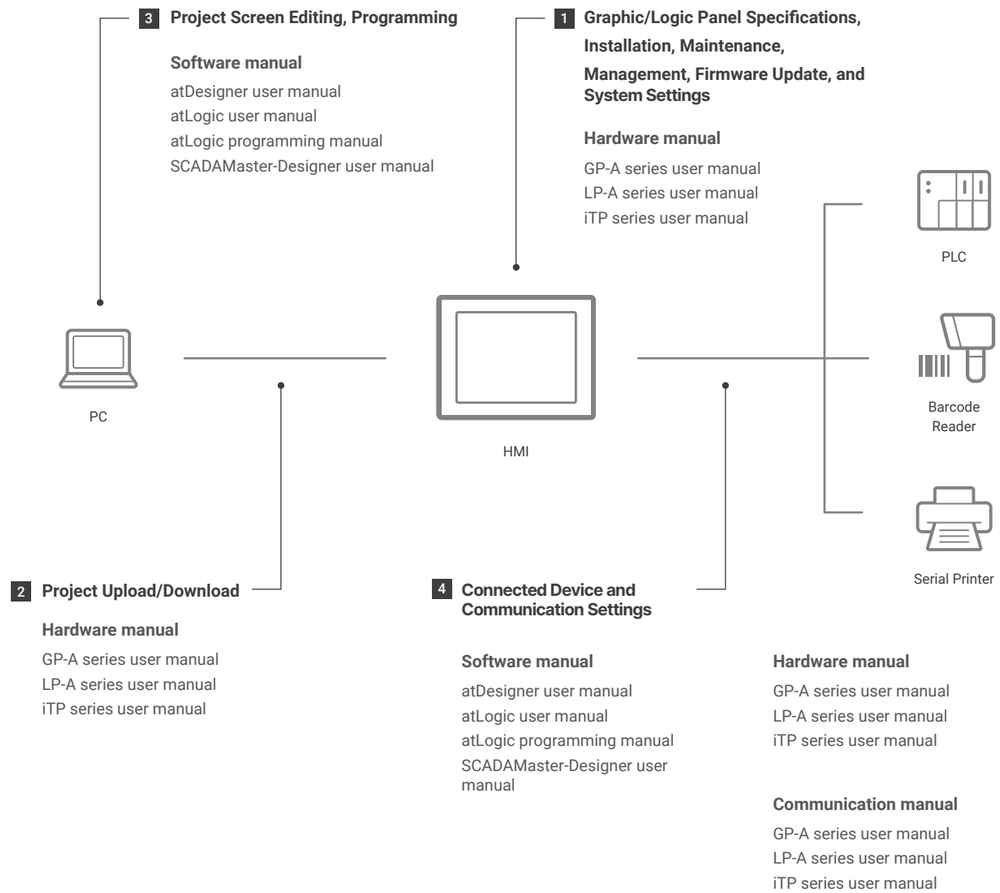
Various Monitoring Functions
Variables, devices, systems, time charts, and more

Convenient User Interface
Applied Microsoft Windows interface

Various Message Screen

Reference Manual by Configuration

For more information, refer to manuals from Autonics website.



From Pre-Sales Support to After-Sales Support

Autonics provides a total HMI solution with specialized experts. From research to sales and technical support, the experts offer in-depth HMI expertise and customized solutions validated through extensive field testing to suit specific operating environments.

Basic
Logic Panel

LP-A Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

LP - A ❶ - ❷ ❸ ❹ ❺ - ❻ ❼ ❽

❶ Screen size
070: 7.0 inch
104: 10.4 inch

❷ LCD type
T: TFT Color LCD

❸ Display color
9: 16,777,216 color

❹ Power supply
D: 24 VDC

❺ Interface

Series	❺	RS232C	RS422	CAN	Micro SD	USB HOST	USB Device	Ethernet
LP-A070	6	1	1	-	-	1	1	1
	7	2	-	-	-			
LP-A104	8	1	1	1	1			
	9	2	-	1	1			

❻ Module
C: All-in-one

❼ I/O configuration
5: 7.0 inch - input 16-point, output 16-point
6: 10.4 inch - input 32-point, output 32-point

❽ I/O connector type
R: Ribbon cable connector
T: Terminal block connector

Product Components

- Logic panel + built in battery
- Instruction manual
- Power connector
- 7.0 inch: 4 fixing brackets
- 10.4 inch: 6 fixing brackets, CAN connector
- Sold separately: communication cable

View product details

Sold Separately

- Communication cable
- Terminal block connector: D3500000381

Software

Visit Autonics web site to download software and manuals.

■ atDesigner

atDesigner is a dedicated screen editor software used to create, edit, and monitor the screen data of LP/GP-A devices. All data arrangement, layout, shapes, properties can be edited using atDesigner. The screen data, project admin account, security level, language, and script can all.

■ atLogic

atLogic is for create, edit, and debug programs for LP series logic panels.

■ Firmware

Please refer to 'LP-A Series user manual' for firmware upgrade.

Manuals

For the detailed information and instructions, please refer to the manuals, and be sure to follow cautions written in the technical descriptions. Visit Autonics website to download manuals.

■ LP-A Series user manual

It describes general information about installation and system of GP-A Series.

■ atDesigner user manual

It describes how to design user screen and how to use HMI function.

■ atLogic user manual, atLogic programming manual

It describes how to install and use atLogic, program, and commands for LP Series.

■ GP/LP user manual for communication

It describes how to connect with external devices such as PLC.

Specifications

Model	LP-A070-T9D□-C5□	LP-A104-T9D□-C6□
Screen size	7.0 inch	10.4 inch
LCD type	TFT Color LCD	
Resolution	800×480 pixel	800×600 pixel
Pixel pitch (W×H)	0.19 × 0.19 mm	0.26 × 0.26 mm
Display area	154.4×93.44 mm	211.2×158.4 mm
Display color	16,777,216 colors	
LCD view angle (top/bottom/left/right)	Within 50°/60°/65°/65° of each	Within 60°/70°/80°/70° of each
Backlight	White LED	
Backlight life cycle	≥ 50,000 hours 01)	
Luminance adjustment	Adjustable by software	
Touch	Analog resistive film method	
Touch panel resolution	800 × 480 cell	800 × 600 cell
Touch panel life cycle	≥ 1 million times	
Sound	Magnetic buzzer (≥ 85 dB)	
Input	16-point	32-point
Insulation method	Photo coupler insulation	
Rated input voltage	24 VDC⎓	
Max. allowable voltage	28.8 VDC⎓ (using the ambient temperature below 45°C)	
Input format	Source input	
Rated input current	X0 ~ X8: ≈ 10 mA X9 ~ XF: ≈ 4 mA	X0 ~ X8: ≈ 10 mA ×2 X9 ~ X1F: ≈ 4 mA ×2

01)Based on 25 °C, time until brightness reaches 50% when continuously ON

Model	LP-A070-T9D□-C5□	LP-A104-T9D□-C6□
Voltage range	19.2-28.8 VDC⎓	
Input resistance	X0 ~ X8: 3.3 kΩ X9 ~ XF: 5.6 kΩ	X0 ~ X8: 3.3 kΩ ×2 X9 ~ X1F: 5.6 kΩ ×2
Response time	0.5 ms	
Number of commons	2-point	
Common method	16-point/1COM	16-point/1COM, 16-point/1COM
Applicable wire	Stranded wire 0.3 to 0.7 mm²	
Output	16-point	32-point
Output terminals	Terminal block or ribbon cable	
Power supply	24 VDC⎓	
Insulation method	Photocoupler isolation	
Rated load voltage	24 VDC⎓	
Load voltage range	19.2-28.8 VDC⎓	
Output format	Sink output	
Max. load current	0.1 A/1-point, 1.6 A/1COM	
Min. load current	1 mA	
Max. voltage falling when ON	≤ 0.2 VDC⎓	
Output delay time	0.5 ms	
Leakage current when OFF	≤ 0.1 mA	
Clamp voltage	45 V	
Output type	Transistor output	
Number of commons	2-point	
Common method	16-point/1COM	16-point/1COM, 16-point/1COM
External connection	16-pin connector (shared with input)	16-pin connector ×2 (shared with input)
Applicable wire	Stranded wire 0.3 to 0.7 mm²	
Certification	CE UK EAC	
Unit weight (package)	≈ 540 g (≈ 742 g)	≈ 1.10 kg (≈ 1.66 kg)

Command	Basic command: 28, application command: 236
Program capacity	16 K step (above firmware v2.60)
Program area	64 MB
Processing speed	Average: approx. 1μs/basic command, application command
I/O control method	Batch processing
Computer control method	Repeated-doubling method, interrupt processing
Device range	Refer to 'LP-A Series user manual'
Special function	Positioning function, motion controller, high speed counter
Serial interface	RS232C, RS422 (Half Duplex)
USB interface	Host: USB 2.0 (Type A) × 1 , Device: USB 2.0 (mini-B) × 1
USB HOST power supply	5 VDC⎓ ±5%
USB HOST output current	500 mA
USB comm. distance	Host: < 2 m , Device: < 2 m
Ethernet interface	Ethernet: IEEE802.3(U), 10/100Base-T, connector: RJ45
CAN interface	24V CAN transceiver
External storage	Micro SD max. 32 GB (FAT16/32)
Printer	PCL3 GUI protocol (USB Host)
Processor	ATMEL ARM Cortex-A5 Single core (536 MHz)
RAM	DDR2 133 MHz 256 MB
Flash	256 MB
Backup memory	SRAM 1MB (lithium battery(1/2 AA))
Backup type	Logging/alarm, non-volatile device
Battery life cycle	5 years at 25°C
Clock	RTC embedded

Supportive interface can be different up to model. Please refer to 'Ordering Information' for the supportive interface per model and 'LP-A Series user manual' and 'GP/LP user manual for communication' for the detailed information about each interface.

Memory for user screen	64MB
Number of user screen	100 pages
System menu language	Korean, English
Font	Bitmap font: 8 × 8, 8 × 16, 16 × 16, 32 × 32 pixel Vector font: 5 to 625 pixel
Font magnification	Bitmap fonts: 1 to 8 times width / height

Number of display characters (character × line)

Characters	Pixel	LP-A070	LP-A104
English / Numbers	6 × 8	133 × 60	133 × 75
	8 × 8	100 × 60	100 × 75
Korean / Chinese characters	16 × 16	50 × 30	50 × 37

Power supply	24 VDC⎓
Permissible voltage range	90 to 110% of power supply
Allowable momentary outage time	≤ 10 ms

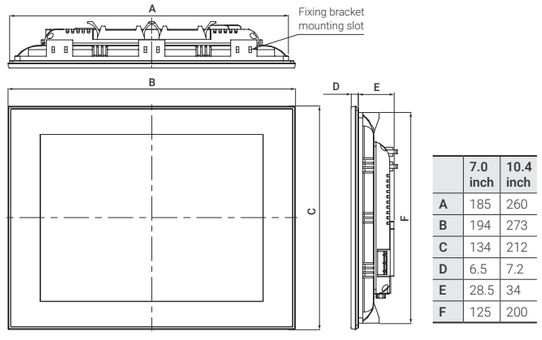
Power consumption

	LP-A070	LP-A104
Power consumption	≤ 7.2 W	≤ 8 W
Excluding external supply power	≤ 6 W	≤ 7 W
Backlight OFF (standby mode)	≤ 4.5 W	≤ 5 W
Backlight ON (based on 20% brightness)	≤ 5 W	≤ 5.5 W

Inrush current	≤ 20 A
Insulated resistance	Between the charging part and the case: ≥ 100 MΩ (500 VDC⎓ megger)
Surge voltage	± 500 V
Ground	3rd grounding (≤ 100 Ω)
Cooling method	Natural air cooling
Noise immunity	The square wave noise (pulse width: 1μs) by the noise simulator ± 0.5 kV
Static discharge endurance	Contact discharge ± 5 kV
Dielectric strength	Between the charging part and the case: 500 VAC~ 50/60 Hz for 1 min
Vibration	0.75 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour
Vibration (malfunction)	0.5 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	147 m/s² (approx. 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (approx. 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	0 to 50°C, storage: -20 to 60°C (a non freezing or condensation environment)
Ambient humidity	35 to 85%RH, storage : 35 to 85%RH (a non freezing or condensation environment)
Protection structure	IP65 (front panel, IEC standard)
Material	Case: ABS flame retardant

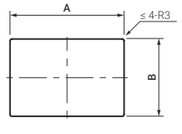
Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.



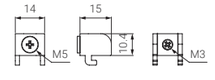
	7.0 inch	10.4 inch
A	185	260
B	194	273
C	134	212
D	6.5	7.2
E	28.5	34
F	125	200

- Panel cut-out



	7.0 inch	10.4 inch
A	$186^{+1.0}_{0}$	$260.5^{+1.0}_{0}$
B	$126^{+1.0}_{0}$	$200.5^{+1.0}_{0}$

- Fixing bracket



Basic
Graphic Panel

GP-A Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

GP - A ❶ - ❷ ❸ ❹ ❺

❶ Screen size
046: 4.6 inch
057: 5.7 inch
070: 7.0 inch
104: 10.4 inch

❷ LCD type
T: TFT Color LCD

❸ Display color
8: 262,144 color
9: 16,777,216 color

❹ Power supply
D: 24 VDC

❺ Interface

Series	❺	RS232C	RS422	CAN	Micro SD	USB Host	USB Device	Ethernet
GP-A 046/057/070	6	1	1	-	-	1	1	1
	7	2	-	-	-			
GP-A104	8	1	1	1	1			
	9	2	-	1	1			

View product details

Product Components

- Graphic panel + built in battery
- Instruction manual
- Power connector
- 4.6 / 5.7 / 7.0 inch: 4 fixing brackets
- 10.4 inch: 6 fixing brackets, CAN connector
- Sold separately: communication cable

Software

Visit Autonics web site to download software and manuals.

■ atDesigner

atDesigner is a dedicated screen editor software used to create, edit, and monitor the screen data of LP/GP-A devices. All data arrangement, layout, shapes, properties can be edited using atDesigner. The screen data, project admin account, security level, language, and script can all.

■ Firmware

Please refer to 'GP-A Series user manual' for firmware upgrade.

Manuals

For the detailed information and instructions, please refer to the manuals, and be sure to follow cautions written in the technical descriptions. Visit Autonics website to download manuals.

■ GP-A Series user manual

It describes general information about installation and system of GP-A Series.

■ atDesigner user manual

It describes how to design user screen and how to use HMI function.

■ GP/LP user manual for communication

It describes how to connect with external devices such as PLC.

Specifications

Model	GP-A046	GP-A057	GP-A070	GP-A104
Screen size	4.6 inch	5.7 inch	7.0 inch	10.4 inch
LCD type	TFT Color LCD			
Resolution	800×320 pixel	640×480 pixel	800×480 pixel	800×600 pixel
Pixel pitch (W×H)	0.13 × 0.13 mm	0.18 × 0.18 mm	0.19 × 0.19 mm	0.26 × 0.26 mm
Display area	108× 43.2 mm	115.2× 86.4 mm	154.4× 93.44 mm	211.2× 158.4 mm
Display color	16,777,216 colors	262,144 colors	16,777,216 colors	16,777,216 colors
LCD view angle (top/bottom/left/right)	Within 75°/70° /80°/80° of each	Within 70°/70° /80°/80° of each	Within 50°/60° /65°/65° of each	Within 60°/70° /80°/70° of each
Backlight	White LED			
Backlight life cycle	≥ 50,000 hours 01)			
Luminance adjustment	Adjustable by software			
Touch	Analog resistive film method			
Touch panel resolution	800 × 320 cell	640 × 480 cell	800 × 480 cell	800 × 600 cell
Touch panel life cycle	≥ 1 million times			
Sound	Magnetic buzzer (≥ 85 dB)			
Certification	CE EAC KC EAC			
Unit weight (packaged)	≈ 272 g (≈ 382 g)	≈ 489 g (≈ 644 g)	≈ 520 g (≈ 706 g)	≈ 1.07 kg (≈ 1.62 kg)

01) Based on 25 °C, time until brightness reaches 50% when continuously ON

Serial interface	RS232C, RS422 (Half Duplex)
USB interface	Host: USB 2.0 (Type A) × 1 , Device: USB 2.0 (mini-B) × 1
USB HOST power supply	5 VDC⎓ ±5%
USB HOST output current	500 mA
USB comm. distance	Host: ＜ 2 m , Device: ＜ 2 m
Ethernet interface	Ethernet: IEEE802.3(U), 10/100Base-T, connector: RJ45
CAN interface	24V CAN transceiver
External storage	Micro SD max. 32GB (FAT16/32)
Printer	PCL3 GUI protocol (USB Host)
Processor	ATMEL ARM Cortex-A5 Single core (536 MHz)
RAM	DDR2 133 MHz 256 MB
Flash	256 MB
Backup memory	SRAM 1MB (lithium battery(1/2 AA))
Backup type	Logging/alarm, non-volatile device
Battery life cycle	5 years at 25°C
Clock	RTC embedded

Supportive interface can be different up to model. For the detailed information, refer to 'Ordering Information'.

Memory for user screen	64MB
Number of user screen	100 pages
System menu language	Korean, English
Font	Bitmap font: 8 × 8, 8 × 16, 16 × 16, 32 × 32 pixel Vector font: 5 to 625 pixel
Font magnification	Bitmap fonts: 1 to 8 times width / height

Number of display characters (character × line)

Characters	Pixel	GP-A046	GP-A057	GP-A070	GP-A104
English / Numbers	6 × 8	133 × 40	106 × 60	133 × 60	133 × 75
	8 × 8	100 × 40	80 × 60	100 × 60	100 × 75
Korean / Chinese character	16 × 16	50 × 20	40 × 30	50 × 30	50 × 37

Power supply	24 VDC⎓
Permissible voltage range	90 to 110% of power supply
Allowable momentary outage time	≤ 10 ms

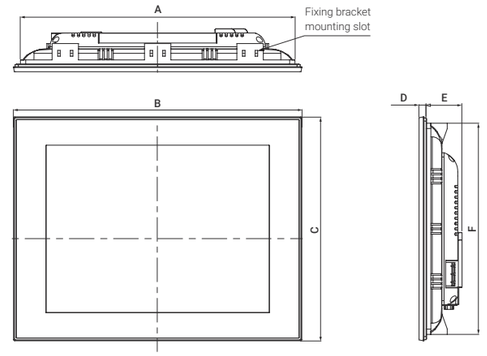
Power consumption

	GP-A046	GP-A057/070	GP-A104
Power consumption	≤ 4.8 W	≤ 7.2 W	≤ 8 W
Excluding external supply power	≤ 4 W	≤ 6 W	≤ 7 W
Backlight OFF (standby mode)	≤ 3.3 W	≤ 4.5 W	≤ 5 W
Backlight ON (based on 20% brightness)	≤ 3.5 W	≤ 5 W	≤ 5.5 W

Inrush current	≤ 20 A
Insulated resistance	Between the charging part and the case: ≥ 100 MΩ (500 VDC⎓ megger)
Surge voltage	± 500 V
Ground	3rd grounding (≤ 100 Ω)
Cooling method	Natural air cooling
Noise immunity	The square wave noise (pulse width: 1μs) by the noise simulator ± 0.5 kV
Static discharge endurance	Contact discharge ± 5 kV
Dielectric strength	Between the charging part and the case: 500 VAC~ 50/60 Hz for 1 min
Vibration	0.75 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour
Vibration (malfunction)	0.5 double amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	147 m/s² (approx. 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (approx. 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	0 to 50°C, storage: -20 to 60°C (a non freezing or condensation environment)
Ambient humidity	35 to 85%RH, storage : 35 to 85%RH (a non freezing or condensation environment)
Protection structure	IP65 (front panel, IEC standard)
Material	Case: ABS flame retardant

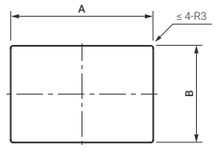
Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.



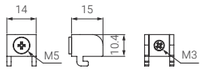
	A	B	C	D	E	F
4.6 inch	135	143.5	75.5	6.5	36	67
5.7 inch	160	168.5	128.5	6.5	36	120
7.0 inch	185	194	134	6.5	28.5	125
10.4 inch	260	273	212	7.2	34	200

- Panel cut-out



	A	B
4.6 inch	$135.5^{+1.0}_{0}$	$67.5^{+1.0}_{0}$
5.7 inch	$160.5^{+1.0}_{0}$	$120.5^{+1.0}_{0}$
7.0 inch	$186^{+1.0}_{0}$	$126^{+1.0}_{0}$
10.4 inch	$260.5^{+1.0}_{0}$	$200.5^{+1.0}_{0}$

- Fixing bracket



Autonics

Global Network

Korea (Headquarters)
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202601-HMI Brochure-EN-01