A&B®

Product Selection Manual

Focus on customer experience and help customers succeed

Wenzhou AB technology Co., Ltd

ISO9001 CQC CB CE RoHS

ABOUT US

Our company adheres to the business philosophy of "People-Oriented, Shared Success," integrating responsibility with value creation. We are committed to becoming a leader in the automation industry and achieving excellence.making outstanding contributions to "intelligent manufacturing in China

**Yueqing A&B Electric Co., Ltd., Founded in 2005 with the website is: www. abelec. com,specializes in electrical products, with a core focus on export, distributing globally. In the company strategically expanded into industrial automation by establishing its subsidiary: **Wenzhou A&B Technologies Co., Ltd. The website is :abtechup.com.

A&B Technologies concentrates on the R&D and manufacturing of core industrial control components like **PLC controllers** and **servo drives**. **Leveraging switches, relays, and power supplies produced by our parent company, alongside the advantages of Yueqing's electrical industry cluster, we integrate local supply chain resources to establish an integrated industrial control ecosystem. Through rigorous OEM partnerships, we maintain stringent quality control while building our **proprietary brand "A&B".

We provide global clients with:
* High-performance industrial control components
* Customized automation solutions
* Electrical control integration systems

Backed by a 50-member R&D team, 200+ production personnel, and an overseas service network, we guarantee technological leadership, lean manufacturing, and responsive global support.

Guided by our philosophy of "**Innovation-driven, Quality-focused, Customer-centric**", A&B is committed to becoming a trusted global provider of solutions and core components in industrial automation, driving the advancement of smart manufacturing.

Technical Strength&Application

With core expertise in motion control, industrial inspection, and fault diagnosis, we hold 100+ intellectual property rights. Our key products include:

- AC/DC Servo Drives
- Servo Motors
- PLC and HMI
- Industrial automation control products

All products are CE-certified and widely applied in

- Robotics/Manipulators
- Construction Machinery
- Printing & Packaging
- 3C Automation

R&D Team

Our multidisciplinary team collaborates with top universities (Hunan University, Central South University, Zhejiang University, etc.) to bridge industry-academia innovation. Expertise covers

- Smart Control
- Mechanical Engineering
- Computer Science
- Communication Engineering

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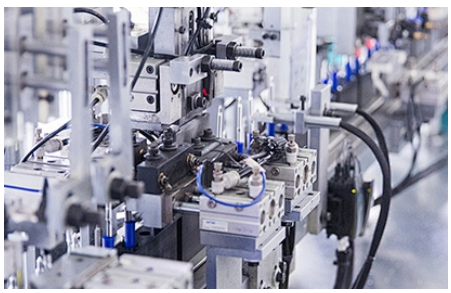


A&B
荣誉奖
安勤科技
Test Verification of Conformity
Certificate of Approval
IAF

DIRECTORY

HMI

Overview

AIcortech HMI, as a human-machine interface product of Aotong Research Institute, has been widely recognized in the market for its economic practicality, fast response speed, high configuration, and multiple choices. AIcortechHMI star product IG IoT HMI has IoT functions such as device management, alarm push, remote operation and maintenance, and system integration.

Aicortech HMI currently has AP8000ig series, AB3000ig series, AB3000ie series, AB3000i series, and AI series.

Compatible

Easy To Use

Stability

General

Precise

HMI formula function

Customers can write recipe file data on the HMI interface and easily switch between different production modes.

User Rights Management

The HMI backend can set different user management and usage permissions to improve device security.

Multilingual display

HMI can support up to 8 languages, making it convenient for multiple countries to use ABHMI without barriers.

Ultra clear IoT HMI

AB ig IoT HMI, specifically designed for the Internet of Things

Large screen human-machine

More comfortable and convenient operation, high-definition display.

Complete IoT functionality

AB8150ig supports MQTT cloud protocol and database server connectivity, making IoT functionality more powerful.

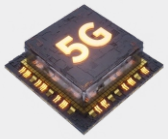
Real time monitoring points for the Internet of Things: 300
Number of monitoring points for alarm data: 200
Number of historical data monitoring points: 100
Historical data retention days: 120 days/1 million records

Remote operation and maintenance

- Remote monitoring
- Remote penetration
- Remote debugging
- Equipment linkage

4-core CPU

The AB8150ig is equipped with the Cortex A35 high-performance processor, which has powerful computational processing capabilities and is capable of handling difficult and complex control tasks.



equipment management

- Multi device management
- Multi permission user management

system integration

- Cloud configuration
- Large screen display
- Connecting with third parties

AB3000ie series HMI

Super powerful 4-core processor, really smooth, fast experience

Fast

- 6s high-speed startup
- 100ms fast cut screen

Particular

- Unique user permission management function
- Unique data encryption function

Steady

- Software security e nhancement
- Communication stability upgrade
- Waterproof and heat dissipation design

Many

- 300+communication protocols
- 50+types of components

AB8000ig series

IoT HMI

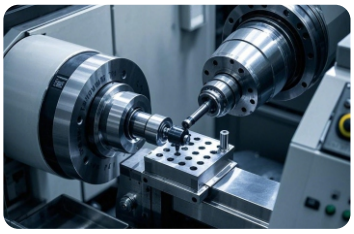
The second generation of IoT human-machine provides higher hardware configuration

Performance characteristics

- 512MB of RAM, 4G eMMC.
- Can easily handle high demand applications and provide larger storage space.
- Support remote operation and maintenance, easy debugging.
- Support multi machine interconnection and collaborative operation.
- Is compatible with over 300 communication protocols and supports other brand label protocols, with excellent device compatibility.
- Standard Ethernet, 4G/WIFI networking optional.

Application scenarios

Widely used in industries such as CNC lathes, textiles, packaging, printing, robotics, and logistics equipment.



AB8000ig series model description

AB 8 101 ig- N

Series Name
AB:AB series

Configure grading
1:1000
2:2000
3:3000
8:8000
9:9000

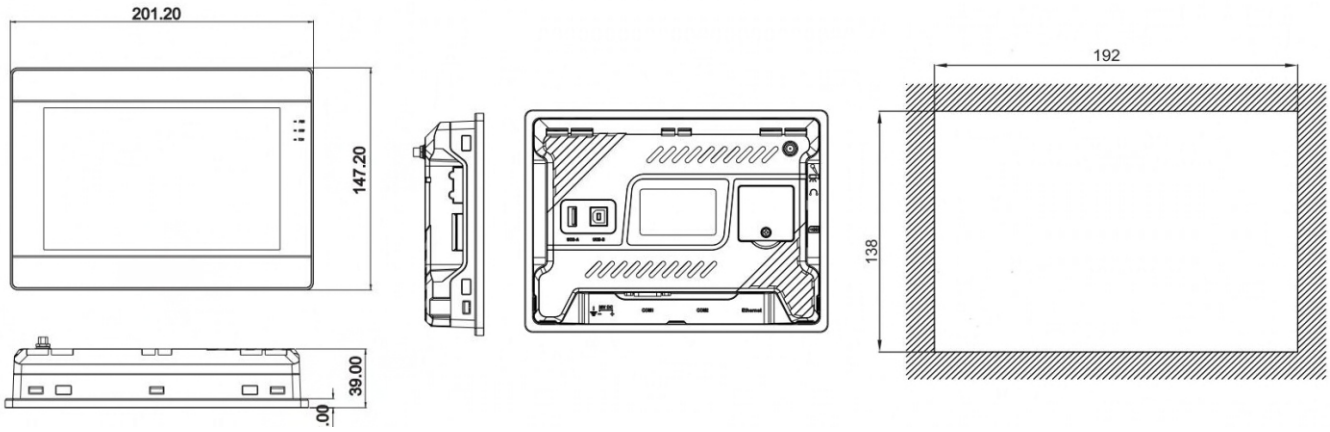
Size
035:3.5 inches
043/041:4.3 inches
070:7 inches
101/102:10.1 inches
104:10.4 inches
150:15 inches

Product series
None: Regular Series
i:i series
ie:ie series
ig:ig series

Special model (software)
C:Cloud functionality
O:stand-alone
R:Remote buyout

Special model (hardware)
A:Single CAN
C:Dual CAN
E:Single serial port
H:high definition
N:Ethernet
(N):Dual Ethernet
S/2S:Double 485
T:DB9Needle serial port
SL:Back mounted style
(4G):Built-in 4G
(WIFI):Built in WIFI
(WG):Built in WIFI、4G
(NWG):Dual Ethernet、Built in WIFI、4G

AB8000ig series size description



Example:AB8070ig

AB8000ig series specification parameters

High-end

Model/Specification	AB8043ig	AB8070ig	AB8101ig(N)

Project		Parameter		
CPU		Four core high-performance processor		
Touch Screen		Resistance-type		
Display	Monitor	4.3 inch	7 inch	10.1 inch
	Resolution	480*272	800*480	1024*600
	LCD brightness	300 cd/㎡	250 cd/㎡	350 cd/㎡
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
Storage	Flash	4GB		
	(Memory RAM)	512MB		
	SD Slot	No	Yes	Yes(TF card)
I/O interface	USB interface	USB Host：USB 2.0 x 1; USB Device：USB Type-C 2.0 x 1No isolation (Two USB ports cannot be used simultaneously)	USB Host：USB 2.0 x 1; USB Client：USB 2.0 x 1 (Two USB ports cannot be used simultaneously)	USB Host：USB 2.0x1 USB Device：USBType-C2.0x1
	serial interface	1 serial port		
		RS232，RS422/RS485（two-in-one），RS485		
	Ethernet	Yes		Dual network port
	4G/WIFI module	Optional		
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC(12~28V DC)		
	power consumption	less than 8W		less than 10W
	power isolation	No		
Structure specifications	Shell material	Engineering plastic ABS+ABS(Flame retardant level)		
	External dimensions (W*H*D)	142.0*86.0*30.5mm	201.2*147.2*39.0mm	271.0*214.0*41.5mm
	Dimension (W*H)	131.0*76.5mm	192.0*138.0mm	259.0*202.0mm
	Weight	0.39KG	0.52KG	1.26KG
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C;		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio Configuration Software		
Function	Internet of Things Services	300 real-time data monitoring points		
		200 monitoring points for alarm data		
		100 historical data monitoring points		
		Historical data retention days: 120 days/1 million records		
	Ordinary transmission	Yes		
	VPN transmission	Optional		Yes
	Data upload	Yes		

AB8000ig series specification parameters

High-end

Model/Specification	AB8102ig	AB8150ig

Project		Parameter	
CPU		Four core high-performance processor	
Touch Screen		Resistance-type	
Display	Monitor	10.1 inch	15 inch
	Resolution	1024*600	1920*1080
	LCD brightness	350 cd/㎡	250 cd/㎡
	Backlight	LED	
	Backlight lifespan (half-life)	More than 20000 hours	
Storage	Flash	4GB	
	(Memory RAM)	512MB	
	SD Slot	Yes	Yes(TF card)
I/O interface	USB interface	USB Host：USB 2.0 x 1; USB Client：USB 2.0 x 1（两个 USB 口不能同时使用） (Two USB ports cannot be used simultaneously)	
	serial interface	1 serial port	
		RS232，RS422/RS485（two-in-one），RS485	
	Ethernet	Yes	
	4G/WIFI module	Optional	
Perpetual calendar		Built-in	
Power specifications	Input power supply	24V DC(12~28V DC)	24V DC(18~28V DC)
	power consumption	less than 10W	less than 15W
	power isolation	No	
Structure specifications	Shell material	Engineering plastic ABS+ABS (Flame retardant level)	Aluminum alloy panel, metal shell Engineering plastics (flame retardant grade)
	External dimensions (W*H*D)	272.0*191.0*41.5mm	403.0*253.0*35.2mm
	Dimension (W*H)	260.0*179.0mm	394.0*244.0mm
	Weight	1.02KG	2.46KG
Operating environment	Protection grade	The panel complies with IP65	
	Storage environment temperature	-20°C~70°C;	-20°C~60°C;
	Environmental temperature for use	-10°C~55°C	0°C~55°C
	Environmental Humility for Use	10 ~ 90%RH(No condensation)	
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)	
Authentication		Compliant with CE certification standards	
Software		APStudio Configuration Software	
Function	Internet of Things Services	300 real-time data monitoring points	
		200 monitoring points for alarm data	
		100 historical data monitoring points	
		Historical data retention days: 120 days/1 million records	
	Ordinary transmission	Yes	
	VPN transmission	Optional	
	Data upload	Yes	

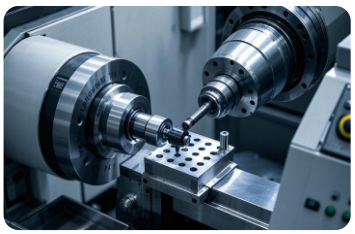
High cost-effective IoT human-machine, easy to debug

Performance characteristics

- 2nd generation IoT human-machine, supports remote operation and maintenance, easy debugging.
- Provinces of traffic, fast speed, and no distortion.
- Support multi machine interconnection and collaborative operation.
- Supports over 300 communication protocols, including maintenance tag protocol, making communication programming more convenient.
- Standard Ethernet networking, optional 4G/WIFI networking method.

Application scenarios

Widely used in industries such as CNC lathes, textiles, packaging, printing, robotics, and logistics equipment.



AB3000ig series model description

AB 3 101 ig- N

Series Name
AB:AB series

Configure grading
1:1000
2:2000
3:3000
8:8000
9:9000

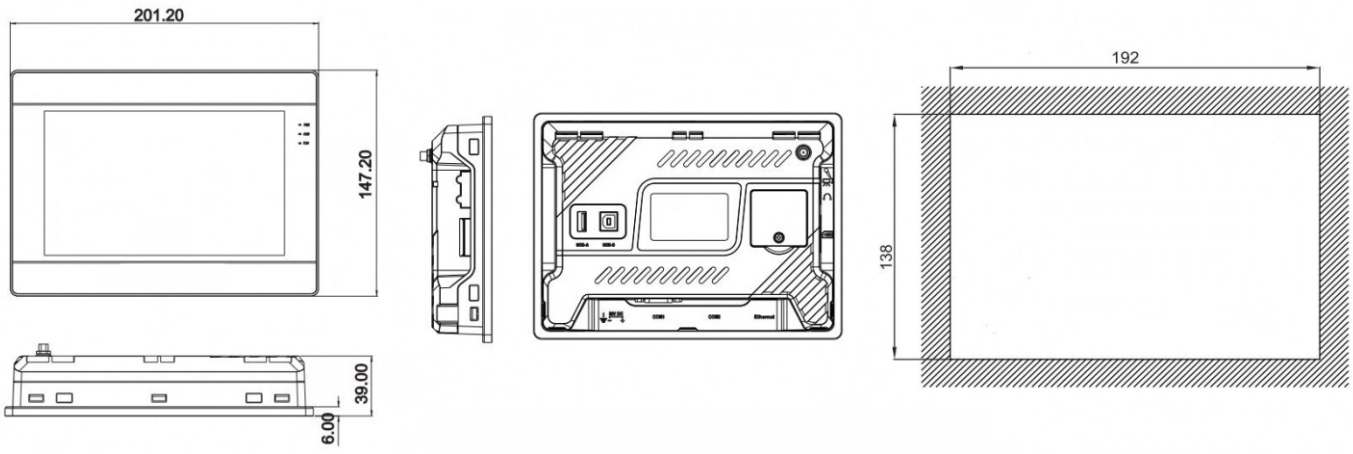
Size
035:3.5 inches
043/041:4.3 inches
070:7 inches
101/102:10.1 inches
104:10.4 inches
150:15 inches

Product series
None: Regular Series
i:i series
ie:ie series
ig:ig series

Special model (software)
C:Cloud functionality
O:stand-alone
R:Remote buyout

Special model (hardware)
A:Single CAN
C:Dual CAN
E:Single serial port
H:high definition
N:Ethernet
(N):Dual Ethernet
S/2S:Double 485
T:DB9Needle serial port
SL:Back mounted style
(4G):Built-in 4G
(WIFI):Built in WIFI
(WG):Built in WIFI、4G
(NWG):Dual Ethernet、Built in WIFI、4G

AB3000ig series size description



Example:AB3070ig

AB3000ig series specification parameters

High-end

Model/Specification	AB3041ig(N)	AB3043ig	AB3070ig

Project		Parameter		
CPU		Four core high-performance processor		
Touch Screen		Resistance-type		
Display	Monitor	4.3 inch	4.3 inch	7 inch
	Resolution	480*272	480*272	800*480
	LCD brightness	300cd/㎡	300 cd/㎡	250 cd/㎡
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
Storage	Flash	128MB		
	Memory (RAM)	128MB		
	SD Slot	No		Yes
I/O interface	USB interface	USB Device：USB Type-C 2.0 x 1 No isolation	USB Host：USB 2.0 x 1；USB Device：USB Type-C 2.0 x 1 No isolation (Two USB ports cannot be used simultaneously)	USB Host：USB 2.0 x 1；USB Client： USB 2.0 x 1 (Two USB ports cannot be used simultaneously)
	serial interface	1 serial port		
		RS232，RS422/RS485（two-in-one），RS485		
	Ethernet	Dual network port	Yes	
	4G/WIFI module	Optional		
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC(12~28V DC)		
	power consumption	less than 8W		
	power isolation	No		
Structure specifications	Shell material	Engineering plastic PC+ABS (Flame retardant level)		
	External dimensions (W*H*D)	128*102*30.5mm	142.0*86.0*30.5mm	201.2*147.2*39.0mm
	Dimension (W*H)	119.0*93.0mm	131.0*76.5mm	192.0*138.0mm
	Weight	0.26KG	0.39KG	0.52KG
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C；		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio Configuration Software		
Function	Internet of Things Services	100 real-time data monitoring points		
		20monitoring points for alarm data		
		50 historical data monitoring points		
		Historical data retention days: 60 days/1 million records		
	Ordinary transmission	Yes		
	VPN transmission	Optional		

AB3000ig series specification parameters

High-end

Model/Specification	AB3101ig(N)	AB3102ig

Project		Parameter	
CPU		Four core high-performance processor	
Touch Screen		Resistance-type	
Display	Monitor	10.1 inch	
	Resolution	1024*600	
	LCD brightness	350 cd/㎡	
	Backlight	LED	
	Backlight lifespan (half-life)	More than 20000 hours	
Storage	Flash	128MB	
	(Memory RAM)	128MB	
	SD Slot	Yes	
I/O interface	USB interface	USB Host：USB 2.0x1 USB Device：USB Type-C 2.0x1	USB Host：USB 2.0 x 1； USB Client： USB 2.0 x 1 (Two USB ports cannot be used simultaneously)
	serial interface	1 serial port	
		COM1:RS232，RS422/RS485（二合一），RS485	
	Ethernet	Dual network port	Yes
	4G/WIFI module	Optional	
Perpetual calendar		Built-in	
Power specifications	Input power supply	24V DC (12~28V DC)	
	power consumption	小于 10W	
	power isolation	No	
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)	
	External dimensions (W*H*D)	271.0*214.0*41.5mm	272.0*191.0*41.5mm
	Dimension (W*H)	259.0*202.0mm	260.0*179.0mm
	Weight	1.26KG	1.02KG
Operating environment	Protection grade	The panel complies with IP65	
	Storage environment temperature	-20°C~70°C	
	Environmental temperature for use	-10°C~55°C	
	Environmental Humility for Use	10 ~ 90%RH(No condensation)	
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)	
Authentication		Compliant with CE certification standards	
Software		APStudio Configuration Software	
Function	Internet of Things Services	100 real-time data monitoring points	
		20 monitoring points for alarm data	
		50 historical data monitoring points	
		Historical data retention days: 60 days/1 million records	
	Ordinary transmission	Yes	
	VPN transmission	Yes	

AB3000ie series
Fast version HMI

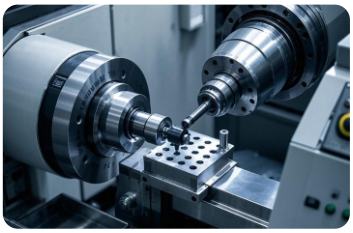
Improve data processing efficiency and provide a smooth operating experience

Performance characteristics

- Equipped with a quad core high-performance processor and a combination of flash 128M/RAM 64M memory.
- Extremely high cost-effectiveness.
- Supports VB, LUA scripts, and custom programming.
- Supports RS232/RS422/RS485 to meet diverse application needs.
- Supports data cable download+USB download.

Application scenarios

Widely used in industries such as CNC lathes, textiles, packaging, printing, robotics, and logistics equipment.



AB3000ie series model description

AB 3 043 ie- T

Series Name
AB:AB series

Configure grading
1:1000
2:2000
3:3000
8:8000
9:9000

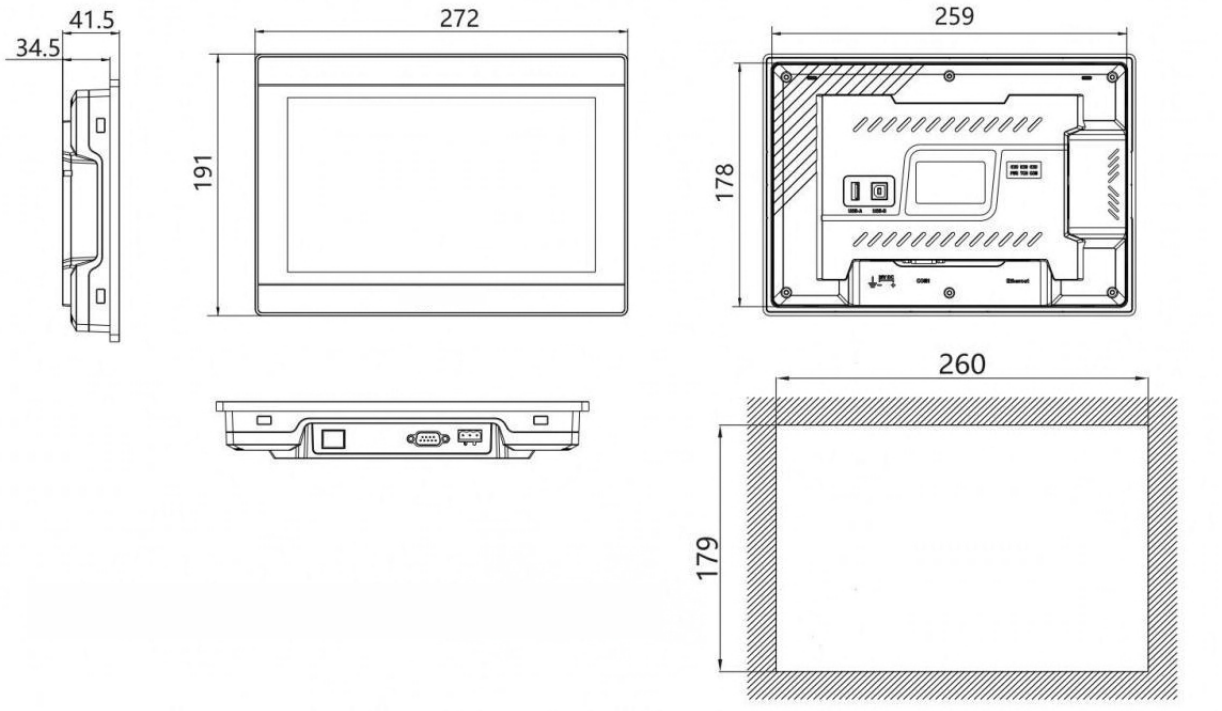
Size
035:3.5 inches
043/041:4.3 inches
070:7 inches
101/102:10.1 inches
104:10.4 inches
150:15 inches

Product series
None: Regular Series
i:i series
ie:ie series
ig:ig series

Special model (software)
C:Cloud functionality
O:stand-alone
R:Remote buyout

Special model (hardware)
A:Single CAN
C:Dual CAN
E:Single serial port
H:high definition
N:Ethernet
(N):Dual Ethernet
S/2S:Double 485
T:DB9Needle serial port
SL:Back mounted style
(4G):Built-in 4G
(WIFI):Built in WIFI
(WG):Built in WIFI、4G
(NWG):Dual Ethernet、Built in WIFI、4G

AB3000ie series size description



AB3000ie series specification parameters

Fast version

Model/Specification	AB3035ie	AB3043ie	AB3043ieS-N	AB3043ie-T

Project		Parameter			
CPU		Four core high-performance processor			
Touch Screen		Resistance-type			
Display	Monitor	3.5 inch	4.3 inch	4.3 inch	4.3 inch
	Resolution	320*240	480*272	480*272	480*272
	LCD brightness	300cd/㎡			
	Backlight	LED			
	Backlight lifespan (half-life)	More than 20000 hours			
Storage	Flash	128 MB			
	Memory （RAM）	64MB			
	SD Slot	No			
I/O interface	USB	Mirco-USB：USB 2.0 x 1（Can be powered through USB, download images and projects）			
	Serial interface	A serial port （ 7-core terminal）		A serial port （ 9 -core terminal）	A serial port （ DB9）
		RS232,RS422/RS485 （two-in-one）		RS232,RS422/RS485 (two-in-one) ,RS485	RS232,RS422/RS485 (two-in-one)
	Ethernet	No		Yes	No
	CAN	No			
	HDMI interface	No			
Perpetual calendar		Built-in			
Power specifications	Input power supply	24V DC (12~28V DC)			
	power consumption	less than 5W			
	power isolation	No			
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)			
	External dimensions (W*H*D)	96.0*81.0*33.0mm	142.0*86.0*30.3mm		142.0*86.0*38.9mm
	Dimension (W*H)	91.0*73.0mm	131.0*78.0mm		131.0*79.0mm
	Weight	0.14KG	0.19KG		0.21KG
Operating environment	Protection grade	The panel complies with IP65			
	Storage environment temperature	-20°C~70°C			
	Environmental temperature for use	-10°C~55°C			
	Environmental Humility for Use	10 ~ 90%RH (No condensation)			
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)			
Authentication		Compliant with CE certification standards			
Software		AP Studio			
Remote control		No			

AB3000ie series specification parameters

Fast version

Model/Specification	AB3070ie	AB3102ie

Project		Parameter	
CPU		Four core high-performance processor	
Touch Screen		Resistance-type	
Display	Monitor	7 inch	10.1 inch
	Resolution	800*480	1024*600
	LCD brightness	250 cd/㎡	350 cd/㎡
	Backlight	LED	
	Backlight lifespan (half-life)	More than 20000 hours	
Storage	Flash	128 MB	
	Memory （RAM）	64MB	
	SD Slot	No	
I/O interface	USB	USB Host：USB 2.0 x 1；USB Client： USB 2.0 x 1	
	Serial interface	1 serial port	
		RS232，RS422/RS485（two-in-one）	
	Ethernet	No	
	CAN	No	
	HDMI interface	No	
Perpetual calendar		Built-in	
Power specifications	Input power supply	24V DC (12~28V DC)	
	power consumption	less than 8W	less than 10W
	power isolation	No	
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)	
	External dimensions (W*H*D)	201.2*147.2*39.0mm	272.0*191.0*41.5mm
	Dimension (W*H)	192.0*138.0mm	260.0*179.0mm
	Weight	0.52KG	1.02KG
Operating environment	Protection grade	The panel complies with IP65	
	Storage environment temperature	-20°C~70°C	
	Environmental temperature for use	-10°C~55°C	
	Environmental Humility for Use	10 ~ 90%RH(No condensation)	
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)	
Authentication		Compliant with CE certification standards	
Software		APStudio	
Remote control		No	

AB 3000i series
Economic type HMI

Emphasize high quality, deeply optimize performance, and enhance experience

Performance characteristics

- Support VB and LUA scripts, custom programming to meet diverse application needs.
- Rich communication interfaces, with 1 built-in RS485, can be additionally equipped with CAN, Ethernet, etc Rs485.
- Dual core processors, paired with Flash 128M/RAM 128M memory combination.
- Supports data cable download+USB drive download+(LAN download).

Application scenarios

Widely used in industries such as lithium batteries, 3C, robotics, printing, photovoltaics, and medical equipment.

AB3000i series model description

AB3043i_

Series Name
AB:AB series

Configure grading
1:1000
2:2000
3:3000
8:8000
9:9000

Size
035:3.5 inches
043/041:4.3 inches
070:7 inches
101/102:10.1 inches
104:10.4 inches
150:15 inches

Product series
None: Regular Series
i:i series
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ig:ig series

Special model (software)
C:Cloud functionality
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Special model (hardware)
A:Single CAN
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S/2S:Double 485
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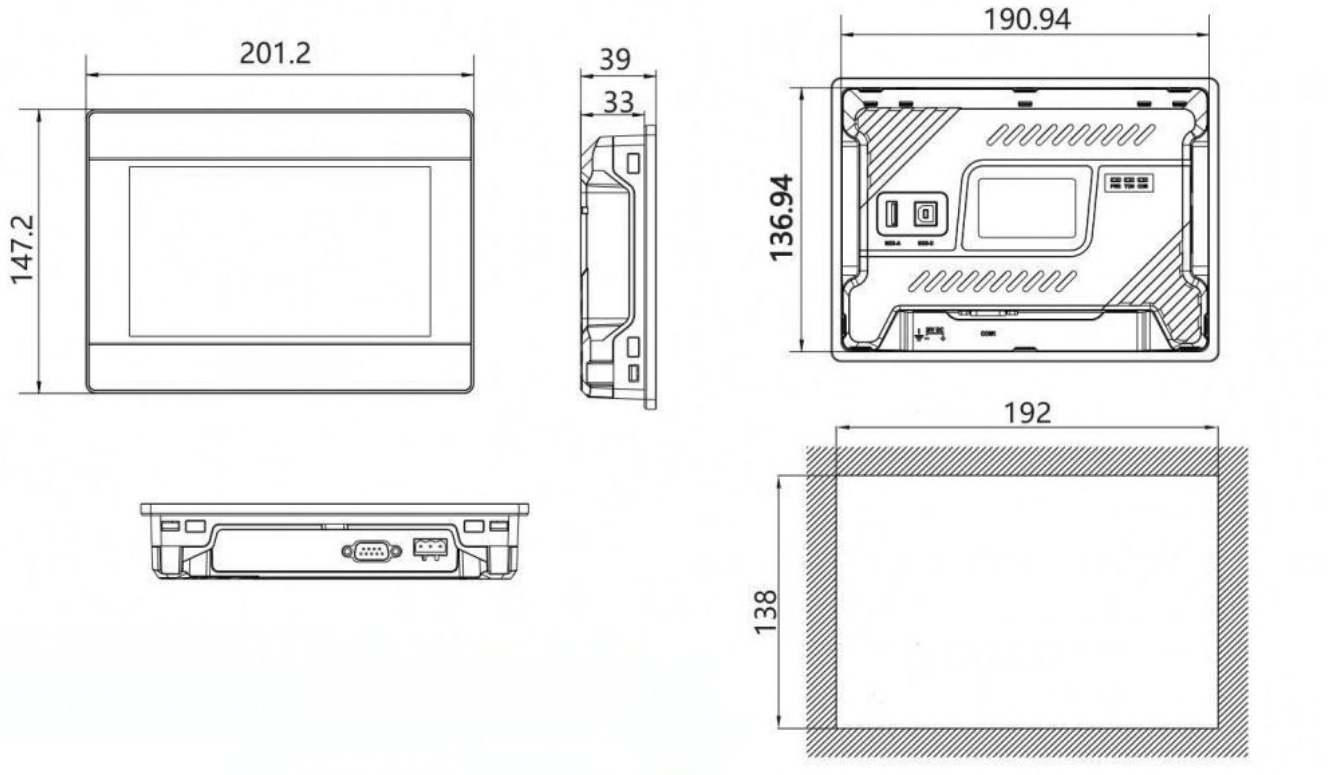
(4G):Built-in 4G
(WIFI):Built in WIFI
(WG):Built in WIFI、4G
(NWG):Dual Ethernet、Built in WIFI、4G

AB3000i series size description



AB3000i series specification parameters

Economic type

Model/Specification	AB3070i	AB3070i-2S	AB3070i-A

Project		Parameter		
CPU		High performance processor		
Touch Screen		Resistance-type		
Display	Monitor	7 inch		
	Resolution	800* 480		
	LCD brightness	250 cd/㎡		
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
Storage	Flash	128 MB		
	Memory （RAM）	128MB		
	SD Slot	No	Yes	
	RTC	Real Time Clock		
I/O interface	USB	USB Host：USB 2.0 x 1；USB Client： USB 2.0 x 1		
	Serial interface	1 serial port	2 serial port	
		RS232，RS422/RS485 (two-in-one，iS model additional 1 RS485)	COM1:RS232,RS422/RS485 COM2:RS232,RS485 COM3:RS485	COM1: RS232 ，RS422/RS485 、CAN COM2:RS232,RS485 COM3:RS485
	Ethernet	No	Yes	
	CAN	No	No	Yes
	HDMI interface	No		
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC (12~28V DC)		
	power consumption	less than 8W		
	power isolation	No		
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)		
	External dimensions (W*H*D)	201.2*147.2*39.0 mm	200.0*146.0*36.5 mm	
	Dimension (W*H)	192.0*138.0 mm		
	Weight	0.51KG		
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio		
Remote control		No		

AB3000i series specification parameters

Economic type

Model/Specification	AB3070i	AB3070i-2S	AB3070i-A

Project		Parameter		
CPU		High performance processor		
Touch Screen		Resistance-type		
Display	Monitor	7 inch		
	Resolution	800* 480		
	LCD brightness	250 cd/㎡		
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
Storage	Flash	128 MB		
	Memory （RAM）	128MB		
	SD Slot	No	Yes	
	RTC	Real Time Clock		
I/O interface	USB	USB Host：USB 2.0 x 1；USB Client： USB 2.0 x 1		
	Serial interface	1 serial port	2 serial port	
		RS232，RS422/RS485 (two-in-one，iS model additional 1 RS485)	COM1:RS232,RS422/RS485 COM2:RS232,RS485 COM3:RS485	COM1: RS232，RS422/RS485、CAN COM2:RS232,RS485 COM3:RS485
	Ethernet	No	Yes	
	CAN	No	No	Yes
	HDMI interface	No		
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC (12~28V DC)		
	power consumption	less than 8W		
	power isolation	No		
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)		
	External dimensions (W*H*D)	201.2*147.2*39.0 mm	200.0*146.0*36.5 mm	
	Dimension (W*H)	192.0*138.0 mm		
	Weight	0.51KG		
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio		
Remote control		No		

AB3000i series specification parameters

Economic type

Model/Specification	AB3102i	AB3102i-2S	AB3102i-A

Project		Parameter		
CPU		High performance processor		
Touch Screen		Resistance-type		
Display	Monitor	10.1 inch		
	Resolution	1024*600		
	LCD brightness	350 cd/㎡		
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
Storage	Flash	128 MB		
	Memory （RAM）	128MB		
	SD Slot	No	Yes	
	RTC	Real Time Clock		
I/O interface	USB	USB Host：USB 2.0 x 1；USB Client： USB 2.0 x 1		
	Serial interface	1 serial port	2 serial port	
		RS232，RS422/RS485 (two-in-one，iS model additional 1 RS485)	COM1:RS232,RS422/RS485 COM2:RS232,RS485 COM3:RS485	COM1: RS232 ，RS422/RS485 、CAN COM2:RS232,RS485 COM3:RS485
	Ethernet	Yes		
	CAN	No		Yes
	HDMI interface	No		
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC (12~28V DC)		
	power consumption	less than 8W		
	power isolation	No		
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)		
	External dimensions (W*H*D)	272.0*191.0*41.5 mm	272.0*190.7*41.3mm	
	Dimension (W*H)	260.0*179.0 mm		
	Weight	1.00KG	1.2KG	
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio		
Remote control		No		

ABAIseries
General use HMI

Emphasize high quality, deeply optimize performance, and enhance experience

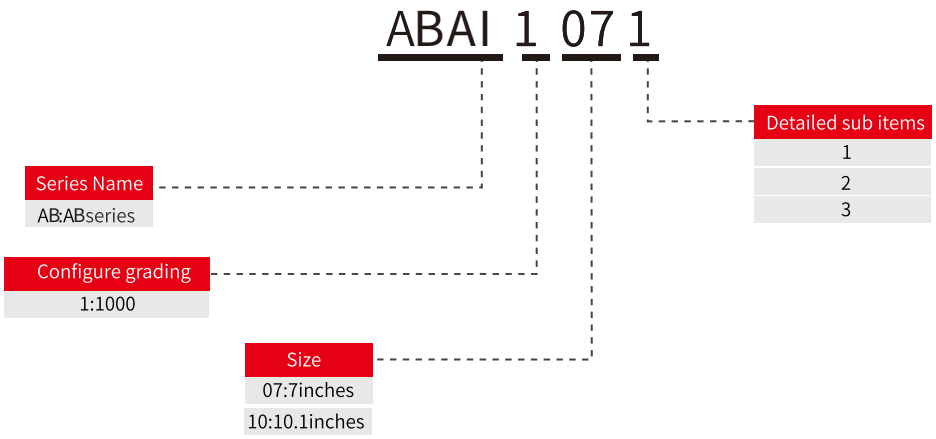
Performance characteristics

- high-performance processor, paired with Flash 128M/RAM 64M memory combination.
- Meet the vast majority of device application scenarios.
- Supports RS232/RS422/RS485.
- Supports downloading PLC programs from USB flash drives, and some models support Ethernet communication.

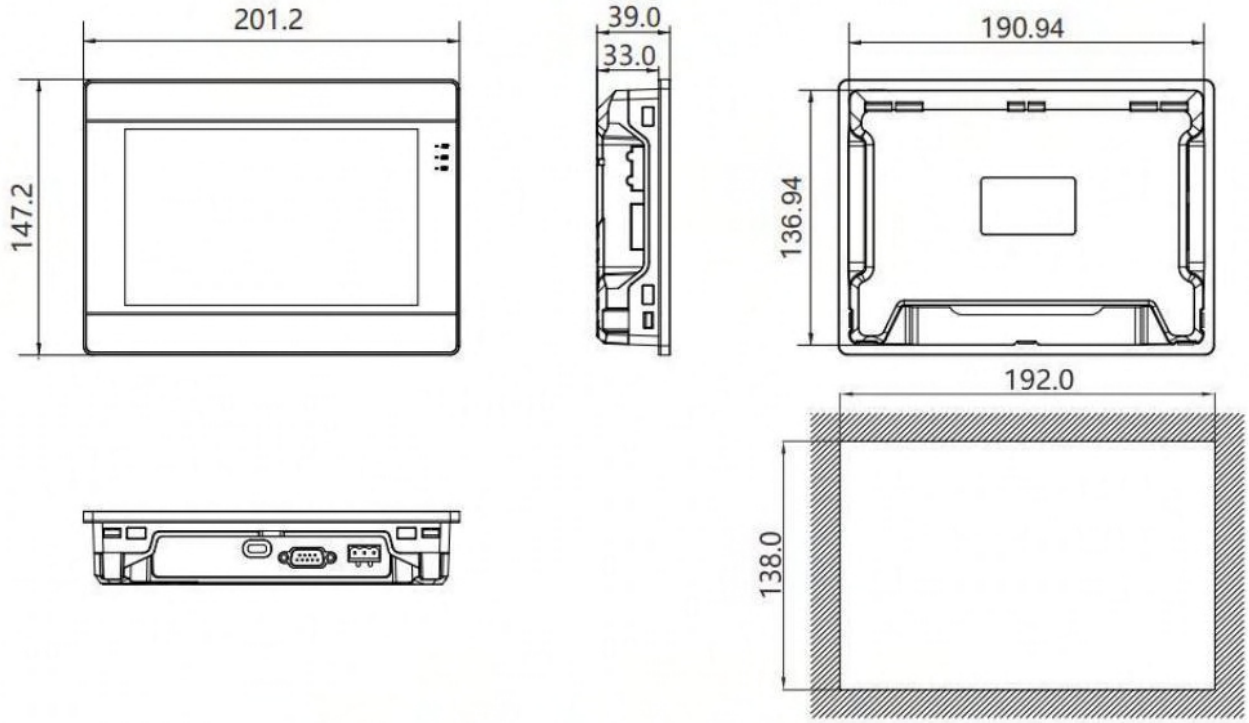
Application scenarios

Widely used in industries such as warehousing and logistics, security gates, engineering vehicles, and service robots.

ABAI series model description



ABAI series size description



ABAI series specification parameters

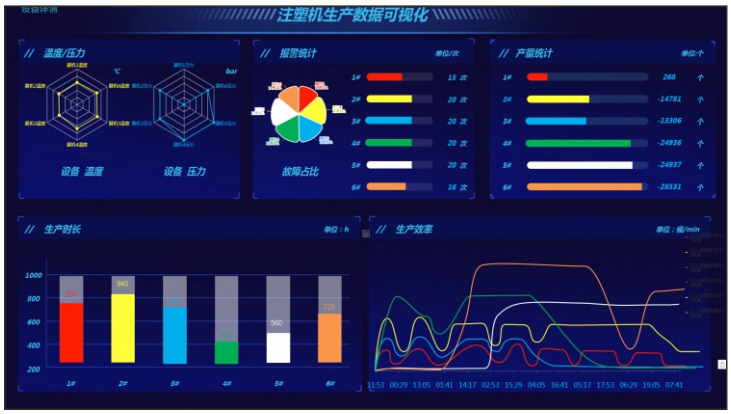
General use

Model/Specification	ABAI 1071	ABAI 1072	ABAI1101

Project		Parameter		
CPU		High performance processor		Four core high-performance processor
Touch Screen		Resistance-type		
Display	Monitor	7 inch		10.1 inch
	Resolution	800*480		1024*600
	LCD brightness	250 cd/㎡		350cd/㎡
	Backlight	LED		
	Backlight lifespan (half-life)	More than 20000 hours		
	Display Color	16 million colors		
Storage	Flash	128 MB		
	Memory （RAM）	64MB		
	SD Slot	No		
I/O interface	USB	USB Host：USB 2.0 x 1	二合一 USB（typeC 接口）	USB Host ： USB2.0 x 1
		USB Client： USB 2.0 x 1		USB Device：USB Type-C 2.0 x 1
	Serial interface	A serial port		
		RS232，RS422/RS485（two-in-one）		RS232，RS422/RS485（two-in-one ），RS485
	Ethernet	No		Yes
Perpetual calendar		Built-in		
Power specifications	Input power supply	24V DC(12~28V)		24V DC(12~24V DC)
	power consumption	less than 8W		less than 10W
	power isolation	No		
Structure specifications	Shell material	Engineering plastic PC+ABS (flame retardant grade)		
	External dimensions (W*H*D)	201.2*147.2*39.0mm		271.0*214.0*41.5mm
	Dimension (W*H)	192.0*138.0mm		259.0*202.0mm
	Weight	0.52KG		1.30KG
Operating environment	Protection grade	The panel complies with IP65		
	Storage environment temperature	-20°C~70°C		
	Environmental temperature for use	-10°C~55°C		
	Environmental Humility for Use	10 ~ 90%RH(No condensation)		
	Vibration resistance	10 ~ 25 Hz (X、Y、Z direction 2G/30 minute)		
Authentication		Compliant with CE certification standards		
Software		APStudio		
Remote control		No		

ABplication Case - Digital Factory

Industry background



The digital factory has emerged with the development of digital simulation technology and virtual reality technology. It achieves optimization and improvement of factory product research and development, manufacturing production, and services through virtual planning and simulation optimization of real industrial production. It is an application manifestation of the integration of modern industrialization and informatization.

Industry pain points

- Many factories still rely on paper-based management for their production processes. Work orders for production tasks require approval from relevant departments based on the actual situation, resulting in slow communication, slow review, low efficiency, low file retention rate, difficult queries, and difficulty in achieving electronic management.
- There are various types of equipment on the factory site, and the industrial communication protocol is not unified, making it difficult for industrial equipment to interconnect and communicate with each other.
- Traditional factories have many businesses and use intelligent information management systems developed by different enterprises, resulting in scattered enterprise management systems, isolated data, and difficult integration with each other.
- The equipment ledger records are chaotic, with low accuracy, and cannot fully record and check the health status of the entire lifecycle of the equipment.
- There is no professional measurement method for factory energy consumption, and emission indicators cannot be detected and implemented, resulting in vague energy consumption data and confusing information for enterprises.

Industry Solutions

AIcortech Digital Factory Industry Solution integrates data from various production lines of the factory through the Aicortech Enterprise Intelligence Cloud Platform. By utilizing Aotong IoT technology and device monitoring technology, we can strengthen factory information management and services, clearly grasp the production and sales processes, improve the controllability of the production process, and reduce manual intervention on the production line. The factory can collect real-time and accurate production line data, and develop reasonable production plans and schedules.

Advantages of the plan

Data visualization

Through data dashboards, real-time monitoring of equipment operation and equipment failure information in the production workshop is carried out, and data reports are generated for intuitive and timely control.

Alarm mechanism

This solution supports real-time alarm display and historical alarm display. The alarm information can be converted into a work order. Remind relevant personnel to perform equipment maintenance and handling through channels such as APP, email, WeChat, etc.

Equipment management

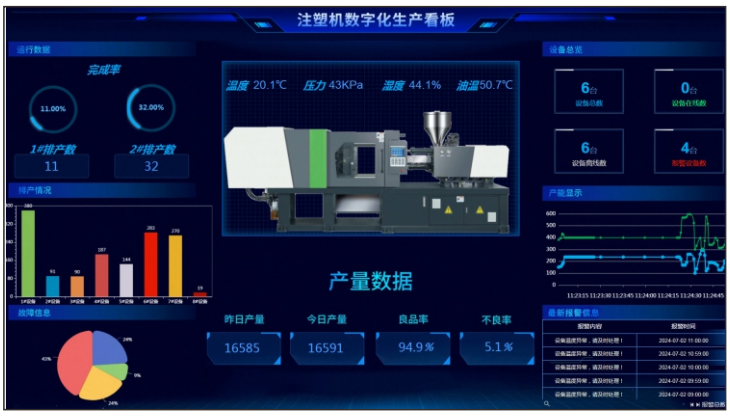
It can centrally monitor, debug, upgrade, and maintain a wide variety of equipment on the factory site, and record the data summary of equipment maintenance.

Permission grading

It can provide multi-level permission management. Create different role accounts and divide permissions for various system functions to meet the application needs of different personnel in the factory.

ABplication Case - Digitalization of Injection Molding Machines

Industry background



Injection molding machines are an important branch of the plastic machinery industry, used to produce large quantities of plastic products through injection molding processes. These products are widely used in various fields such as automobiles, home appliances, medical devices, electronic products, toys, etc. With the increasing demand for high-performance plastic products worldwide, the injection molding machine industry is expected to continue its growth trend. At the same time, technological advancements, especially the application of intelligent and automated technologies, will further improve the production efficiency and product quality of injection molding machines.

Industry pain points

- The instability of manual operation leads to frequent machine adjustments, which affects product quality. Lack of standardized process conditions makes it difficult to ensure product continuity and consistency.
- Low production efficiency makes it difficult to meet the requirements of modern manufacturing for high-speed production. High energy consumption does not conform to the trend of energy conservation and emission reduction.
- During the injection molding process, there may be issues such as water absorption causing material waste and hydrolysis, which can affect the yield rate.

Industry Solutions

The digital solution for AIcortech injection molding machine utilizes the Aicortech Industrial Internet of Things platform to collect data, implement injection molding EMS system, intelligent production management, fault prediction and maintenance, process optimization, mobile applications and remote monitoring, etc., achieving improved production efficiency, cost reduction and quality control, and helping enterprises achieve intelligent manufacturing.

Advantages of the plan

Timely handling of warning management

Through cloud platforms or monitoring software, operators can view the real-time operating status and key parameters of injection molding machines, while technicians can perform fault diagnosis and preventive maintenance, timely detect abnormal situations, and reduce downtime.

Remote data collection and analysis

Real time collection of machine operating parameters such as injection pressure, oil temperature, mold temperature, injection speed, etc. through Huibox. The collected data will be transmitted to the data processing system, which can be cleaned, converted, and stored for analysis and monitoring.

Implement OEE of injection molding machine equipment

By using AIcortechIG screen or gateway's LUA script and local configuration to implement standalone device OEE, it significantly improves device utilization and product quality. Through the Enterprise Intelligence Cloud platform, device monitoring and data analysis can be carried out to achieve OEE of the entire production line, promote continuous improvement, and enhance the competitiveness of the enterprise.

View Capacity Data Dashboard

Combining real-time data charts and electronic dashboards to achieve intuitive presentation and monitoring of the production process, helping operators and management to understand the production process intuitively and achieve transparent management of the factory. Through comprehensive analysis of equipment data, including production, quality, equipment status, and fault statistics, accurate data support is provided for production decision-making.

ABplication Case - Smart Agriculture

Industry background

Smart agriculture refers to the use of modern information technologies such as the Internet of Things, big data, cloud computing, artificial intelligence, etc., to achieve precision, automation, and intelligent management of agricultural production. It is an important way to solve the contradiction between population and land, improve agricultural production efficiency and the quality of agricultural products. With the continuous advancement of technology and policy support, smart agriculture has developed rapidly in China, becoming a key force in promoting agricultural modernization and rural revitalization strategies.

Industry pain points

- Traditional agricultural technology is outdated and has low production efficiency.
- The loss of rural labor force has led to a younger generation rarely engaging in agriculture, resulting in an aging of agricultural labor force.
- The agricultural industry chain is long, and the connection between each link is not smooth enough. Lack of effective full industry chain management mechanism makes it difficult to achieve economies of scale.

Industry Solutions

The Aicortech Smart Agriculture Solution utilizes industrial control technology to collect data from various sensors in greenhouses, and uploads it to relevant platforms through the Aotong V-BOX/Aotong IG IoT HMI. Realize the detection, image and data storage of parameters such as soil moisture, soil temperature, air temperature, air humidity, light intensity, CO2 content, etc., and analyze the collected data to achieve automatic control of temperature regulation, dimming, ventilation, automatic irrigation, automatic ventilation, automatic rolling shutter, etc., and can be remotely and timely monitored to improve production and operation efficiency. Management personnel can remotely achieve real-time visual control of all greenhouses.

Advantages of the plan

24-hour monitoring of base environmental indicators

By building a comprehensive "Internet of Things" monitoring network on agricultural production sites, the climate environment, soil moisture, and crop growth of the production base can be monitored in real time. At the same time, on-site agricultural facilities and equipment can be remotely and automatically controlled, truly achieving 24-hour uninterrupted real-time monitoring, intelligent warning of abnormal situations, timely resolution of dangerous disasters, and precise control of facilities and equipment. Ultimately, the goal is to reduce costs, improve efficiency, yield and quality.

Visual management of crops

Real time monitoring of the environment, personnel, activities, and crop growth status within the planting area can be achieved through a video surveillance system. It can monitor multiple areas simultaneously or zoom in to a single area for individual and refined viewing and management.

Equipment data monitoring dashboard

The collected device data can be visualized through Huiwang and cloud configuration, and can also be viewed through a large screen display to achieve remote viewing and intelligent control of agricultural production equipment.

Intelligent decision

Process and analyze data on cloud platforms, and automatically adjust irrigation, fertilization, pest control, etc. based on the analysis results. Provide data-driven planting recommendations and management plans.

ABplication Case - Smart Water Management

Industry background

Smart water management utilizes technologies such as the Internet of Things and big data to achieve intelligent management of water resources, including water quality monitoring, leakage control, and water supply scheduling, in order to improve efficiency, save resources, and ensure safety. With the acceleration of urbanization and the increasingly severe problem of water scarcity, smart water management has become a key means to solve the supply-demand contradiction and improve service levels.

Industry pain points

- The regulatory measures for drinking water sources are outdated, with few monitoring stations, insufficient information service capabilities, inadequate data sharing and collaboration, and a lack of effective warning mechanisms.
- The safety guarantee of the water supply network urgently needs to be improved: the problems faced include water quality changes caused by biochemical reactions, pipeline leaks, and the lack of a comprehensive water quality monitoring system.
- The information sharing mechanism of the water supply treatment system is not sound: data silos and information barriers are common, leading to resource waste and low efficiency.

Industry Solutions

The AIcortech Smart Water Management Application Solution has achieved extensive IoT applications through the Aotong Smart Network platform and professional water management systems. This solution collects production, environmental, and status data of water companies through intelligent devices, and then transmits, stores, and intelligently analyzes this data to form a dynamically updated data resource library. And provide unified information resource support for various business needs of enterprises, helping them make wiser decisions in production, operation, service, and management, thereby achieving intelligent operation.

Advantages of the plan

Remote management of equipment

Administrators can remotely view access device information and project information, configure collection frequency and cycle remotely, and perform remote program configuration upgrade operations on the system. They can flexibly configure and expand based on on-site equipment.

Alarm mechanism

Alarm push modes such as WeChat push, E-meal notification, and intelligent APP reminder can be used to promptly notify staff, improve fault handling efficiency, upgrade equipment alarm management, and maintenance management.

Real time data dashboard

It can monitor the operation status of key facilities such as smart water plants and pipelines in real time, achieve remote control and scheduling, and help water management personnel adjust operational strategies in a timely manner.

Intelligent control total consumption

By real-time monitoring, analysis, and optimization control of energy consumption, unnecessary energy waste can be reduced, energy utilization efficiency can be improved, operating costs can be reduced, and the sustainable development of the water system can be supported.