

# Kinco

## Human-machine Interface

**Kinco®**

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**Kinco Automation(Shanghai) Ltd.**

**Kinco®**



## Human-machine Interface

### Product Catalog

# Corporate Profile

Kinco Automation (Shanghai) Ltd. (hereinafter called Kinco ) and its subsidiary, Kinco Electric (Shenzhen) Ltd., are private high-tech enterprises specialized in the research, development, and production of automation products. Kinco controls such companies as eView HMItek (Shenzhen) Ltd., JAT KINCO Electric Shenzhen Ltd., Beijing KDN Automation Co., Ltd., and Kinavo Servo Motor (Changzhou) Ltd., and owns two well-known brands of eView and Kinco. In addition, it has established production lines with proprietary intellectual property rights such as industrial human-machine interfaces, AC servo systems, and stepper systems, PLC and industrial fieldbus products. Kinco has become an outstanding representative of the automation control industry in China.

Undertaking the mission of "Provide Chinese automation solutions to global customers", Kinco continuously introduces state-of-the-art technologies and makes independent innovation to build an automation technology platform in China, with technical presence in control, drive, human-machine interface, communications and design of electromechanical integration. We own PLC technologies compliant with IEC61131-3 standard. The intelligent servo motor driver system developed jointly with a Germany partner can deliver better performance through internal programming and fieldbus communications. We hold the lion's share in Chinese human-machine interface market, far beyond our international competitors. We also take the lead in the development trend of human-machine interface towards an embedded and open system in China. We integrate several fieldbus technologies including Profibus, CANopen, and Ethernet into our products to implement high-reliability and high-speed communications. In addition, we can provide customized products, services and solutions by taking advantage of automation technology platform with proprietary intellectual property rights.

Kinco has established R&D centers in Shenzhen, Shanghai, and Beijing and a first-class international automation research team. We implement total quality management throughout the marketing, R&D, production, and distribution in strict accordance with ISO9001 standard and ensure quick response to customer requirements by the project management system. With our 3 subsidiaries, 20 offices, 7 technical support centers, and a complete agent network throughout the country, we can provide our customers with complete support from pre-sales inquiry, scheme design, project implementation, to after-sales service. Based on customer-oriented concept, we survey customer's requirements to seek high-speed growth opportunities of the industry in the automation platform. At present, we hold the leading position in such general equipment control markets as textile machinery, packaging and printing machinery, and pharmaceutical machinery. Our products and eView and Kinco brands have been appraised as No. 1 in the Most Influential HMI Brands in China, the Best HMI Product of the Year, and the Best New Servo Control Product of the Year, by China Industrial Control Net (www.gongkong.com) and the US. magazine Control Engineering. We will make vigorous efforts to tap the integration opportunities between the high-growth industries and the automation platform to make the best of our platform.

Sticking to the business philosophy of people orientation and excellence pursuing and the value norm of customer intimacy , Kinco advocates the enterprise spirit of performance-oriented innovation, cooperation and efficiency and establishes the value allocation principle of co-building, co-share . We have the vision that automation creates wonderful life and have value maximization as our ultimate goal.

Our Brand: **Kinco®**



Shanghai



Shenzhen



Changzhou



Beijing

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# System Description

MT6000 is a brand new series of touch panel HMI (Human Machine Interface) for industrial automation applications and other applications such as building automation and home appliance control. Thanks to the powerful PXA270 CPU and user-friendly Windows CE operation system, MT6000 can bring you performance and flexibility.

Kinco has established partnership with several major software suppliers. Mutual benchmark tests ensure that their WinCE software products are fully compatible with the MT6000 hardware. Users of those software products can easily immigrate from other hardware platform to MT6000 with few projects modifications, in this way they can save their investments and reuse their experiences. Theoretically any software designed for Windows CE and XScale processor could run on MT6000.

The user can also develop their application programs with Microsoft Visual Studio development tool. We provide software development kit (SDK), necessary documents and technical support to help the users complete the software development.

With our 6-year experience in developing and manufacturing HMI touch panels in industrial automation fields, we clearly know what our customers need and the contemporary trend in automation world. MT6000 differences from many other competitors' products on communication interfaces. Besides the conventional serial ports, USB Host/Client ports and Ethernet port, MT6000 provides industrial standard CAN interface. A system expansion port is reserved on the board, which means adding other fieldbus or real-time Ethernet interfaces is very easy. Kinco will provide more fieldbus/RT Ethernet interface expansion options upon the requirement of our customers.

## MT6000 series features

- XScale® PXA270 32-bit RISC CPU;
- Windows® CE 5.0 OS pre-installed;
- TFT LCD, screen size 5.7" ,8" and 10.4" ;
- Major HMI/SCADA and soft PLC software ready;
- SDK for developing proprietary application;
- Serial, Ethernet and CAN port;
- SD card slot for mass storage;
- Flexible expansion board.



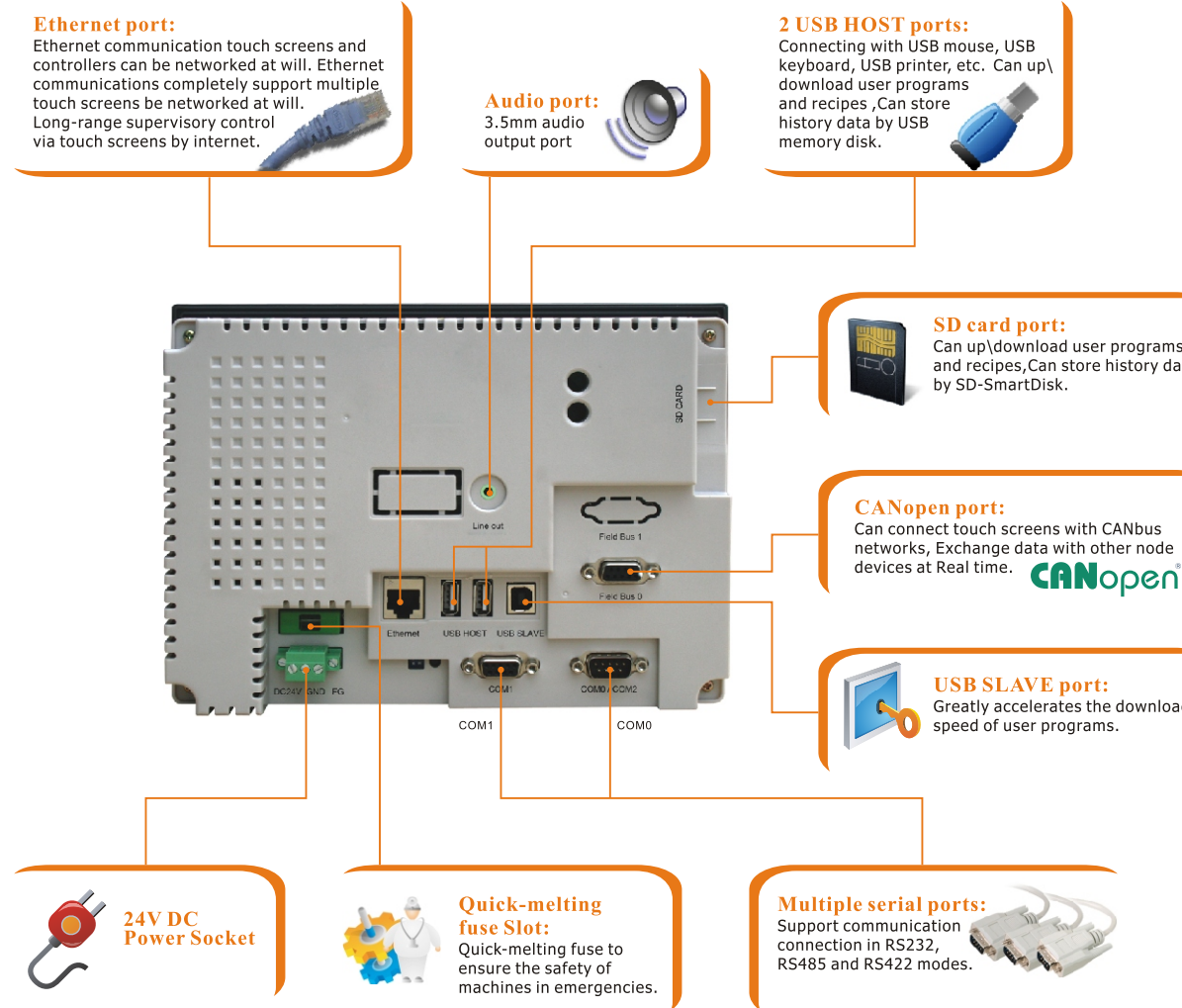
# Hardware Description

## Standard Configuration:

- Three RS-232/485/422 ports
- Two USB-HOST ports
- One USB SLAVE port
- One Ethernet Interface
- One Audio Output Interface
- One SD Card

## Expandable Configuration:

- Profibus-DP Communication Card
- CANopen Communication Card
- MPI Communication Card



# Application Description

## HMI/SCADA Terminal

HMI/SCADA software plays a critical role in today's factory management. MT6000 is a cost-effective choice for on-site HMI terminal. Ethernet interface ensure the easy connection into factory-level network and the smooth flow of data stream from the bottom to the top. SD card slot and USB port make the storage and transfer your invaluable data just a piece of cake. The TFT LCD display can show images of 65536 colors at VGA resolution. There are many HMI/SCADA software products in the market. Any software which can be used on a WinCE/ ARMV4 platform is OK for MT6000. Among them are MoviconCE from Progea, PanelWorX from Iconics and Web Studio from Indusoft, just to name a few.

## Panel PLC

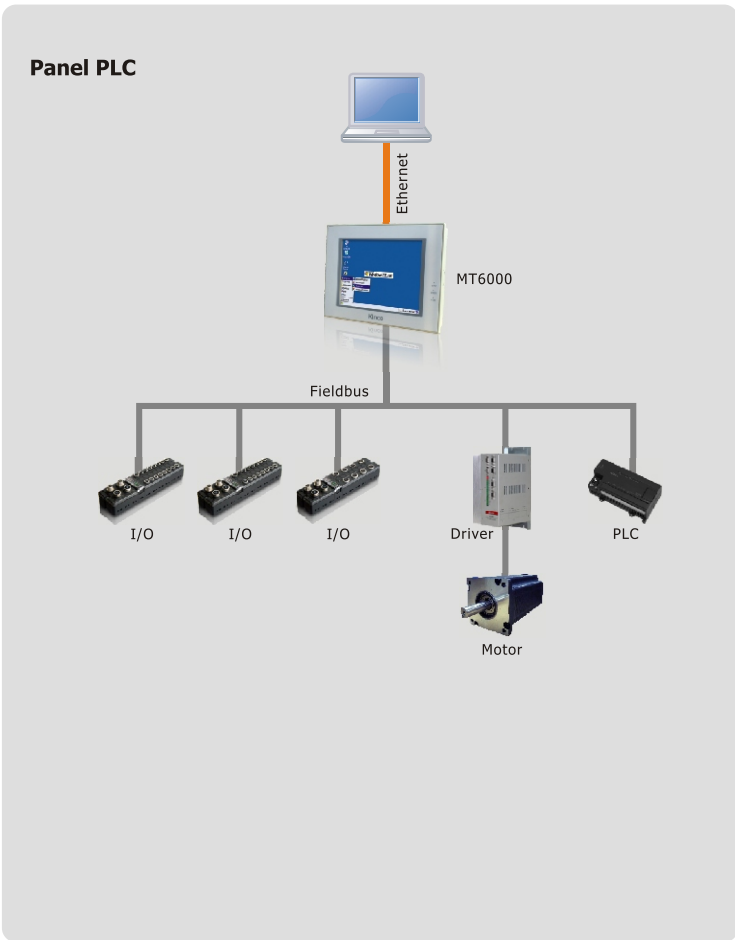
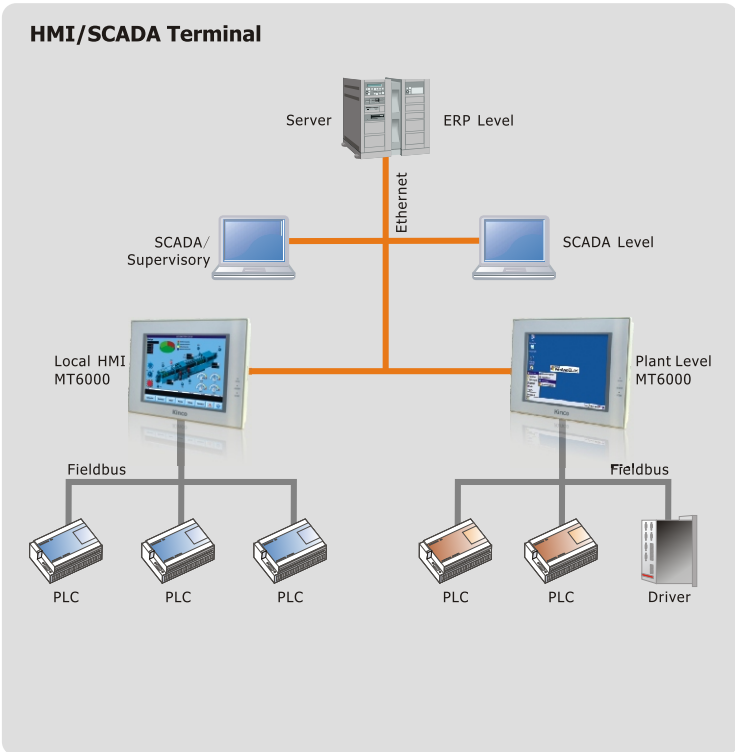
Software-based logic controller is another hot topic in today's automation industry. With the powerful RISC processor, Besides the high-speed logic execution capacity, MT6000 can also execute CAM and CNC task, supporting up to 9 axis interpolation. Being a controller-HMI all-in-one integrated solution, the user could save cost and cabin space for mounting. We have cooperated with 3S, one of the leaders in soft-PLC market and made a customized version of CoDeSys runtime. Besides the serial



ports and Ethernet, we provide a CANopen interface which can be configured within the CoDeSys programming environment.

## Other application

For users who want to develop their specific application, MT6000 can be used as a general-purpose embedded hardware platform. We provide the SDK tools and technical documents and telephone support to help the users complete their developments. The boundary of application is just limited by your imagination!



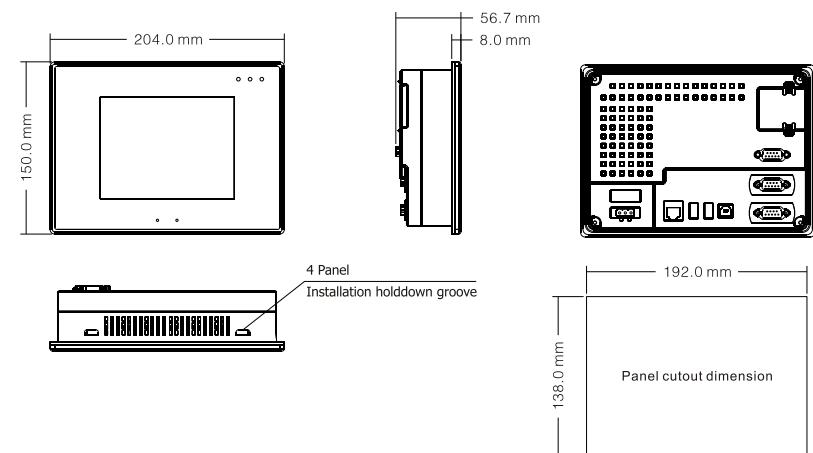
# MT6000 Series Technical Specifications



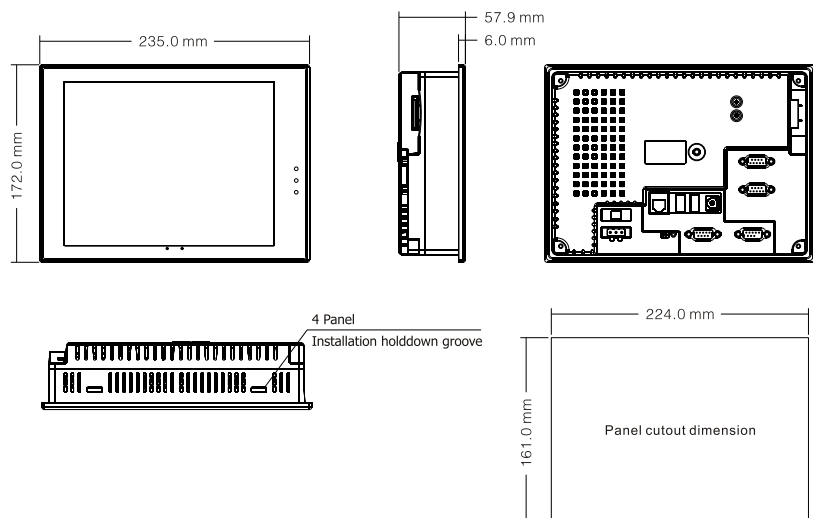
Model	MT6300C	MT6300T	MT6400T	MT6500T
Performance specification				
Display	5.6" TFT	5.7" TFT	8" TFT	10.4" TFT
Resolution	320×234 pixels	320×240 pixels	640×480 pixels	
Color	65536 colors			
Backlight	LED	1CCFL		2CCFL
Brightness	300cd/m <sup>2</sup>	500cd/m <sup>2</sup>	250cd/m <sup>2</sup>	400cd/m <sup>2</sup>
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 520MHz			
Memory	32M FLASH, 64M SDRAM			
Recipe memory & RTC	512KB & RTC			
Expandable memory	SD Card, USB Stick			
Printer port	Connect a printer with a USB port via USB HOST port.			
Ethernet	10/100 Base-T			
Audio interface	None		1 Audio output interface	
Program download	1 USB SLAVE port			
COM port	COM1:RS232/RS485-2/RS485-4, COM2:RS232/RS485-2/RS485-4			
Video interface	None			
USB Host	2 USB host ports for keyboard, mouse, printer, and etc.			
Communication module extending	CANopen interfaceexpansion board			
Electrical specification				
Rated power	7.2W		10.8 W	12 W
Rated voltage	DC24V			
Input range	DC21~DC28V			
Power down allowed	<5ms			
Insulation resistance	Greater than 50MΩ @ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Light-gray			
Shell material	ABS			
Dimensions(mm)	204×150×56.7		235×172×57.9	310.6×230.6×55.7
Cutout size(mm)	192×138		224×161	298×218
Weight	0.96kg		1.27kg	2kg
Environment specification				
Operating temperature	0~45℃	-10~70℃	0~45℃	
Operating humidity	10~90% non-condensing			
Storage temperature	-10~60℃	-30~80℃	-10~60℃	
Storage humidity	10~90% non-condensing			
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)			
Cooling method	Natural air cooling			
Certification				
Degree of protection	IP65 (front panel)			
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007			
FCC compatibility	Complies with FCC Class A			



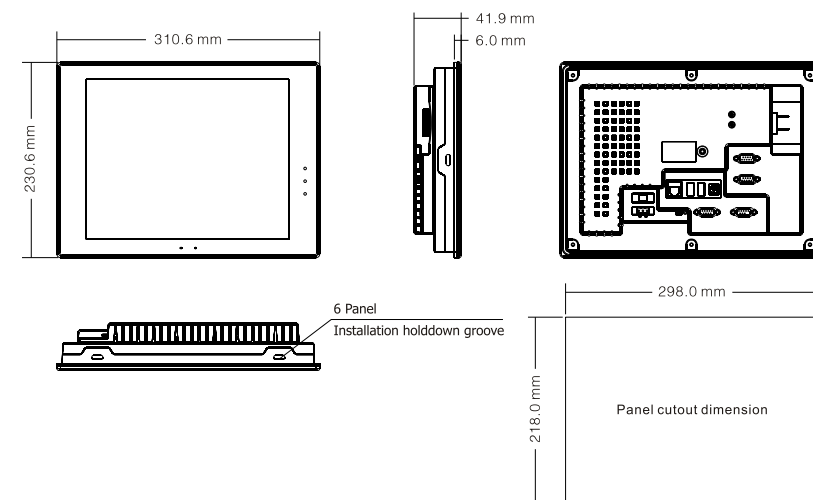
# Dimensions (Unit:mm)



MT6300



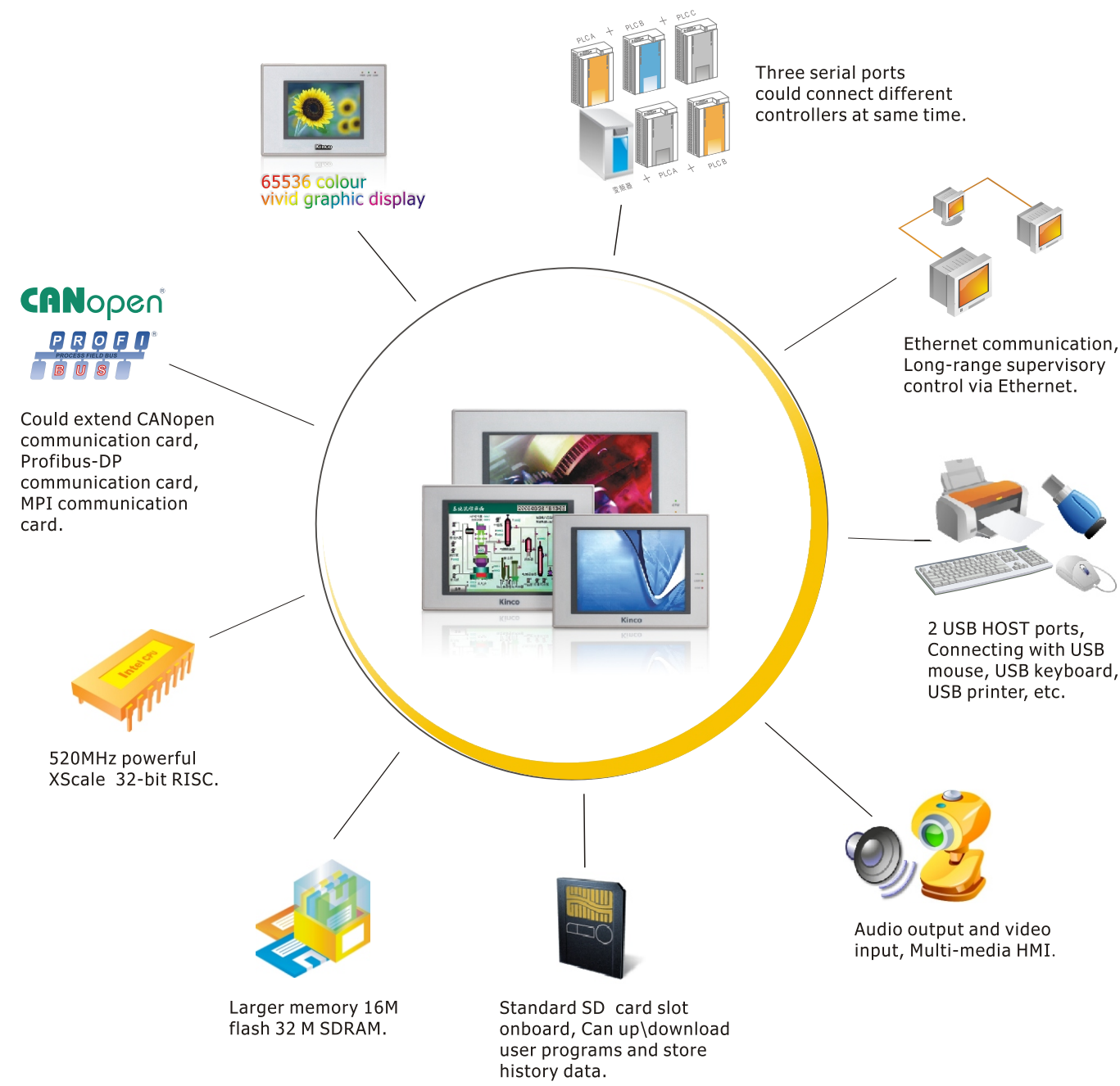
MT6400



MT6500

# System Description

MT5020 series HMI use INTEL 520MHz RISC CPU and LINUX operating system, have the easy learning configuration software, maintain the classic HMI design. It supports USB HOST function and SD card, and could manage data and preserve parameters online, you can quickly up/download user programs, and integrate the audio output; MT5020 series HMI integrate industry Ethernet and Fieldbus interface, could be linked with other screens in eView protocol, could communicate with other controllers via Ethernet interface in MODBUS TCP/IP protocol, could exchange data with controller via OPC software, could extend CANopen communication card and Profibus-DP communication card, improve the application with international bus equipment.



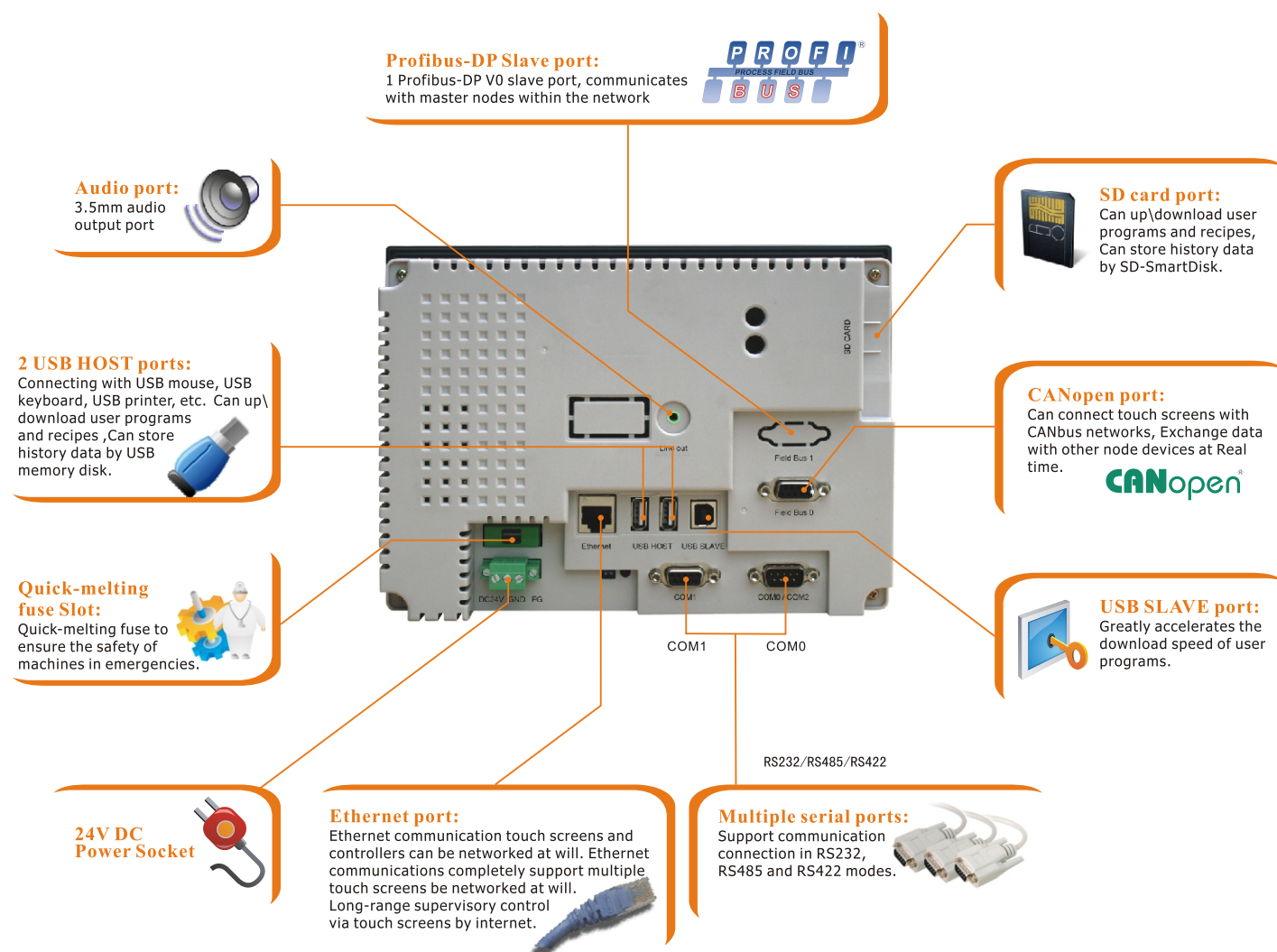
# Hardware Description

## Standard Configuration:

Three RS-232/485/422 ports  
Two USB-HOST ports  
One USB SLAVE port  
One Ethernet Interface  
One Audio Output Interface  
Two Video input interface  
One SD Card

## Expandable Configuration:

Profibus-DP Communication Card  
CANopen Communication Card  
MPI Communication Card



## MT5020 series features

- Higher performance and efficiency thanks to the 520MHz powerful XScale® 32-bit RISC processor;
- Larger and expansible memory for more complicated user application and data storage;
- Dual USB host ports compatible with peripherals like mouse, keyboard, printer and USB disk. Users can upload/download application and recipes data from/to the panel by using USB disk. Historical data can also be stored in the USB disk;
- Standard SD® card slot onboard  
Just like the USB disk, SD® card can be used for uploading/downloading application and recipes data from/to the panel. Also, historical data can be stored in the card;
- 3.5mm audio output port for external speaker;
- Some models support two-channel video input interface, they can be used real-time monitoring on industrial fields;
- RJ45 Ethernet interface through which the panel can communicate with controllers and other panels, users can remotely get access to the panel via the internet also;
- Optional CANopen interface makes it possible for using the panel as a CAN node. With proper drivers, the panel can be used as a host or client. With MT5020, you CAN;
- The panel can exchange data with Profibus-DP node with the optional Profibus interface;
- With optional MPI interface, the panel can communicate with Siemens S7-300/400 without any costly adapters;
- 1 USB slave port for downloading application data from the PC faster than via serial port;
- 65536 color TFT LCD ensures vivid graphic display.



MT5020 Series

Technical Specifications



Model	MT5320C		MT5320C-DP		MT5320C-CAN		MT5320C-MPI	
Performance specification								
Display	5.6" TFT (113.3×84.7mm)							
Resolution	320×234 pixels							
Color	65536 colors							
Backlight	LED							
Brightness	300cd/m²							
Backlight life	50000 hr.							
Touch Panel	4-wire precision resistance network							
Processor	32-bit RISC CPU 520MHz							
Memory	8M FLASH, 16M SDRAM							
Recipe memory & RTC	512KB & RTC							
Expandable memory	SD Card, U Disk							
Printer port	Connect a printer with a USB port via USB HOST port.							
Ethernet	10/100 Base-T							
Audio interface	None							
Program download	1 USB SLAVE port							
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232							
Video interface	None							
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.							
Communication module extending	No support	Profibus-DP expansion board supported		CANopen expansion board supported		MPI expansion board supported		
Electrical specification								
Rated power	7.2 W							
Rated voltage	DC24V							
Input range	DC21~DC28V							
Power down allowed	<3ms							
Insulation resistance	Greater than 50MΩ @ 500V DC							
Dielectric strength test	500V AC 1 minute							
Structure specification								
Shell color	Light-gray							
Shell material	ABS							
Dimensions(mm)	204×150×56.7							
Cutout size(mm)	192×138							
Weight	0.96kg							
Environment specification								
Operating temperature	0~45℃							
Operating humidity	10~90% non-condensing							
Storage temperature	-10~60℃							
Storage humidity	10~90% non-condensing							
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)							
Cooling method	Natural air cooling							
Certification								
Degree of protection	IP65 (front panel)							
CE certification	Passed CE certification							
FCC compatibility	Complies with FCC Class A							

MT5020 Series

Technical Specifications



Model	MT5320T		MT5320T-DP	MT5320T-CAN	MT5320T-MPI
Performance specification					
Display	5.7" TFT (115.2×86.4mm)				
Resolution	320×240 pixels				
Color	65536 colors				
Backlight	1CCFL				
Brightness	500cd/m <sup>2</sup>				
Backlight life	50000 hr.				
Touch Panel	4-wire precision resistance network				
Processor	32-bit RISC CPU 520MHz				
Memory	8M FLASH, 16M SDRAM				
Recipe memory & RTC	512KB & RTC				
Expandable memory	SD Card, U Disk				
Printer port	Connect a printer with a USB port via USB HOST port.				
Ethernet	10/100 Base-T				
Audio interface	None				
Program download	1 USB SLAVE port				
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232				
Video interface	None				
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.				
Communication module extending	No support	Profibus-DP expansion board supported	CANopen expansion board supported	MPI expansion board supported	
Electrical specification					
Rated power	7.2 W				
Rated voltage	DC24V				
Input range	DC21~DC28V				
Power down allowed	<3ms				
Insulation resistance	Greater than 50MΩ @ 500V DC				
Dielectric strength test	500V AC 1 minute				
Structure specification					
Shell color	Light-gray				
Shell material	ABS				
Dimensions(mm)	204×150×56.7				
Cutout size(mm)	192×138				
Weight	0.96kg				
Environment specification					
Operating temperature	-10~70℃				
Operating humidity	10~90% non-condensing				
Storage temperature	-30~80℃				
Storage humidity	10~90% non-condensing				
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)				
Cooling method	Natural air cooling				
Certification					
Degree of protection	IP65 (front panel)				
CE certification	Passed CE certification				
FCC compatibility	Complies with FCC Class A				

# MT5020 Series

## Technical Specifications



Model	MT5420T		MT5420T-DP		MT5420T-CAN	MT5420T-MPI
Performance specification						
Display	8" TFT (162.2×121.7mm)					
Resolution	640×480 pixels					
Color	65536 colors					
Backlight	1CCFL					
Brightness	250cd/m²					
Backlight life	50000 hr.					
Touch Panel	4-wire precision resistance network					
Processor	32-bit RISC CPU 520MHz					
Memory	16M FLASH, 32M SDRAM					
Recipe memory & RTC	512KB & RTC					
Expandable memory	SD Card, U Disk					
Printer port	Connect a printer with a USB port via USB HOST port.					
Ethernet	10/100 Base-T					
Audio interface	1 Audio output interface					
Program download	1 USB SLAVE port					
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232					
Video interface	None					
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.					
Communication module extending	No support	Profibus-DP expansion board supported	CANopen expansion board supported	MPI expansion board supported		
Electrical specification						
Rated power	10.8 W					
Rated voltage	DC24V					
Input range	DC21~DC28V					
Power down allowed	<3ms					
Insulation resistance	Greater than 50MΩ @ 500V DC					
Dielectric strength test	500V AC 1 minute					
Structure specification						
Shell color	Light-gray					
Shell material	ABS					
Dimensions(mm)	235×172×57.9					
Cutout size(mm)	224×161					
Weight	1.27kg					
Environment specification						
Operating temperature	0~45℃					
Operating humidity	10~90% non-condensing					
Storage temperature	-10~60℃					
Storage humidity	10~90% non-condensing					
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)					
Cooling method	Natural air cooling					
Certification						
Degree of protection	IP65 (front panel)					
CE certification	Passed CE certification					
FCC compatibility	Complies with FCC Class A					

# MT5020 Series

## Technical Specifications



Model	MT5520T		MT5520T-DP	MT5520T-CAN	MT5520T-MPI
Performance specification					
Display	10.4" TFT (211.2×158.4mm)				
Resolution	640×480 pixels				
Color	65536 colors				
Backlight	2CCFL				
Brightness	400cd/m²				
Backlight life	50000 hr.				
Touch Panel	4-wire precision resistance network				
Processor	32-bit RISC CPU 520MHz				
Memory	16M FLASH, 32M SDRAM				
Recipe memory & RTC	512KB & RTC				
Expandable memory	SD Card, U Disk				
Printer port	Connect a printer with a USB port via USB HOST port.				
Ethernet	10/100 Base-T				
Audio interface	1 Audio output interface				
Program download	1 USB SLAVE port				
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232				
Video interface	None				
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.				
Communication module extending	No support	Profibus-DP expansion board supported	CANopen expansion board supported	MPI expansion board supported	
Electrical specification					
Rated power	12 W				
Rated voltage	DC24V				
Input range	DC21~DC28V				
Power down allowed	<3ms				
Insulation resistance	Greater than 50MΩ @ 500V DC				
Dielectric strength test	500V AC 1 minute				
Structure specification					
Shell color	Light-gray				
Shell material	ABS				
Dimensions(mm)	310.6×230.6×55.7				
Cutout size(mm)	298×218				
Weight	2kg				
Environment specification					
Operating temperature	0~45℃				
Operating humidity	10~90% non-condensing				
Storage temperature	-10~60℃				
Storage humidity	10~90% non-condensing				
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)				
Cooling method	Natural air cooling				
Certification					
Degree of protection	IP65 (front panel)				
CE certification	Passed CE certification				
FCC compatibility	Complies with FCC Class A				



# MT5020 Series

## Technical Specifications



Model	MT5620T	MT5620T-DP	MT5620T-CAN	MT5620T-MPI
Performance specification				
Display	12.1" TFT (246×184.5mm)			
Resolution	640×480 pixels			
Color	65536 colors			
Backlight	2CCFL			
Brightness	250cd/m²			
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 520MHz			
Memory	16M FLASH, 32M SDRAM			
Recipe memory & RTC	512KB & RTC			
Expandable memory	SD Card, U Disk			
Printer port	Connect a printer with a USB port via USB HOST port.			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Video interface	2 PAL signal video input interface,BNC connector			
Program download	1 USB SLAVE port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.			
Communication Module extending	No support	Profibus-DP expansion board supported	CANopen expansion board supported	MPI expansion board supported
Expand module Connector	No	Compatible Profibus DB9 Female	Compatible CANopen DB9 Female	Compatible MPI DB9 Female
Electrical specification				
Rated power	15.6 W			
Rated voltage	DC24V			
Input range	DC21~DC28V			
Power down allowed	<3ms			
Insulation resistance	Greater than 50M Ω @ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Light-gray			
Shell material	Aluminum alloy			
Dimensions(mm)	350×264×48.7			
Cutout size(mm)	327×241			
Weight	4.3kg			
Environment specification				
Operating temperature	-10~65℃			
Operating humidity	10~90% non-condensing			
Storage temperature	-20~70℃			
Storage humidity	10~90% non-condensing			
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)			
Cooling method	Natural air cooling			
Certification				
Degree of protection	IP65 (front panel)			
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007			
FCC compatibility	Complies with FCC Class A			

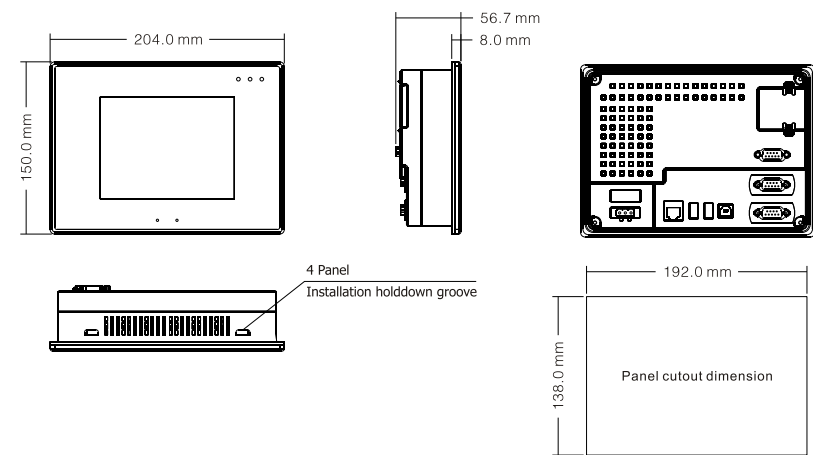
# MT5020 Series

## Technical Specifications

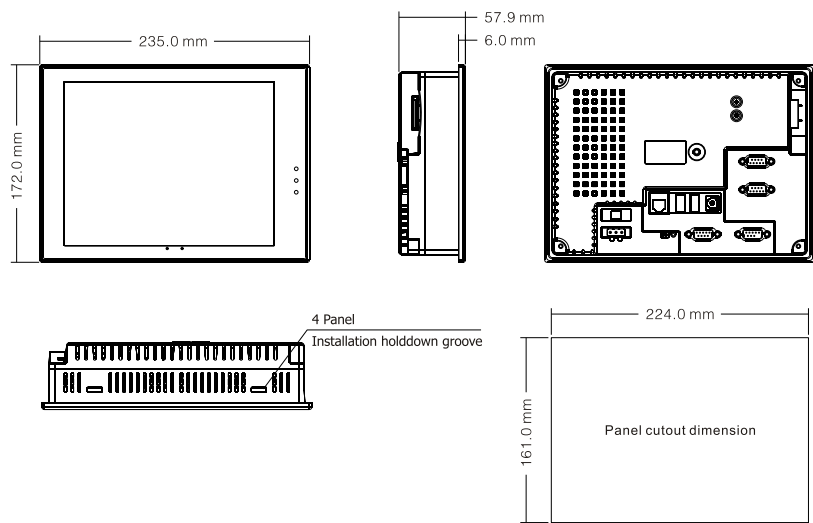


Model	MT5720T		MT5720T-DP	MT5720T-CAN	MT5720T-MPI
Performance specification					
Display	15" TFT (304.1×228.1mm)				
Resolution	1024×768 pixels				
Color	65536 colors				
Backlight	2CCFL				
Brightness	250cd/m²				
Backlight life	50000 hr.				
Touch Panel	4-wire precision resistance network				
Processor	32-bit RISC CPU 520MHz				
Memory	16M FLASH, 32M SDRAM				
Recipe memory & RTC	512KB & RTC				
Expandable memory	SD Card, U Disk				
Printer port	Connect a printer with a USB port via USB HOST port.				
Ethernet	10/100 Base-T				
Audio interface	1 Audio output interface				
Video interface	2 PAL signal video input interface,BNC connector				
Program download	1 USB SLAVE port				
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232				
USB Host	A Mouse, Keyboard and Printer, etc. which can be extended by USB port.				
Communication Module extending	No support	Profibus-DP expansion board supported	CANopen expansion board supported	MPI expansion board supported	
Expand module Connector	No	Compatible Profibus DB9 Female	Compatible CANopen DB9 Female	Compatible MPI DB9 Female	
Electrical specification					
Rated power	16.8 W				
Rated voltage	DC24V				
Input range	DC21~DC28V				
Power down allowed	<3ms				
Insulation resistance	Greater than 50MΩ @ 500V DC				
Dielectric strength test	500V AC 1 minute				
Structure specification					
Shell color	Black				
Shell material	Aluminum alloy				
Dimensions(mm)	406.5×313.5×48.3				
Cutout size(mm)	387.5×294.5				
Weight	5.1kg				
Environment specification					
Operating temperature	0~50℃				
Operating humidity	10~90% non-condensing				
Storage temperature	-20~60℃				
Storage humidity	10~90% non-condensing				
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)				
Cooling method	Natural air cooling				
Certification					
Degree of protection	IP65 (front panel)				
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007				
FCC compatibility	Complies with FCC Class A				

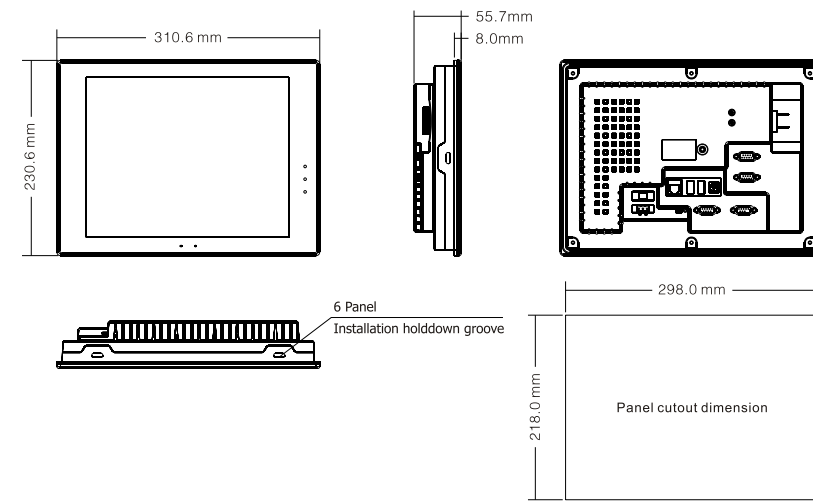
Dimensions (Unit:mm)



MT5320

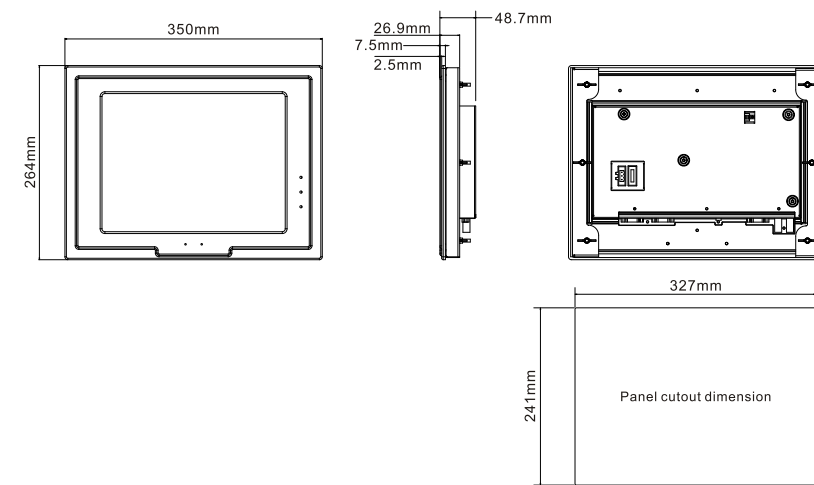


MT5420

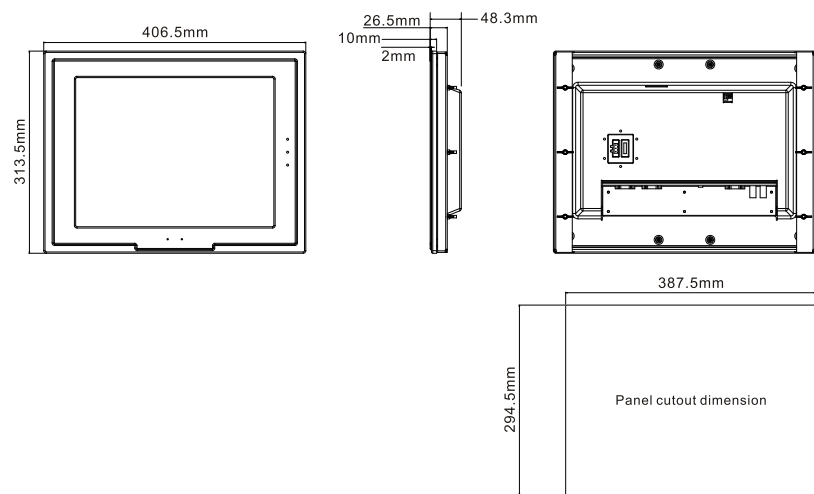


MT5520

Dimensions (Unit:mm)



MT5620



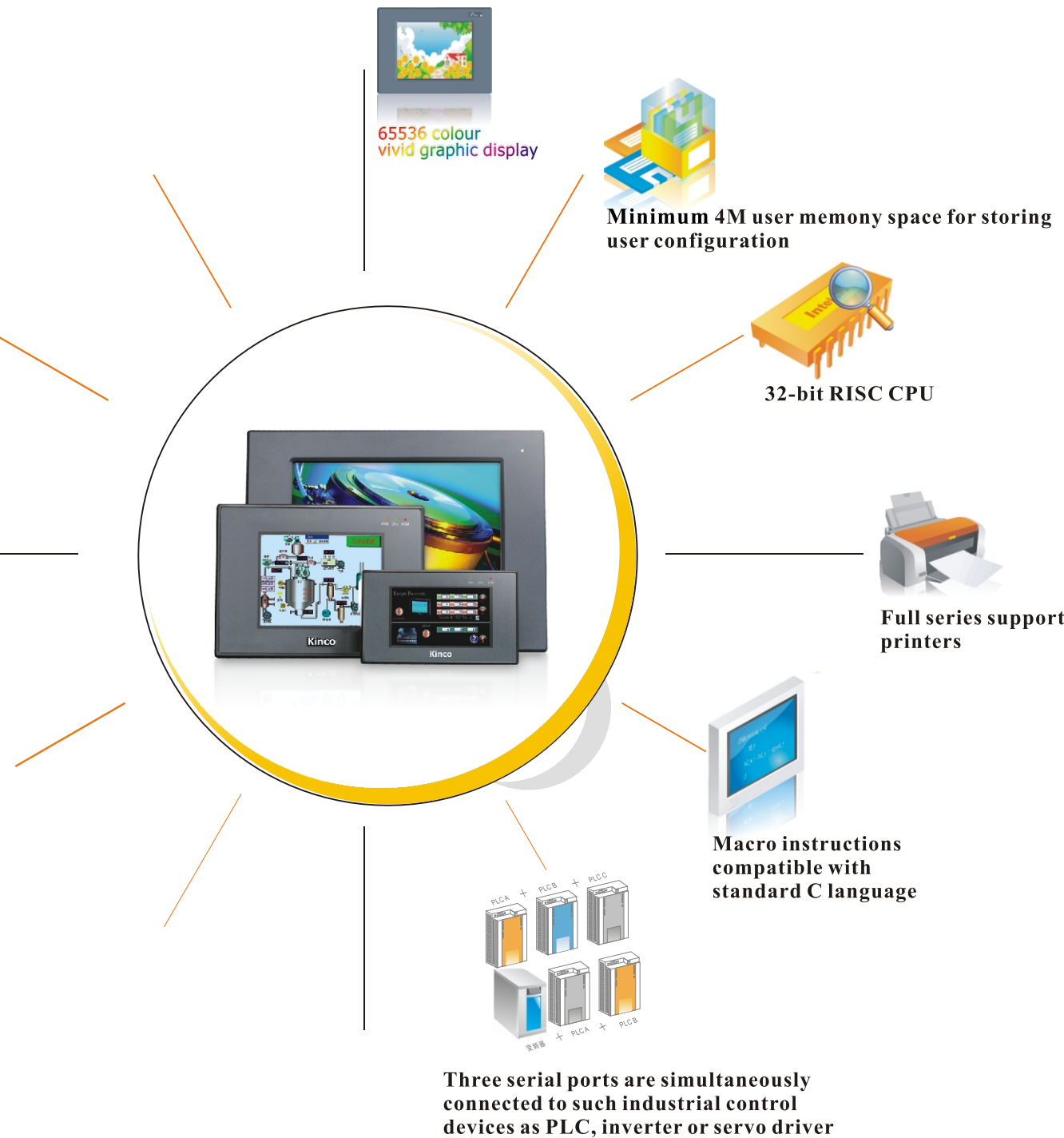
MT5720



# System Description

As the industrial competition is getting fiercer, more and more customers demand HMI products featuring more powerful functions, more convenient operation, quicker response speed, and lower cost. As an upgraded version, the MT4000 is designed to meet customer requirements. It derives from our consistent efforts to improve HMI touch screens and represents one of the many high-performance products for industrial applications.

Inheriting most of the functions of the high-end MT5000 series, the MT4000 adopts the 32-bit RISC CPU, capable of calling complicated shapes and satisfying the requirements of most customers. It can communicate directly with many PLCs, while no special program is required for data transfer with these PLCs. In addition, it supports such functions as online simulation, super-large storage space for user configurations, and macros compatible with the standard C language. It can perform on-site data collection, processing, monitoring, and output in a quick, effective, and secure way.



# Hardware Description

- Standard configuration
  - Three high-speed serial ports
  - One USB SLAVE port
  - One printer port

**USB download greatly accelerates the download speed of user configurations**

The traditional HMI uses a serial port to download, with the maximum download speed is about 11.5K bytes/s. MT4000 uses USB1.1 port to download data from device, with a speed as high as 100K bytes/s, which greatly improves the configuration download speed. ( A new version capable of data exchange with USB flash disk is to be launched soon£

**Connected to printer with parallel port, Provide stable and smooth printing**

Supporting the connection to mainstream ink-jet and laser printers and mini printers.

**Supporting simultaneous communications via multiple serial ports**

MT4000 series support communication connection in RS232, RS485 and RS422 modes. The three communication ports of the standard hardware can support different PLC communication protocols at the same time and can be connected to different controllers. The three ports are completely independent. The PLC communication failure of one port will not affect the communication of the other port, featuring high reliability.

**RJ45 Ethernet interface supports the connection between HMI and Ethernet controller or PC**

**Quick-melting fuse to ensure the safety of machines in emergencies**



## MT4000 series features

- 10M/100M Ethernet interface, supports Ethernet communication based on CS structure, could be used for the setting of system parameters and online simulation of project configuration, multiple HMIs could be linked via Ethernet, could communicate with PC and PLC via Ethernet interface, could exchange data with controller which supports Ethernet communication via OPC software (only applicable to MT4000E series);
- 65536 true color TFT LCD, supports the import multiple windows image formats, such as BMP, JPG, GIF; supports all fonts of windows platform, supports 4 languages of interface display;
- 32-bit, 400MHz RISC CPU;
- 8M FLASH ROM + 16M SDRAM, larger storage space;
- Compatible with major PLCs and controllers, could provide customer-made communication drive program rapidly;
- 256KB recipe memory, could record data easily, convenient for user to inquire;
- Supports the timing of a minimum of 100ms, configured with multiple functions such as timing data transfer, value accumulation, decrease and macro instruction;
- Real-time clock, could reserve time for more than 2 years at power-off state;
- 3 COM ports, supports simultaneous communications with controllers of 3 different protocols, supports RS232/RS422/RS485 mode;
- 1 USB SLAVE port, greatly accelerates the download speed of user configuration;
- One DB15/DB25 printer port;
- Powerful configuration software-EV5000 supports macro commands and provides rich drawing library.

# MT4000 Series Technical Specifications



MT4200T



MT4201T

Model	MT4200T		MT4201T	
Performance specification				
Display	4.3" TFT ( 95×53.9mm)			
Resolution	480×272 pixels			
Color	65536 colors			
Backlight	LED			
Brightness	165cd/m <sup>2</sup>			
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 400MHz			
Memory	8M FLASH, 16M SDRAM			
Recipe memory & RTC	256KB & RTC			
Printer port	None			
Ethernet	None			
Functional keys	None		8 user defined function keys	
Program download	1 USB SLAVE port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Electrical specification				
Rated power	4.8 W			
Rated voltage	DC24V			
Input range	DC21~DC28V			
Power down allowed	<5ms			
Insulation resistance	Greater than 50MΩ @ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Black			
Shell material	ABS			
Dimensions(mm)	151.8×86.8×52.3			
Cutout size(mm)	145×81			
Weight	0.4kg			
Environment specification				
Operating temperature	-20~55℃			
Operating humidity	10~90% non-condensing			
Storage temperature	-25~60℃			
Storage humidity	10~90% non-condensing			
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)			
Cooling method	Natural air cooling			
Certification				
Degree of protection	IP65 (front panel)			
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007			
FCC compatibility	Complies with FCC Class A			



# MT4000 Series

## Technical Specifications



MT4300C/MT4300CE



MT4300T/MT4300TE

Model	MT4300C	MT4300CE	MT4300T	MT4300TE
Performance specification				
Display	5.6" TFT (113.3×84.7mm)		5.7" TFT (115.2×86.4mm)	
Resolution	320×234 pixels		320×240 pixels	
Color	65536 colors			
Backlight	LED		1CCFL	
Brightness	300cd/m²		500cd/m²	
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 400MHz			
Memory	8M FLASH, 16M SDRAM			
Recipe memory & RTC	256KB & RTC			
Printer port	1 DB25, Support SPRT SP-DN16PH,HP LaserJet P2014,EPSON LQ 305KT			
Ethernet	No	Support	No	Support
Program download	1 USB SLAVE port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Electrical specification				
Rated power	9.6 W			
Rated voltage	DC24V			
Input range	DC21~DC28V			
Power down allowed	<5ms			
Insulation resistance	Greater than 50MΩ @ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Black			
Shell material	ABS			
Dimensions(mm)	204×150×52			
Cutout size(mm)	192×138			
Weight	0.85kg			
Environment specification				
Operating temperature	0~45℃		-10~70℃	
Operating humidity	10~90% non-condensing			
Storage temperature	-10~60℃		-20~75℃	
Storage humidity	10~90% non-condensing			
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)			
Cooling method	Natural air cooling			
Certification				
Degree of protection	IP65 (front panel)			
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007			
FCC compatibility	Complies with FCC Class A			

# MT4000 Series

## Technical Specifications



MT4404T/MT4404TE



MT4403T/MT4403TE

Model	MT4404T	MT4404TE	MT4403T	MT4403TE
Performance specification				
Display	7" 16:9 TFT (152.4×91.4mm)		8" TFT (162.2×121.5mm)	
Resolution	800×480 pixels		800×600 pixels	
Color	65536 colors			
Backlight	LED			
Brightness	300cd/m <sup>2</sup>		250cd/m <sup>2</sup>	
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 400MHz			
Memory	8M FLASH, 16M SDRAM			
Recipe memory & RTC	256KB & RTC			
Printer port	1 DB25, Support SPRT SP-DN16PH,HP LaserJet P2014,EPSON LQ 305KT			
Ethernet	No	Support	No	Support
Program download	1 USB SLAVE port			
COM port	COM0:RS232/RS485-2/RS485-4,COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Electrical specification				
Rated power	8W			
Rated voltage	DC24V			
Input range	DC21~DC28V			
Power down allowed	<5ms			
Insulation resistance	Greater than 50MΩ @ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Black			
Shell material	ABS			
Dimensions(mm)	206.8×124.2×45.1		235×172×53	
Cutout size(mm)	193.5×112.5		224×161	
Weight	0.7kg		1.1kg	
Environment specification				
Operating temperature	-10~45℃		0~45℃	
Operating humidity	10~90% non-condensing			
Storage temperature	-20~60℃		-10~60℃	
Storage humidity	10~90% non-condensing			
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)			
Cooling method	Natural air cooling			
Certification				
Degree of protection	IP65 (front panel)			
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007			
FCC compatibility	Complies with FCC Class A			

# MT4000 Series

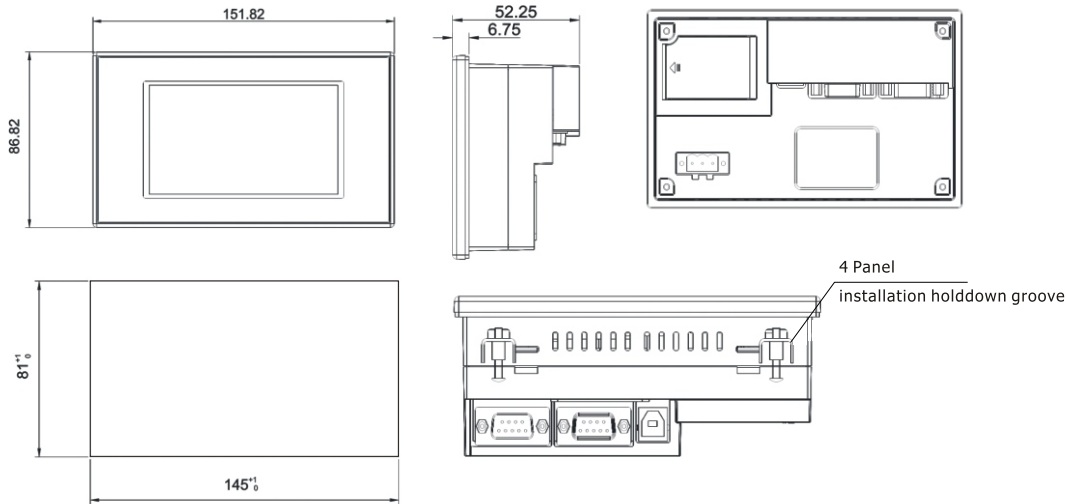
## Technical Specifications



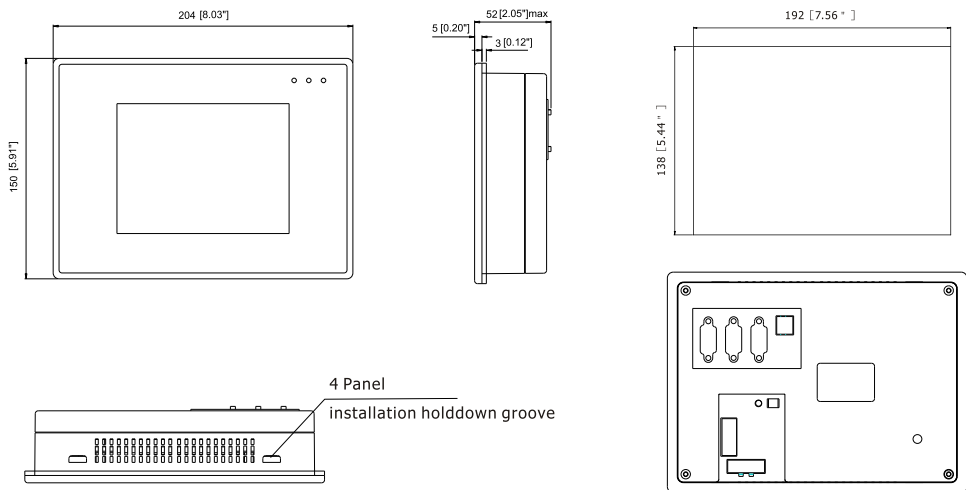
MT4500T/MT4500TE

Model	MT4500T		MT4500TE
Performance specification			
Display	10.4" TFT (211.2×158.4mm)		
Resolution	640×480 pixels		
Color	65536 colors		
Backlight	2CCFL		
Brightness	400cd/m <sup>2</sup>		
Backlight life	50000 hr.		
Touch Panel	4-wire precision resistance network		
Processor	32-bit RISC CPU 400MHz		
Memory	8M FLASH, 16M SDRAM		
Recipe memory & RTC	256KB & RTC		
Printer port	1 DB25, Support SPRT SP-DN16PH,HP LaserJet P2014,EPSON LQ 305KT		
Ethernet	No	Support	
Program download	1 USB SLAVE port		
COM port	COM0:RS232/RS485-2/RS485-4,COM1:RS232/RS485-2/RS485-4, COM2:RS232		
Electrical specification			
Rated power	10.8 W		
Rated voltage	DC24V		
Input range	DC21~DC28V		
Power down allowed	<5ms		
Insulation resistance	Greater than 50MΩ @ 500V DC		
Dielectric strength test	500V AC 1 minute		
Structure specification			
Shell color	Deep gray		
Shell material	ABS		
Dimensions(mm)	310×230×54		
Cutout size(mm)	298×218		
Weight	1.67kg		
Environment specification			
Operating temperature	0~45℃		
Operating humidity	10~90% non-condensing		
Storage temperature	-10~60℃		
Storage humidity	10~90% non-condensing		
Shockproof test	10~25Hz (X, Y, Z direction, 2G, 30 minutes)		
Cooling method	Natural air cooling		
Certification			
Degree of protection	IP65 (front panel)		
CE certification	EN61000-6-2:2005 and EN61000-6-4:2007		
FCC compatibility	Complies with FCC Class A		

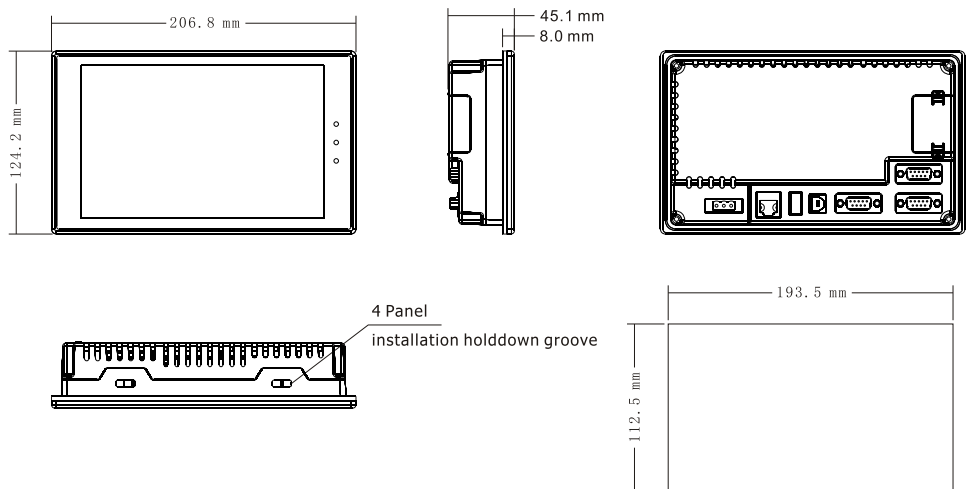
## Dimensions (Unit:mm)



MT4200

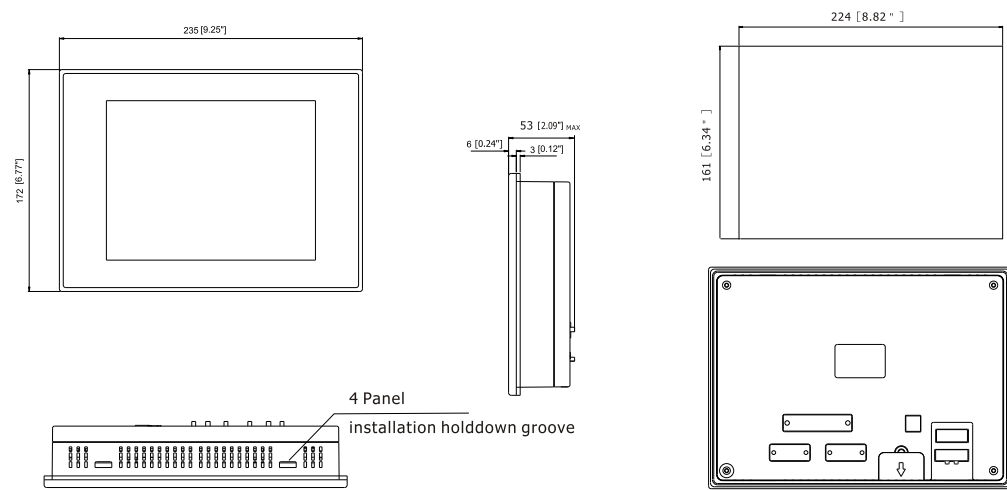


MT4300

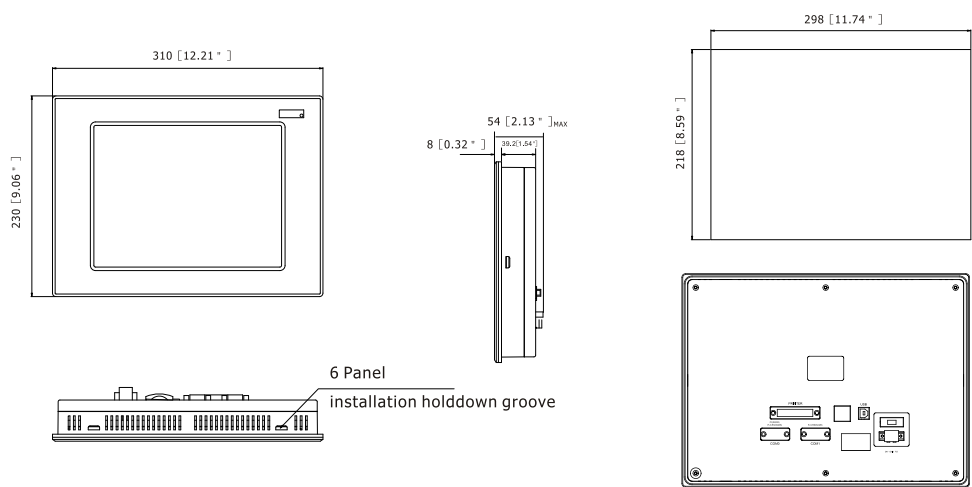


MT4404

# Dimensions (Unit:mm)



MT4403



MT4500

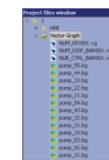
# Software Description

## Operation window: A simple and practical platform for project design and editing

- Completing all functions from editing components library and simulation compilation, to download;
- Browse various project information and make better adjustment in time.

## Project file window Facilitate in modifying components library

- Click an image library file, and the user can browse and edit the file;
- Visual understanding of the HMI quantity used.



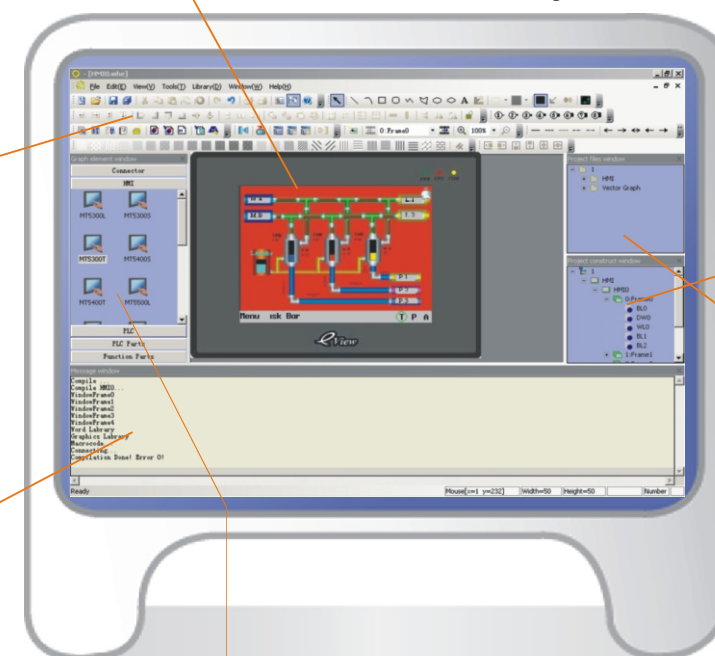
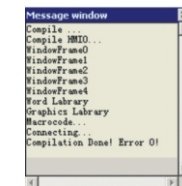
All windows can be dragged freely, and a user can create individualized operation interfaces according to his/her own habits.

## Menu bar: True color icon, visual and convenient navigation

- Familiar icon style for most users,easy to use;
- Simple and visual function.

## Compilation information window

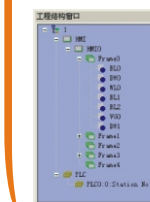
Display compilation  
progress  
After compilation display,  
the user can download files.



## Project structure window

Master the conditions  
of the entire project

Master the HMI,  
HMI components and PLC  
type used for the entire project.



## Components library window

Five components libraries, meeting design requirements



Communication  
connection

Touch screen

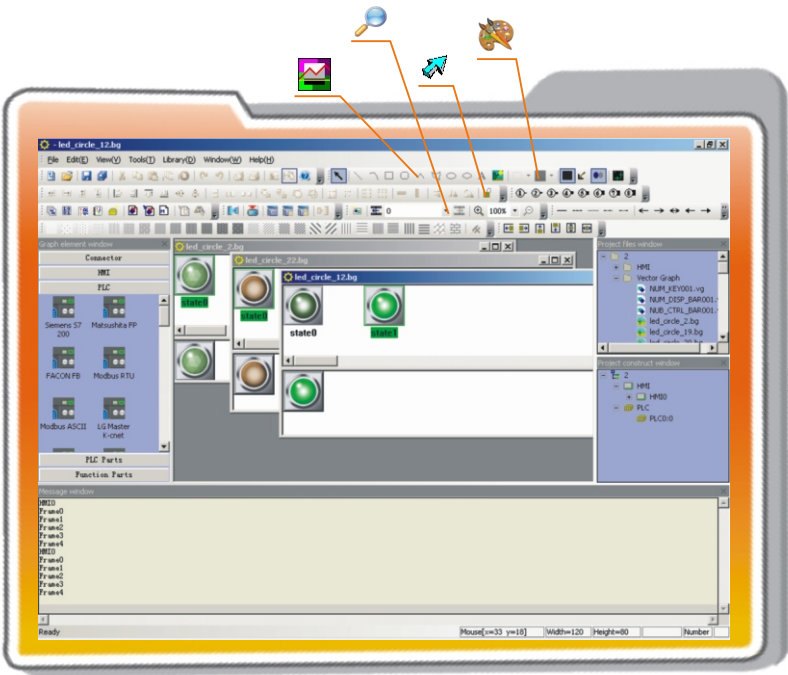
PLC

PLC components

Functional components



# Software Description



### Completely support contrast and brightness adjustment

The contrast and brightness of the LCD can be adjusted online through setting special register without the need to adjust them by means of jumper switch or potentiometer.

### Rich components library resources Facilitate in making beautiful configuration interfaces

The original components libraries of the EV5000 can meet design requirements in most cases. If a customer has special requirement, he can build own graph library with the drawing tools of EV5000 software. EV5000 has a huge number of 3D effect components which facilitate in making mobile 3D graphics and animation.

### Digital photos/Corporate logo import

The EV5000 supports the import of multiple Windows image formats, such as JPEG, GIF and BMP. The user can import their own logo or other images as initial screen.

### Supporting all fonts of the Windows platform

In graphic mode, static text can be displayed in any fonts supported by the windows system on the configuration interface. The user has more choice for fonts now.

### Recipe editing function

Providing 256K Words recipe memory, without any loss upon power failure, facilitating the setting and modification of initial values of the equipment, capable of providing multiple different recipes for the controller.

### Perfect event log function

It can store records of events occurred during production, without any loss upon power failure, facilitating invocation anytime; if necessary, this function can be used to learn the operational history of the equipment and improve the design of the process flow.

Powerful vector graphic function, supporting drawing of arcs, sectors, scales and pointers at any angle

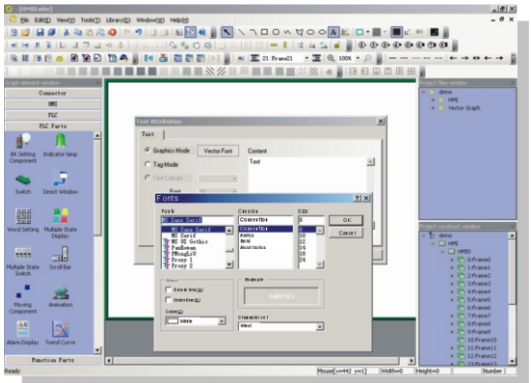
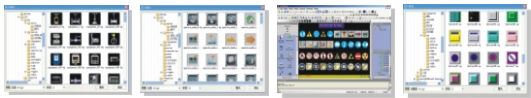
- Eight line width options
- Three-level zoom-in/zoom-out display
- Supporting drawing of various vector-based image
- User-defined color filling in multiple modes

### Password protection

Three different authority levels, authorized operators can execute necessary setting and operations according to their authority level. The security performance of the system is greatly enhanced.

### Multi-language application environment

Any language supported by Windows can be displayed on the panel. The user can use up to 4 languages within a project, which makes it possible for global users to share their wisdom with their clients worldwide.



# Software Description



### Learn compiling macro commands in ten minutes

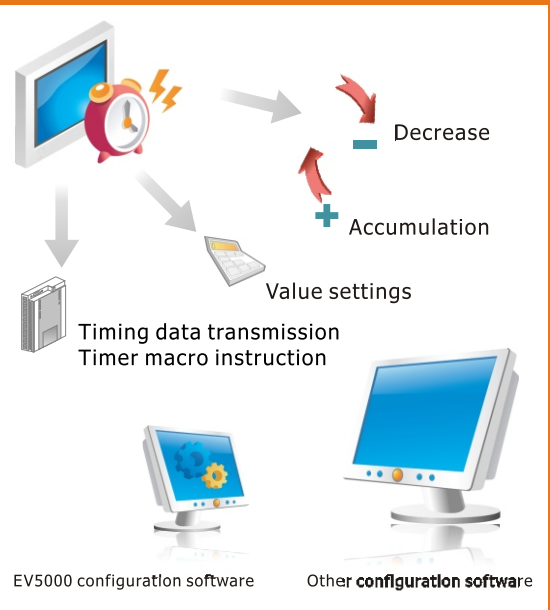
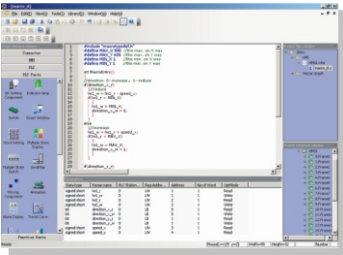
Macro codes compatible with standard C language can be triggered in multiple methods, featuring powerful function and flexible use.

### In the past

Most HMIs in the market use respectively defined script languages, lack of versatility, which are hard to learn since there is no sufficient reference resources, and furthermore they cannot be implanted into other HMI panels.

### Present

The EV5000 provides unique macro instruction compilation fully compatible with the standard C language.If you are familiar with the C language, you can learn how to code macro instructions in ten minutes.The rich reference documents, powerful function,and easy portability greatly enhance the macro command function of the EV5000.



Powerful online networking and synchronous communication function and rapid processing speed have simplified the complicated process flow design.

### Powerful timer function

- iThe timer of MT5000 can implement the timing of a minimum of 100 ms, featuring accurate timing;
- iConfigured with multiple functions such as timed data transfer, value settings,accumulation, decrease, and timed macro instruction;
- iMultiple trigger modes such as register trigger and initialization trigger, to facilitate users in implementing flexible configuration programming.

### Customizable startup LOGO window

Different from other HMIs which do not have any screen display upon startup,the MT5000 can immediately display a user-defined LOGO upon power-on until the configuration window finishes startup, lasting about five seconds. The user can freely edit and modify the startup window.