Kinco®

Kinco

Human-machine Interface

Human-machine Interface
Product Catalog

Corporate Profile

Kinco Automation is a leading supplier of industrial automation products and solutions from China with full line of automation products including industrial human machine interfaces (HMI), AC servo systems, stepper systems, PLC, VFD and field bus products. Kinco aims to help you achieve a leading position in your market.

Reliable partner of your success
☐ Gain the competitive edge
☐ Support your business
☐ Serve your needs

High standard of quality management
☐ 100% function and reliability test before delivery
☐ Quality control and tracking go through the full product life cycle
☐ Certificated process control and quality management capability

Proven performance
☐ Customers in over 40 countries and in diverse markets and sectors

Perpetual innovation
☐ 8% of annual turnover invested in R&D
☐ Experienced international R&D teams
☐ Patent applications continue to rise every year
☐ Market-driven R&D: we organize our R&D activities around the voice from the customers

Provide Chinese Automation Solutions for Global Customers

CONTENTS

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;
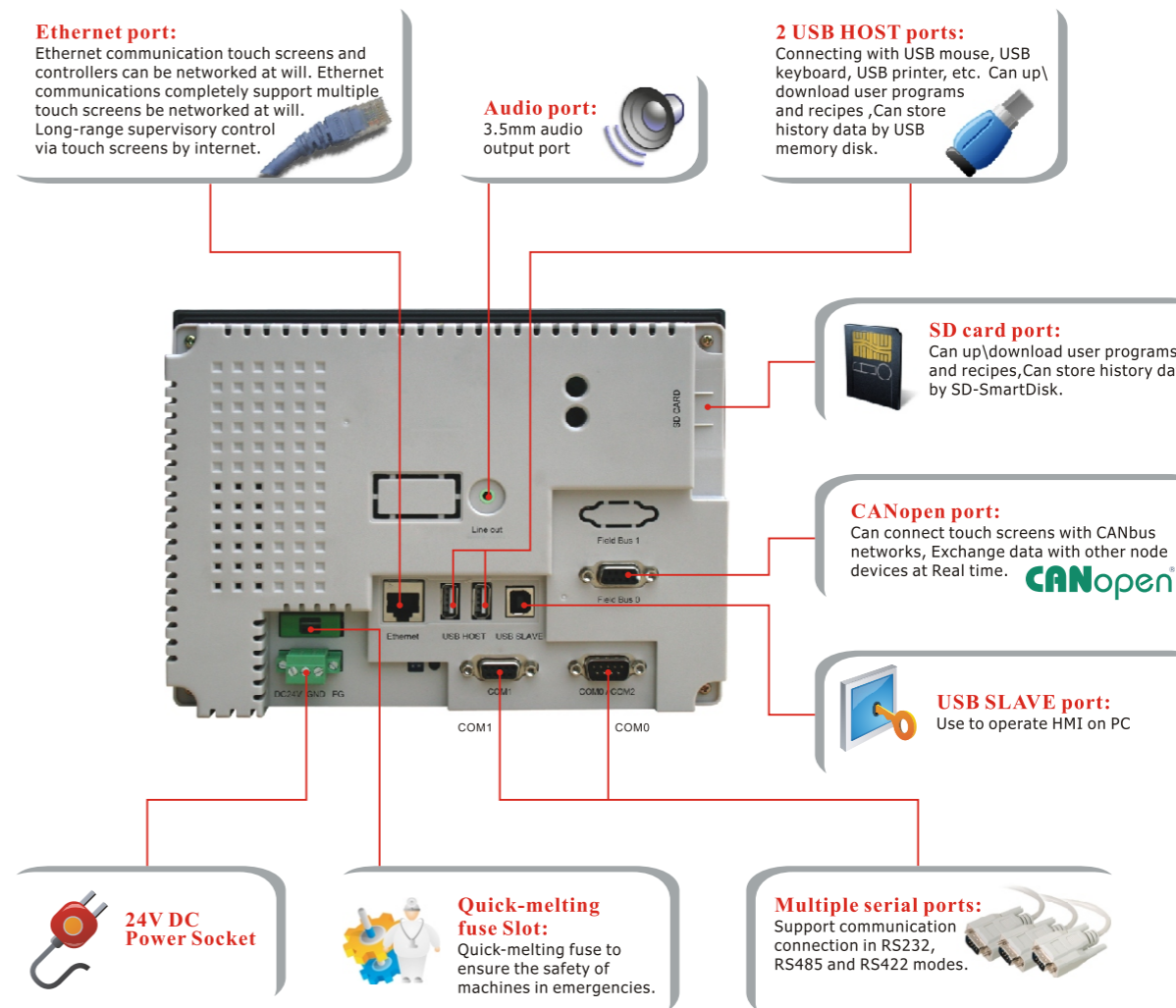- SD card slot for mass storage;
- Flexible expansion board.

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:

CANopen Communication Card

Ethernet port:
Ethernet communication touch screens and controllers can be networked at will. Ethernet communications completely support multiple touch screens be networked at will. Long-range supervisory control via touch screens by internet.

Audio port:
3.5mm audio output port

2 USB HOST ports:
Connecting with USB mouse, USB keyboard, USB printer, etc. Can up\download user programs and recipes ,Can store history data by USB memory disk.

SD card port:
Can up\download user programs and recipes,Can store history data by SD-SmartDisk.

CANopen port:
Can connect touch screens with CANbus networks, Exchange data with other node devices at Real time.

USB SLAVE port:
Use to operate HMI on PC

24V DC Power Socket

Quick-melting fuse Slot:
Quick-melting fuse to ensure the safety of machines in emergencies.

Multiple serial ports:
Support communication connection in RS232, RS485 and RS422 modes.

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.
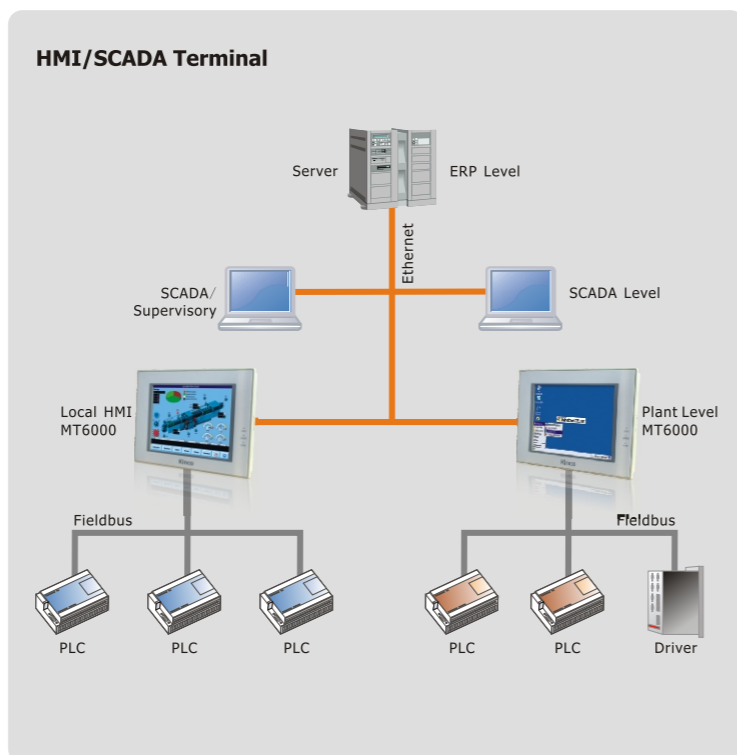
Panel PLC

Software-based logic controller is another hot topic in today's automation industry. With the powerful RISC processor, MT6000 can execute logic control task in a high-speed. 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.
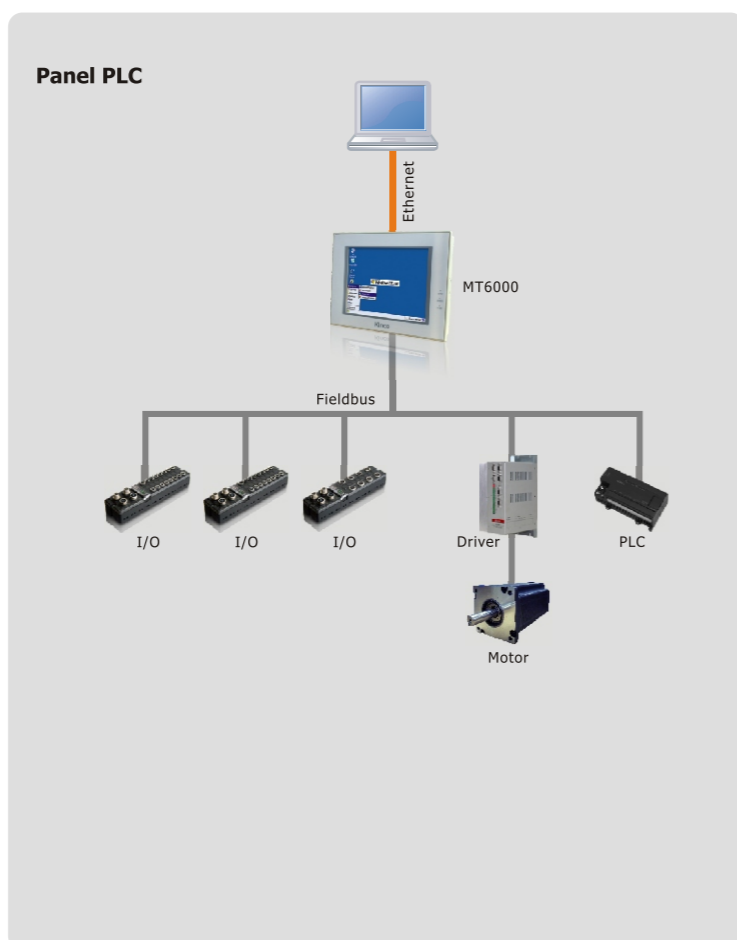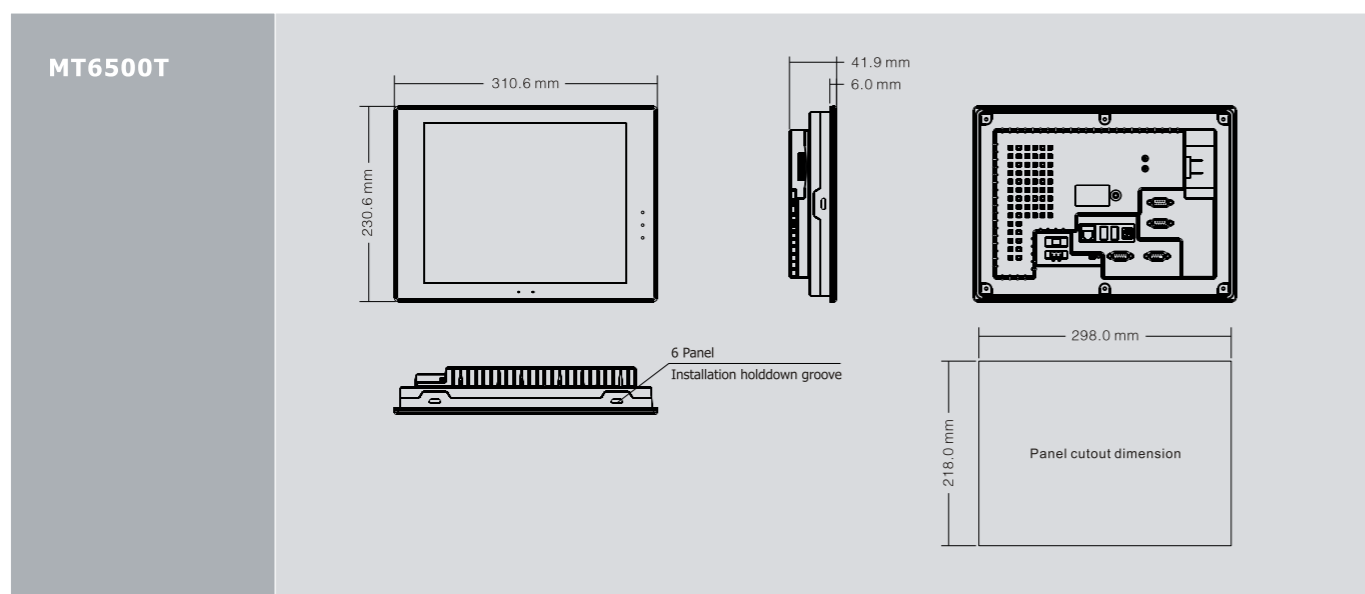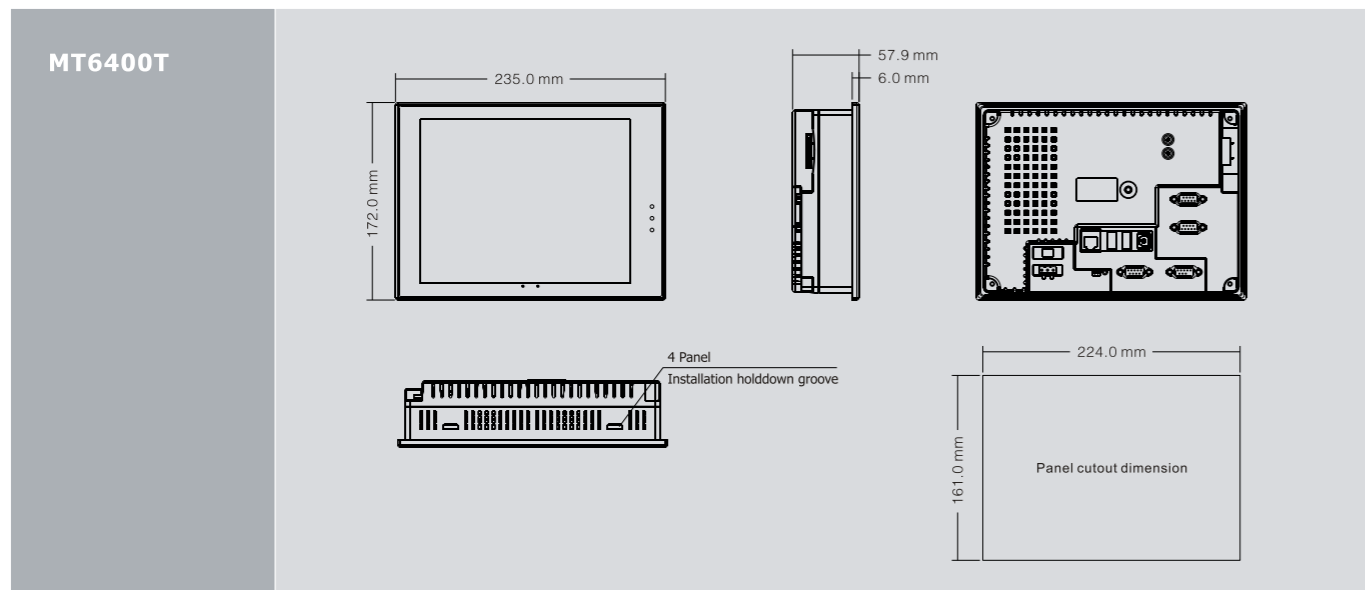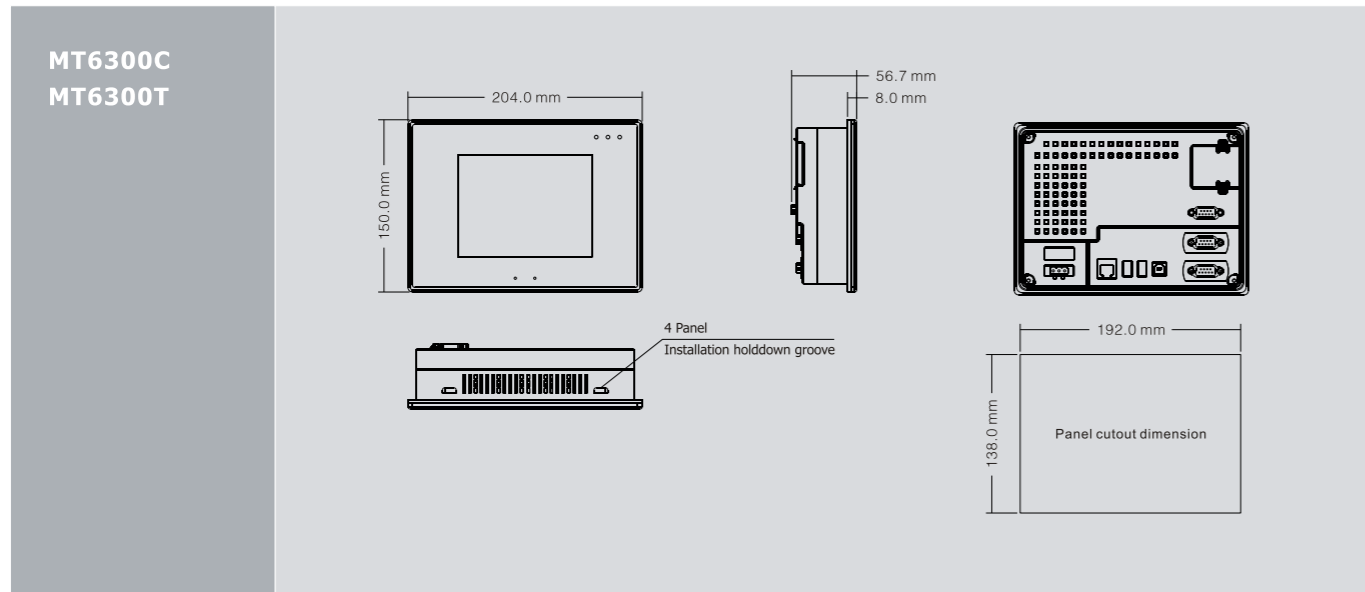
Other application

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!
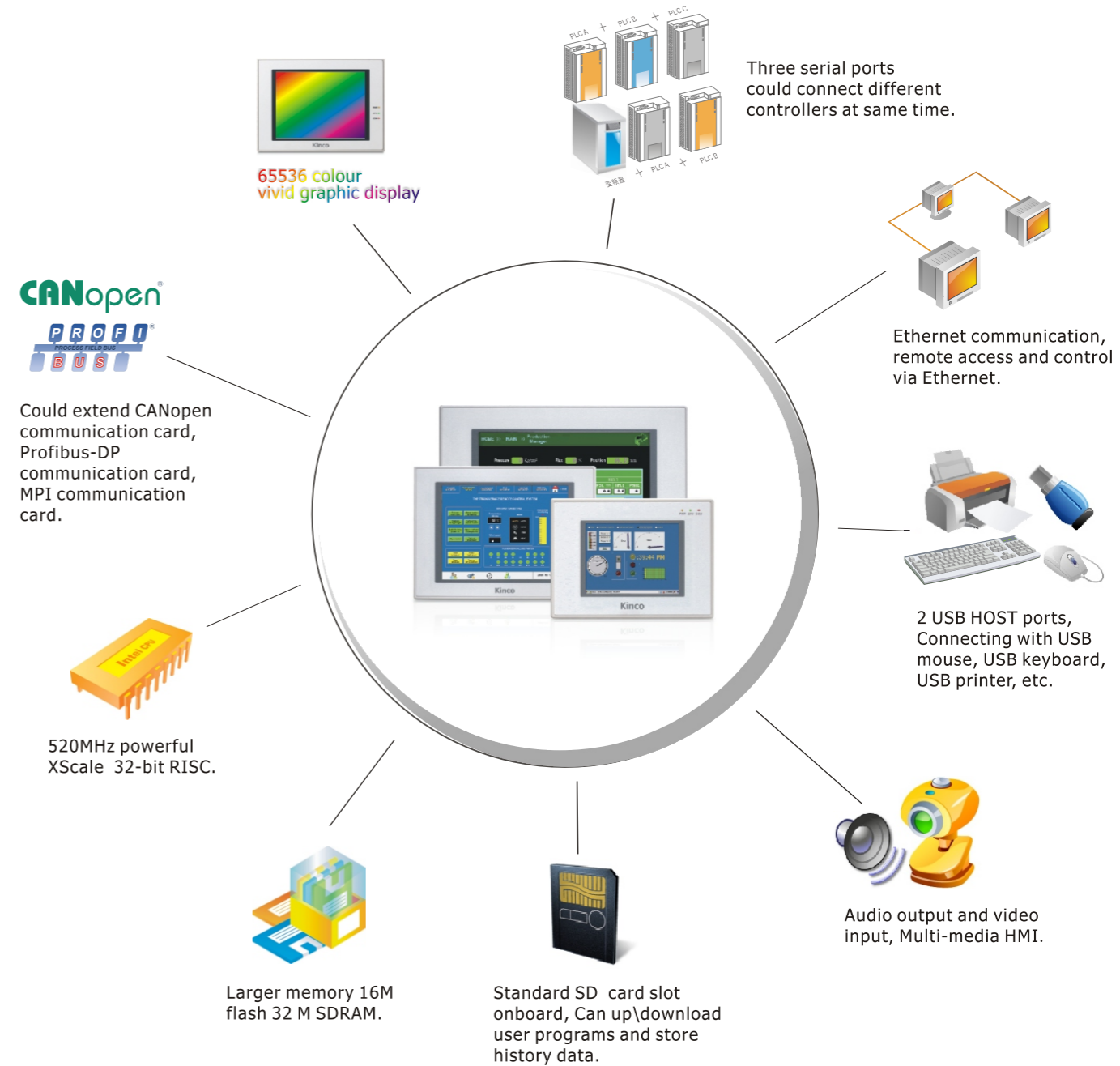
HMI/SCADA Terminal

Panel PLC

MT6000 Series
Technical Specifications

MT6300   MT6400   MT6500

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^2	500cd/m^2	350cd/m^2	400cd/m^2
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,Ethernet 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 interface expansion 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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

Dimensions (Unit:mm)

MT6300C
MT6300T

204.0 mm
150.0 mm
56.7 mm
8.0 mm

4 Panel
Installation holddown groove

192.0 mm
138.0 mm
Panel cutout dimension

MT6400T

235.0 mm
172.0 mm
57.9 mm
6.0 mm

4 Panel
Installation holddown groove

224.0 mm
161.0 mm
Panel cutout dimension

MT6500T

310.6 mm
230.6 mm
41.9 mm
6.0 mm

6 Panel
Installation holddown groove

298.0 mm
218.0 mm
Panel cutout dimension

System Description

MT5000 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;
MT5000 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, connecting to the field bus network.

65536 colour
vivid graphic display

Three serial ports could connect different controllers at same time.

Ethernet communication, remote access and control via Ethernet.

Could extend CANopen communication card, Profibus-DP communication card, MPI communication card.

520MHz powerful XScale 32-bit RISC.

2 USB HOST ports, Connecting with USB mouse, USB keyboard, USB printer, etc.

Audio output and video input, Multi-media HMI.

Larger memory 16M flash 32 M SDRAM.

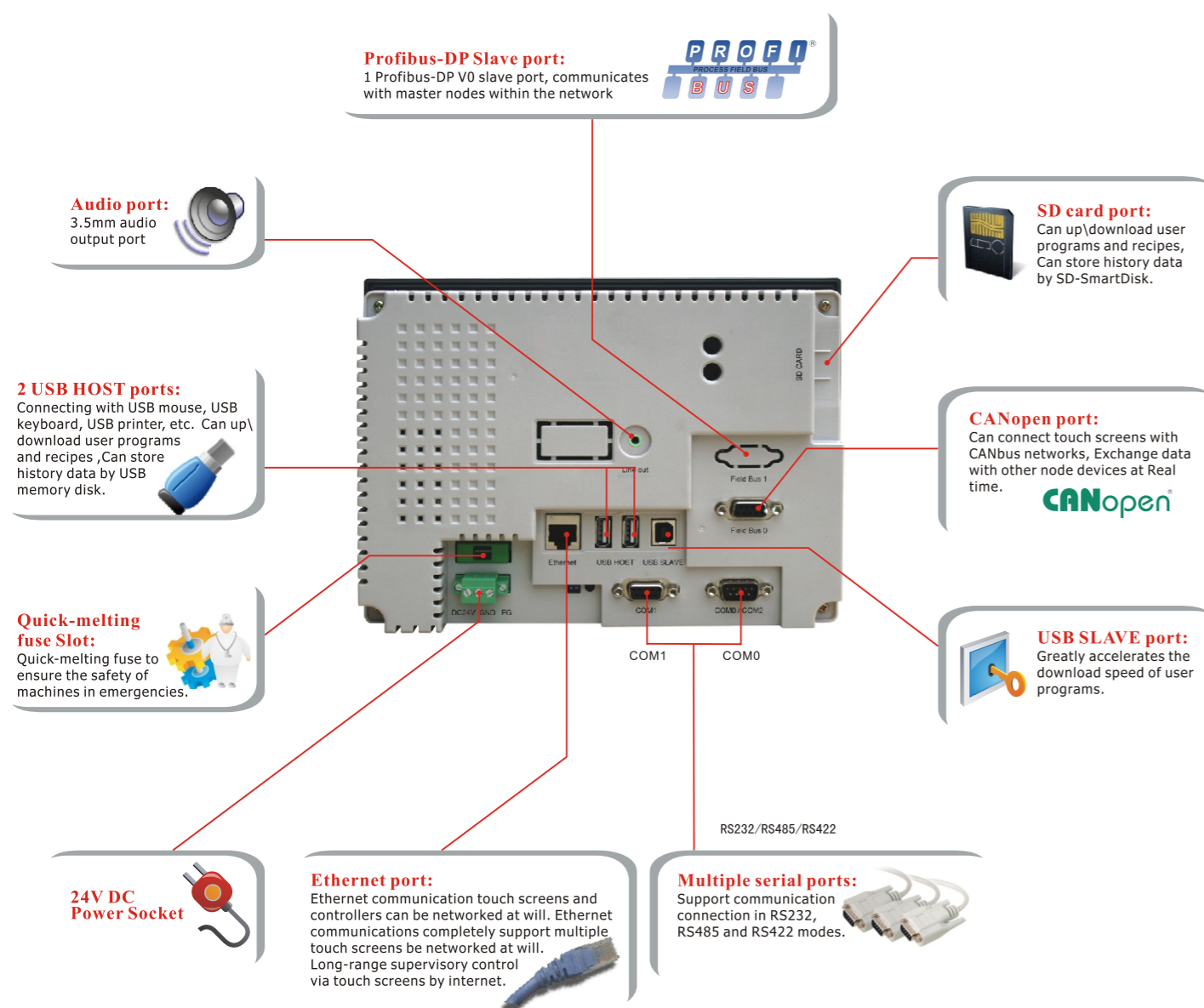Standard SD card slot onboard, Can up\download user programs and store history data.

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

MT5000 Series Features

Profibus-DP Slave port:
1 Profibus-DP V0 slave port, communicates with master nodes within the network

Audio port:
3.5mm audio output port

SD card port:
Can up\download user programs and recipes, Can store history data by SD-SmartDisk.

2 USB HOST ports:
Connecting with USB mouse, USB keyboard, USB printer, etc. Can up\download user programs and recipes ,Can store history data by USB memory disk.

CANopen port:
Can connect touch screens with CANbus networks, Exchange data with other node devices at Real time.

Quick-melting fuse Slot:
Quick-melting fuse to ensure the safety of machines in emergencies.

USB SLAVE port:
Greatly accelerates the download speed of user programs.

COM1   COM0

RS232/RS485/RS422

24V DC Power Socket

Ethernet port:
Ethernet communication touch screens and controllers can be networked at will. Ethernet communications completely support multiple touch screens be networked at will. Long-range supervisory control via touch screens by internet.

Multiple serial ports:
Support communication connection in RS232, RS485 and RS422 modes.

➢ 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.

MT5000 Series
Technical Specifications

Model	MT5320C	MT5320C-DP	MT5320C-CAN	MT5320C-MPI
Performance specification				
Display	5.6" TFT			
Resolution	320×234 pixels			
Color	65536 colors			
Backlight	LED			
Brightness	$300cd/m^2$			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	None			
Vedio interface	None			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	7.2 W			
Rated voltage	DC24V			
Input range	21~28VDC			
Momentary power-off	<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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

Model	MT5323T	MT5323T-DP	MT5323T-CAN	MT5323T-MPI
Performance specification				
Display	5.7" TFT			
Resolution	640×480 pixels			
Color	65536 colors			
Backlight	LED			
Brightness	$700cd/m^2$			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	None			
Vedio interface	None			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	10 W			
Rated voltage	DC24V			
Input range	12~28VDC			
Momentary power-off	<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	-20~70℃			
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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

Model	MT5420T	MT5420T-DP	MT5420T-CAN	MT5420T-MPI
Performance specification				
Display	8'' TFT			
Resolution	640×480 pixels			
Color	65536			
Backlight	1CCFL			
Brightness	350cd/m^2			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Vedio interface	None			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	10.8 W			
Rated voltage	DC24V			
Input range	21~28VDC			
Momentary power-off	<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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

Model	MT5423T	MT5423T-DP	MT5423T-CAN	MT5423T-MPI
Performance specification				
Display	8'' TFT			
Resolution	800×600 pixels			
Color	65536			
Backlight	LED			
Brightness	300cd/m^2			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Vedio interface	None			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	8 W			
Rated voltage	DC24V			
Input range	12~28VDC			
Momentary power-off	<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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

Model	MT5520T	MT5520T-DP	MT5520T-CAN	MT5520T-MPI
Performance specification				
Display	10.4'' TFT			
Resolution	640×480 pixels			
Color	65536			
Backlight	2 CCFL			
Brightness	400cd/m^2			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Vedio interface	None			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	12 W			
Rated voltage	DC24V			
Input range	21~28VDC			
Momentary power-off	<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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

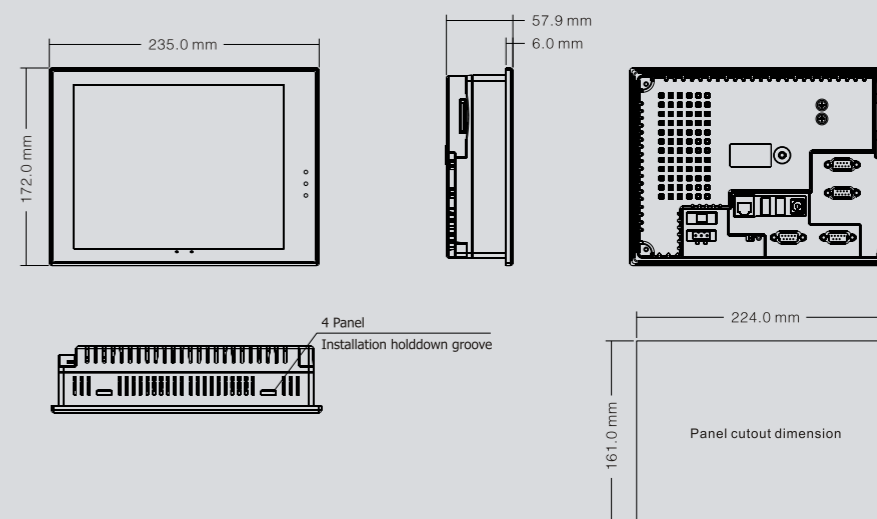| Model	MT5620T	MT5620T-DP	MT5620T-CAN	MT5620T-MPI
Performance specification				
Display	12.1'' TFT			
Resolution	800×600 pixels			
Color	65536			
Backlight	2 CCFL			
Brightness	250cd/m^2			
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 520MHz			
Memory	16M FLASH, 32M SDRAM			
Recipe memory & RTC	512KB & RTC			
Expandable memory	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Vedio interface	2 PAL signal video input interface,BNC connector			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	15.6 W			
Rated voltage	DC24V			
Input range	21~28VDC			
Momentary power-off	<3ms			
Insulation resistance	Greater than 50MΩ@ 500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Black			
Shell material	Metal			
Dimensions(mm)	350×264×48.7			
Cutout size(mm)	327×241			
Weight	4.3kg			
Environment specification				
Operating temperature	-10~60℃			
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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT5000 Series
Technical Specifications

Model	MT5720T	MT5720T-DP	MT5720T-CAN	MT5720T-MPI
Performance specification				
Display	15" TFT			
Resolution	1024×768 pixels			
Color	65536			
Backlight	2 CCFL			
Brightness	250cd/m^2			
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	1 SD Card, 2 USB HOST			
Printer port	USB/Serial port			
Ethernet	10/100 Base-T			
Audio interface	1 Audio output interface			
Vedio interface	2 PAL signal video input interface,BNC connector			
Program download	1 USB SLAVE port/Serial port/Ethernet port			
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Expansion port	None	Profibus-DP	CANopen	MPI
Electrical specification				
Rated power	16.8 W			
Rated voltage	DC24V			
Input range	21~28VDC			
Momentary power-off	<3ms			
Insulation resistance	Greater than 50MΩ@500V DC			
Dielectric strength test	500V AC 1 minute			
Structure specification				
Shell color	Black			
Shell material	Metal			
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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

Dimensions (Unit:mm)

MT5320C
MT5320C-DP
MT5320C-CAN
MT5320C-MPI

MT5323T
MT5323T-DP
MT5323T-CAN
MT5323T-MPI

204.0 mm
150.0 mm
56.7 mm
8.0 mm
4 Panel
Installation holddown groove
192.0 mm
138.0 mm
Panel cutout dimension

MT5420T
MT5420T-DP
MT5420T-CAN
MT5420T-MPI

MT5423T
MT5423T-DP
MT5423T-CAN
MT5423T-MPI

235.0 mm
172.0 mm
57.9 mm
6.0 mm
4 Panel
Installation holddown groove
224.0 mm
161.0 mm
Panel cutout dimension

MT5520T
MT5520T-DP
MT5520T-CAN
MT5520T-MPI

310.6 mm
230.6 mm
55.7mm
8.0mm
6 Panel
Installation holddown groove
298.0 mm
218.0 mm
Panel cutout dimension

Dimensions (Unit:mm)

MT5620T
MT5620T-DP
MT5620T-CAN
MT5620T-MPI

350mm

264mm

26.9mm
7.5mm
2.5mm

48.7mm

327mm

241mm

Panel cutout dimension

MT5720T
MT5720T-DP
MT5720T-CAN
MT5720T-MPI

406.5mm
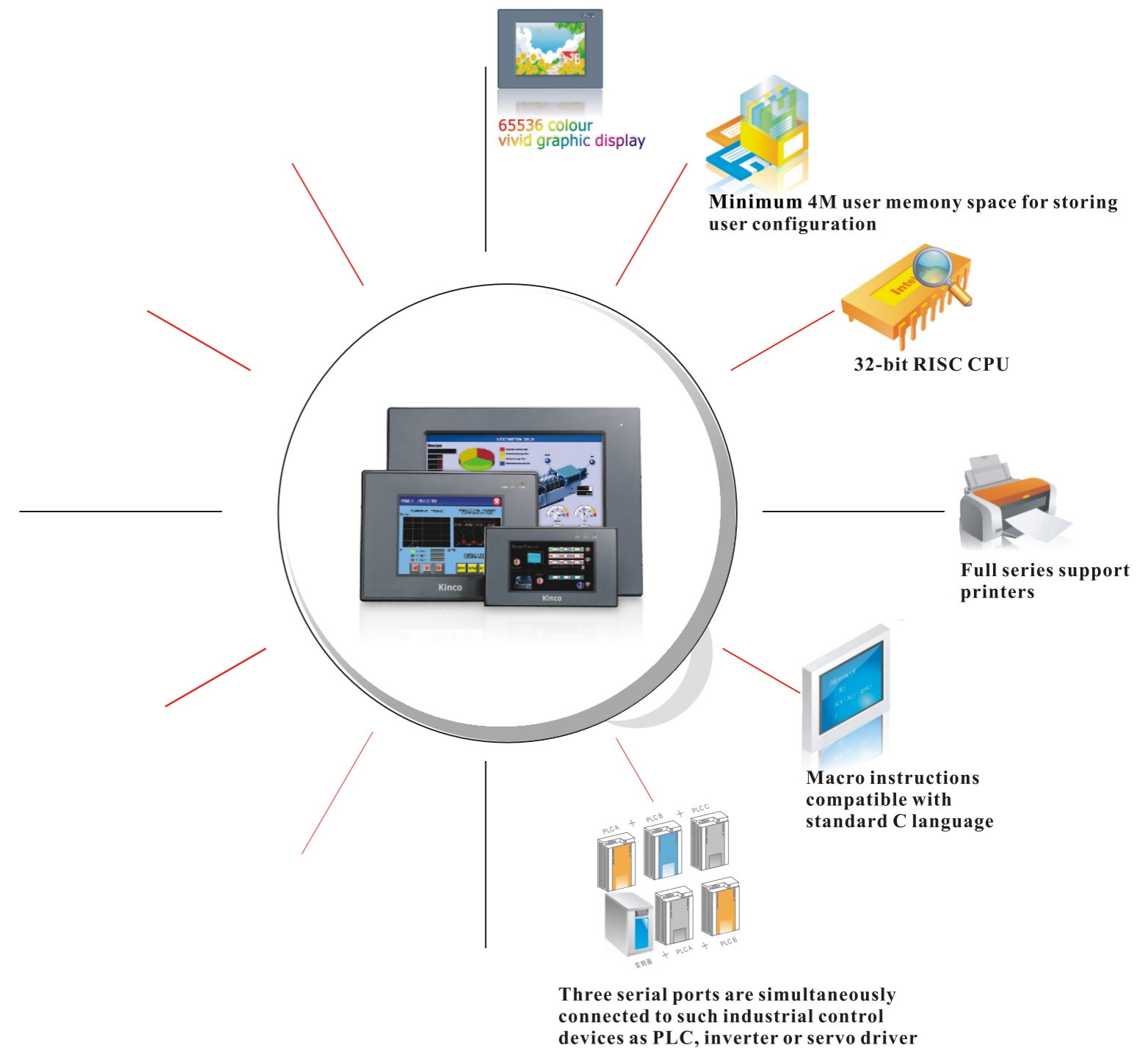
313.5mm

26.5mm
10mm
2mm

48.3mm

387.5mm

294.5mm

Panel cutout dimension
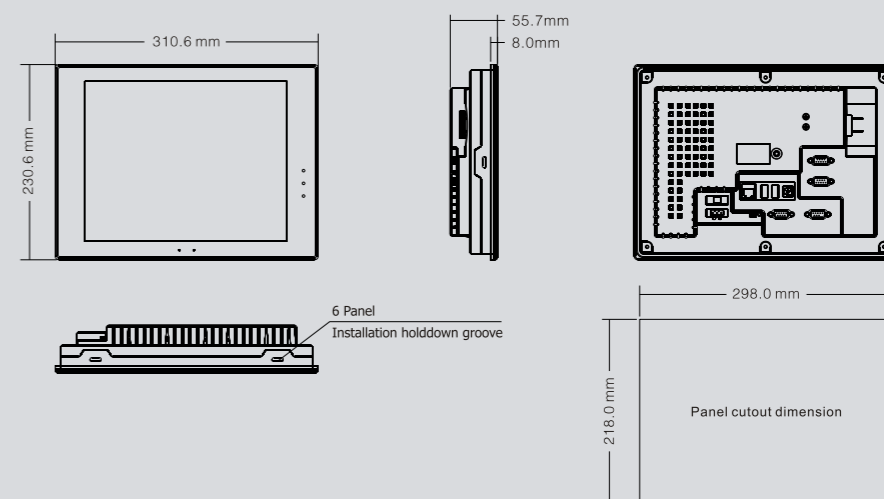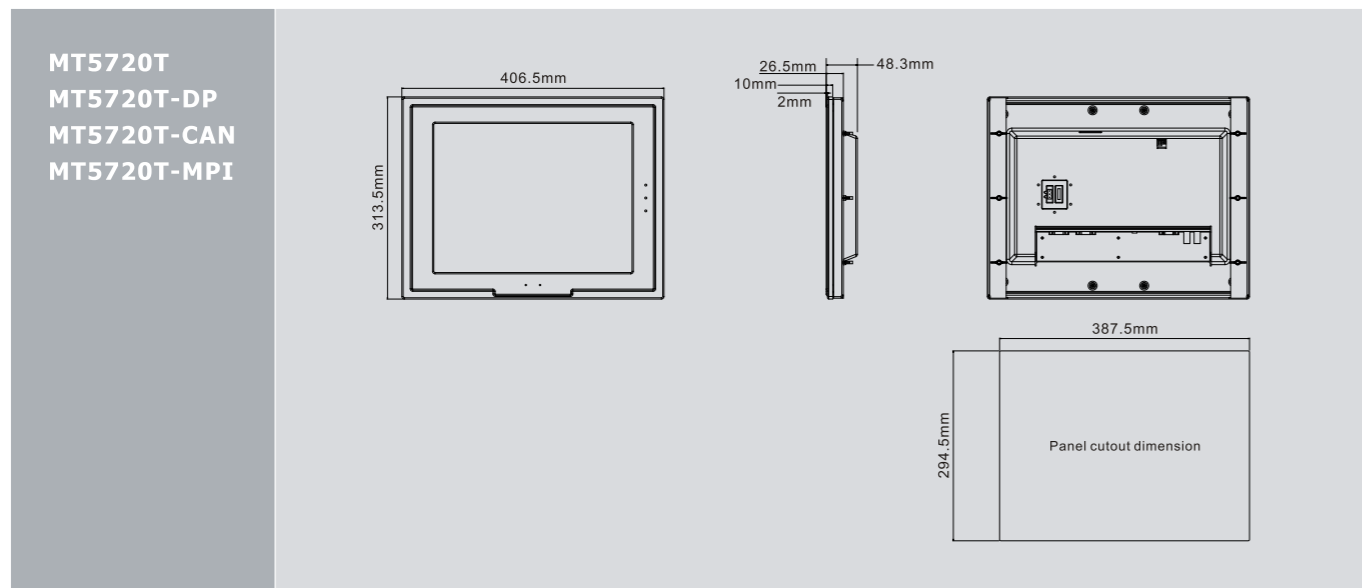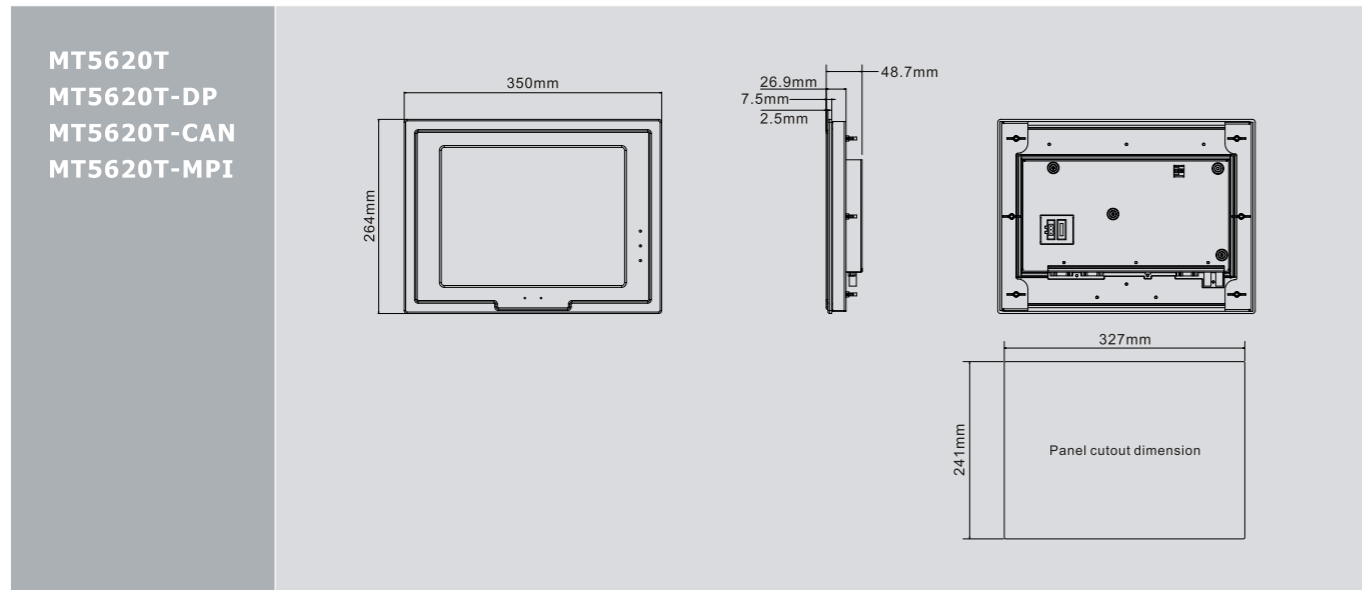
System Description

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.

65536 colour
vivid graphic display

Minimum 4M user memory space for storing user configuration

32-bit RISC CPU

Full series support printers

Macro instructions compatible with standard C language

Three serial ports are simultaneously connected to such industrial control devices as PLC, inverter or servo driver

Kinco

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.

RJ45 Ethernet interface supports the connection between HMI and Ethernet controller or PC
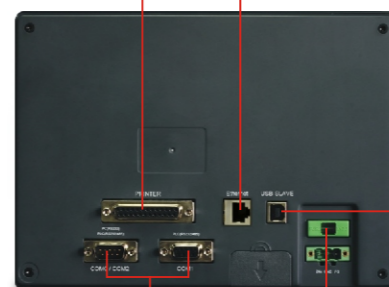
Supporting simultaneous communications via multiple serial ports

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.

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

MT4210T

MT4220TE

Model	MT4210T	MT4220TE
Performance specification		
Display		4.3" TFT
Resolution	480×272 pixels	
Color	65536 colors	
Backlight	LED	
Brightness	300cd/m^2	
Backlight life	50000 hr.	
Touch Panel	4-wire precision resistance network	
Processor	32-bit RISC CPU 400MHz	32-bit RISC CPU 800MHz
Memory	128M FLASH + 64M SDRAM	
Expandable memory	None	1 USB host, 1 SD card
Recipe memory & RTC	512KB + RTC	
Printer port	Serial port	Serial port/USB port
Ethernet	None	Support
Program download	USB SLAVE/Serial port	USB SLAVE/Serial port/Ethernet port
COM port	COM0:RS232/RS485-2/RS485-4, COM2:RS232	
Electrical specification		
Rated power	3.5 W	
Rated voltage	DC24V	
Input range	12~28VDC	
Power down allowed	<3ms	
Insulation resistance	Greater than 50MΩ@ 500V DC	
Dielectric strength test	500VAC 1 minute	
Structure specification		
Shell color	Black	
Shell material	ABS	
Dimensions(mm)	154×89×59.8	
Cutout size(mm)	145×81	
Weight	0.34kg	
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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards	
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		5.7" TFT	
Resolution	320×234 pixels		320×240 pixels	
Color	65536 colors			
Backlight	LED		1CCFL	
Brightness	300cd/m^2		500cd/m^2	
Backlight life	50000 hr.			
Touch Panel	4-wire precision resistance network			
Processor	32-bit RISC CPU 400MHz			
Memory	8M FLASH, 16M SDRAM			
Expandable memory	None			
Recipe memory & RTC	256KB & RTC			
Printer port	DB15/Serial port			
Ethernet	None	Support	None	Support
Program download	USB SLAVE/Serial port	USB SLAVE/Serial port/Ethernet port	USB SLAVE/Serial port	USB SLAVE/Serial port/Ethernet port
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232			
Electrical specification				
Rated power	6 W		9.6 W	
Rated voltage	DC24V		DC24V	
Input range	12~28VDC		21~28VDC	
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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards			
FCC compatibility	Complies with FCC Class A			

MT4000 Series
Technical Specifications

MT4404T/MT4404TE
MT4424T/MT4424TE

MT4414T/MT4414TE

Model	MT4404T	MT4404TE	MT4414T	MT4414TE	MT4424T	MT4424TE
Performance specification						
Display	7" 16:9 TFT					
Resolution	800×480 pixels					
Color	65536 colors					
Backlight	LED					
Brightness	300cd/m^2					
Backlight life	50000 hr.					
Touch Panel	4-wire precision resistance network					
Processor	32-bit RISC CPU 400MHz		32-bit 800MHz RISC		32-bit RISC CPU 624MHz	
Memory	8M FLASH, 16M SDRAM		128M FLASH, 64M SDRAM		128M FLASH, 64M Mobile DDR	
Expandable memory	None		1 USB host		1 USB host, 1 SD card	
Recipe memory & RTC	256KB & RTC		512KB & RTC		128KB & RTC	
Printer port	Serial port				USB/Serial port	
Ethernet	None	Support	None	Support	None	Support
Program download	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232		COM0:RS232/RS485-2/RS485-4, COM2:RS232		COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232	
Electrical specification						
Rated power	8W		4W		8W	
Rated voltage	DC24V		DC24V		DC24V	
Input range	DC21~28V		DC12~28V		DC21~28V	
Power down allowed	<5ms		<3ms		<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		204×150×37		206.8×124.2×45.1	
Cutout size(mm)	193.5×112.5		192×138		193.5×112.5	
Weight	0.8kg		0.75kg		0.8kg	
Environment specification						
Operating temperature	0~45℃		0~45℃		0~45℃	
Operating humidity	10~90% non-condensing					
Storage temperature	-10~60℃		-10~60℃		-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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards					
FCC compatibility	Complies with FCC Class A					

MT4000 Series
Technical Specifications

MT4403T/MT4403TE

MT4512T/MT4512TE
MT4522T/MT4522TE

Model	MT4403T	MT4403TE	MT4512T	MT4512TE	MT4522T	MT4522TE
Performance specification						
Display	8" TFT		10.1" 16:9 TFT		10.1" 16:9 TFT	
Resolution	800×600 pixels		800×480 pixels		800×480 pixels	
Color	65536 colors		65536 colors		65536 colors	
Backlight	LED		LED		LED	
Brightness	250cd/m^2		320cd/m^2		320cd/m^2	
Backlight life	50000 hr.					
Touch Panel	4-wire precision resistance network					
Processor	32-bit RISC CPU 400MHz		32-bit 800MHz RISC		32-bit RISC CPU 400MHz	
Memory	8M FLASH, 32M SDRAM		128M FLASH, 64M SDRAM		16M FLASH, 32M SDRAM	
Expandable memory	None		1 USB host		1 USB Host, 1 SD Card	
Recipe memory & RTC	256KB & RTC		512KB & RTC		256KB & RTC	
Printer port	DB25/Serial port		Serial port		USB/Serial port	
Ethernet	None	Support	None	Support	None	Support
Program download	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port
COM port	COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232		COM0:RS232/RS485-2/RS485-4, COM2:RS232		COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232	
Electrical specification						
Rated power	8W		8W		8W	
Rated voltage	DC24V		DC24V		DC24V	
Input range	DC12~28V		DC12~28V		DC12~DC28V	
Power down allowed	<5ms					
Insulation resistance	Greater than 50MΩ @ 500V DC					
Dielectric strength test	500V AC 1 minute					
Structure specification						
Shell color	Black		Black		Black	
Shell material	ABS		ABS		ABS	
Dimensions(mm)	235×172×53		310×230×55		310×230×58	
Cutout size(mm)	224×161		298×218		298×218	
Weight	1.3kg		2kg		2kg	
Environment specification						
Operating temperature	-10~45℃		0~45℃		0~45℃	
Operating humidity	10~90% non-condensing					
Storage temperature	-20~60℃		-10~60℃		-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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards					
FCC compatibility	Complies with FCC Class A					

MT4000 Series
Technical Specifications

MT4513T/MT4513TE
MT4523T/MT4523TE

MT4620TE

Model	MT4513T	MT4513TE	MT4523T	MT4523TE	MT4620TE
Performance specification					
Display	10.4" TFT		10.4" TFT		12.1" TFT
Resolution	800×600 pixels		800×600 pixels		800×600 pixels
Color	65536 colors		65536 colors		65536 colors
Backlight	LED		LED		LED
Brightness	300cd/m^2		300cd/m^2		450cd/m^2
Backlight life	50000 hr.				
Touch Panel	4-wire precision resistance network				
Processor	400MHz RISC	800MHz RISC	520MHz RISC		800MHz RISC
Memory	128M FLASH, 64M SDRAM		16M FLASH, 32M SDRAM		1Gbit NAND Flash + 64M DDR2-667
Expandable memory	None	1 USB HOST	1 SD Card, 1 USB HOST		1 SD Card, 1 USB HOST
Recipe memory & RTC	512KB & RTC		256KB & RTC		128KB & RTC
Printer port	Serial port	USB SLAVE/ Serial port	USB SLAVE/Serial port		USB SLAVE/Serial port/ Ethernet port
Ethernet	None	Support	None	Support	Support
Program download	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port	USB SLAVE/ Serial port/ Ethernet port	USB SLAVE/ Serial port/ Ethernet port
COM port	COM0:RS232/RS485-2/RS485-4, COM2:RS232		COM0:RS232/RS485-2/RS485-4, COM1:RS232/RS485-2/RS485-4, COM2:RS232		
Electrical specification					
Rated power	8 W		12 W		10 W
Rated voltage	DC24V		DC24V		DC24V
Input range	DC10~DC28V		DC12~DC28V		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		Black		Cold gray
Shell material	PC+ABS		ABS		ABS
Dimensions(mm)	310×230×55		310×230×55		350×260×54
Cutout size(mm)	298×218		298×218		340×250
Weight	2kg		2kg		4.4kg
Environment specification					
Operating temperature	0~45℃		0~45℃		-10~55℃
Operating humidity	10~90% non-condensing				
Storage temperature	-10~60℃		-10~60℃		-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	Comply with EN61000-6-2:2005 and EN61000-6-4:2007standards				
FCC compatibility	Complies with FCC Class A				

Dimensions (Unit:mm)

MT4210T
MT4220TE

Panel cutout dimension

MT4300C
MT4300CE
MT4300T
MT4300TE

4 Panel installation holddown groove

Panel cutout dimension

MT4404T
MT4404TE
MT4424T
MT4424TE

4 Panel installation holddown groove

Panel cutout dimension

MT4414T
MT4414TE

Panel cutout dimension

Dimensions (Unit:mm)

MT4403T
MT4403TE

235
53
6
3
172

224

4 Panel
Installation
holddown groove

161

Panel cutout dimension

MT4512T
MT4512TE
MT4522T
MT4522TE
MT4513T
MT4513TE
MT4523T
MT4523TE

310
54
8 39.2
230

298

6 Panel
Installation
holddown groove

218

Panel cutout dimension

MT4620TE

350
54
52.6
260

340

250

Panel cutout dimension

PS 0V 24V Diesel USB USB COM1/COM2 COM

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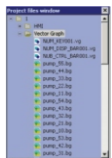
All windows can be dragged freely, and a user can create individualized operation interfaces according to his/her own habits.

Menu bar:
True color icon, visual and convenient navigation

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

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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.
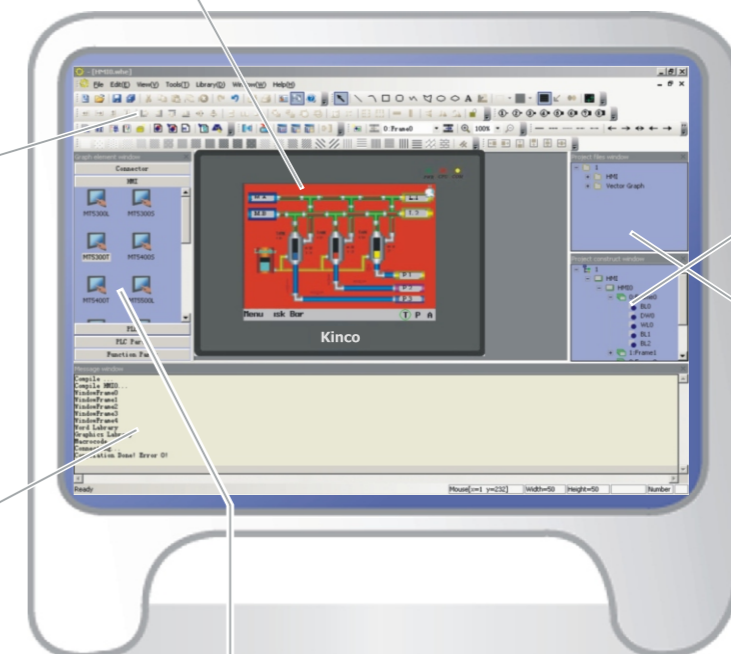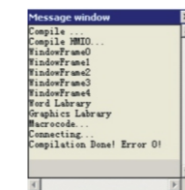
Components library window
Five components libraries, meeting design requirements

Communication connection	Touch screen	PLC	PLC components	Functional components

Software Description

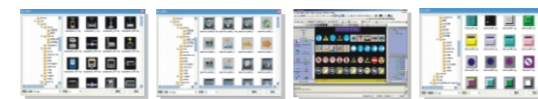**Powerful vector graphic function, supporting drawing of arcs, sectors, scales and pointers at any angle**

Eight line width options

Three-level zoom-in/zoom-out display

Supporting drawing of various vector-based image

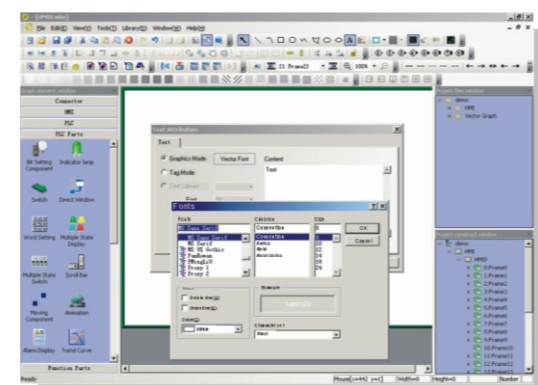User-defined color filling in multiple modes

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.

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.

Bitmap image   Vector graph

Software Description

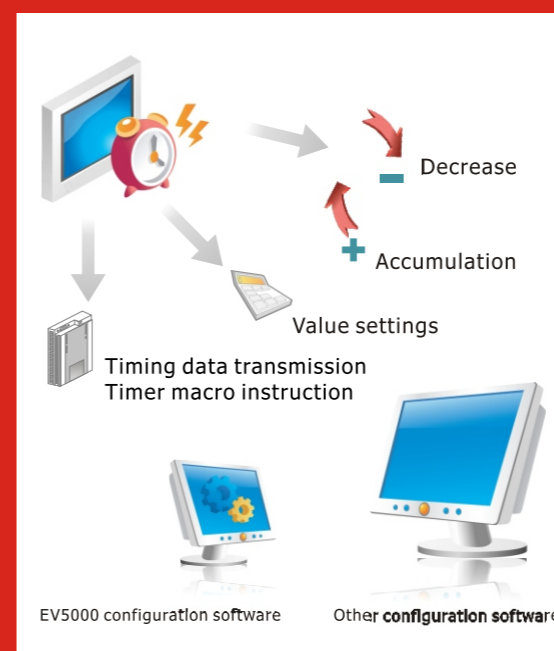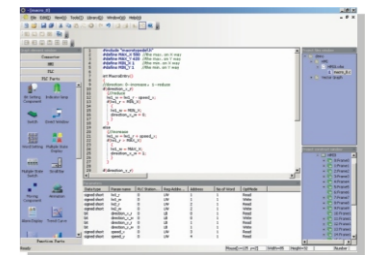**Learn compiling macro commands in ten minutes**

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.

EV5000 configuration software   Other configuration software

Timing data transmission
Timer macro instruction

Value settings

Decrease

Accumulation

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

Powerful timer function

¡The timer of MT5000 can implement the timing of a minimum of 100 ms, featuring accurate timing;
¡Configured with multiple functions such as timed data transfer, value settings,accumulation, decrease, and timed macro instruction;
¡Multiple 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.
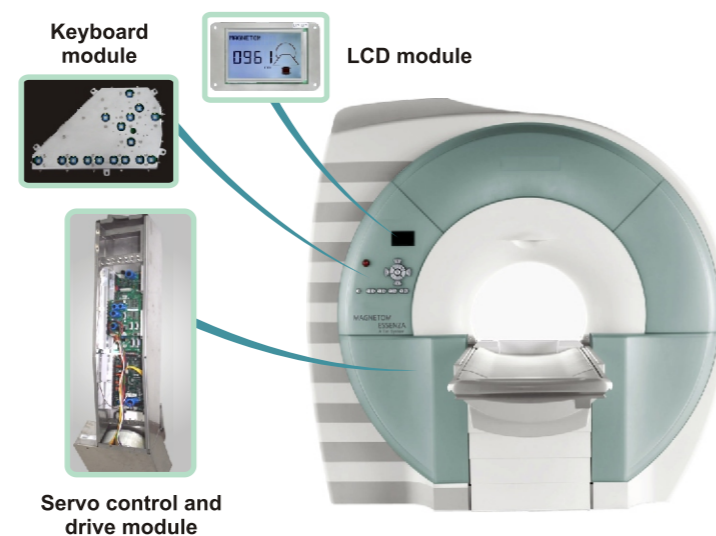
Kinco, Automation Solution Supplier

Kinco presents you solutions based on automation technology and industry know-how.

Kinco Automation Solutions

Kinco provides important sub-system to a world-famous healthcare equipment manufacturer.

Kinco satisfies the most rigid quality requirement in healthcare industry.

■ **System function:** control and drive the motion of patient table for MRI inspection.
■ **Features:** Ultra-low RF emission, withstand strong magnetic interference.

Keyboard module

LCD module

Servo control and drive module

Operator Terminal for construction machine

KG/KW series operator terminal, serving famous heavy machine builders all over China.

■ **Features:**
 - CAN bus interface;
 - Compatible with protocols of major controllers;
 - Enhanced structure design, withstand shock and extreme temperature;
 - Enhanced EMC design, withstand harsh interference;
 - User-friendly editing software.

KincoCut paper cutter control system

Together with leading paper cutter manufacture in China, Kinco presents advanced cutter control system at competitive cost.

■ **Features:**
 - Advanced performance;
 - Optimized CIP3 and CIP4 technology, compatible with printing data format standard;
 - All major components from Kinco, ensure quality and competitive cost.

Tower crane safety controller

Kinco-TB safety controller, compatible with GB/T5031-2008 standard, protect your assets and staff.

■ **Features:**
 - Display system critical status and parameters in real time;
 - Alarm when critical status events occur;
 - Record system log;
 - Flexible and easy to be expanded.