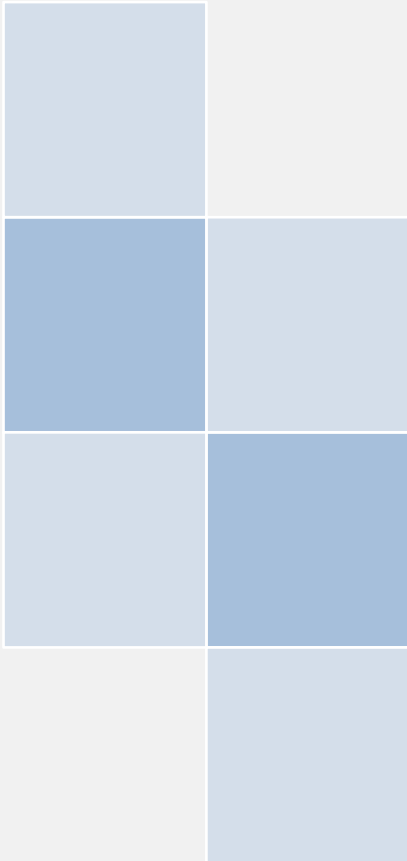


AS560PKC

Industrial Panel PC



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DECLARATION OF CONFORMITY

This restriction is subject to provide protection for system operation in business environment, which will produce, use and transmit radio frequency energy. Without notice of the instructions of the correct installation and use, it may cause harmful interference to radio communication. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device gets bad affect on the signal of radio/ TV. User could insure by turn device on/off.

When this device produces some harmful interference, user can use the following measure to solve interference problem:

Setting the receiving antenna' s direction or location

Increase the distance between this device and receiver.

Plug in this device' s power connector into different circuits of the power outlet with receiver

If you need technical support, please inform the dealer or experienced radio/TV technical personnel.

Warning:

If user changes the setting unauthorized or repairs the device without any approval of the relevant authority, then user' s rights of controlling this device will be canceled.

TECHNICAL SUPPORT AND SERVICE

Please visit: astor.com.pl to get the details.

User should collect the product information following:

- Product name and serial number.
- Attached device' s description
- User' s software' s description (operational system, vision, application software and so on)
- Full description of the product' s problem
- Full details of every error information

Warning:

1. DC 12~24V power input;
2. Package: be careful, please take the device by two hands;
3. Maintenance: please clean and maintain the surface by correct ways, only can uses the certificated or dry product to clean up.

SAFETY INTRODUCTION

1. Please read the safety operating introduction very carefully.
2. Please store this manual so that refers it again.
3. Before clean up the device by wet cloth please confirm that power connector is out of outlet, DO NOT use any liquid or decontamination spray to clean it up!
4. There must be an easy touched power outlet.
5. Please confirm that the device is be put on a stable platform before installation, accident fall may cause damages of device.
6. Please confirm that the voltage which is come from power outlet is fit on the requirement, before you connect the device to outlet.
7. Please arrange the power cable in a hiding place and do not cover anything on the cable.
8. Please be cautious of the warnings and notices on the device.
9. If the device is not used for a long time, shut off the power to avoid the damages by transient over voltage.

10. DO NOT allow any liquid flow into the device so that cause fire or short circuit.

11. DO NOT pull the device up by yourself, please let any certificated engineer to do that for your safety.

If you meet the following situations, please repair it by professional person:

- Power cable or connector is broken;
- Liquid flow into the device.
- Device doesn' t work properly. Or you can' t make it work through the user manual.
- This device falls or any damage;
- Some obvious damage;

12. DO NOT store the device in out of the temperature range what we suggested, NOT less then -30°C or higher than 80°C, or may damage the device.

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Chapter 1

OVERVIEW

1.1 Introductions



Figure 1-1:

AS560PKC

AS560PKC series is fanless industrial Panel PC with projected capacitive touch panel, IP69k water and dust proof panel, stylish enclosure, and reliable modular structure. Through flexible combination among the different panel sizes and system boxes, customer could get various solution, and replace system or upgrade the platform without changing cabinet design. Which is convenient to product maintenance, replacement, production and upgrade in future.

OS supports: WindowsIO, Linux.

Monitor can be 15.6", 21.5", 23.8" optional.

1.2 Features

- Size option 15.6",21.5" and 23.8"
- Intel® J6412 and i5-1235U processor
- DDR4-3200MHz memory,up to 32GB
- Stainless steel housing,IP69K compliant
- Supports VESA stand mounting
- Pre-install NFC module,support 13.56MHz
- Pre-install WIFI module

1.3 External Overview

AS560PKC make up of front panel monitor and back panel.

1.3.1 Front panel

The front side of AS560PKC is front panel LCD touch screen monitor surrounded by stainless steel housing.



Figure 1-2: Front panel

1.3.2 Rear Panel

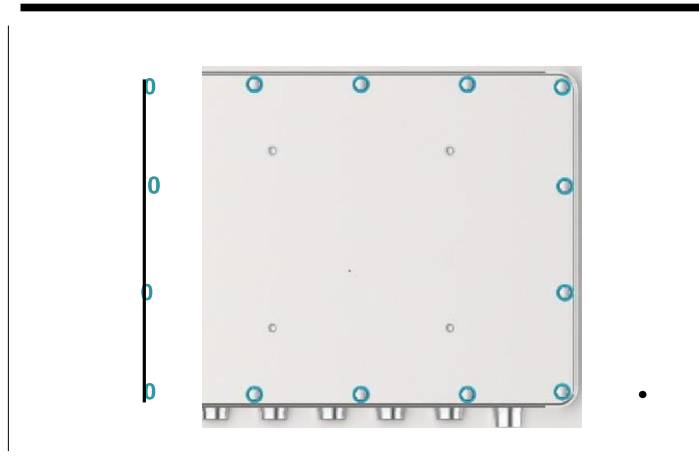


Figure 1-3: Rear panel

1.4 Internal overview

The internal components include the touch panel module and the motherboard. The motherboard has memory, a wireless module and a hard drive, 3G wireless modular optional.

1.5 Specifications

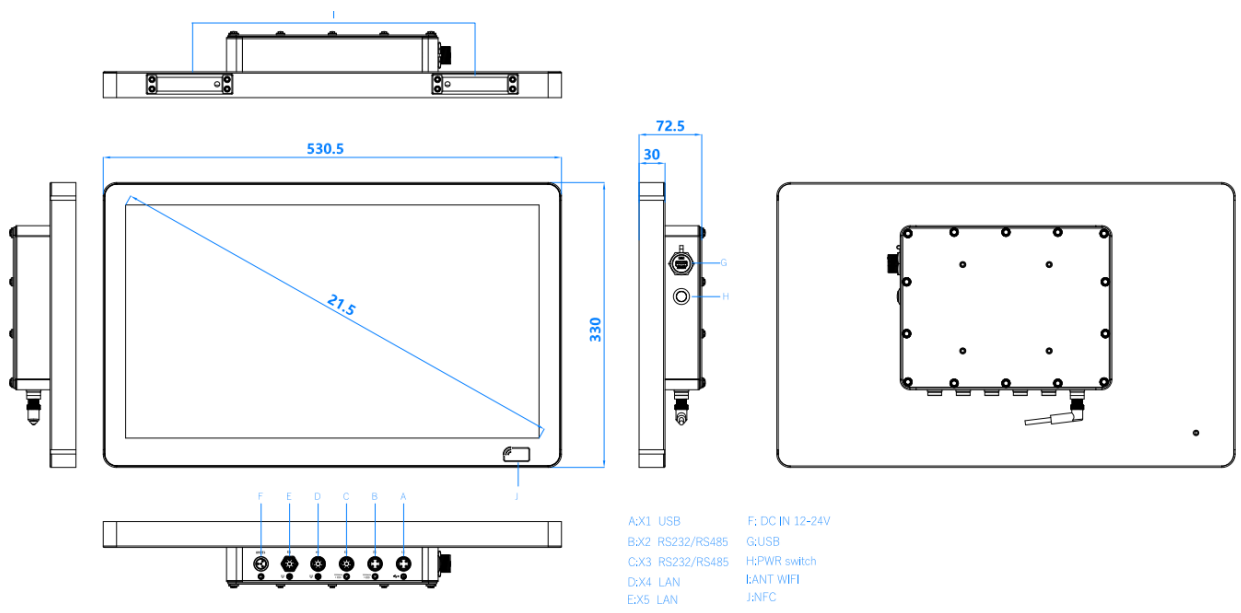
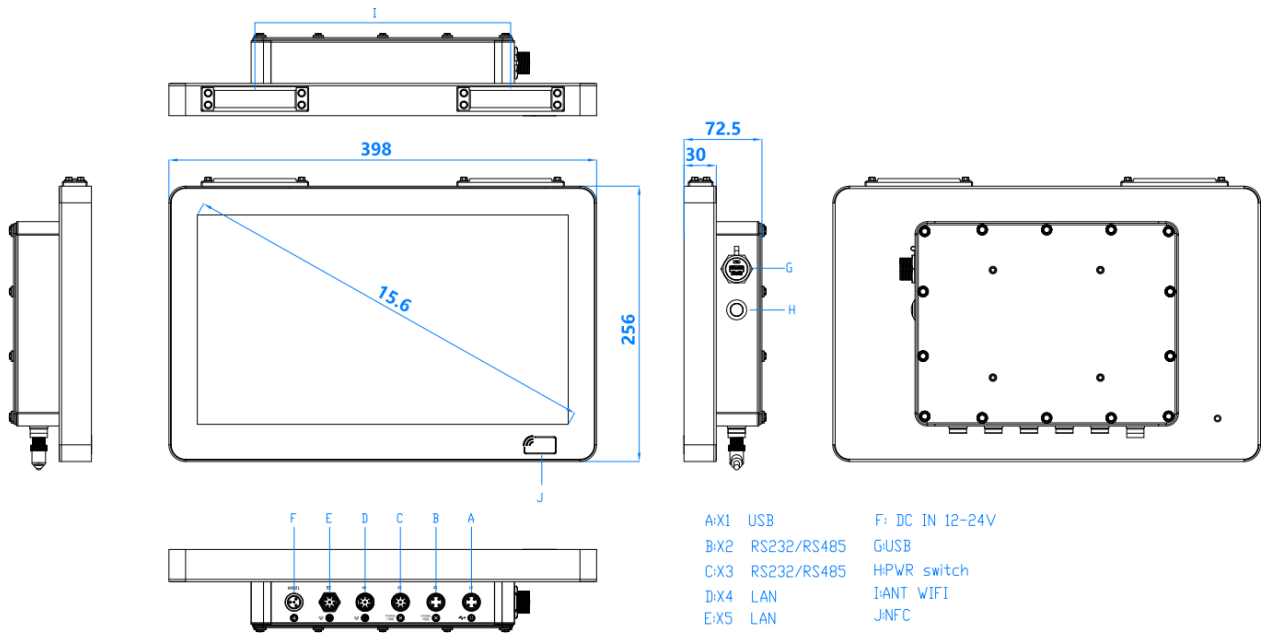
Model No.				
		WP1563-C-XXX	WP2153-C-XXX	WP2383-C-XXX
System	CPU	Intel® Celeron® J6412 processor, Quad-core,base frequency 2.0GHz,TDP 10W Intel® Processor Core™ i5-1235U		
	Memory	1 x DDR4-3200MHz SO-DIMM slot, up to 32GB		
	Storage	1 x M.2-2242 B Key SSD slot(SATA 3.0) (12th Gen CPU:1 x M.2-2280 M Key SSD slot(SATA3.0)		
	USB	2 x USB2.0		
	COM	2 x RS-232(COM1,RS-485 optional)		
	LAN	2 x GbE(RJ45),Intel i210-AT controller		
	Other I/O	1 x POWER/ 1x DC IN /2x LAN /2 x COM /2x USB		
	WIFI	Support the WLAN standard IEEE 802.11 a/g/n		
	NFC	Supports 13.56MHz,Supports ISO14443 TYPE A standard/ Mifare standard cards		
LCD	LCD Size	15.6" FHD TFT LCD	21.5" FHD TFT LCD	23.8" FHD TFT LCD
	Resolution	1920 x 1080	1920 x 1080	1920 x 1080
	Luminance	350cd/m2	250cd/m2	250cd/m2
	MTBF(hours)	50000hrs	50000hrs	30000hrs
	Contrast Ratio	800: 1	1000: 1	3000: 1
Touch screen	Type	Multi-touch,capacitive touch screen		
	Transmittance	≥ 87%		
	Controller interface	USB 2.0		
OS	OS	Windows10, Linux		
Power Consumption	Input Voltage	DC 12~24V		
	Idle Power Consumption	<60Watt (<84Watt 12th Gen CPU)		
Mechanical	Housing	Rugged stainless steel		
	Dimensions	398mm x 256mm x 72.5mm	530.5mm x 330mm x 80mm	581mm x 359mm x 72.5mm
	VESA Size	100mm x 100mm		

	Weight	6.35kg	j s.5kg	19.95kg
Environment	Operating Temperature	0 ~ 50°C		
	Storage Temperature	-20 ~ 60°C		
	Relative Humidity	5~95% @40° (non-condensing)		
	Vibration	SSD applied:1.SGrms,IEC 60068-2-64,random,5~500Hz,1 hr/axis		
	Shock	Operating IOG peak acceleration (11ms duration), follow IEC 60068-2-27		
	EMC	-		
	Waterproof	IP69K		

Table 1-1: Specification

1.6 Dimensions

WPXXX3-C



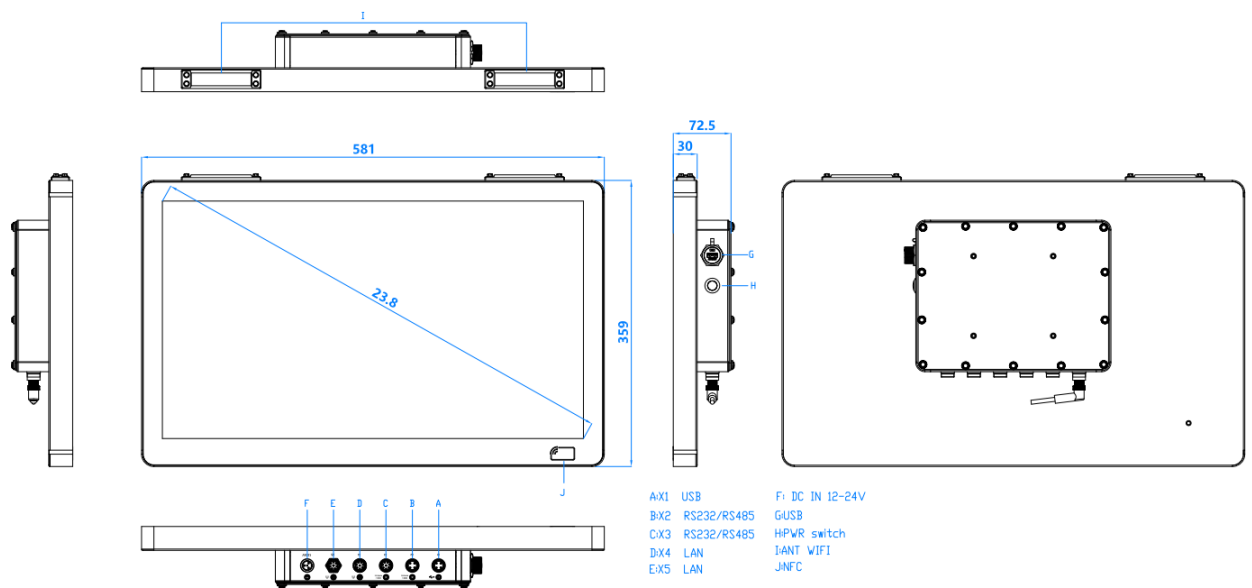


Figure 1-4: WPXXX3-C dimensions

Chapter 2

INSTALLATIONS

Warning:

When installing the AS560PKC, make sure to: ¹¹ Turn the power off: chance of electrocution.

Turn off the monitor and unplug it from the power supply. ¹¹ Only let certified engineer change the hardware settings: Incorrect settings can cause irreparable damage to the product.

¹¹ Install the monitor with assistance: The product is very heavy and maybe damage by drops and bumps.

Two or more people should install the panel PC. ¹¹ Take anti-static precautions: Electrostatic discharge can destroy electrical components and injure the user. Users must ground themselves using an anti-static wristband or similar device.

The installation steps below should be followed in order:

Step 1: Unpack the flat panel PC;

Step 2: Check all the required parts are included;

Step 3: Install the hard drive;

Step 4: Install the compact flash card;

Step 5: Mount the flat panel PC;

Step 6: Connect peripheral devices to the bottom panel of the flat panel PC;

Step 7: Connect the power cable;

Step 8: configure the system;

2.1 Unpack the flat panel PC

Unpack the flat panel PC, follow the step below:

Step 1: Carefully cut the tape sealing the outside box. Only cut deep enough to break the tape.

Step 2: Open the outside box.

Step 3: Carefully cut the tape sealing the inside box. Only cut deep enough to break the tape.

Step 4: Open the inside box.

Step 5: Lift the monitor out the box.

Step 6: Remove the peripheral box from the main box

2.2 Packing list:

Please check out all items by following list when you open the package:

Item	Picture	Quantity
AS560PKC		1
Power adapter		1
USB		1
COM		2
LAN		2

Table 2-1: Packing List

If any items are missing or damaged, contact the distributor or sales representative immediately.



Figure 2-1: Monitor stand

2.2.1 Arm mounting

AS560PKC can be installed on any arm that supports the standard VESA mounting interface. An example wall arm is shown below:



Figure 2-2: Arm mounted

To install the AS560PKC on the arm, follow the direction below:

Notice: Make sure the arm supports standard VESA mounting. The AS560PKC uses a VESA mounting to attach to the arm.

Step 1: The arm purchased separately, follow the instructions in the arm' s user manual to securely attach the arm to the wall.

Step 2: Once the mounting arm has been firmly attached to the surface, lift the flat panel PC onto the interface pad of the mounting.

Step 3: Align the retention screw holes on the mounting arm interface with those in the flat panel PC.

Step 4: Secure the flat panel PC to the interface pad by inserting four retention screws through the bottom of the mounting arm interface pad and into the flat panel PC.

2.2.2 Wall mounting

To mount the flat panel PC onto the wall, please follow the steps below:



Figure 2-3: Wall mounting

Step 1: Select the location on the wall for the wall-mounting bracket.

Step 2: Carefully mark the locations of the four bracket screw holes on the wall.

Step 3: Drill four pilot holes at the marked locations on the wall, for the bracket retention screws.

Step 4: Align the wall-mounting bracket screw holes with the pilot holes.

Step 5: Secure the mounting-bracket to the wall by inserting the retention screws into the four pilot holes and tightening them

Step 6: Insert the four monitor mounting screws provided in the wall mounting kit into the four screw holes on the rear panel of the flat panel PC and tighten until the screw shank is secured against the rear panel

Step 7: Align the mounting screws on the monitor rear panel with the mounting holes on the bracket.

Step 8: Carefully insert the screws through the holes and gently pull the monitor downwards until the monitor rests securely in the slotted holes. And ensure that all four of the mounting screws fit snugly into their respective slotted holes.

Step 9: Secure the panel PC by fastening the retention screw of the wall-mounting bracket.

2.7 10 connectors

The 10 connectors extend the capabilities of the panel PC but are not essential for operation (except power)

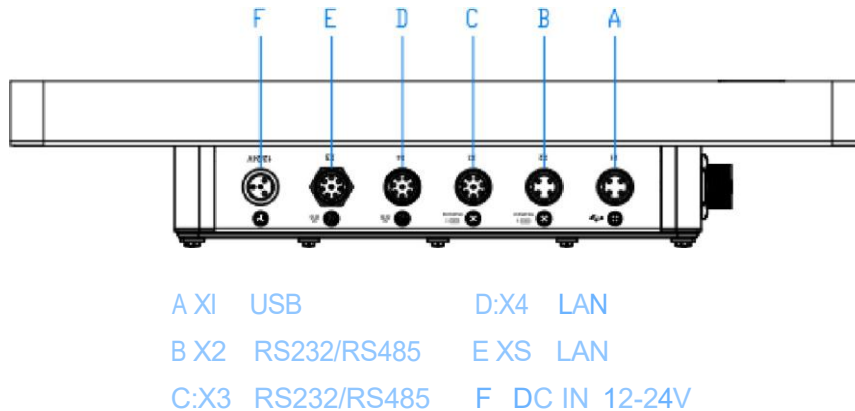


Figure 2-4: 10 Connectors

2.7.1 LAN connection

The RJ-45 connectors enable connection to an extend network. To connect a LAN cable with a RJ-45 connector, please follow the instructions below.

Step 1: Locate the RJ-45 connector on the bottom panel of the AS560PKC.

Step 2: Align the connectors. Align the RJ-45 connector on the LAN cable with one of the RJ-45 connector on the bottom panel of the AS560PKC. Please

See Figure 2-13

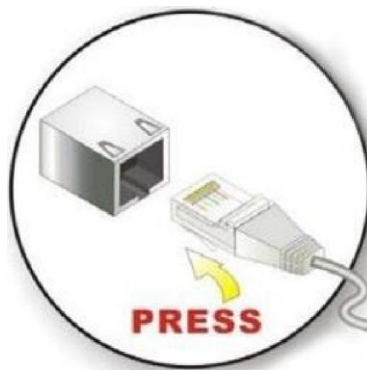


Figure 2-5: LAN connection

e
s
s

Step 3: Secure the connector. Secure the serial device connector to the external interface by tightening the two retention screws on either side of the connector.

2.7.2Serial device connection

To connect USB device to the AS560PKC, please follow the instruction below:

Step 1: Locate the DB-9 connector. The location of the DB-9 connector is shown in chapter 2.

Step 2: Insert the serial connector. Insert the DB-9 connector of a serial device into the DB-9 connector on bottom panel. Please see Figure 2-14.

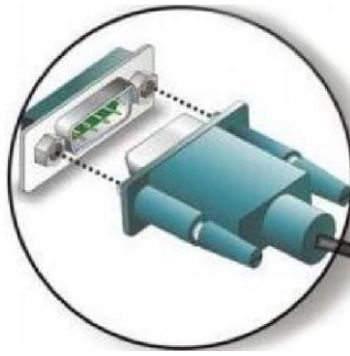


Figure 2-6: Serial device connector

Step 3: Secure the connector. Secure the serial device connector to the external interface by tightening the two retention screws on either side of the connector.

2.7.3 USB connection

To connect USB device to the AS560PKC, please follow the instruction below:

Step 1: Located the USB connectors. The locations of the USB connectors are shown in Chapter 2

Step 2: Align the connectors. Align the USB device connector with one of the connectors on the bottom panel. Please See Figure 2-15

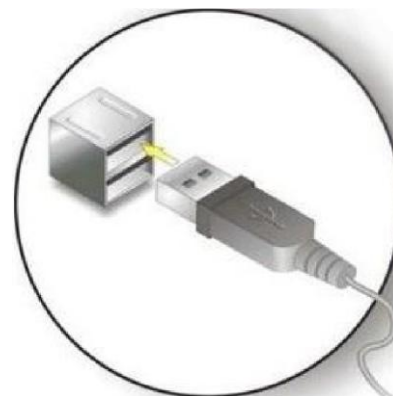


Figure 2-15: USB Device connector

Step 3: Insert the device connector. Once aligned, gently insert the USB device connector into the onboard connector

2.8 Power connector

The power cable connects the panel PC to power supply. The power cable is required for operation of the panel PC.

Step 1: Connect one end to the panel PC.

Step 2: Connect the other end to the included power supply.

2.9 Connectors Definition

■ COM Ports

COM1 ~2 are 4-core M12 connector (RS-485 optional) and its definition is:

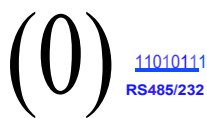
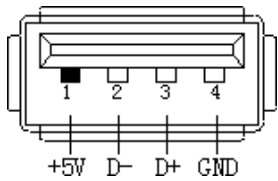
	tt	m%	
		RS-232 !UA.	RS-485
	1		Data-
	2	RXD	Data+
	3	TXD	
	4	GND	

Table 2-2: COM1~2 MI2 connectors

■ USB

We provide a standard single deck USB port in front panel, you can use the 1 USB interfaces at the same time, and here is the interface definition:

	PIN	SIGNAL
	1	+5V
	2	Date-
	3	Date+
	4	GND

5-core M12 USB connector and its definition is:

	针	信号
	1	+5V
	2	Date-
	3	Date+
	4	GND
	5	⚡

Table 2-3: USB

■ Ethernet Interfaces (LAN1, LAN2) (LAN1, LAN2)

We provide two 10 / 100 / 1000Mbps RJ-45 Ethernet interfaces, you can use it directly. There are two status indicators, links status on the left side, data transmission status on the right side.

	针	信号	针	信号
	1	TX2+	5	TX1+
	2	TX3+	6	TX0-
	3	TX3-	7	TX2-
	4	TX0+	8	TX1-

Table 2-4: M2 LAN connector

■ Power connector interface:

- AS560PKC offers a 3-pins power input interface:

	tt	1□"5"
	1	12~24V
	2	GND
	3	W

Table 2-5: Power connector

PWR, hard drive status indicators

We provide a set of power, hard drive status indicators, you can know the procedure status by these indicators, green light constantly is for power-up. Red light flashing on hard drive indicator is shows that the hard drive is reading/writing data for now.

Chapter 3

BIOS Setting

3.1 Introduction

The BIOS is programmed onto the BIOS chip, the BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.

3.1.1 Starting setup

The AMI is activated when the computer is turned on. The setup program can be activated in one of two ways:

1. Press the <F2> key as soon as the system is turned on.
2. Press the <F2> key when the "Press Del to enter SETUP" tips appears on the screen.

If the message disappears before the <F2> key is pressed, restarted the computer and try again.

3.1.2 Using setup

Use the arrow keys to highlight items. Press <ENTER> to select, use the <PAGE UP> and <PAGE DOWN> keys to change entries. Press <F1> for help and press <ESC> to quit. Navigation keys are shown in.

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left side
Right arrow	Move to the item on the right side
ESC	Reset
+	Increase the numeric value or make changes
-	Decrease the numeric value make changes
F1	General help, only for the status page setup menu and option page setup menu
F2	Previous value
F9	Optimized defaults
F10	Save all the CMOS changes and reset
F12	Fast boot mode

Table 3-1: BIOS navigation keys

3.1.3 Getting help

When <F1> is pressed a small help window describing the appropriate keys to use and the possible selection for the highlight item appears. To exits the help Windows press <ESC> or the <F1> key again.

3.1.4 Unable to reboot after configuration changes

If the computer cannot boot after changes to the system configuration is made, CMOS defaults. Use the jumper described in **Chapter 2**.

3.1.5 BIOS menu bar

The menu bar on the top of the BIOS screen has the following main items:

- Main - Changes the basic system configuration.
- Advanced - Changes the advanced system settings
- PCI / PnP - Changes the advanced PCI / PnP settings
- Boot - Changes the system boot configuration.
- Security - Sets user and supervisor passwords.
- Chipset - Changes the chipset settings.
- Exit - Selects exit options and loads default settings.

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

3.2 Main

When you first enter the BIOS Setup Utility, you will enter the Main setup screen.

You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.

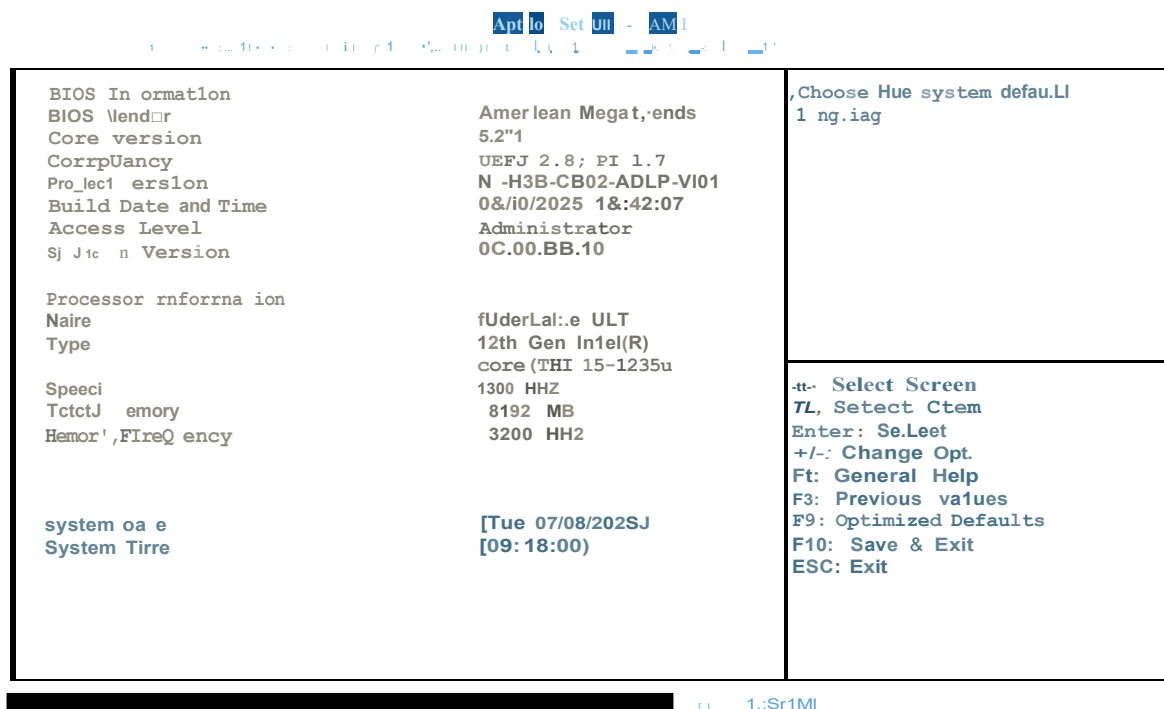


Figure 3.2 Main Setup Screen

The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

3.2.1 System Time/ System Date

Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard.

Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/ DD/ YY format. The time must be entered in HH : MM : SS format.

3.2.2 Power on configuration

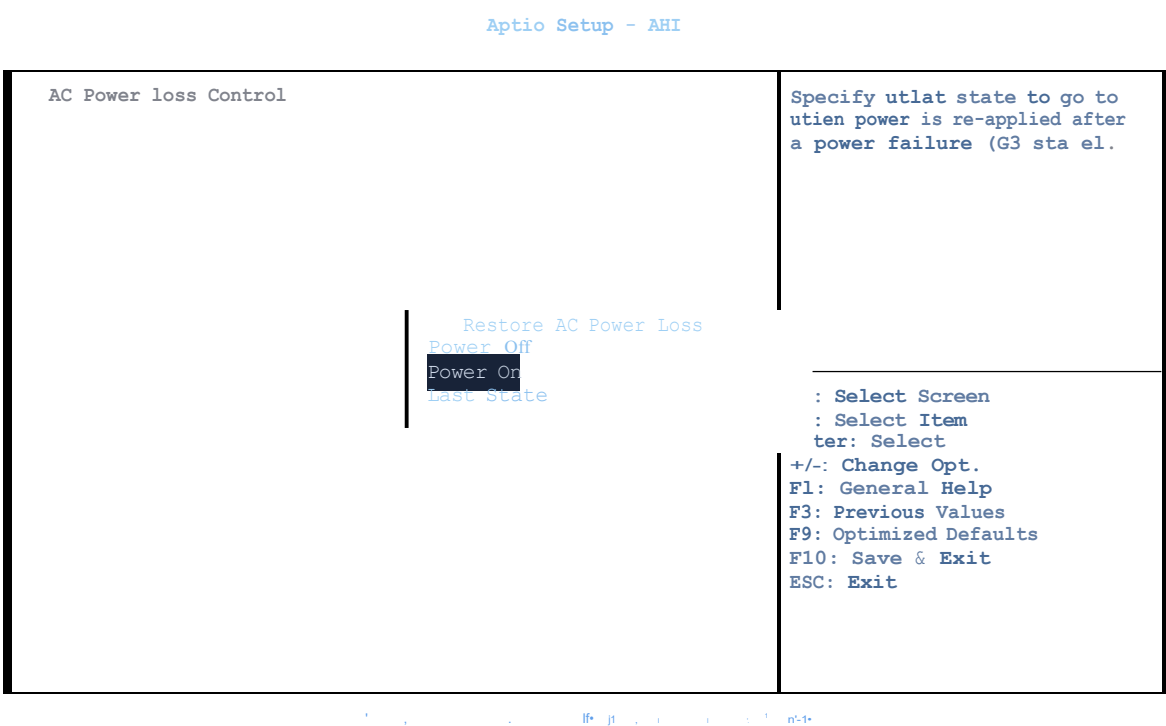


Figure 3.3Power on Settings

Power OFF: After accidental power-off, the device won't automatically boot-up when power-on again.

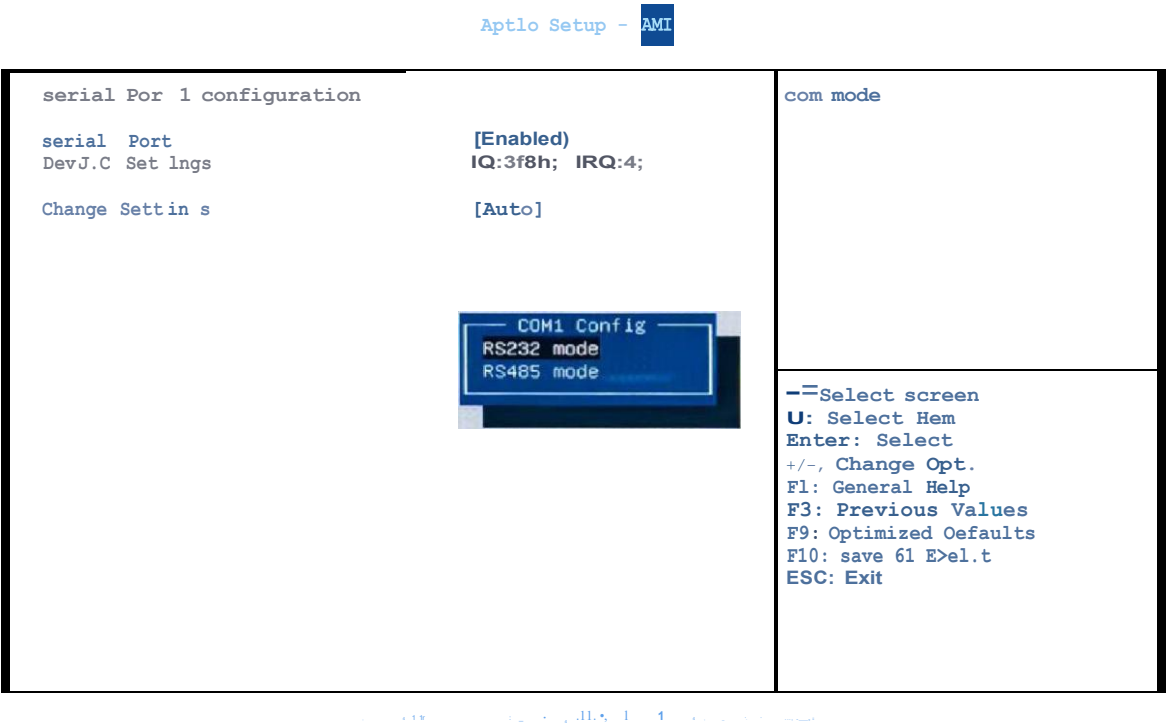
Power ON: After accidental power-off, the device will automatically boot-up when power-on again.

Last State: After accidental power-off, the device will recover to the state of the former state before power-off. i.e.: If the former state is "Power On", then the device w

ill automatically boot-up when power-on again; if the former state is" Power off", t
hen the device will remain power-off when the power- on again.

3.2.3 RS485 Function Settings

In the setup screen, select the "Advanced" tab, then choose the "Super 10 Configuration" tab. Press the "Enter" key and select "Serial Port 1 Configuration". Change the RS232 mode to RS485 mode. This indicates that the RS485 function is enabled.



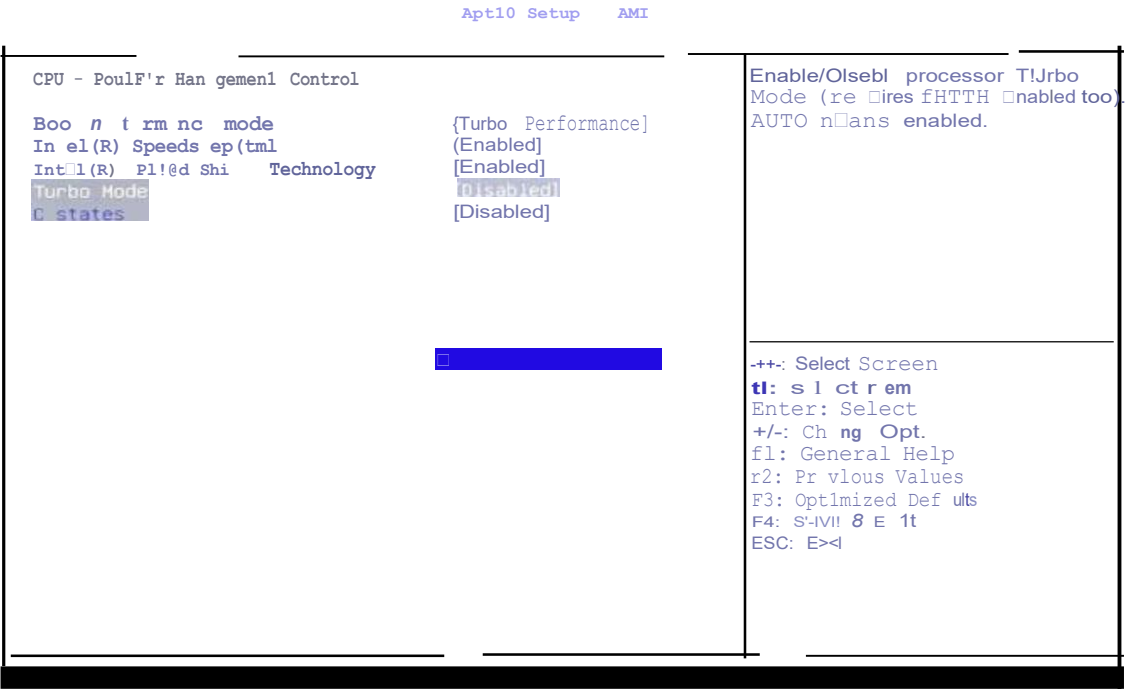
□3-3: RS485 function settings

3.2.4 CPU Turbo Boost Settings

From the AS560PKC setup screen, select the "Advanced" tab. Then, by selecting the "Power & Performance" tab, you can enter the setup screen. Choose

the "CPU - Power Management Control" option, and then select "Turbo Mode".

Change the "Disabled" at the end to "Enabled" to indicate that turbo mode is enabled; otherwise, it is disabled.



□3-4: CPU Turbo Mode

Chapter 4

System Maintenance

4.1 System Maintenance Introduction

If the components of the TPC6000-CXX 3 fail they must be replaced, such as the wireless LAN module or the motherboard. Please contact the system reseller or vendor to purchase the replacement parts. Back cover removal instructions and jumper settings for the AS560PKC Care described below.

4.2 Motherboard Replacement

In the case of motherboard failure, please contact an ASTOR sales representative, reseller or system vendor. The motherboard is accessible after opening the rear cover.

4.3 Cover Removal

Warning:

Turn off the power before removing the back cover. Risk of electrocution.

Severe damage to the product and injury to the body may occur if internal parts are touched while the power is still on.

Warning:

Take antistatic precautions when working on the internal components. Some internal components are easily damaged or destroyed by electrostatic discharge.

Take antistatic precautions to prevent electrostatic discharge.

To replace any of the following components,

- Memory module
- Wireless LAN module
- Inverter

The back cover of the AS560PKC must be removed. To remove the back cover, loosen the four silver screws, slide the cover down and then lift to remove.

A large, bold, dark blue letter 'A' is centered within a light blue rectangular box. The box has a thin white border and is set against a white background.

Safety Precautions

Warning:

The precautions outlined in this chapter should be strictly followed. Failure to follow these precautions may result in permanent damage to the AS560PKC:

A.I Safety Precautions

Please follow the safety precautions outlined in the sections that follow:

A.1.1 General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- **Follow the electrostatic precautions** outlined below whenever the AS560PKC is opened.
- **Make sure the power is turned off and the power cord is disconnected** whenever the AS560PKC is being installed, moved or modified.
- **Do not apply voltage levels that exceed the specified voltage range.** Doing so may cause fire and/or an electrical shock.
- **Electric shocks can occur** if the AS560PKC chassis is opened when the AS560PKC is running.
- **Do not drop or insert any objects** into the ventilation openings of the AS560PKC.
- If considerable amounts of dust, water, or fluids enter the AS560PKC, turn off the power supply immediately, unplug the power cord, and contact the AS560PKC vendor.

- **DO NOT** do the following:
- **DO NOT** drop the AS560PKC against a hard surface.
- **DO NOT** strike or exert excessive force onto the LCD panel.
- **DO NOT** touch any of the LCD panels with a sharp object.
- **DO NOT** use the AS560PKC in a site where the ambient temperature exceeds the rated temperature

A.1.2 Anti-static Precautions

Warning:

Failure to take ESD precautions during the installation of the AS560PKC may result in permanent damage to the AS560PKC and sever injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the AS560PKC. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the AS560PKC is opened and any of the electrical components are handled, the following anti-static precautions are strictly adhered to.

- **Wear an anti-static wristband:** Wearing a simple anti-static wristband can help to prevent ESD from damaging any electrical component.
- **Self-grounding:** Before handling any electrical component, touch any grounded conducting material. During the time the electrical component is

handled, frequently touch any conducting materials that are connected to the ground.

- **Use an anti-static pad:** When configuring or working with an electrical component, place it on an antic-static pad. This reduces the possibility of ESD damage.
- **Only handle the edges of the electrical component:** When handling the electrical component, hold the electrical component by its edges.

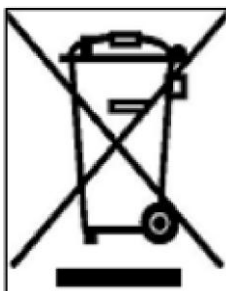
A.1.3 Product Disposal

CAUTION:

Risk of explosion if battery is replaced by and incorrect type, only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method. Within the European Union:



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal

household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

A.2 Maintenance and Cleaning Precautions

When maintaining or cleaning the AS560PKC, please follow the guidelines below.

A.2.1 Maintenance and Cleaning

Prior to cleaning any part or component of the AS560PKC, please read the details below.

- Except for the LCD panel, never spray or squirt liquids directly onto any other components. To clean the LCD panel, gently wipe it with a piece of soft dry cloth or a slightly moistened cloth.
- The interior does not require cleaning. Keep fluids away from the interior.
- Be careful not to damage the small, removable components inside.
- Turn off before cleaning.
- Never drop any objects or liquids through the openings.

- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning.
- Avoid eating, drinking and smoking nearby.

A.2.2 Cleaning Tools

Some components may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use for cleaning.

- **Cloth** - Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended.
- **Water or rubbing alcohol** - A cloth moistened with water or rubbing alcohol should be used.
- **Using solvents** - The use of solvents is not recommended as they may damage the plastic parts.
- **Vacuum cleaner** - Using a vacuum specifically designed for computers is one of the best methods of cleaning. Dust and dirt can restrict the airflow and cause circuitry to corrode
- **Cotton swabs** - Cotton swabs moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.
- **Foam swabs** - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.



B

Hazardous Materials Disclosure

B.I Hazardous Materials Disclosure Table for IPB Products Certified as RoHS Compliant Under 2002/95/EC without Mercury

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the table below.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	X	0	0	0	0	X
Housing	X	0	0	0	0	X
Printed Circuit Board	X	0	0	0	0	X
Metal Fasteners	X	0	0	0	0	0
Cable Assembly	X	0	0	0	0	X
Fan Assembly	X	0	0	0	0	X
Fan Assembly	X	0	0	0	0	X
Battery	0	0	0	0	0	0
0: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/TI1363-2006 X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/TI1363-2006						

Table B-1

