

**PPC-2112PT**  
( Low Power 21" Touch Panel PC )

**User's Manual**

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## 1.1 Introduction

This Panel PC is designed to be used for all kinds of industrial, medical, commercial, banks (e.g.

ATM), kiosk, vehicles, train, bus, truck, home, hotel, restaurant, airport, gas station, as well as military applications. The components chosen are industrial grade which are able to withstand higher temperature and harsh environment for many years. The total fanless design was specially designed for very dirty environments which are full of dirty, dust, chemical gas or liquid and small particles in the air that can cause damage to the computer system. Our products incorporate a variety of advanced features and anti-shock, anti-vibration designs, yet we are able to offer very cost-effective pricing and solutions. We believe that we can provide not only the best technology and advanced products, but also the lowest cost products compared to other similar products. For a complete view of our products and solutions, please discuss with our distributors or check on our web site.

This product manual contains a variety of technical information to help you to use or install the product. The manual contains the technical specification, port connectors, diagrams of the board or unit and its various areas, jumper settings, and many other useful areas. Please refer to the manual for details about each specific product. The manual also includes some general idea about special features, software options, and some basic troubleshooting ideas to help you in these areas.

The driver CD contains the various product manuals and many drivers, organized by the product, then device such as LAN, and then by operating system such as Windows XP, 2000, NT, 98 or Linux or other operating systems. Please select the product of interest first, and then select the device area such as LAN or touch screen or other. Then select the operating system of interest such as Linux, XP Embedded, Win CE, Win 98, etc. Now you will have a few choices such as install a driver, look at the driver install guide, or browse the directory. You can easily browse the directory to see related files and tips. The driver CD is designed to auto run under windows, so for best use it is better to run it on windows. However if you are installing from a Linux system for example, you can also browse the driver CD directly to go to the selected product directory, organized by product name.

This Panel PC is widely used in all kinds of applications including Kiosk, factory automation, HMI (Human-Machine-Interface), hotel, restaurant, home, banking (e.g. ATM), 7-11, POS, POI, super markets, medical, military, food, mining, airport, school, building, vehicles, telecommunications, ... and so on. Whenever the customer has any special requirement, we are very pleased to custom design for them at a much competitive pricing and within the average 4 weeks delivery time.

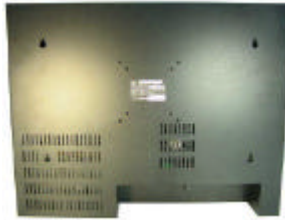
We are able to custom design the all-in-one or separate Panel PC from a very small 6.4", 7", 8.4", 10.4", 12.1", 15", 17", 18", 21", 23", 30", all the way up to the largest 40" as per the customer's required specifications including in the very cold weather and a higher temperature or in a very harsh environment with dirty, humid, full of particles in the air, etc. Please contact our distributors for further details.

## 1.2 Pictures and dimensions of PPC-2012PT

### - Pictures of low power PPC-2112PT



IP-56, NEMA-12  
Rugged steel construction

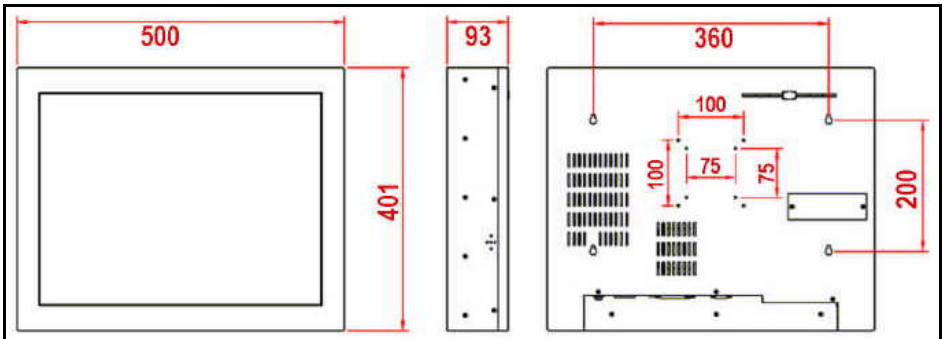


VESA-75, VESA-100  
wall-mount compliant

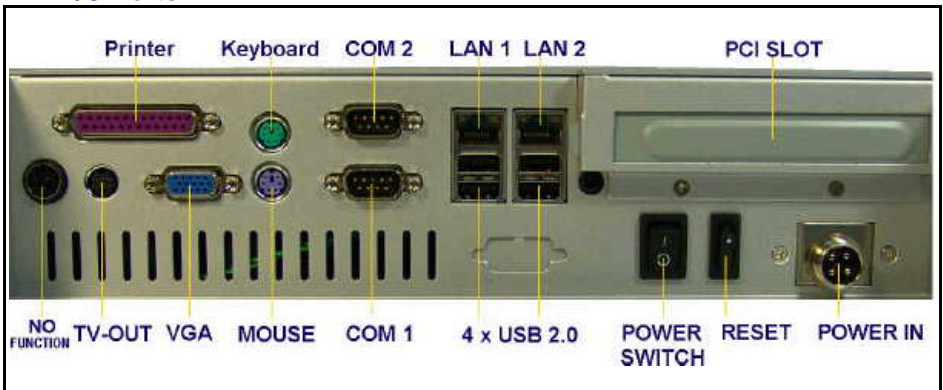


4 x USB 2.0, 4 x COM, 2 x LAN,  
MPEG-II, Speakers, PCI

## 1.3 Dimensions



## 1.4 I/O Ports



## 1.5 Power Adapter and Optional Accessories



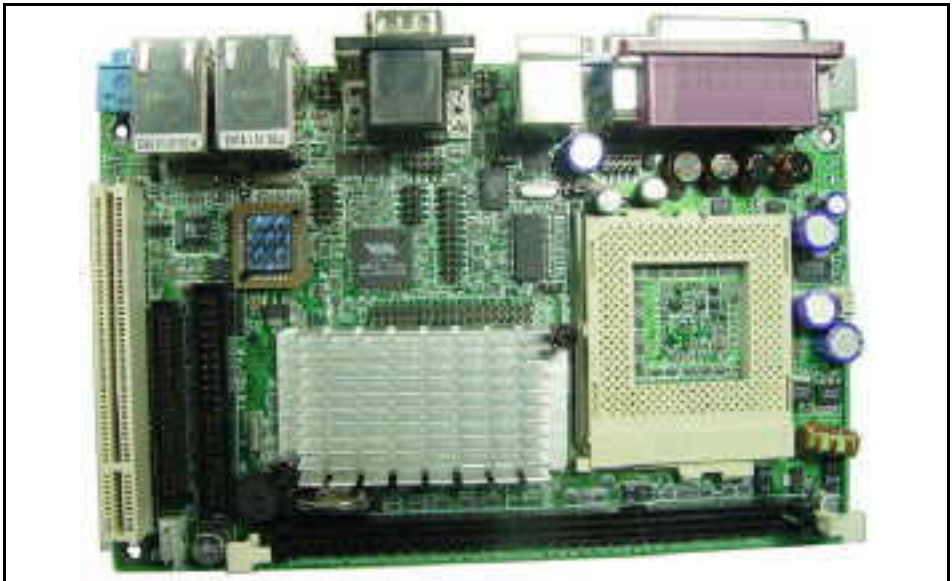
**Power supply**



**Wall mount Kit**

## 1.6 Main Board Used In PPC-1572, 1573, 1513, 1575, 1576, 1577, 1772, 1773, 1912, 2012, 2112, etc.

**Main board : NASA-6822VLLA**



## 1.7 Specifications

Model No.	PPC-2112PT
Front bezel	No aluminum front bezel. Only 1.6mm steel housing, square box
Housing	Made from 1.6mm rugged steel construction
IP & NEMA	Meets 100% water-proof IP-65, 66, 67, 68, NEMA-4 on front
Color	Black color is standard. Silver color is optional at your request
Wall-mount	Meet VESA-75, VESA-100 wall mount standard
LCD specs.	21" TFT LCD display, high bright 250 cd/m2 lamination,
Touch screen * Vandal-Proof Touch	Standard : 5-wire resistive touch screen, 2048 x 2048 resolution <b>Note</b> : Vandal Proof, Strike-proof, cut-proof, chemical liquid free Capacitive touch screen is available for your request at low cost
Speaker	Built in 2 stereo speakers
Processor	VIA C3 Low power 1GHz CPU
System RAM	Support up to maximum 1GB DDR RAM Standard is 256MB.
HDD	Standard is 20GB slim size anti-vibration HDD.
VGA	Support second monitor
AGP	Support 4X, 8X AGP speed
Video Memory	Support 16M, 32M, and 64M share memory. Default is 32 or 64M.
MPEG-II chip	Support hardware MPEG-I, MPEG-II video and movies
LAN	Dual fast 100/10 Mbps Ethernets support networking
USB 2.0	4 x USB 2.0 at I/O port. (another 2 x USB pin headers on board)
Serial port	4 x COM ports (2 outside, 2 inside), 3 x RS232, 1 x RS232 / 422 / 485.
Keyboard	1 x PS2 type keyboard port
Mouse	1 x PS2 type mouse port
Printer port	1 x LPT port for printer interface
PCI expansion slot	1 x PCI slot for future expansion purpose
PCI ver. 2.2	Support PCI version 2.2
PCI IDE port	Support ATA-100 x 2 up to 4 devices
Audio jack	Support external speaker or microphone function
Vibration resistance	Passed strict IEC-60068 life random vibration test from 5 – 500 Hz at 2G RMS under Windows XP Pro.
Shock resistance	Passed strict IEC-60068 life shock test from 15G for 11ms duration at 3 axis 6 directions under Windows XP Pro.
Power supply	Standard AC 100-240V power adapter. Output : 19VDC DC 12, 24V power adapters are optional.
Dimensions (WxHxD)	See the above drawing
Operating temperature	From 0 to 50 degree C at an air ventilation area

## SECTION 2 INSTALLATION

### 2.1 How to load Windows O.S.

Put the legal MicroSoft Windows XP CD into the CD-ROM of the PPC-1573PT, follow the instructions step by step and finish the installations of the Windows XP Home or Pro. The installation procedure is same as those ordinary desktop PC.

Sometimes it is better to enter into the BIOS to select CD-ROM as the primary boot-up disk.

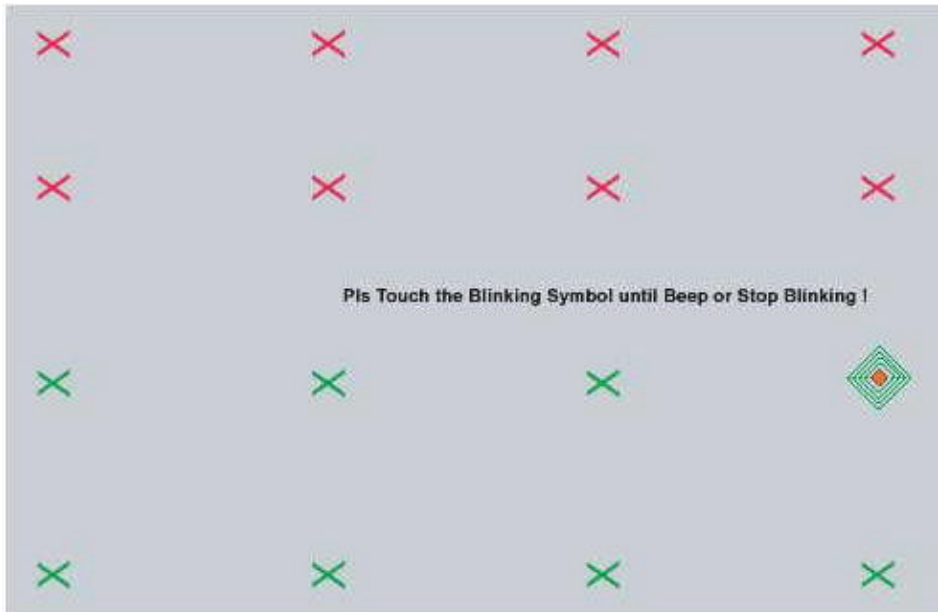
## SECTION 3 TOUCH SCREEN DRIVER INSTALLATION

### 3.1 Touch screen driver

The touch driver was contained in the CD Disk came with the unit. There are two touch drivers. One is E-T, one is S-M. Please choose E-T touch driver to load into the PPC. After loading the E-T touch driver, you must perform a 25-point calibration on the touch. Please be sure that each touch point must be calibrated one by one. After all of the 25 touch points were calibrated. The touch driver is successfully loaded.

### 3.2 25-Point Calibration

Touch the center point of the blinking icon one by one until all 25 points were calibrated.



## SECTION 4 BIOS SETUP

### 4.1 BIOS Setup

The 8" LCD built in is a Sharp TFT LCD with 640 x 480 resolution and a high brightness of 380 – 400 cd/m<sup>2</sup>. Please be sure to choose the correct Display Device and Panel Type at the *Advanced Chipset Features Setup* in case you change the original BIOS setup by accident. Follow the following procedures :

- Step 1 : Enter into BIOS Setup Main menu
  - Step 2 : Choose Advanced Chipset Features Setup
  - Step 3 : Move to Display Device item, select [ CRT+LCD ]
  - Step 4 : Move to Panel Type item, select [ 00 ]
  - Step 5 : Save the setting and Exit the BIOS, restart the system
- Finish.

### BIOS Set-up :

#### BIOS Setting for Nagasaki Panel PCs

Model No.	Size	Resolution	Mainboard	Main → Advanced Chipset → Select Display Device	
				Display Device	Panel Type
PPC-712	7"	640 x 480	NASA-6822	No matter	<b>CRT</b>
PPC-812	8"	640x480	NASA-6822	CRT+LCD	<b>00</b>
PPC-872	8"	640 x 480	NASA-6822	CRT+LCD	<b>00</b>
PPC-1072-VGA	10.4"	640 x480	NASA-6822	CRT+LCD	<b>00</b>
PPC-1072-SVGA	10.4"	800 x 600	NASA-6822	CRT+LCD	<b>01</b>
PPC-1272	12"	800 x 600	NASA-6822	CRT+LCD	<b>01</b>
PPC-1273	12"	800 x 600	NASA-6822	CRT+LCD	<b>01</b>
PPC-1511	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1513	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1514	15"	1024 x 768	NASA-P411	CRT+LCD	<b>8</b>
PPC-1572	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1573	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1574	15"	1024 x 768	NASA-P411	CRT+LCD	<b>8</b>
PPC-1575	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1576	15"	1024 x 768	NASA-P411	CRT+LCD	<b>0A</b>
PPC-1577	15"	1024 x 768	NASA-6822	CRT+LCD	<b>0A</b>
PPC-1712	17"	1280 x 1024	NASA-6822	CRT+LCD	<b>0D</b>
PPC-1713	17"	1280 x 1024	NASA-6822	CRT+LCD	<b>0D</b>
PPC-1714	17"	1280 x 769	NASA-6822	CRT+LCD	<b>0C</b>
PPC-1912	19"	1280 x 1024	NASA-6822	CRT+LCD	<b>0D</b>
PPC-2012	20"	1280 x 1024	NASA-6822	CRT+LCD	<b>0D</b>
PPC-2112	21"		NASA-6822	CRT	

## SECTION 5 CPU Clock and Ratio setting

Only VIA C3 1.0 or 1.2GHz low power CPU can be used on this mainboard.

### Note :

1. BIOS setting must select 133MHz as CPU clock speed and 7.5 ratio for best performance.
2. In case you wish to reduce the thermal temperature of the system, you can enter into the BIOS and select a lower ratio e.g. 4.0 or 5.0 than 7.5.



Picture of the VIA C3 low power 1.0 GHz CPU.

## SECTION 6 HOW TO ORDER A PANEL PC

### 6.1 Model No.

**- PPC-2112PT :**

17 inch Panel PC with Touch screen and all standard equipments

**- PPC-2113PT :**

17 inch Panel PC with Touch screen, without CD-ROM

### 6.2 Legend : How to understand the letter and number of a Panel PC

<b>Letter</b>	The meaning of the letters or numbers
<b>PPC</b>	Panel PC
<b>21</b>	21 inch (the size of the LCD display)
<b>1</b>	Means there is no Aluminum Front Bezel
<b>2</b>	2 means the 2 <sup>nd</sup> model developed in its kind. There is a CD-ROM inside.
<b>3</b>	3 means the 3 <sup>rd</sup> model developed in its kind. There is no CD-ROM inside.
<b>P</b>	PCI slot for future expansion
<b>T</b>	Touch screen, it could be a Resistive touch or Vandal-Proof Capacitive Touch screen