# **TWINHEAD**



**PN1H (Model number PLUGTH series)** 

# Plug-In PC - PLUGTH series for Panasonic Professional Displays

## **Operating Instructions**

Before connecting, operating, or adjusting this product, please read this instruction completely. Please keep this manual for future reference.

## **Safety Precautions**

# **⚠ WARNING**

Never attempt to disassemble or modify this product.

To avoid fire, shock, or failure.

 If you sense smoke, an odd odor, or unusual noises while in operation, immediately unplug the display.

Switch off and unplug the plasma display from the supply outlet. To avoid fire or shock, do not leave the power of the display turned on.

- To avoid shock or other problems, do not leave the display plugged into the supply outlet.
- It is recommended to use shielded LAN cable.
- Please contact our designated service department for installation or change of this product.

#### **Attention to Service personnel:**

Before removing or installing the Plug-in PC, be sure to turn the power of the display off and unplug it from the supply outlet.

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### **Handling Cautions**

Do not touch the connector contacts directly with hands.

To avoid electrostatic damage to internal parts, before handling this product, torch a large metallic object such as a steel cabinet to discharge yourself before handling this product.

- Be sure to use the supplied cable or specified parts for interconnection.

  To avoid malfunction or failure, do not use parts other than those recommended.
- Be sure to turn the power of the display off and unplug it from the supply outlet before installing or removing the product.
- When installing or removing the Plug-in PC, exercise care to avoid injury.
   There may be some sharp-pointed solder joints on the rear side of the board that could cause unexpected injury.
- · Use the supplied power adaptor.

### **Safety Instructions**



Do not block the opening vents provided for ventilation.

Blocking these vents may cause the Plug-in PC processor to overheat.



Always keep strong magnetic or electrical objects away from your Plug-In PC.



Do not use store your Plug-In PC in extreme temperatures.



Do not place your Plug-In PC near fire or other sources of heat.



Do not expose to dust or corrosive materials.



Do not expose your Plug-In PC to sudden changes in temperature or humidity.

Keep your Plug-In PC away from air conditioners or heating vents.

## Copyright

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## **Regulatory Statement**

#### **Federal Communications Commission Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

■ Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and shielded AC power cable must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

### **Declaration of Conformity**

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

### RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 8 inch from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

This device is slave equipment; the device is not radar detection and not ad-hoc operation in the DFS band.

### **European Notice**

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN 55022 (CISPR 22) Radio Frequency Interference
- EN 55024 (EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61000-3-2, EN61000-3-3) Generic Immunity Standard
- EN 60950-1 (IEC 60950-1) Product Safety

#### R&TTE (CE) MANUAL REGULATORY REQUIREMENT (WLAN - IEEE 802.11a/b/g/n)

- 802.11a Restrictions:
- The low band 5.15-5.35 GHz is for indoor use only.
- 802.11b.g.n Restrictions:
- European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz.

• In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use.

#### **CE Declaration of Conformity**

#### CE!

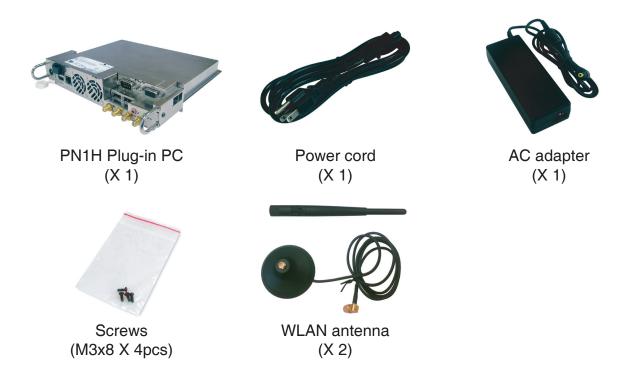
Is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC), Low- voltage Directive (73/23/EEC) and the Amendment Directive (93/68/EEC), the procedures given in European Council Directive 99/5/EC and 9/3360EEC.

The equipment was passed. The test was performed according to the following European standards.

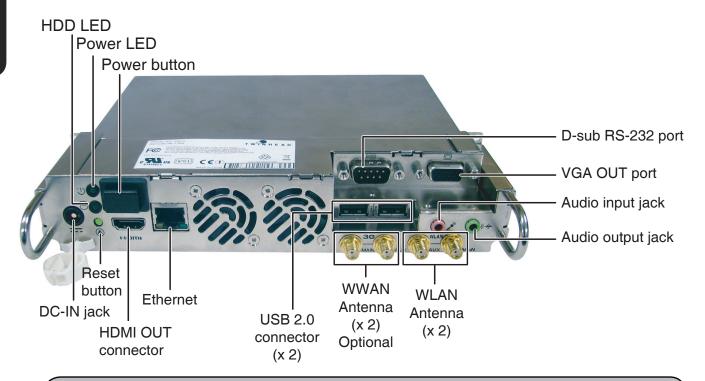
- EN 301 893 V1.2.3
- EN 300 328 V1.7.1 (2006-05)
- EN 301 489-1 V.1.4.1 (2005-09) / EN 301 489-17 V.1.2.1 (2002-04)
- EN 60950-1:2001

## **Package Content**

The following items come with your package. If any of them is damaged or missing, please contact your retailer.



### **Product Overview**





#### Note:

- The Plug-in PC cannot output video signal into HDMI and VGA at the same time.
- By default, the Plug-in PC will follow the power status of the Display.
- It is recommended to use TV's remote control to turn on/off the Plug-in PC.

#### **LED Indicator**

Item	Description	
Power LED	Green when system is active	
	Flashing when it is in standby	
HDD LED	Green when the read/write data	
LAN LED	Green when LAN is connected	
	Yellow when LAN access data	

## **Device Setup**

#### Installation

To install the device, do the following:

- **1**. Turn the power of the Display off and unplug it from the supply outlet.
- 2. Carefully place the Display down on a cushioned surface to protect the screen from damage.
  - Install only with another person's assistance.
- **3**. Remove the slot covers by unscrewing the securing screws.

- **4**. Insert the Plug-in PC until it is firmly plugged into the connector as shown.
  - Note that incomplete insertion may damage the internal components.



- **5**. Secure it with the four included screws. Please fasten with a cross screw driver.
  - Be sure to fasten all screws tightly.



- **6**. Connect all the necessary signal cables.
- 7. Connect the power cord of the Plug-in PC as shown below.









- 8. Connect the Display power cable.
- 9. Turn on the Display.

#### **Detachment**

To remove the device, do the following:

- **1**. Turn the power of the Display off and unplug it from the supply outlet.
- **2**. Carefully place the Display down on a cushioned surface to protect the screen from damage.
- **3**. Remove the securing screws.



**4**. Grip the handle of the Plug-in PC and slowly pull out from the Display slot.



## Selecting the Input Signal

To switch the input signal to Plug-in PC, do the following:

- 1. Connect the power cord correctly and power on the Display.
- 2. Press the **INPUT** button on the remote control or Display control panel to select the input signal to be played back from the equipment which has been connected to the Display.

Input signals will change as follow:

PC: PC input terminal in PC IN.

**Slot Input\***: Input terminal in Slot Input.

\* This option only appears if a Plug-in PC is installed into the Display.

**VIDEO**: Video input terminal in AV IN (VIDEO).

**COMPONENT\*\***: Component or RGB input terminal in COMPONENT/RGB IN.

\*\* "COMPONENT" may be displayed as "RGB", depending the setting of "COMPONENT/RGB-IN SELECT".

**HDMI**: HDMI input terminal in AV IN (HDMI).

**DVI**: DVI input terminal in DVI-D IN.



#### Note:

- When a Plug-in PC incompatible with the Display is installed, "NON-COMPATIBLE FUNCTION BOARD" is displayed on the screen.
- If there is no Plug-in PC installed into the Display, the input signal will change as follow:

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\rightarrow PC \rightarrow VIDEO \rightarrow COMPONENT \rightarrow HDMI \rightarrow DVI
```

**3**. Select **Slot Input** and the system will automatically adjust to the highest resolution of the Display screen size.

# **Specifications**

Features		Specifications		
CPU	Type & Speed	Intel i5 2520M / Intel i7 2620M		
	Install Method			
	Power	35W		
	Consumption			
	Level 2 Cache	3MB on-die for i5, 4MB for i7		
Major Chipsets	Chipsets	Core Logic: Intel HM65		
		VGA: Embeded Graphic Intel HD Graphic 100/200		
		Or nVidia N12P GS (Optional)		
		USB 2.0: HM65 built-in		
		Audio: Support High Definition		
		Keyboard Control: ITE 8518		
System memory	Capacity	Two 204-pin DDRIII SODIMM sockets each for 1, 2, 4GB		
		Standard is 4GB memory		
	Туре	DDR-III 800-1333MHz		
	Max. Memory	8GB		
Storage	Internal hard	2.5" 9.5mm HDD with SATA150, 7200RPM		
	disk drive	Support 320/500 GB or more		
System & Video		EFI BIOS structure		
		4MB Flash Memory		
		Supports ACPI 3.0, USB2.0 boot (all ports)		
		Suspend to RAM, Suspend to Disk		
Communications	Networking devices	Integrated Gigabit bps Ethernet		
	Wireless	Two Mini Express card slots		
	networking devices	Support two Ext. SMA Antennas if WLAN module installed		
	WWAN	Another mini card slot for optional WWAN module that supports LTE module		
		The SIM card socket is on board		
		Support Ext. Main and Aux. SMA Antennas if WWAN module installed		
Operating System	Microsoft OS	Windows 7 (64-bit)		
		Windows XP embedded driver ready		
Power supply		AC power input:100V-240V, 50Hz-60Hz, 110W; output: 15.6V		
Dimensions		209.1mm (W) x 176.4mm (D) x 38.5 mm (H)		
Weight		Approx. 1180g (w/o GPU)		
		Approx. 1210 g (with GPU)		

# **Appendix**

# Plug-In PC Power Control Matrix (on Windows)

Power button setting on Plug-In PC ("When I press the power button")	When the Display is on and turned off by remote, Plug-In PC will change its power	When the Display is off and turned on by remote, Plug-In PC will change its power
Set to " <b>Shut Down</b> "	On> Off	On> On
	Standby> Standby	Standby> On
	Off> Off	Off> On
Set to " <i>Sleep</i> "	On> Standby	On> On
	Standby> Standby	Standby> On
	Off> Off	Off> On
Set to " <b>Do Nothing</b> "	On> On	On> On
	Standby> Standby	Standby> On
	Off> Off	Off> On
Set to "Ask What to do"	It will remain	Disable