

ONYX-1521

15.6" Intel® Atom D525 Dual Core Processor
High Brightness
Slim Medical Panel PC

ONYX-1521 Manual
October, 2012

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Packing List

Before you begin installing your Slim Medical Panel PC, please make sure that the following items have been shipped:

- ONYX-1521 Slim Medical Panel PC
- VESA Screws (M4 x 0.7 x 12mm)
- Utility CD-ROM which contains Drivers and Utilities

If any of these items are missing or damaged, you should contact your distributor or sales representative immediately.

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Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning.
Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation.
Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. **Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.**
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified

service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

- a. The power cord or plug is damaged.
- b. Liquid has penetrated into the equipment.
- c. The equipment has been exposed to moisture.
- d. The equipment does not work well, or you cannot get it to work according to the users manual.
- e. The equipment has been dropped and damaged.
- f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

16. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. [UL 60950-1](#) for IT equipment and [ANSI/AAMI ES 60601-1 / IEC 60601-1](#) series for systems – shall comply with the standard [IEC 60601-1-1](#), Safety requirements for medical electrical systems. Equipment not complying with [ANSI/AAMI ES 60601-1](#) shall be kept outside the patient environment, as defined in the standard.)

Caution:

It may cause the danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer.

Classification

1. Degree of protection against electric shock: Not classified.
TYPE B APPLIED PART for Isolation card function (RS-232)
2. Degree of protection against the ingress of water: IPX0
3. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
4. Mode of operation: Continuous
5. Type of protection against electric shock: Class I equipment
6. No Applied part, No AP / APG

FCC

Warning!



This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

UL Module Description



Onyx-1521 AC modules are developed to suitable for the Classification Mark requirement

Safety Symbol Description

The following safety symbols are the further explanations for your reference.

	<p>Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with ANSI/AAMI ES 60601-1: 2005 AND CAN/CSA-C22.2 No. 60601-1:08</p>
	<p>Attention, consult ACCOMPANYING DOCUMENTS.</p>
	<p>Stand-by (Green light)</p>
	<p>Ground wire Protective Ground wire.</p>
	<p>Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with UL 60601-1, and CAN/CSA C22.2 NO. 601.1</p>

Below Table for China RoHS Requirements

產品中有毒有害物質或元素名稱及含量

ONYX Panel PC/ Workstation

部件名稱	有毒有害物質或元素					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
印刷電路板 及其電子元件	×	○	○	○	○	○
外部信號 連接器及線材	×	○	○	○	○	○
外殼	×	○	○	○	○	○
中央處理器 與記憶體	×	○	○	○	○	○
硬碟	×	○	○	○	○	○
液晶模組	×	○	○	○	○	○
光碟機	×	○	○	○	○	○
觸控模組	×	○	○	○	○	○
電源	×	○	○	○	○	○
<p>O：表示該有毒有害物質在該部件所有均質材料中的含量均在 SJ/T 11363-2006 標準規定的限量要求以下。</p> <p>X：表示該有毒有害物質至少在該部件的某一均質材料中的含量超出 SJ/T 11363-2006 標準規定的限量要求。</p> <p>備註： 一、此產品所標示之環保使用期限，系指在一般正常使用狀況下。 二、上述部件物質中央處理器、記憶體、硬碟、光碟機、觸控模組為選購品。</p>						

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Chapter

1

**General
Information**

1.1 Introduction

The ONYX-1521 is a Slim Medical Panel PC with Intel® Atom D525 1.8GHz Dual Core processor-based computer that is designed to serve as a point of care station. It is a PC-based system with 15.6" true color TFT LCD display, Zero Noise solution; integrated multimedia functions make them the perfect platforms to build comprehensive lifestyle computing applications.

The ONYX-1521 includes all the features of a powerful computer into a slim and attractive chassis. ONYX-1521 has 300 nits 15.6" TFT LCD with 1366 x 768 resolution. It supports 2.5" Hard Disk Drive/SSD storage function and one Mini Card slot for WLAN expansion. Moreover, it features flexible I/O ports such as six USB2.0, two isolated RS-232 ports and two isolated Gigabit LANs.

Convenient operation, Silent, compact, mobility and highly integrated multimedia system let you to focus on healthcare utility, interactive information displays, automation control systems, general desktop usage, multimedia recreation, and other medical requirements.

1.2 Features

- 15.6" 1366x768 TFT LCD Display
- Easy To Use, Compact, Simple Design
- Fanless, Zero Noise
- 500 : 1 Contrast Wide View Angle
- 300 nits High Brightness
- Intel® Atom™ D525 1.8GHz Processor
- 5-wire Resistive Touch Screen
- 802.11 b/g/n Wireless LAN (Optional)
- Weight: 4.3Kg

1.3 Specification

Hardware Specifications

Display	ONYX-1521: 15.6" TFT LCD
System Memory	204-pin DDRIII SODIMM x 2, Max. 4GB
CPU Board	Intel® Atom D525 1.8GHz Dual Core Processor
Drive Bay	2.5" Hard Disk Drive/SSD (SATA)
Expansion	Mini-Card x 2
Button	Brightness: "+" / "-"; Sound: "+" / "-"; Power SW
I/O	USB 2.0 x 6 Isolated RS-232 x 2 Isolated Gigabit LAN x 2 Line-out, Mic-in
Speaker	3W x 2
Power Requirement	DC 24V

LCD Specifications

Display Type	15.6" TFT LCD
Max. Resolution	1366 x 768
Max. Colors	16.7M
Pixel Pitch (mm)	0.252 x 0.252
Luminance (cd/m2)	300 (TYP)
Viewing Angle	170° (H)
	160° (V)

Contrast Ratio	500 : 1
Brightness Control	Yes
Back Light Life Time	50,000 Hrs

Note: All ONYX's LCD products are manufactured with High precision technology. However, there are a small number of defective pixels in all LCD panels that are not able to change color. This is a normal occurrence for all LCD displays from all manufacturers and should not be noticeable or objectionable under normal operation. ONYX LCD panels are qualified for industry standard conditions in the following: total 7 dead pixels on a screen or if there are 3 within 1 inch square area of each other on the display.

Mechanical Specifications

Architecture	Close-frame
Front Bezel	Plastic bezel with resistive touch screen
Color	White
Mounting / Holder	VESA 75/100mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension (W x H x D)	15.7" x 10.2" x 2.6" (400mm x 260mm x 66mm)
Net Weight	9.5lb(4.3 kg)

Power Supply Specifications

Model No.	GMPU70A-6 (Eljintek Inc)
WD Part No.	GMPU70A-6-L

Input Voltage	100 ~ 240 Vac, 50/60 Hz, 1.8~0.8A
Output Voltages	24VDC-2.91A, 70W MAX
MTBF	61320 Calculated Hours (7 years)

Environmental Specifications

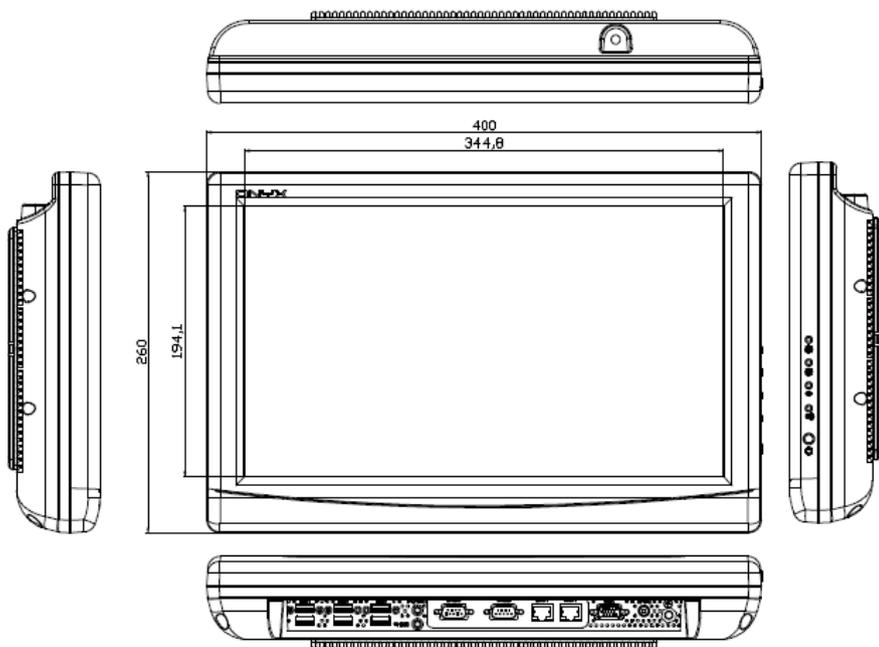
Operating Temperature	0°C to 40°C (32°F ~104°F)
Storage Temperature	-20°C to 60°C (-4°F ~140°F)
Storage Humidity	5% to 95%@ 40°C, non-condensing
Vibration	0.5G / 5 ~ 500Hz (Random) / operation
Shock	15G peak acceleration (11 msec. duration) / operation
Drop	76cm (1 Corner, 3 Edge, 6 Surface)
EMI / Safety	CE / FCC Class B / EN 60601-1
Noise	Zero noise

Touch Screen

Type	5-wire, Analog Resistive
Interface	USB Interface
Resolution	2048 x 2048
Light Transmission	> 80% ± 2%
Life Time	35 million times

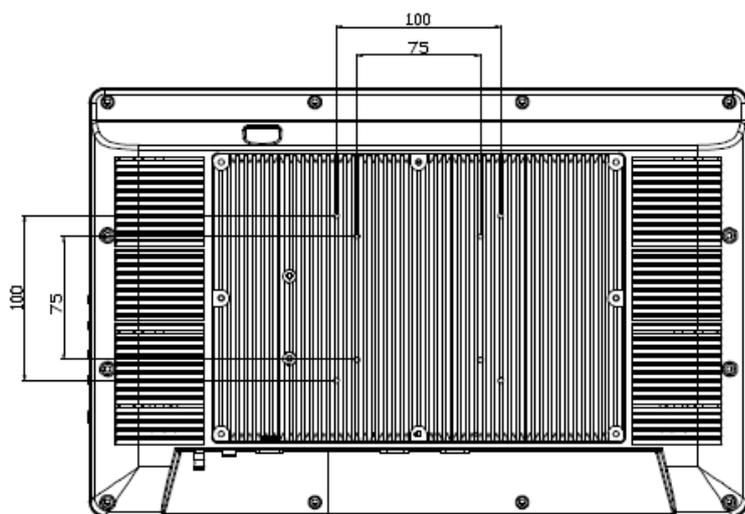
1.4 Dimension

ONYX-1521



Unit: mm

ONYX-1521



Unit: mm

Chapter

2

**Hardware
Installation**

2.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth”

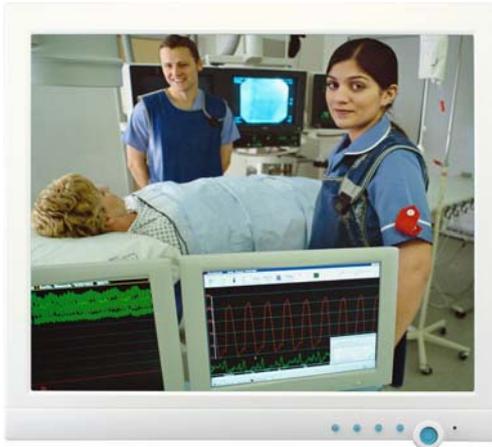
Do not modify this equipment without authorization of the manufacturer.

Caution!

Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 A Quick Tour of the ONYX-1521

Before you start to set up the ONYX-1521, take a moment to become familiar with the locations and purposes of the controls, drives, connections and ports, which are illustrated in the figures below. When you place the ONYX-1521 upright on the desktop, its front panel appears as shown in Picture 2-1.



Picture 2-1: Front View of the Slim Medical Panel PC

When you turn the Slim Medical Panel PC around and look at its rear cover, the sunken I/O section is at the bottom of the PC, as shown in Picture 2-2. (The I/O section includes various I/O ports, including DC-in, Serial ports, VGA, Ethernet, USB.) Only assemble with the Mini card.



ONYX-1521

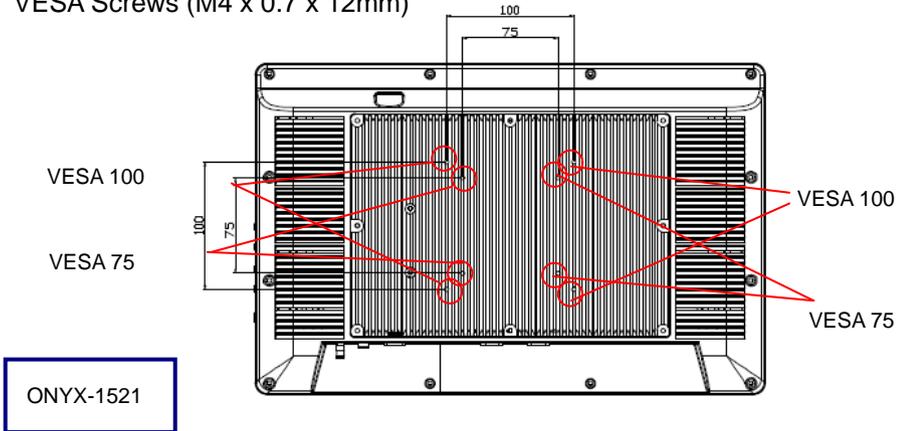
Figure 2.2: Rear view of the Slim Medical Panel PC

2.3 Removing the rear maintenance cover

Pull USB cover; Unscrew the attachment screws used to hold the rear maintenance cover and remove rear cover.

2.4 VESA Mounting Holes

VESA Screws (M4 x 0.7 x 12mm)



Chapter

3

Driver Installation

The ONYX-1521 comes with a CD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver CD, the driver CD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

Follow the sequence below to install the drivers:

- Step 1 – Install Intel® INF Driver
- Step 2 – Install Intel® VGA Driver
- Step 3 – Install Intel® LAN Driver
- Step 4 – Install Audio Driver
- Step 5 – Install Touch Driver
- Step 6 – Smart Card Driver

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the ONYX-1521 CD-ROM into the CD-ROM drive. And install the drivers from Step 1 to Step 6 in order.

Step 1 – Install Intel® INF Driver

1. Click on the **Step 1 – Inf Driver** folder and double click on the **infinst_autol.exe**
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2 – Install Intel® VGA Driver

1. Click on the **Step 2 –VGA driver** folder and select the corresponding folder for your operating system and double click on **Setup.exe** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 3 – Install Intel® LAN Driver

1. Click on the **Step 3 – LAN driver** folder and select the **WinXP** folder and double click on **setup.exe** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 4 –Install Audio Driver

1. Click on the **Step 4 –AUDIO driver** folder and select the corresponding folder for your operating system and double click on **Setup.exe** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 5 – Install Touch Panel Driver

1. Click on the **Touch Driver** folder and double click on the **setup.exe**
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 6 – Install Smart Card Driver

1. Click on the **Smart Card** folder and select the WinXP folder and double click on the **setup.exe**
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Appendix

A

Miscellanea

A.1 General Cleaning Tips

You may need the following precautions before you begin to clean the computer. When you clean any single part or component for the computer, please read and understand the details below fully.

1. Never spray or squirt the liquids directly onto any computer component. If you need to clean the device, please rub it with a piece of dry cloth.
2. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
3. Turn the system off before you start to clean up the component or computer.
4. Never drop the components inside the computer or get circuit board damp or wet.
5. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
6. Try not to put any food, drink or cigarette around the computer.

A.2 Cleaning tools

Although many companies have created products to help improve the process of cleaning your computer and peripherals users can also use household items to clean their computers and peripherals. Below is a listing of items you may need or want to use while cleaning your computer or computer peripherals.

Keep in mind that some components in your computer may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning tips.

- **Cloth** - A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- **Water or rubbing alcohol** – You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the computer. Unknown solvents may be harmful to the plastics parts.
- **Vacuum cleaner** - Absorb the dust, dirt, hair, cigarette particles, and other particles out of a computer can be one of the best methods of cleaning a computer. Over time these items can restrict the airflow in a computer and cause circuitry to corrode.

- **Cotton swabs** - Cotton swabs moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.
- **Foam swabs** - Whenever possible it is better to use lint free swabs such as foam swabs.

Note:

We strongly recommended that you should shut down the system before you start to clean any single components.

Please follow the steps below.

1. Close all application programs
2. Close operating software
3. Turn off power switch
4. Remove all device
5. Pull out power cable

A.3 Scrap Computer Recycling

If the computer equipments need the maintenance or are beyond repair, we strongly recommended that you should inform us as soon as possible for the suitable solution. For the computers that are no longer useful or work well, please contact with worldwide distributors for recycling.

The worldwide distributors show on the following website:

<http://www.onyx-healthcare.com.tw/Contact.php>

Note:

Follow the national requirements to dispose unit

FCC 15.21 Information to user.

Any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

ISM equipment Note:

- (a) The interference potential of the device or system
- (b) Maintenance of the system
- (c) Simple measures that can be taken by the user to correct interference.
- (d) Manufacturers of RF lighting devices must provide an advisory statement, either on the product packaging or with other user documentation, similar to the following:
This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz. Variations of this language are permitted provided all the points of the statement are addressed and may be presented in any legible font or text style.

RF Radiation Exposure Statement

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.