ONYX-1531

15.6" FHD LCD with LED Backlight

Intel® Celeron J1900 Quad Core Processor

Slim Medical Panel PC

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Acknowledgments

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- Microsoft® Windows is a registered trademark of Microsoft® Corporation.

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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-1531 Slim Medical Panel PC
- Utility DVD-ROM, which contains Drivers and Utilities
- Four VESA Screws(M:4mm x P:0.7mm x L:10mm)
- Medical Power Adapter 60W/12VDC

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. **Warning: To avoid risk of electric shock, this equipment
    must only be connected to a supply mains with protective
    earth. (Avertissement: Pour éviter tout risque de choc
    électrique, cet appareil doit être connecté à une
    alimentation secteur avec une prise de terre)**

10. Position the power cord so that people cannot step on it. Do
    not place anything over the power cord.

11. All cautions and warnings on the equipment should be noted.

12. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

13. Never pour any liquid into an opening. This could cause fire or electrical shock.

14. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

15. Warning: Do not modify this equipment without authorization of the manufacturer. (Avertissement: Ne pas modifier cet équipement sans l'autorisation du fabricant)

16. 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.

17. 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.

18. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. UL 1950 for IT equipment and ANSI/AAMI ES 60601-1: 2005 AND CAN/CSA-C22.2 No. 60601-1:08 / IEC 60601 series for systems – shall comply

with the standard IEC 60601-1-1, Safety requirements for medical electrical systems. Equipment not complying with UL 60601-1 shall be kept outside the patient environment, as defined in the standard.

19. **Unplug the power cord from the power adapter jack to disconnect the device.**

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 production against electric shock: not classified

2. Degree of protection against the ingress of water: IPX0

3. Mode of operation: Continuous

4. Type of protection against electric shock: Class I equipment
5. No Applied Part, No AP/APG

FCC

Warning!

This device complies with Part 18 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.

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UL Module Description

CLASSIFIED c (UL) us	*ONYX-1531 module is developed to suitable for the Classification Mark requirement*

Safety Symbol Description

The following safety symbols are the further explanations for your

reference.

CLASSIFIED c **(UL)** US	*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***
📖	*Attention, consult ACCOMPANYING DOCUMENTS.*
⏻	*Stand-by*
⏚	*Ground wire* *Protective Ground wire.*

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Contents

Chapter

1

General Information

1.1 Introduction

ONYX-1531 Slim Medical Panel PC is based on Intel® Celeron™ J1900 Quad Core processor, which delivers a performance improvement of more than 100 percent compared to systems running traditional single-core processors. With four cores computing engines, ONYX-1531 can simultaneously execute four computing tasks. It accommodates one 2.5" SATA hard disk drive/SSD and two DDRIII SODIMM up to 8GB.

The high brightness LCD, zero noise solution and integrated multimedia functions make them the perfect platform upon which to build comprehensive lifestyle computing applications.

ONYX-BE1531 offers a highly scalable bedside infotainment solution to enhance patient experiences within the hospital. Packaged with renowned software solution partners, ONYX-1531 bedside terminals provide patients with capabilities like Entertainment on Demand, Online Access, VoIP Phone, Nurse Notification, etc. ONYX-1531 is definitely your perfect choice.

1.2 Feature

- Intel® Celeron™ J1900 Quad Core Processor

- Supports Dual Channel DDR3 SODIMM up to 8GB

- Built-in RFID and Smart Card Security (Optional)

- 7 Smart Function Keys

- Handset with remote control(Optional)

- Magnetic Card Reader(optional)

- Power over Ethernet Module for LAN1(optional)

1.3 Specification

Hardware Specifications

Model Number	
ONYX-1531	
Main Specification	
Display	15.6" 1920x1080 LCD
CPU	Intel® Celeron™ J1900 Processor
OS Support	Windows® 10 (32 bit & 64 bit)
	Windows® 8.1 (32 bit & 64 bit)
	Windows® 7 (32 bit & 64 bit)
	Linux Fedora Core
Disk Drive Space	2.5" Hard Disk Drive/Solid State Drive, mSATA Solid State Drive
Expansion	Magnetic Stripe Reader (Optional)
	1D / 2D Barcode Scanner (Optional)
Function Key	Power On/Off, Speaker Volume Up/Down, LCD Brightness Up/Down, LCD On/Off, Touch Screen On/Off
I/O	1x RS-232 port (isolated, pass the dielectric test: 2122Vdc only)
	4x USB 2.0 ports
	2x Gigabit LAN (isolated, pass the dielectric test: 2122Vdc only)
	Sound:
	1 x Line-out
	1 x Mic-in
	Equipotential Terminal

LCD Specifications

Display Type	15.6" LCD
Max. Resolution	1920 x 1080
Contrast Ratio	700:1
Dot Size (mm)	0.179 x 0.179
Luminance (cd/m2)	300(TYP)
Back Light Life Time	>15,000 Hrs

Note:

All ONYX 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. All 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, Screw type:M4*8mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension (WxHxD)	397.8mmx 265mm x 39.3 mm
Net Weight	6.2 lb (2.8 Kg)

Power Supply Specifications

Model No.	ATM065-P120 **(ADAPTER)**
Input Voltage	100 ~ 240 Vac, 50/60 Hz, 1.6-0.7A
Output Voltages	12VDC⎓5A 60W
MTBF	61320 Calculated Hours (7 years)

Environmental Specifications

Operating Temperature	0˚C to 40˚C (32˚F ~104˚F)
Operating Humidity	30% to 75% RH, non-condensing
Operating Pressure	700 to 1033 hPa
Storage Temperature	-20˚C to 60˚C (-4˚F ~140˚F)
Storage Humidity	10% to 90% RH, non-condensing
Storage Pressure	700 to 1033 hPa
Vibration	0.5G / 5 ~ 500Hz (Random) / operation
Shock	20G peak acceleration (11 msec. duration) / operation
Drop	76cm (1 Corner, 3 Edge, 6 Surface)
EMI / Safety	CE / FCC Class B/ANSI AAMI ES60601-1/ EN 60601-1

Touch Screen

Type	Projective Capacitive / 5-wire Resistive
Interface	USB interface
Light Transmission	> 75%

1.4 Dimension

Dimensions: 397.8 x 265 x 39.3mm
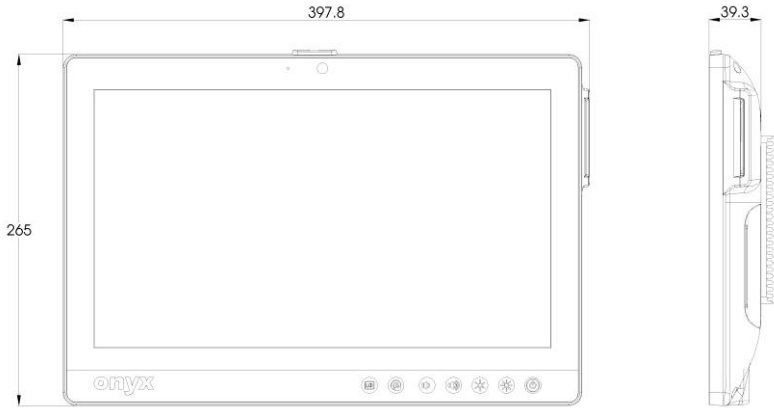
VESA Mount: 75 x 75mm, 100 x 100mm
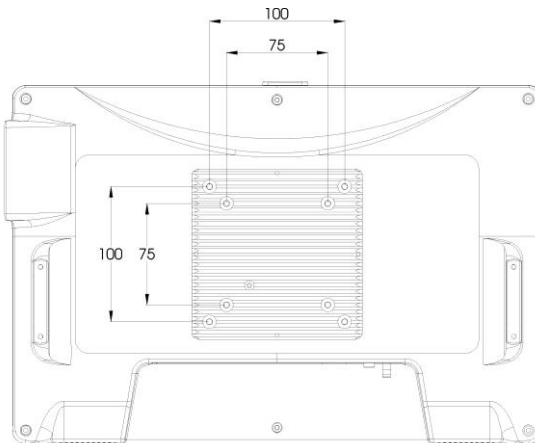
Chapter

2

Hardware Installation

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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.*

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 Quick Tour of ONYX-1531

There are 7 control buttons in the front side of ONYX-1531. Please refer to table 2.1 for the function of each button.

Handset(optional)   Control Buttons   MSR(optional)
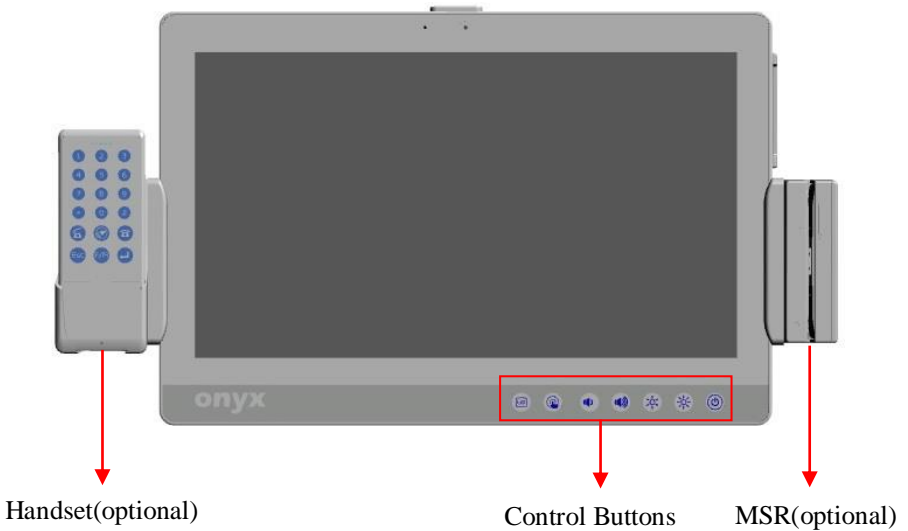
Picture 2.1: Front View of ONYX-1531 Series

Control Button	Function
⏻	Press 2 seconds to turn on the power
☀	Increase LCD brightness
☀	Decrease LCD brightness
🔊	Increase speaker volume Hardware volume control - does not associate with Windows volume bar
🔉	Decrease speaker volume Hardware volume control - does not associate with Windows volume bar
👆	Enable/Disable Touch Screen
LCD	Enable/Disable LCD

Table 2.1: Functions of Control Buttons

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ONYX-1531 provides an optional remote control handset. Please refer to table 2.2 for the function of each key.

	Key Mapping	Default	Remark
①	"1"		
②	"2"		
③	"3"		
④	"4"		
⑤	"5"		
⑥	"6"		
⑦	"7"		

(8)	"8"		
(9)	"9"		
(0)	"0"		
(*)	"shift" + "8"		
(#)	"shift" + "3"		
(phone)	"Alt + Page Up", "Ctrl + R"		Same as Skype
(phone)	"Alt + Page Down"		Same as Skype
(enter)	"Enter"		
(Esc)	"ESC"		
(F/M)	"F15"		

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		1.Press (F/M) 1 second 2. Press (0) 3 seconds 3. Press (◎) to trigger barcode	Turn off automatically if no press after 20 seconds
	"Up"		
	"Down"		
	"Left"		
	"Right"		
		Volume up	
		Volume down	

Table 2.2: Remote Control Functions

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The sunken I/O section is at the bottom, as shown in Picture 2-2.

Gigabit LAN x2 (isolated, pass the dielectric test: 2122Vdc only)

Power Input   Line out

Mic

USB 2.0 x4
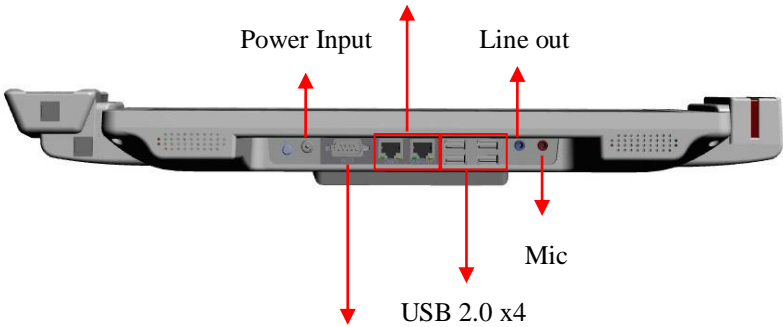
RS-232 (isolated, pass the dielectric test: 2122Vdc only)

Picture 2.2: Bottom view of ONYX-1531 Series

When you turn ONYX-1531 around and look at its right side, the smart card reader is on the right side as shown in Picture 2-3.

Picture 2.3:Right View of ONYX-1531 Series

2.3 Mounting with VESA Mounting Holes

ONYX-1531 can be mounted with 75mm x 75mm or 100mm x 100mm VESA holes in the rear cover by wall-mount.

VESA Holes
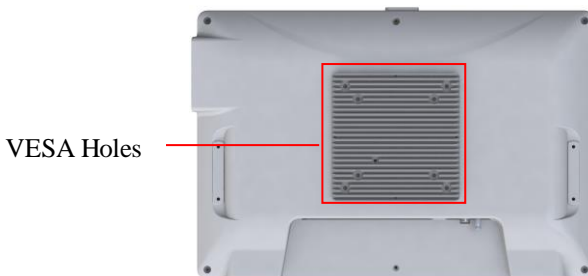
Picture 2.4: Back view of ONYX-1531

2.4 Turn on and Boot up into Windows OS

This section is for Windows operating system only. If you are installing a different operating system, please contact your vendor for installation details.

Your ONYX-1531 will begin loading Windows OS once you push the power button to turn power on. After less than one minute, Windows desktop screen will appear.

You can select the programs from the start menu in the left-down corner of the desktop screen.

2.5 Turn off

Turning off ONYX-1531 properly is important for system reliability. There are two ways to turn off the system.

1. On the start menu, click "shut down" and select "OK"
2. Push the power button and then the system will shut down automatically

Chapter

3

Driver
Installation

There are several installation ways depending on the driver package under different Operating Systems.

Please follow the sequence below to install the drivers:

For Windows 7/8.1:

Step 1 – Chipset Driver

Step 2 – Graphics Driver

Step 3 – LAN Driver

Step 4 – Audio Driver

Step 5 – USB 3.0 Driver

Step 6 – Resistive Touch Screen Driver(only for ET series)

Step 7 – TPM Driver

Step 8 – Barcode Scanner Driver(optional)

For Windows 10:

Step 1 – Chipset Driver

Step 2 – Graphics Driver

Step 3 – Audio Driver

Step 4 – MBI Driver

Step 5 – TXE Driver

Step 6 – TPM Driver

Step 7 – Resistive Touch Screen Driver(only for ET series)

Step 8 – Barcode Scanner Driver(optional)

Appendix

A

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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. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
2. Turn the system off before you start to clean the component or computer.
3. Never drop the components inside the computer or get circuit board damp or wet.
4. 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.
5. Try not to put any food, drink or cigarette around the computer.

Note: We strongly recommend that you should shut down the system and remove the power cord before cleaning ONYX-1531.

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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 swaps 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 requirement to dispose unit