

ONYX-175VS/195VS

17"/19" High resolution LCD

DDRIII 8GB RAM support

Intel 45GS Core 2 Duo Processor

High Performance

Medical station

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Packing List

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

- ONYX-175VS / 195VS Vital Fanless Isolation Medical Station
- VESA screws
- Utility CD-ROM(Please insert the ONYX-175VS/195VS CD-ROM into external CD-ROM drive.) which contains User's Manual (in PDF format), 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 1950 for IT equipment and UL 60601-1 / 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.

17. 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 protection against electric shock: not classified
2. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
3. Mode of operation: Continuous
4. Type of protection against electric shock: Class I equipment
5. Class I: No Applied part, No AP / APG

FCC Safety

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-175VS / 195VS 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.

 The logo consists of a circle with the word "CLASSIFIED" at the top, "UL" in the center, and "US" at the bottom. A small "C" is positioned to the left of the circle.	<i>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</i>
 A black triangle with a white exclamation mark inside, indicating a warning.	<i>Attention, consult ACCOMPANYING DOCUMENTS.</i>
 The logo features the letters "UL" in a stylized font, with "C" to the left and "US" to the right. A registered trademark symbol (®) is above the "L".	<i>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</i>

Below Table for China RoHS Requirements

產品中有毒有害物質或元素名稱及含量

ONYX HEALTHCARE 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	×	○	○	○	○	○

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。

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。

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。

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Chapter

1

**General
Information**

1.1 Introduction

The ONYX-175VS / 195VS Vital Fanless Isolation Medical Stations are based on Intel Core 2 Duo 45GS processor which deliver a performance improvement of more than 100% compared to systems running traditional single-core processors. With two cores, or computing engines, ONYX can simultaneously execute two computing tasks. It accommodates one 2.5" SATA hard disk drive and up to 8GB DDR SODIMM.

The high brightness LCD, Low Noise solution, integrated multimedia functions and extensive expansion options make them the perfect platform upon which to build comprehensive lifestyle computing applications.

The ONYX-175VS / 195VS include all the features of a powerful computer into a slim and attractive chassis. The ONYX-175VS / 195VS have 17"/19" 380 nits TFT display with 1280 x 1024 resolutions. Integrating with high brightness LCD is easier to analyze DICOM image. This model owns sidemount slim 8 in1 card reader, slim DVD ROM, and smart card reader to support vivid storage read/write and ID check by smart card reader.

The ONYX-175VS / 195VS are compact; Gigabit LAN and selectable WLAN network compatible PC with full safety and medical approval and features to control a dedicated system with a wide variety of applications. Combining the ONYX-175VS / 195VS into your system can achieve both cost-saving and efficient improvements. Common applications include Surgical, Radiology, PACS (Picture Archiving Communication Systems), LIS (Lab Information Systems) and Electronic Medical Record. The ONYX-175VS / 195VS are definitely your perfect choices.

1.2 Feature

- 17"/19" true color Vital Fanless Isolation Medical PC
- High performance Intel® Core™ 2 Duo processor
- Support DDRIII memory up to 8GB memory
- Built-in RFID security(optional)
- Support PCI-E expansion
- Support WLAN and Bluetooth Wireless solution (optional)

1.3 Specification

Hardware Specifications

Display	ONYX-195VS: 19" SXGA TFT LCD ONYX-175VS: 17" SXGA TFT LCD
CPU Board	Intel® Core 2 Duo SL9400 1.86GHz / Celeron LV723 1.2GHz Processors
System Memory	DDR3 SODIMM x 2 supports Up to 8GB
Disk Drive Space	2.5" SATA Hard Disk Drive (optional) Slim CD/DVD-R/W (optional) 8 in 1 card reader Smart Card reader (optional)
Expansion	1 x PCI-E(x16), 1 x Mini PCI, 1 x Mini Card
Button	Brightness: "+" / "-"; Sound: "+" / "-"; Power SW
I/O	
Audio	Mic-in, Line-in, Line-out
USB	6 x USB 2.0 ;1x USB1.1 Isolation (Top USB Port)
Serial port	Isolated RS232 x 2, RS-232 x 1, RS-232/422/485 x 1
Ethernet	2 x Giga Isolated LAN
Speaker	2 x 2W speakers

LCD Specifications

Model	ONYX-195VS	ONYX-175VS
Size	19"	17"
Resolution	1280x1024	1280x1024
Max. Colors	16.7M	16.7M
Luminance	300 nits	380 nits
View Angle	178°(H)/178°(V)	170°(H)/170°(V)
Contrast Ratio	1300:1	1000:1

Back Light Life Time	50,000hrs	50,000hrs
Touch Screen	5-wire resistive / 35 Million activities	

Note:

All ONYX Healthcare'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 Healthcare's 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	Blue-white (Sky series)
Mounting / Holder	VESA 75/100mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension (W xHxD)	460mm x 385mm x 97 mm
Carton Dimension	620mm x 615mm x 251mm
Net Weight	ONYX-175VS: 18.48 lb (8.4 kg) ONYX-195VS: 18.7 lb (8.5 kg)
Gross Weight	ONYX-175VS: 21.16 lb (9.62 kg) ONYX-195VS: 22 lb (10 kg)
Packing Filler	PE

Power Supply Specifications

Model Item	PROTEK POWER (PMP120-14-B16)
Power Requirement	DC 12~24V
Input Voltage	100 ~ 240V AC @ 47~ 63Hz, 1.4 ~0.6A
Output Voltage	24V, 5.0A, 120W Max.
MTBF	150,000 hrs operation at 25°C

Environmental Specifications

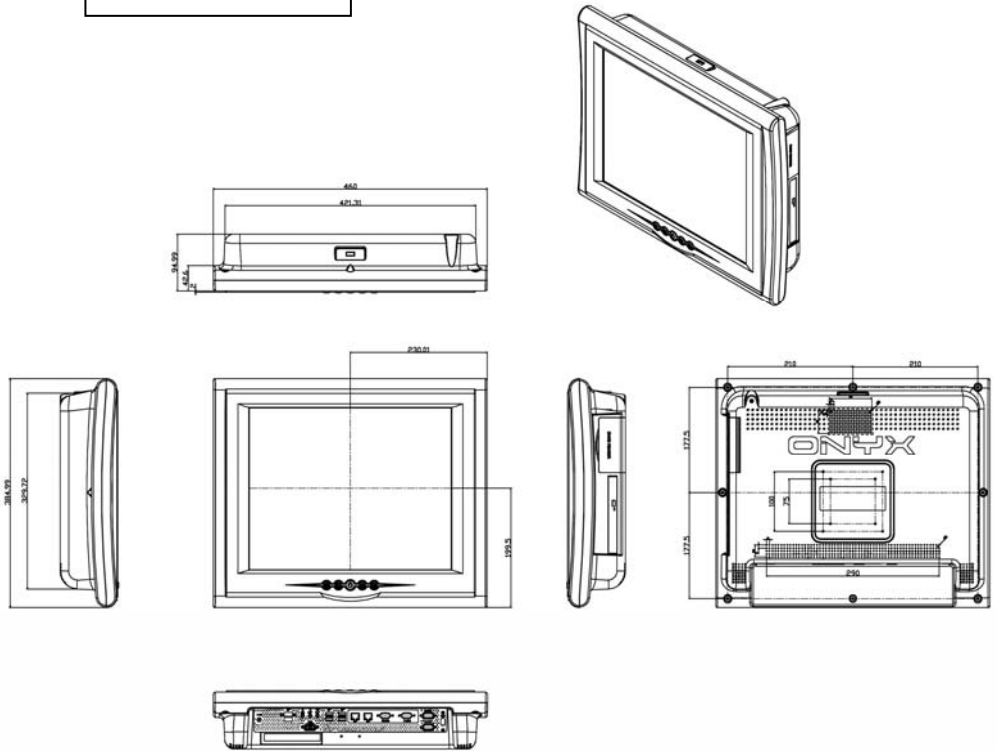
Operating Temperature	32°F~104°F (0°C~40°C)
Operating Humidity:	30%~75%
Operating Atmospheric Pressure:	850hPa~1000hPa
Storage Temperature:	-20°C to 60°C (-4°F ~140°F)
Transport and Storage Humidity:	5%~95% @ 45°C, non-condensing
Vibration	0.5G / 5 ~ 500Hz (Random) / operation
Shock	20G peak acceleration (11 msec. duration) / operation
Drop	76cm (1 Corner, 3 Edge, 6 Surface)
EMI / Safety	CE / FCC Class B/UL 60601-1/EN 60601-1
Noise	Zero Noise
Input Power Rating	100~240Vac,50~60Hz

TouchScreen (Optional)

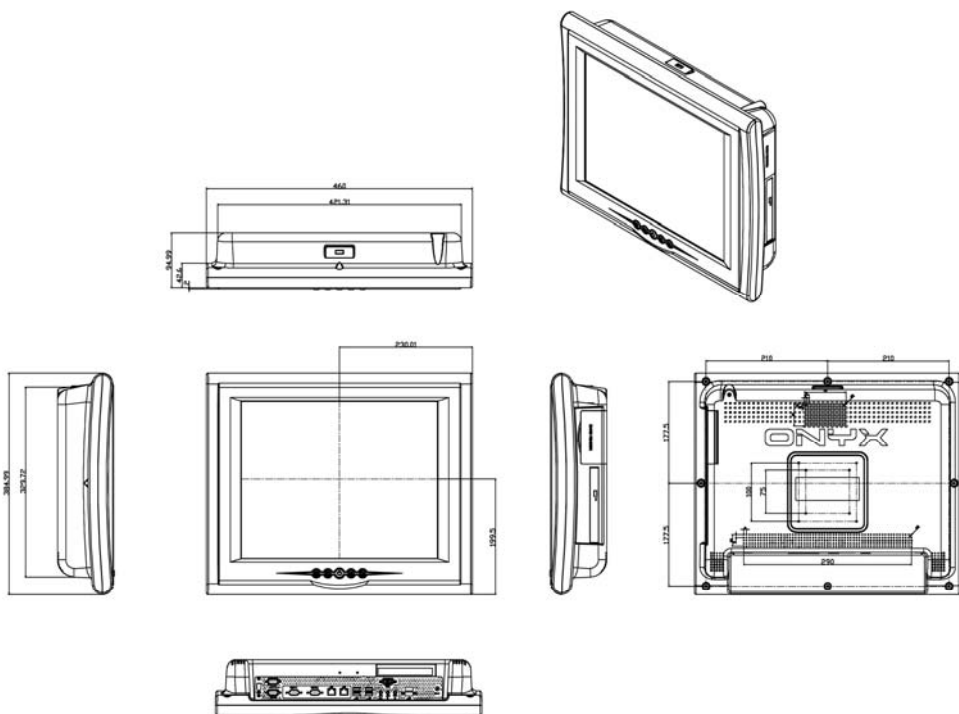
Type	5-wire, Analog Resistive
Interface	TTL UART interface
Resolution	2048 x 2048
Light Transmission	> 80%
Life Time	35 million activations

1.4 Dimension

ONYX-175VS



ONYX-195VS



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.

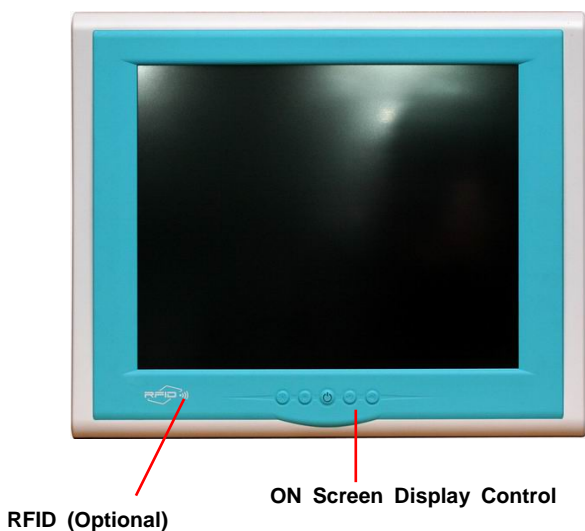
Caution!

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-175VS / 195VS

Before you start to set up the ONYX-175VS / 195VS, 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.

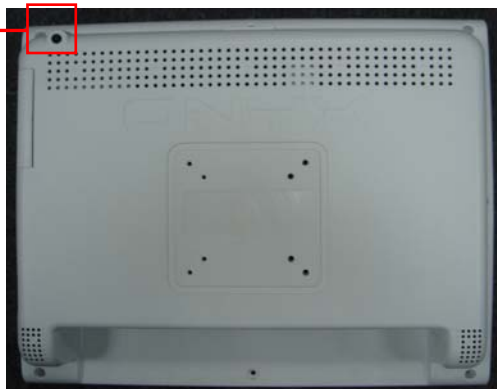
When you place the ONYX-175VS / 195VS upright on the desktop, its front panel appears as shown in Picture 2-1.



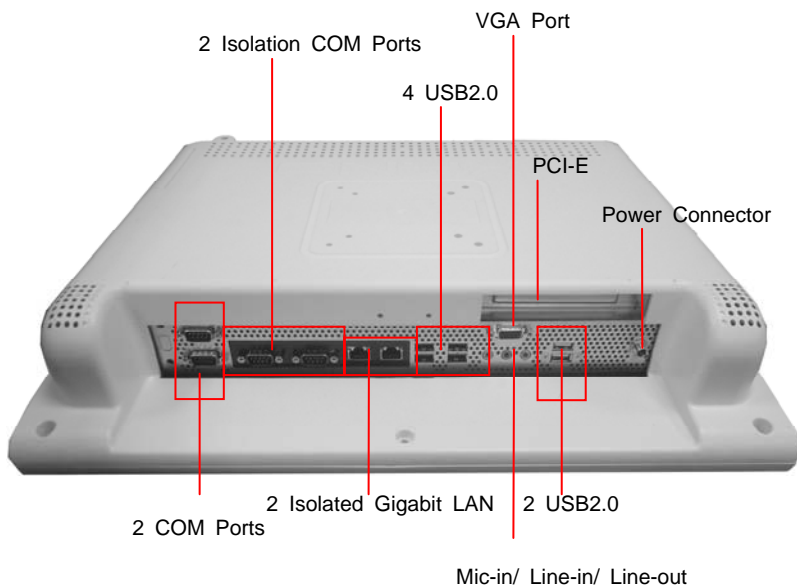
Picture 2.1: Front View of the Medical Station

When you turn the Medical Station around and look at its rear cover, the sunken I/O section is at the bottom of the station, as shown in Picture 2-2. (The I/O section includes various I/O ports, including serial ports, VGA port, the Ethernet port, USB ports, the microphone jack, PCI-E slot, and so on.) The S-video in option function will need Mini PCI slot. Only assemble with the Mini PCI capture card; the S-Video in function will work. The medical Station integrates with WLAN function by using Mini PCI.

WLAN
(optional)



Picture 2.2: Rear view of the Medical Station



When you turn the Medical Station around and look at its left side, the smart card reader, all in one card reader and DVD ROM are on the left side of the Medical Station as shown in Picture 2-3.



Picture 2.3: Left view of the Medical Station

2.3 Mounting Installing

The display panel can be mounted into the wall. You will need the screws along with the mounting brackets, which be packed in the accessory box. Follow the steps below:

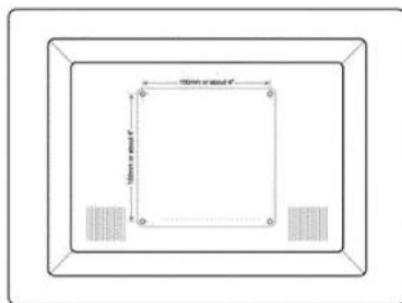
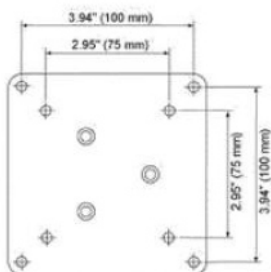
Before you start to follow the instructions, please place the display panel into the wall. See the following illustration on the left.

Step1: Place the mounting brackets and plus the screw.

Step2: Aim the mounting set at the hole on the monitor.

Step3: Fix the monitor with the mounting set by screwing it.

Step4: You've completed the preliminary when the mounting set is tightened. Next, repeat the steps and tighten all mounting set around the monitor until the monitor is firmly mounting on the wall.



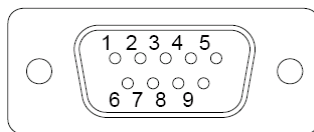
2.4 COM5 RS-232/422/485 Selection

COM5 RS-232/422/485 selection is set in BIOS setting as following.

Entering BIOS Setting Menu: Choose "Integrated Peripherals → Super IO device → COM5 select". (Default setting at "RS-232")

2.5 RS-232/422/485 Serial Port Connector

Different devices implement the RS-232/422/485 standard in different ways. If you are having problems with a serial device, be sure to check the pin assignments below for the connector.



Pin	Signal	Pin	Signal
1	DCD (422TXD-/485DATA-)	2	RXD (422RXD+)
3	TXD (422TXD+/485DATA+)	4	DTR (422RXD-)

Medical Station**ONYX-175VS/195VS**

5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	N.C.

Chapter

3

**Award
BIOS Setup**

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press <F1> to RESUME

Write down the message and press the F1 key to continue the boot up sequence.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

The ONYX-175VS / 195VS CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering setup

Power on the computer and press immediately. This will allow you to enter Setup.

Standard CMOS Features

Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features

Use this menu to set the advanced features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup

Use this menu to specify your settings for power management. (HDD power down, power on by ring etc.)

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu shows you the status of PC.

Frequency/Voltage Control

This menu shows you the display of frequency/Voltage Control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password

Use this menu to set Supervisor/User Passwords.

Save and Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Chapter

4

**Driver
Installation**

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

Please follow the sequence below to install the drivers:

Step 1 – Install INF Driver

Step 2 – Install VGA Driver

Step 3 – Install LAN Driver

Step 4 – Install AUDIO Driver

Step 5 –Touch Screen Driver

Card Reader Driver Installation

Smart Card Driver Installation (Optional)

RFID Driver Installation (Optional)

USB 2.0 Drivers are available for download using Windows Update for both Windows XP and Windows 2000. For additional information regarding USB 2.0 support in Windows XP and Windows 2000, please visit www.microsoft.com/hwdev/usb/.

For installation procedures of each driver, you may see the details in the following.

4.1 Installation

Insert the ONYX-175VS / 195VS CD-ROM into the CD-ROM drive and install the drivers from Step 1 to Step 5 in order. (Other drivers will be optional).

Step 1 – Install INF Driver

1. Click on the **Step 1- INF driver** folder and double click on ***infinst911_autol.exe***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2 – Install 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 **Winx32** folder and double click on **.exe** for x86 (32bit) OS; if the OS is Windows 64bit OS, please select the **Winx64** folder and double click on **.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 3 –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 Screen Driver

1. Click on the **Touch 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 you
3. The system will help you install the driver automatically

4.2 Card Reader Driver Installation

1. Click on the **Card Reader** folder and then double click on the **Setup.exe**
2. Follow the instructions that the window shows you
3. The system will help you install the driver automatically

4.3 Smart Card Driver Installation

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

4.4 RFID Driver Installation

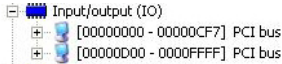
1. Click on the **RFID** folder and then double click on the **ISO15693.exe**
2. Follow the instructions that the window shows you
3. The system will help you install the driver automatically

Appendix

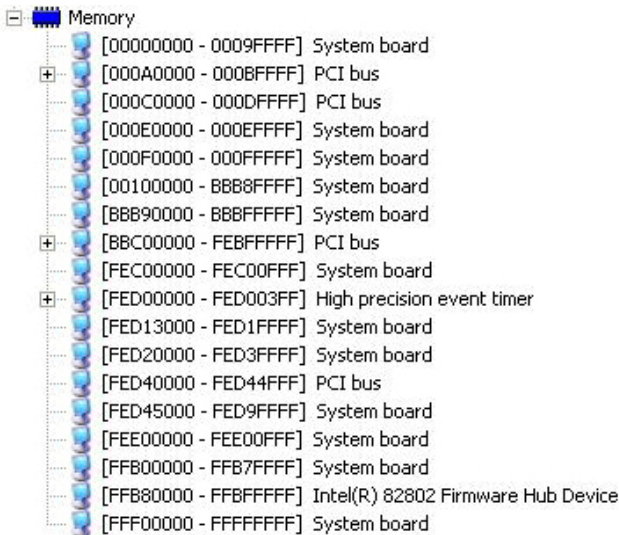
A

I/O Information

A.1 I/O Address Map



A.2 Memory Address Map



A.3 IRQ Mapping Chart

Interrupt request (IRQ)	
(ISA) 0	High precision event timer
(ISA) 3	Communications Port (COM2)
(ISA) 4	Communications Port (COM1)
(ISA) 8	High precision event timer
(ISA) 9	Microsoft ACPI-Compliant System
(ISA) 10	Communications Port (COM3)
(ISA) 10	Communications Port (COM5)
(ISA) 11	Communications Port (COM4)
(ISA) 11	Communications Port (COM6)
(ISA) 13	Numeric data processor
(PCI) 5	Intel(R) ICH9 Family SMBus Controller - 2930
(PCI) 16	Intel(R) 82574L Gigabit Network Connection #2
(PCI) 16	Intel(R) ICH9 Family PCI Express Root Port 1 - 2940
(PCI) 16	Intel(R) ICH9 Family USB Universal Host Controller - 2937
(PCI) 16	Mobile Intel(R) 4 Series Chipset PCI Express Root Port - 2A41
(PCI) 16	Mobile Intel(R) 4 Series Express Chipset Family
(PCI) 17	Intel(R) ICH9 Family PCI Express Root Port 2 - 2942
(PCI) 18	Intel(R) ICH9 Family PCI Express Root Port 3 - 2944
(PCI) 18	Intel(R) ICH9 Family USB Universal Host Controller - 2936
(PCI) 18	Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293C
(PCI) 19	Intel(R) ICH9 Family PCI Express Root Port 4 - 2946
(PCI) 19	Intel(R) ICH9 Family USB Universal Host Controller - 2939
(PCI) 19	Intel(R) ICH9 Family USB Universal Host Controller - 2935
(PCI) 19	Intel(R) ICH9M/M-E 2 port Serial ATA Storage Controller 1 - 2928
(PCI) 19	Intel(R) ICH9M/M-E 2 port Serial ATA Storage Controller 2 - 292D
(PCI) 20	Intel(R) 82567LM Gigabit Network Connection
(PCI) 21	Intel(R) ICH9 Family USB Universal Host Controller - 2938
(PCI) 22	Microsoft UAA Bus Driver for High Definition Audio
(PCI) 23	Intel(R) ICH9 Family USB Universal Host Controller - 2934
(PCI) 23	Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293A

A.4 DMA Channel Assignments

Direct memory access (DMA)	
4	Direct memory access controller

Appendix

B

Miscellanea

B.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.

B.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

B.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