SMA-1233

11.6” WXGA/Full HD LCD

Intel® Elkhart Lake Processor

Slim Medical All-in-One PC

SMA-1233 Manual 1st Ed
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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:

- SMA-1233 Slim Medical All-in-One PC
- Utility DVD-ROM, which contains Drivers and Utilities
- Four VESA Screws (M:4mm x P:0.7mm x L:10mm)
- Medical Power Adapter 12V, 5A or Medical Power Adapter 12V, 7A
- Power cord x 1 (optional)

  *Use power cord:

  Listed, Detachable, Type SJT or above. 125/250 V minimum, 18 AWG/3C mini-mum, 3.0 m long maximum. One end terminates in 125 V, 10 A, with NEMA 5-15P or 250 V, 10 A with NEMA 6-15P, grounding type, the other end with an appliance coupler. Hospital grade.

** Please use the USB interface external DVD Driver or check the ONYX Official website to download drivers: https://www.onyx-healthcare.com/

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:Power supply is specified as a part of ME EQUIPMENT, To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
   (Avertissement: L'alimentation électrique est spécifiée comme faisant partie de ME EQUIPMENT, 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 62368/60950 for IT equipment and ANSI/AAMI ES 60601-1 AND

CAN/CSA-C22.2 No. 60601-1/ IEC 60601 series) for systems – shall comply with the standard IEC 60601-1, Safety requirements for medical electrical systems. Equipment not complying with IEC 60601-1 series 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.
20. Patient is not intended operator, do not touch the device and patient at the same time.
21. ME EQUIPMENT must be connected to an specific power source when loss of power source would result in an unacceptable RISK
22. Installation the equipment by service personnel.
23. ME EQUIPMENT is not difficult to operate the disconnect device from power supply cord.

Intended Use

SMA-1233 is intended to serve as a computer for integration with hospital systems. SMA-1233 is designed for general purpose medical computing with built-in CPU, memory, storage, thermal solution, enclosure in the hospital environment, for data collection and for displaying information. The machine, LCD display and power supply must not be used outdoors or in areas where an explosion hazard may occur. The user has to make sure the requirements from IEC 60601-1 are fulfilled, especially in combination from this machine with other electrical equipment. And it shall not be used for life supporting system. The latest version of this user manual is available for download from https://www.onyx-healthcare.com/service_en_3.php.

Classification

1. Degree of production against electric shock: not classified
2. Mode of operation: Continuous
3. Type of protection against electric shock: Class I equipment
4. No Applied Part, No AP/APG

FCC

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.

(Cet appareil est conforme à la partie 18 des règles FCC. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.)

UL Module Description

CLASSIFIED C UL US	SMA-1233 module is developed to suitable for the Classification Mark requirement

Safety Symbol Description

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

	Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with AAMI ES60601-1:2005/(R)2012 and A1:2012/(R)2012 and A2:2021, CAN/CSA-C22.2 No. 60601-1:14 (Reaffirmed 2022)
	Attention, consult ACCOMPANYING DOCUMENTS.
	Stand-by
	Ground wire Protective Ground wire.
	Alternating current
	Direct current
	Equipotentiality To identify the terminals, when connected together, bring the various parts of an equipment or of a system to the same potential.

Contents

Chapter

1

General Information

1.1 Introduction

SMA-1233 Slim Medical All-in-One PC is based on Intel® Atom™ x6425E quad cores, Atom™ x6211E dual cores or Celeron™ N6210 dual cores processor, which delivers a performance improvement of more than 100 percent compared to systems running traditional single-core processors. With four or two cores computing engines, SMA-1233 can simultaneously execute four or two computing tasks. It accommodates one M.2 SATA SSD and one DDR4 SODIMM up to 16GB.

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

SMA-1233 includes all the features of a powerful computer into a slim and attractive chassis. It has a 11.6” LCD with 1366 x 768 or 1920 x 1080 resolution. SMA-1233 owns an optional RFID reader to support ID check. Combining SMA-1233 into your system can achieve both cost-saving and efficient improvements in common applications including Surgical, Radiology, PACS (Picture Archiving Communication Systems), LIS (Lab Information Systems) and Electronic Medical Record. SMA-1233 is definitely your perfect choice.

1.2 Feature

- 11.6” 1366x768 / 1920x1080 LCD
- Capacitive Multi-Touch Screen
- Intel® Atom™ x6425E Quad Core Processor, Atom™ x6211E Dual Core Processor, Celeron™ N6210 Dual Core Processor
- Supports DDR4 3200 SODIMM up to 16GB
- 4 Programmable Function Keys

1.3 Specification

Hardware Specifications

Display	11.6” BOE :1366x768 、AUO 1920x1080 LCD
Touch Screen	Capacitive Multi-Touch Screen
CPU	Intel® Atom™ x6425E Quad Core Processor, Atom™ x6211E Dual Core Processor, Celeron™ N6210 Dual Core Processor (Max. TDP=12W)
System Memory	One DDR4-3200 SODIMM up to 16GB
Disk Drive	M.2 2242 SATA Solid State Drive
Wireless Communication	802.11 ax/ac/a/b/g/n + BT 4.0 (optional)
Function Keys	Power On/Off, LCD Brightness Up/Down, Touch Screen On/Off
I/O Ports	USB 3.1 Gen1x4 , 5V/0.9A RS-232 x1 Gigabit LAN x2 HDMI out 2.0 x1 Equipotential Terminal +12V DC input

LCD Specifications

Display Type	11.6” LCD BOE
Max. Resolution	1366 x 768
Contrast Ratio	500:1
Luminance (cd/m2)	250(TYP)
Back Light Life Time	>15,000 Hrs

Display Type	11.6” LCD AUO
Max. Resolution	1920 x 1080
Contrast Ratio	800:1
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*10mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension (WxHxD)	300.0mmx 205.0mm x 47.3 mm
Net Weight	3.527 lb (1.695 Kg)

Power Supply Specifications

Model	Adapter ATM065T-P120
Input Voltage	100 ~ 240 Vac, 50-60 Hz, 1.6-0.7A
Output Voltage	12V, 5A, 60W max.

Model	Adapter ATM090T-P120
Input Voltage	100 ~ 240 Vac, 50-60 Hz, 1.2-0.5A
Output Voltage	12V, 7A, 84W max.

Environmental Specifications

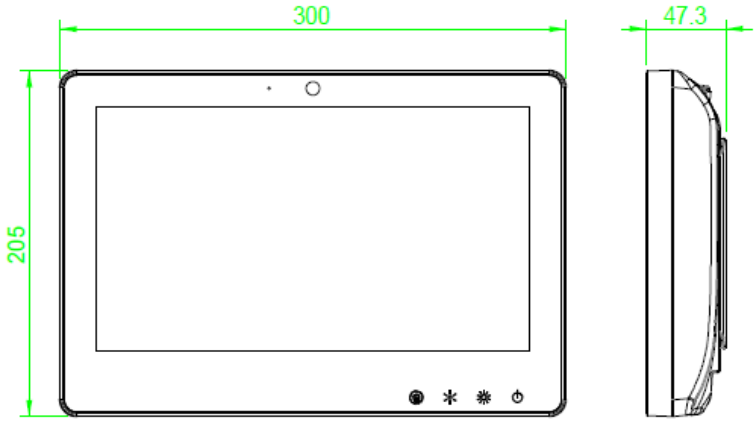
Operating Temperature	0˚C to 40˚C (32˚F ~104˚F)
Operating Humidity	30% to 75% RH, non-condensing
Operating Pressure	700 to 1060 hPa
Storage Temperature	-20˚C to 60˚C (-4˚F ~140˚F)
Storage Humidity	10% to 90% RH, non-condensing
Storage Pressure	700 to 1060 hPa
Vibration	0.5G / 5 ~ 500Hz (Random) / operation
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

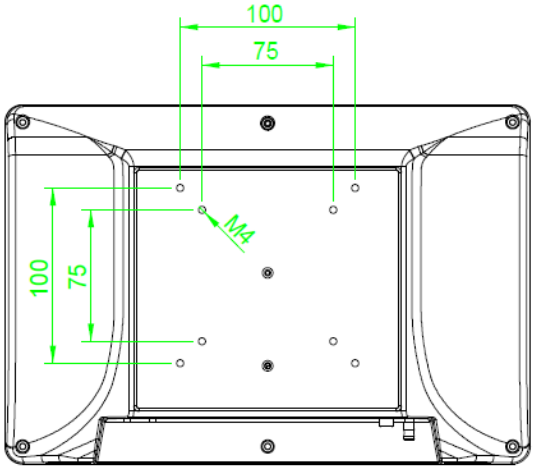
Type	Projective Capacitive / 5-wire Resistive
Interface	USB interface
Light Transmission	> 75%

1.4 Dimension

Dimensions: 300.0 x 205.0 x 47.3mm



VESA Mount: 75 x 75mm, 100 x 100mm



Chapter

2

Hardware Installation

2.1 Safety Precautions

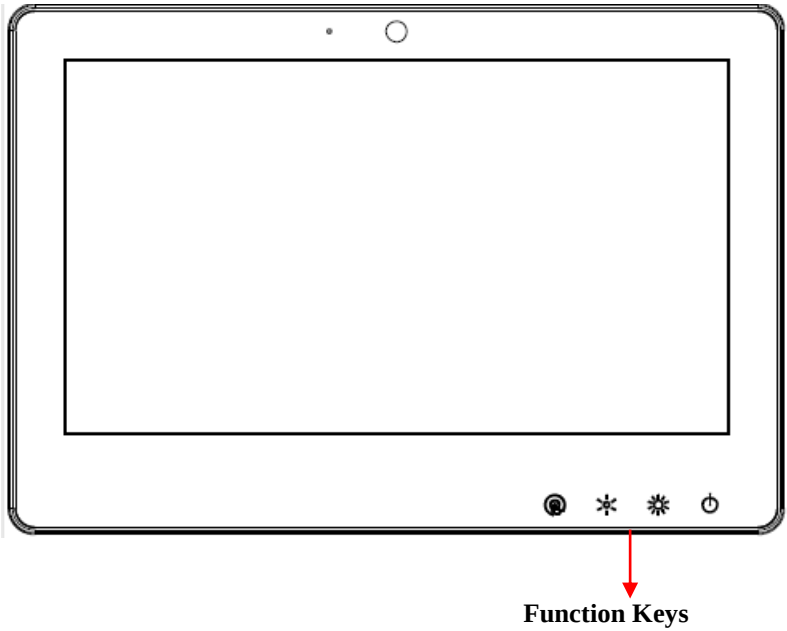
Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

(Débranchez toujours complètement le cordon d'alimentation de votre carte lorsque vous travaillez dessus. N'effectuez pas de connexions lorsque l'appareil est sous tension, car une poussée soudaine d'alimentation peut endommager les composants électroniques sensibles.)

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.
(Mettez-vous toujours à la terre pour éliminer toute charge électrostatique avant de toucher la carte. Les appareils électroniques modernes sont très sensibles aux charges électrostatiques. Utilisez toujours un bracelet antistatique avec mise à la terre. Placez tous les composants électroniques sur une surface antistatique ou dans un sac antistatique lorsqu'ils ne sont pas dans le chassis.)

2.2 Quick Tour of SMA-1233

There are 4 function keys in the front side of SMA-1233. Please refer to table 2.1 for the function of each key.

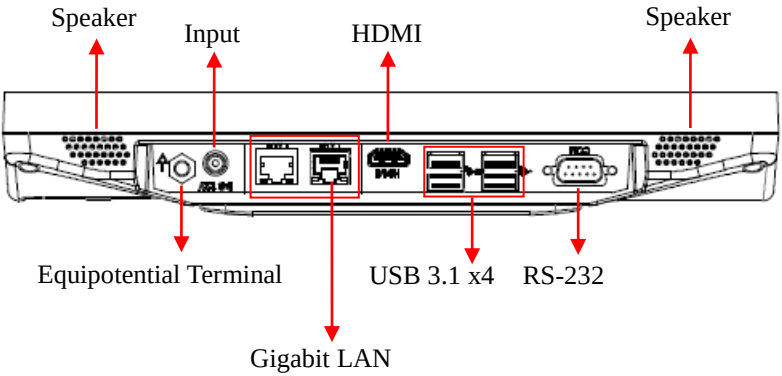


Picture 2.1: Front View of SMA-1233

Function Key	Function
	Power button: Press 2 seconds to turn on the power (Light is blue)
	Increase LCD brightness (Light is blue)
	Decrease LCD brightness (Light is blue)
	Enable/Disable Touch Screen (Orange is off / blue is on)

Table 2.1: Function of Each Key

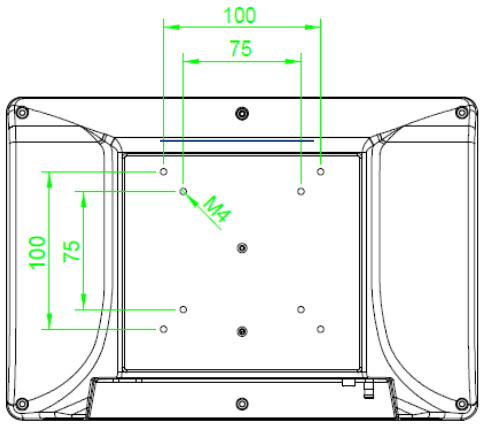
The sunken I/O section is at the bottom, as shown in Picture 2-2.



Picture 2.2: Bottom View of SMA-1233

2.3 Mounting

SMA-1233 can be mounted with 75mm x 75mm or 100mm x 100mm VESA holes in the rear cover by wall-mount. The I/O side should be placed downward during installation and use.



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 SMA-1233 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 or the middle of the desktop screen.

2.5 Turn off

Turning off SMA-1233 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 10/11:

Step 1 – Chipset Driver

Step 2 – Graphics Driver

Step 3 – Serial I/O Driver

Step 4 – ME Driver

Step 5 – Ethernet Driver

Step 6 – Audio Driver

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.

Note: We strongly recommend that you should shut down the system and remove the power cord before cleaning SMA-1233.

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:

https://www.onyx-healthcare.com/

Note:

Follow the national requirement to dispose unit