

ACCEL-VM300

Intel® 13th Generation Core™
Medical AI Computing Platform

ACCEL-VM300 Manual 3.0 Ed
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Packing List

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

- ACCEL-VM300
- Utility DVD-ROM, which contains Drivers and user manual

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

*** Use power cord should follow then specification below:**

UL Listed, CSA approval, 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.

Headquarters

Onyx Healthcare Inc.

4F, No.135, Lane 235, Pao-Chiao Rd.,

Hsin-Tien City, Taipei 231, Taiwan, R.O.C.

TEL: +886-2-8919-2188

FAX: +886-2-8919-1699

E-mail: sales@onyx-healthcare.com

<http://www.onyx-healthcare.com>

Worldwide Offices:

Onyx Healthcare, USA Inc.

2663 Saturn street, Brea, CA 92821, USA

Tel : +1-714-996-1800

Fax: +1-714-996-1811

Email: usasales@onyx-healthcare.com

Onyx Healthcare EUROPE B.V.

Primulalaan 42,5582 GL Waalre,The Netherlands

Tel : +31-(0)499-745600

Email: eusales@onyx-healthcare.com

Onyx Healthcare Technology GmbH

An der Trift65d

63303 Dreieich , Germany

TEL: +49-(0)61033-7479-00

Fax: +49-(0)61033-7479-49

Email: eusales@onyx-healthcare.com

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 équipement doit uniquement être connecté à une alimentation secteur avec mise à la terre de protection.
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, **unplug the power cord to**

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. For safety reason, never open the equipment without authorization of the manufacturer.
15. **Warning: Do not modify this equipment without authorization of the manufacturer.**

(Avertissement : Ne modifiez pas 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 user 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 60950-1 for IT equipment and ANSI/AAMI ES 60601-1: 2005 AND CAN/CSA-C22.2 No. 60601-1:08) Any person who connects external equipment to signal input, signal output, or other connectors has formed a system and is therefore responsible for the system to comply with the standard IEC 60601-1, safety requirements for medical electrical systems.

19. Warning : The device intends to be used in the highly sensitive medical environments and these environments are prevented from access by general hospital staff, and the device should be installed in a suitable and safe location to avoid unauthorized contact. The top cover of device is allowed to be opened by manufacturer's authorized for professional service purpose only.

(Avertissement : L'appareil est destiné à être utilisé dans des environnements médicaux hautement sensibles et ces environnements sont interdits d'accès au personnel hospitalier général, et l'appareil doit être installé dans un endroit approprié et sûr pour éviter tout contact non autorisé. Le couvercle supérieur de l'appareil peut être ouvert par le fabricant autorisé à des fins de service professionnel uniquement).

20 ACCEL-VM300 is applying for the medical instruments main system but without the medication analysis, disease detection,

and medical diagnosis function.

21. Do not touch the device and Patient at the same times.

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

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.

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 provoquer un fonctionnement indésirable.

UL Module Description

	<p>ACCEL-VM300 modules are developed to suitable for the Classification Mark requirement</p>
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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) + AMD (2012) AND CAN/CSA-C22.2 No. 60601-1:14</p>
	<p>Refer to instructions manual/booklet</p>
	<p>Follow operating instructions.</p>
	<p>Ground wire Protective Ground wire.</p>
	<p>Alternating current</p>

	<p><i>Equipotentiality</i> To identify the terminals, when connected together, bring the various parts of an equipment or of a system to the same potential.</p>
	<p>Stand-by switch (PC power button)</p>
<p>I/O</p>	<p>Power supply switch (on/off)</p>

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Chapter

1

General Information

1.1 Introduction

Powerful AI Computing Unit

Onyx Healthcare's ACCEL-VM300 is a compact and slim system uniquely designed for computer-aided medical detection applications with real time response that streamlines the decision making process for doctors, the product provides below features

ACCEL VM300 Medical-Grade Box PC Powered by Intel 13th Gen Processor with i9 Processor up to 5.0Ghz computing power and provide PCIe by 16 slot for high-end graphics card integration such as NVIDIA RTX 5000 Ada and PCIe by 4 for capture card integration for image or video capture.

1.2 Feature

- Design for 2U Rack Mount Chassis
- Intel 13 Gen Core i9 Processor
- Support 2.5" SATA SSD x 2 and M.2 M Key NVMe x 2
- Internal Medical 500W PSU
- Support 1 x PCIe by 16 slot for Graphic card integration
- Support 1 x PCIe by 4 for capture card integration (Optional)
- Support DC 12V output for external monitor (Optional)

1.3 Specification

Hardware Specifications

CPU	Intel® i9-13900TE 5.0GHz / Core i7-13700TE 4.8Ghz
Disk Drive Space	<ul style="list-style-type: none"> ● Main 2.5" Hard Disk Drive/Solid State Drive x 2 ● M.2 M Key 2242 NVMe SSD x 2 <p>Remark: **one of M.2 M Key slot share the same slot with PCIe by 4 slot **another of M.2 M Key slot share the same location with M.2 E Key for WiFi module</p>
System Memory	Support 2 x SO-DIMM DDR4 with up to 64GB
Rear I/O	<p>4 x USB 3.2 Type A Gen 2 (5V/900mA) 2 x USB 2.0 Type A 2 x RJ-45 2.5G LAN 1 x HDMI 2.0b/ 2. x DP 1.4a/ 1 x VGA 2 x COM 1 x AC input 1 x Grounding Pin</p> <p><u>Sound:</u> 1 x Line-out 1 x Mic-in</p>
Speaker (Optional)	2 x 5W Built-in Speaker
Security	TPM 2.0 onboard

Front I/O	1 x Power Button 2 x USB 3.0
VGA	Up to 1920 x 1200 @60Hz
HDMI	Up to 4096 x 2160 @24Hz/2560 x 1600@60Hz, with Digital Audio
Display Port	Up to 4096 x 2160 @24Hz/3840 x 2160@60Hz, with Digital Audio
Expansion Slot	<ul style="list-style-type: none"> ● 1 x 12V DC OUT(Optional) ● 1 x M.2 E Key 2230 for Wi-Fi + BT ● 1 x PCIe Gen3 Slots x 16 ● 1 x PCIe Gen3 Slot x 4 (Optional)
Optional Graphic card (Optional)	Up to NVIDIA RTX 5000 Ada:
Power Supply	Power Supply : 100-240V, 50-60hz, 8-4A, 500W Medical ATX PSU

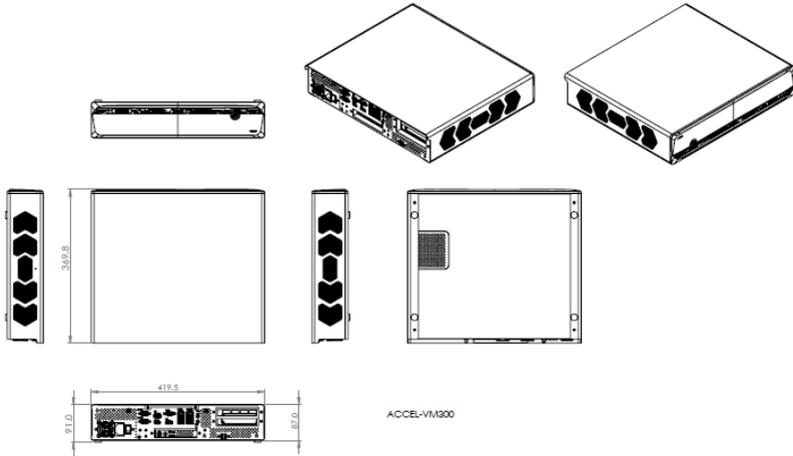
Mechanical Specifications

Construction	Metal chassis
Dimension	419.5 x 369.8 x 87 mm (without Rubber foot) 419.5 x 369.8 x 91 mm (with Rubber foot)
Carton Dimension	500mm x 200mm x 630 mm
Net Weight	8 kg Max.
Gross Weight	9.4 kg Max.
Packing Filler	PE foam

Environment Specifications

Operating Environment	0°C to 35°C (32 °F ~95°F) 30% ~ 75% @ 40°C, Non-Condensing 700~1060 hPa
Storage / Transport Environment	-20°C to 60°C (-4°F ~140°F) 10% ~ 90% @ 40°C, Non-Condensing 700~1060 hPa
EMI / Safety	CE: EN 60601-1-2:2015+A1:2021 (V4.1) EN 60601-1:2007+A1:2013+A2:2021 (V3.2) EN 55032:2015/A1:2020 EN55035:2017/A11:2020 (ITE) IEC 62368-1:2020+A11:2020 (ITE) FCC: Part 15B/ Part 18 UL: ANSI/AAMI ES60601-1: 2005/A1:2012/A2:2021 (V3.2) cUL: CAN/CSA-C22.2 No. 60601-1:14 (IEC 60601-1:2005+A1:2012+A2:2020, MOD) (V3.2)

1.4 Dimension



Chapter

2

Hardware Introduction

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.

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 surtension soudaine peut endommager les composants électroniques sensibles .

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

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

2.2 A Quick Tour of the ACCEL-VM300

Before you start to set up the ACCEL-VM300, 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.

Please place the ACCEL-VM300 upright on the desktop, its front side appears as shown in Picture 1.1.



Picture 1.1: Front View of the ACCEL-VM300

When you turn the ACCEL-VM300 around and look at its rear side, as shown in Picture 1.2.



Picture 1.2: Rear view of the ACCEL-VM300

2.3 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 ACCEL-VM300 will begin loading Windows OS once you push the power button) to turn power on (LED indicator light blue). 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.

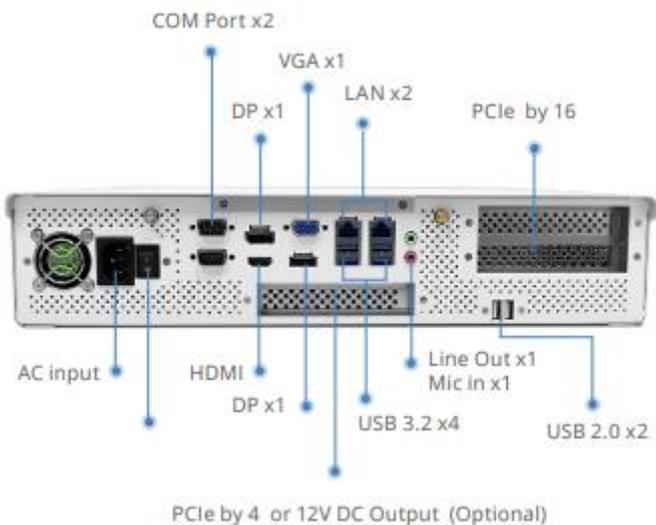
2.4 Turn off

Turning off ACCEL-VM300 properly is important for system reliability.

1. On the start menu, click “shut down” and select “OK”
2. And then the system will shut down automatically

2.5 I/O Connectors





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:

3.1 Installation

Insert the ACCEL-VM300 DVD into the DVD-ROM drive. And install the drivers from Step 1 to Step 6 in order.

Step 1 - INF

Step 2 - VGA

Step 3 - LAN

Step 4 - Audio

Step 5 - ME

Step 6 - Intel HID Event Filter

Wifi&BT Driver (optional)

RapidStorage Driver—only for when Intel RST is needed

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.
- **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 requirement to dispose unit