VIA ALTA DS 3

High-performance Edge AI system
with dual 4K screen support and rich
wireless and I/O connectivity options

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Regulatory Compliance

FCC-A Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his personal expense.

Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

Notice 3

The product described in this document is designed for general use, VIA Technologies assumes no responsibility for the conflicts or damages arising from incompatibility of the product. Check compatibility issue with your local sales representatives before placing an order.

CE FC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

Battery Recycling and Disposal

• Only use the appropriate battery specified for this product.
• Do not re-use, recharge, or reheat an old battery.
• Do not attempt to force open the battery.
• Do not discard used batteries with regular trash.
• Discard used batteries according to local regulations.

Safety Precautions

• Always read the safety instructions carefully.
• Keep this User's Manual for future reference.
• All cautions and warnings on the equipment should be noted.
• Keep this equipment away from humidity.
• Put this equipment on a reliable flat surface before setting it up.
• Check the voltage of the power source and adjust to 110/220V before connecting the equipment to the power inlet.
• Do not place the power cord where people will step on it.
• Always unplug the power cord before inserting any add-on card or module.
• If any of the following situations arise, get the equipment checked by authorized service personnel:
    • The power cord or plug is damaged.
    • Liquid has entered into the equipment.
    • The equipment has been exposed to moisture.
    • The equipment is faulty or you cannot get it work according to User's Manual.
    • The equipment has been dropped and damaged.
    • The equipment has an obvious sign of breakage.
• Do not leave this equipment in extreme temperatures or in a storage temperature above 70°C (158°F). The equipment may be damaged.
• Do not leave this equipment in direct sunlight.
• Never pour any liquid into the opening. Liquid can cause damage or electrical shock.
• Do not place anything over the power cord.
• Do not cover the ventilation holes. The openings on the enclosure protect the equipment from overheating

Box Contents

- 1 x VIA ALTA DS 3 system
- 1 x Stand holder
- 1 x AC to DC adapter
- 1 x Power cord
- 1 x Wi-Fi antenna (ALTADS30VA001-T only)

Ordering Information

Part Number	Description
ALTADS30VA001-T	Android system with 2.15GHz Qualcomm® Snapdragon™ 820E Embedded Platform, 16GB eMMC, 4GB POP LPDDR4 RAM, 2 HDMI, 3 USB 3.0, Gigabit Ethernet, Wi-Fi, Bluetooth 4.1, SD card slot, M.2 slot, SIM card slot, miniPCIe slot, Stand holder, US power cord, 12V DC-in
ALTADS30VA002-T	Android system with 2.15GHz Qualcomm® Snapdragon™ 820E Embedded Platform, 16GB eMMC, 4GB POP LPDDR4 RAM, 2 HDMI, 3 USB 3.0, Gigabit Ethernet, SD card slot, M.2 slot, SIM card slot, miniPCIe slot, Stand holder, US power cord, 12V DC-in

Optional Accessories

Wireless Accessories

Part Number	Description
EMIO-2573-00A0	Quectel EC25-A 4G/LTE mobile broadband full size miniPCIe module for USA with assembly kit and antenna pack

Mounting Options

Part Number	Description
VT6076-C0000A1	VESA mount cradle

Cable Accessories

Part Number	Description
99G33-080297	Debug cable (TX/RX)

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1. Product Overview

Accelerate your intelligent signage, kiosk, and access control device development and deployment with the VIA ALTA DS 3 Edge AI system. Powered by the Qualcomm® Snapdragon™ 820E Embedded Platform, the VIA ALTA DS 3 combines cutting-edge compute, graphics, and AI processing performance with dual 4K display support, rich connectivity options, and flexible camera and I/O peripheral integration capabilities in an ultra-compact fanless form factor.

Measuring just 175mm (W) x 25mm (H) x 118mm (D), the system integrates a rich set of I/O features through the front and rear panels of its ultra-compact fanless chassis, including two HDMI ports, three USB 3.0 ports, one Mini USB 2.0 port, and one miniPCIe slot. Other features include 4GB POP LPDDR4 RAM, 16GB eMMC flash memory, one SD card slot, one M.2 slot, and line-out and mic-in audio jacks. The system delivers rich network connectivity through its Gigabit Ethernet port and a choice of Wi-Fi & Bluetooth 4.1 or 4G LTE wireless integration options.

To facilitate software and AI application development, the VIA ALTA DS 3 comes with a BSP featuring Android 8.0 which includes the Qualcomm® Neural Processing SDK for artificial intelligence designed to help developers run one or more neural network models trained in Caffe/Caffe2, ONNX, or TensorFlow using the CPU, GPU, or DSP in the Qualcomm® Snapdragon™ 820E Embedded Platform.

1.1   Key Features

1.1.1   High-Performance

The ARM based VIA ALTA DS 3 system is powered by a Qualcomm® Snapdragon™ 820E Embedded Platform that provides a full range of rich features including superb multi-tasking performance.

1.1.2   Fanless and Space Saving

The VIA ALTA DS 3 features fanless operation in a slim chassis designed to save space, making it ideal for installation in a wide range of environments.

1.1.3   Optimized Integration with Multiple I/O Access

With front and back panel I/O access, the VIA ALTA DS 3 can be easily configured to support a wide variety of applications with easy integration and quick setup.

1.1.4   Dual 4K Display Support

The VIA ALTA DS 3 has an independent integrated HDMI 2.0 transmitter that supports 4K UHD display output, and 4K UHD display output from dual MIPI DSI to HDMI 1.4 converter.

1.1.5   Storage Expansion

The VIA ALTA DS 3 has 16GB eMMC flash storage onboard and features an SD Card slot supports and additional 32GB. The onboard M.2 slot enables further expansion with it support for extra storage of up to 1TB.

1.1.6   Networking Support

The VIA ALTA DS 3 is equipped with an RJ-45 port that supports high-speed Gigabit Ethernet. Wireless connectivity can be added through the miniPCIe slot using the optional VIA EMIO-2573 mobile broadband miniPCIe module.

1.1.7   Mounting Solution

The VIA ALTA DS 3 supports multiple methods for mounting the chassis securely. It can be mounted to any flat surface using the stand holder, or even to VESA mountable surfaces with a VESA mounting kit.

1.1.8   Embedded Operating System Ready

The VIA ALTA DS 3 features a complete software evaluation image featuring Android 8.0.

1.2 Product Specifications

Processor

- Qualcomm® Snapdragon™ 820E Embedded Platform
  - Two high-performance Kryo cores up to 2.15GHz
  - Two low power Kryo cores up to 1.593GHz

System Memory

- 4GB POP LPDDR4 SDRAM

Storage

- 16GB eMMC flash memory
- M.2 slot for M.2 2280 PCIe NVMe SSD
- SD card slot

Graphics

- Qualcomm® Adreno 530 GPU
  - 3D graphics accelerator with 64-bit addressing 624MHz
  - Graphics engine supporting OpenGL ES 3.1/GEP, GL4.4, DX11.3/4, OpenCL 2.0, Renderscript-Next
  - Supports H.264, H.265 (HEVC 8/10-bit) video decoding up to: 4K@60fps

Wireless Connectivity

- NFA324A-12H32 QCA6174A-1 Wi-Fi 802.11 a/b/g/n/ac + BT 4.1 combo LGA module

Audio

- WCD9335 Audio Codec

HDMI

- Integrated HDMI 2.0 transmitter and dual DSI to HDMI 1.4 converter

Front Panel I/O

- 1 x Power button with power LED indicator
- 1 x SD card slot
- 2 x USB 3.0 ports
- 1 x Line-out
- 1 x Mic-in (or optional CIR)

Back Panel I/O

- 1 x DC-in jack
- 1 x Gigabit Ethernet port
- 2 x HDMI ports
- 1 x USB 3.0 port
- 1 x Mini USB 2.0 port (fastboot mode only)
- 1 x Antenna hole (for 4G or Wi-Fi)
- 1 x Kensington Lock

Onboard I/O

- 1 x MiniPCIe slot
- 1 x M.2 slot
- 1 x SIM card slot

Power Supply

- 12V DC-in

Operating System

- Android 8.0

Operating Temperature

- 0°C ~ 40°C

Operating Humidity

- 0% ~ 95% @ 40°C (non-condensing)

Storage Temperature

- -20°C ~ 70°C

Mechanical Construction

- Plastic frame
- Metal bracket

Mounting

- Stand holder, VESA mount (optional)

Dimensions

- 175mm (W) x 25mm (H) x 118mm (D) (6.88" x 0.98" x 4.64")

Weight

- 0.61kg (1.34lbs)

Compliance

- CE, FCC

Notes:
1. As the operating temperature provided in the specifications is a result of testing performed in VIA's chamber, a number of variables can influence this result. Please note that the working temperature may vary depending on the actual situation and environment. It is highly recommended to execute a solid testing program and take all the variables into consideration when building the system. Please ensure that the system runs well under the operating temperature in terms of application.

2. Please note that the lifespan of the onboard eMMC/UFS memory chip may vary depending on the amount of access. More frequent and larger data access on the eMMC memory makes its lifespan shorter. Therefore, it is highly recommended to use a replaceable external storage (e.g., SD card) for large data access.

1.3   Layout Diagram

Power button   USB 3.0   Mic-in

SD Card slot   Line-out

Figure 1: Front panel I/O layout

DC-in   HDMI   Mini USB 2.0

+12V   HDMI 2   HDMI 1   SS

Kensington Lock   Gigabit Ethernet   USB 3.0   Antenna hole
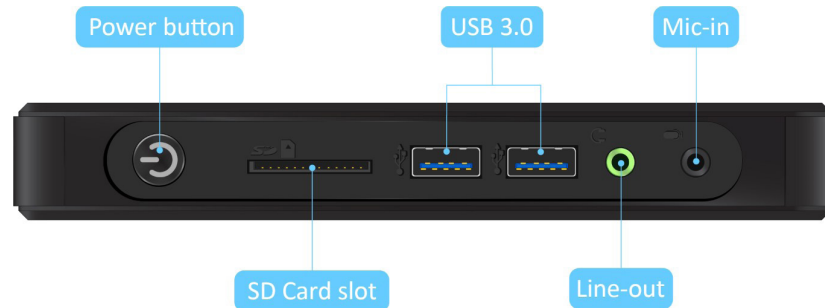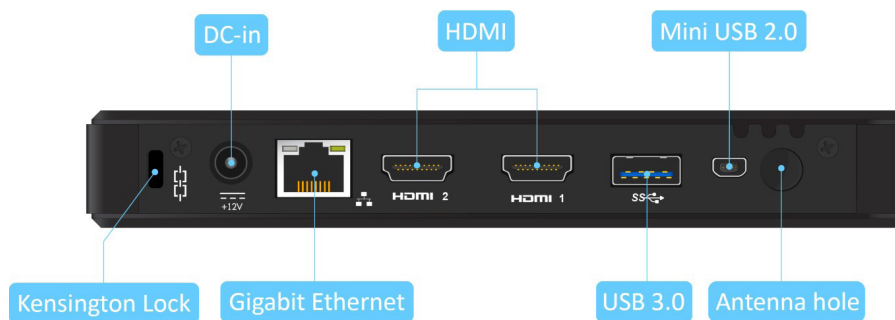
Figure 2: Back panel I/O layout

1.4   Product Dimensions

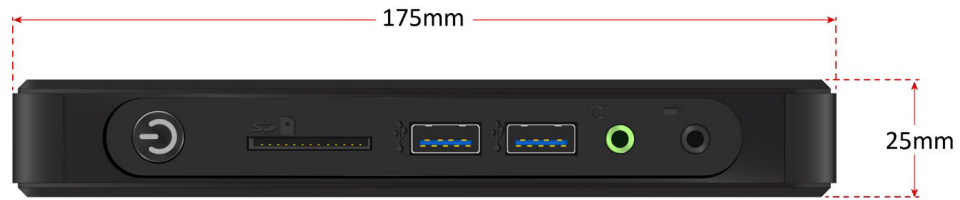
Figure 3: Dimensions of the VIA ALTA DS 3 (front view)

Figure 4: Dimensions of the VIA ALTA DS 3 (top view)

Figure 5:Dimensions of the VIA ALTA DS 3 with stand holder installed (front view)

Figure 6:Dimensions of the VIA ALTA DS 3 with stand holder installed (top view)

2. External I/O Pin Descriptions and Functionality

The VIA ALTA DS 3 has a wide selection of interfaces. It includes a selection of frequently-used ports as part of the external I/O coastline.

2.1　HDMI® Ports

The VIA ALTA DS 3 is equipped with two HDMI ports on the back panel which use an HDMI port Type A receptacle connector to connect High Definition video and digital audio using a single cable. The pinouts of the HDMI port are shown below.

Pin	Signal	Pin	Signal
1	D2+	11	GND
2	GND	12	CLK-
3	D2-	13	CEC
4	D1+	14	NC
5	GND	15	DDC_CLK
6	D1-	16	DDC_DATA
7	D0+	17	GND
8	GND	18	HDMI_5V
9	D0-	19	PLUG_DET
10	CLK+		

Figure 7: HDMI port diagram

Table 1: HDMI port pinouts

2.2　USB 3.0 Ports

The VIA ALTA DS 3 is equipped with three USB 3.0 ports, one in the front panel and two in the back panel. Each USB 3.0 port has a maximum data transfer rate of up to 5Gbps and is compatible with USB 2.0 specifications. This USB port gives complete Plug and Play and hot swap capability for external devices. The pinouts of the USB 3.0 port are shown below.

Pin	Signal
1	VBUS
2	D-
3	D+
4	GND
5	RX-
6	RX+
7	GND
8	TX-
9	TX+

Figure 8: USB 3.0 diagram

Table 2: USB 3.0 pinouts

2.3   Mini USB 2.0 Port

The VIA ALTA DS 3 is equipped with a mini USB 2.0 port on the back panel which is only used during the fastboot mode when installing the Android image. The pinouts of the mini USB 2.0 port are shown below.

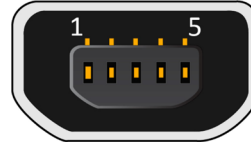| Pin	Signal
1	VCC 5V
2	D-
3	D+
4	ID
5	GND

Figure 9: Mini USB 2.0 port diagram

Table 3: Mini USB 2.0 port pinouts

2.4   Gigabit Ethernet Port

The VIA ALTA DS 3 comes with one Gigabit Ethernet port on the back panel which uses an 8 Position and 8 Contact (8P8C) receptacle connector commonly known as RJ-45. It is fully compliant with the IEEE 802.3 (10BASE-T), 802.3u (100BASE-TX), and 802.3ab (1000BASE-T) standards. The pinouts of the Gigabit Ethernet port are shown below.

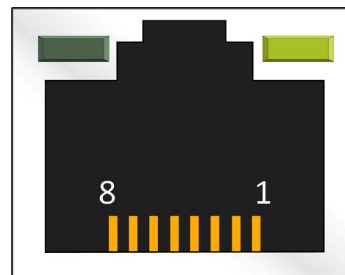| Pin	Signal
1	TX1+
2	TX1-
3	TX2+
4	TX2-
5	TX3+
6	TX3-
7	TX4+
8	TX4-

Figure 10: Gigabit Ethernet port diagram

Table 4: Gigabit Ethernet port pinouts

The Gigabit Ethernet port (RJ-45) is equipped with two LED indicators on the front side to show its Active/Link status and Speed status.

	Active LED (Left LED on RJ-45 port)	Link LED (Right LED on RJ-45 port)
Link off	LED is off	LED is off
Speed_10Mbit	Green flash	LED is off
Speed_100Mbit	Red flash	LED is off
Speed_1000Mbit	LED is off	Orange flash

Table 5: Gigabit Ethernet port LED color definition

2.5   Audio Jack

The VIA ALTA DS 3 offers High Definition audio through two 3.5mm TRS jacks on the front panel: Line-out and Mic-in. The Line-out jack is for connecting to external speakers or headphones. The Mic-in jack is for connecting to a microphone. The diagram of the audio jacks is shown below.

Figure 11: Audio jacks diagram

2.6   SD Card Slot

The VIA ALTA DS 3 comes with an SD card slot located on the front panel with support for a maximum storage capacity of 32GB. The pinouts of the SD card slot are shown below.

Pin	Signal
1	SDC2_DATA3
2	SDC2_CMD
3	GND
4	VDD
5	SDC2_CLK
6	GND
7	SDC2_DATA_0
8	SDC2_DATA_1
9	SDC2_DATA_2
CD	SD_CARD_DET_IN
WP	SD_WP

Figure 12: SD card slot diagram

Table 6: SD card slot pinouts

2.7   Power Button

The VIA ALTA DS 3 comes with a power button featuring a built-in power LED indicator (blue light). The power button can support two functions: System Suspend/Resume and Pop-up power control menu. The diagram of the power button is shown below.

Figure 13: Power button diagram

Power Button behavior	
Suspend/Resume System	Quickly press the power button once to suspend. While in suspend mode quickly press once to resume.
Pop-up power control menu	Occurs when the power button is pressed for longer than 3 seconds.

Table 7: Power button behavior description

2.8   DC-In Jack

The VIA ALTA DS 3 comes with a DC-in jack that carries a 12V DC external power input. The specification and pinouts of the power DC-in jack are shown below.

Pin	Signal
1	+12V
2	GND

Table 8: DC-in jack pinouts
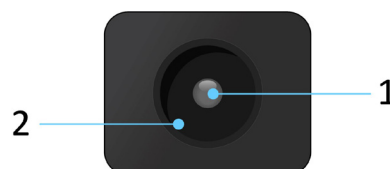
Figure 14: DC-in jack diagram

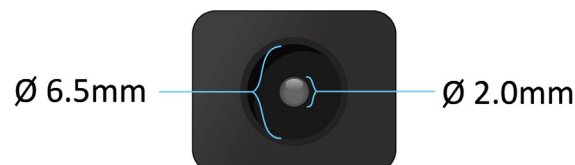| Physical Specification	
Outer Diameter	6.5mm
Inner Diameter	2.0mm
Barrel Depth	8.2mm
Electrical Specification	
Input Voltage	+12V

Table 9: DC-in jack specification

Figure 15: DC-in jack specification diagram

3. Onboard I/O

This chapter provides information about the onboard I/O connectors on the VIA ALTA DS 3 system's mainboard.

3.1 MiniPCIe Slot

The VIA ALTA DS 3 is equipped with a miniPCIe slot for wireless networking options such as a 4G module. The pinouts of the miniPCIe slot are shown below.
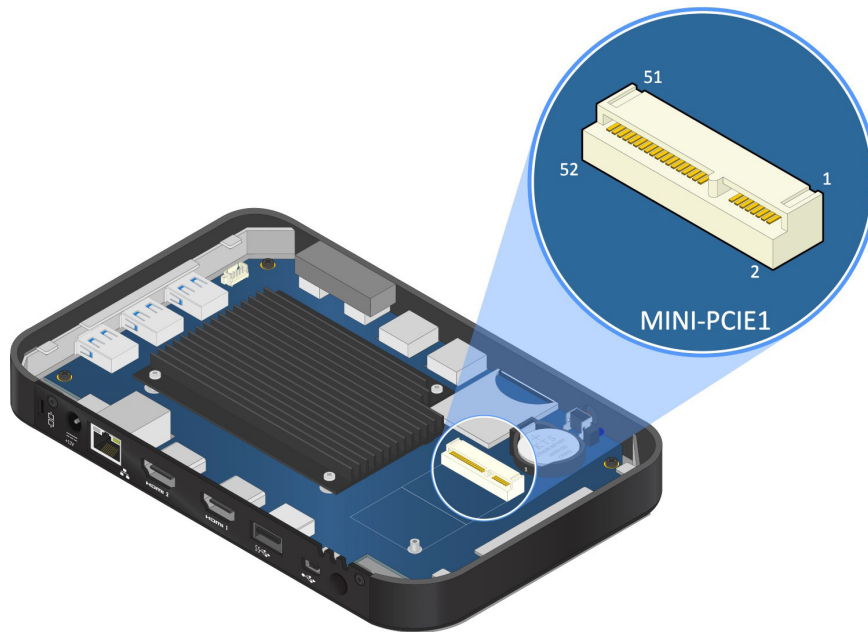

Figure 16: MiniPCIe slot diagram

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	Reserved	2	VDD3V3_MPCIE	35	GND	36	MINI_PCIE_USB_DM
3	Reserved	4	GND	37	GND	38	MINI_PCIE_USB_DM
5	Reserved	6	VDD1V5	39	VDD3V3_MPCIE	40	GND
7	Reserved	8	USIM_VCC_A	41	VDD3V3_MPCIE	42	Reserved
9	GND	10	USIM_DATA_A	43	GND	44	Reserved
11	Reserved	12	USIM_CLK_A	45	Reserved	46	Reserved
13	Reserved	14	USIM_RST_A	47	Reserved	48	VDD1V5
15	GND	16	USIM_VPP_A	49	Reserved	50	GND
17	Reserved	18	GND	51	Reserved	52	VDD3V3_MPCIE
19	Reserved	20	MPCIE_W_DISABLE				
21	GND	22	MPCIE_RST_N				
23	Reserved	24	VDD3V3_MPCIE				
25	Reserved	26	GND				
27	GND	28	VDD1V5				
29	GND	30	Reserved				
31	Reserved	32	Reserved				
33	Reserved	34	GND				

Table 10: MiniPCIe slot pinouts

3.2 M.2 Slot

The VIA ALTA DS 3 is equipped with a M.2 slot which is used to support an M.2 2280 PCIe NVMe SSD module for additional storage of up to 1TB. The pinouts of the M.2 slot are shown below.
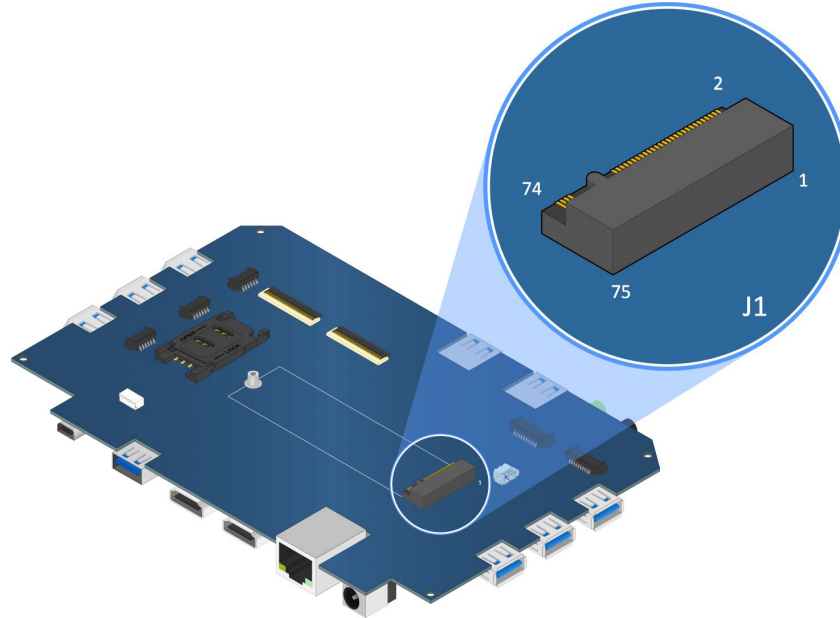

Figure 17: M.2 slot diagram

Pin	Signal	Pin	Signal		Pin	Signal	Pin	Signal
1	GND	2	VDD3V3_M2		41	PCIE2_RX_M	42	NC
3	GND	4	VDD3V3_M2		43	PCIE2_RX_P	44	NC
5	NC	6	NC		45	GND	46	NC
7	NC	8	NC		47	PCIE2_TX_M	48	NC
9	GND	10	VDD3V3_M2		49	PCIE_TX_P	50	PCIE2_RST_N
11	NC	12	VDD3V3_M2		51	GND	52	PCIE2_CLKREQ_N
13	NC	14	VDD3V3_M2		53	PCIE2_CLK_M	54	PCIE2_WAKE_N
15	GND	16	VDD3V3_M2		55	PCIE2_CLK_P	56	MFG_DATA
17	NC	18	VDD3V3_M2		57	GND	58	MFG_CLCOK
19	NC	20	NC		59	-	60	-
21	GND	22	NC		61	-	62	-
23	NC	24	NC		63	-	64	-
25	NC	26	NC		65	-	66	-
27	GND	28	NC		67	NC	68	M2_SUSCLK
29	NC	30	NC		69	VDD3V3_M2	70	VDD3V3_M2
31	NC	32	NC		71	GND	72	VDD3V3_M2
33	GND	34	NC		73	GND	74	VDD3V3_M2
35	NC	36	NC		75	GND		
37	NC	38	PCIE2_DSLP					
39	GND	40	NC					

Table 11: M.2 slot pinouts

3.3　SIM Card Slot

The VIA ALTA DS 3 is equipped with a SIM card slot that can support a 4G SIM card. Using the SIM card slot on the VIA ALTA DS 3 requires a 4G module to be installed in the miniPCIe slot to enable the 4G function, otherwise the SIM card slot is disabled. The SIM card slot is designed only for a 4G module without a built-in SIM card slot on it. The SIM card slot is labeled as "SIM1". The pinouts of the SIM card slot are shown below.
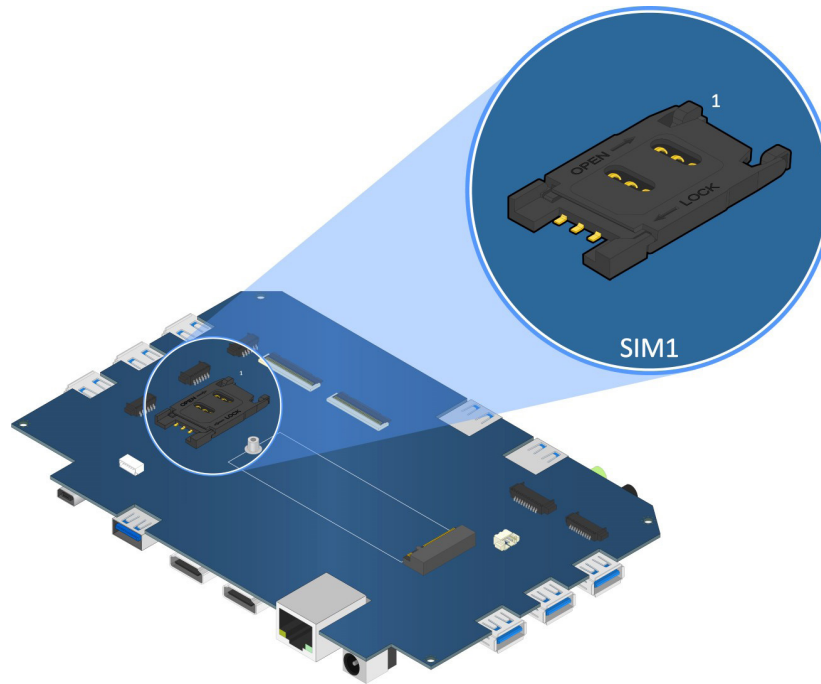

Figure 18: SIM card slot diagram

Pin	Signal
1	USIM_VCC_A
2	USIM_RST_A
3	USIM_CLK_A
4	-
5	GND
6	USIM_VPPSIM_A
7	USIM_DATA_A

Table 12: SIM card slot pinouts

4. Hardware Installation

This chapter provides information about the hardware installation procedures. It is recommended to use a grounded wrist strap before handling computer components. Electrostatic discharge (ESD) can damage some components.

> **Reminder:**
> Once the chassis has been opened, the warranty of this product is no longer valid.

4.1   Opening the Chassis

Step 1

Remove the two screws on the back panel I/O plate.

Figure 19: Unscrewing the back panel I/O plate

Step 2

Gently pull out the back panel I/O plate.

Figure 20: Removing the back panel I/O plate

Step 3

Gently slide the top cover horizontally to disengage it from the chassis and pull up to remove it completely.

Figure 21: Removing the top cover

4.2   Installing the M.2 2280 PCIe NVMe SSD Module

Step 1

Follow the instructions in section 4.1 above to open the chassis.

Step 2

Remove the four screws of the system's mainboard then gently remove the mainboard from the chassis.
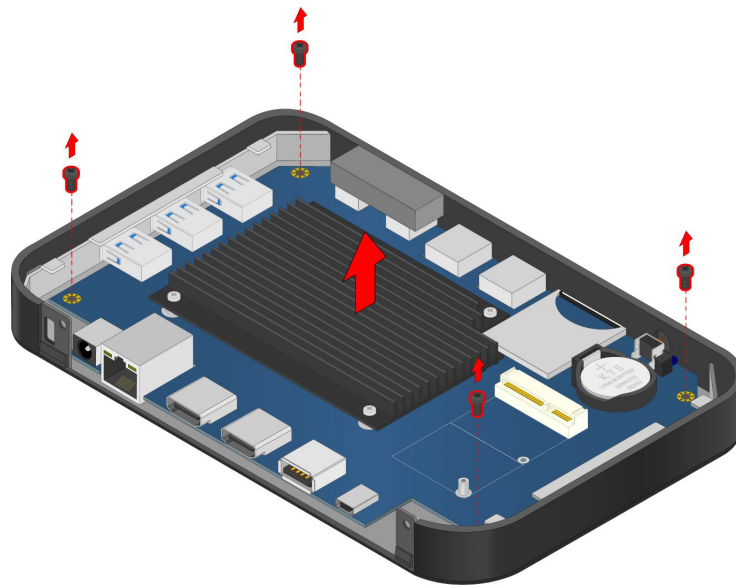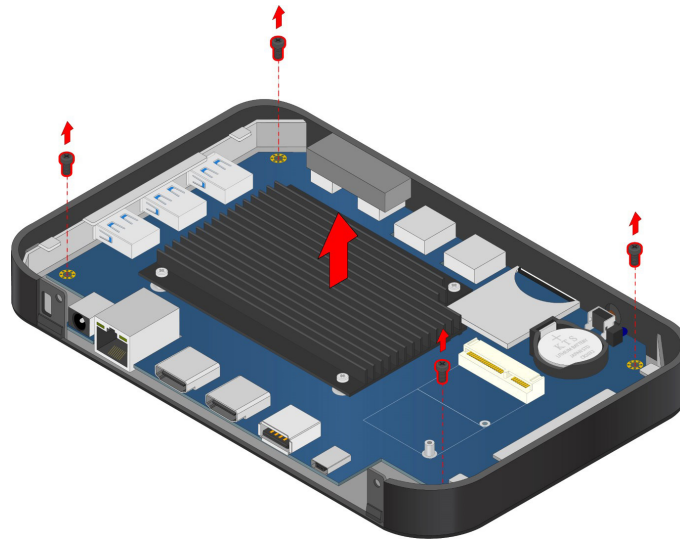

Figure 22: Removing the system's mainboard

Step 3

On the bottom side of the system's mainboard, align the notch on the M.2 2280 PCIe NVMe SSD module with the counterpart on the M.2 slot. Then insert the module at a 30° angle.
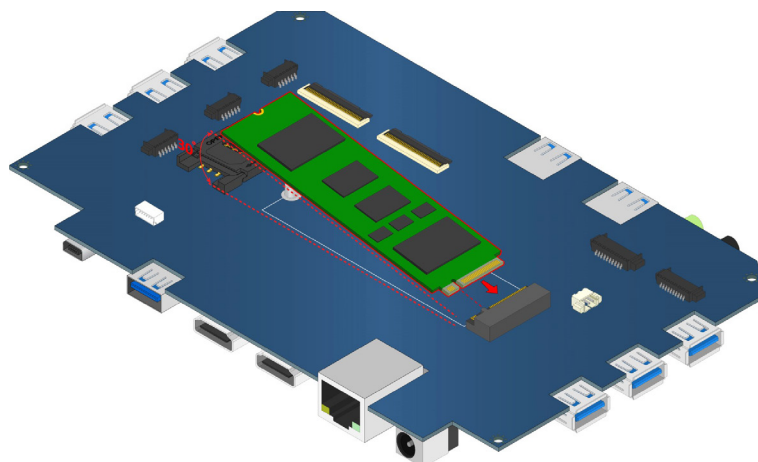
Figure 23: Installing the M.2 2280 PCIe NVMe SSD module

Step 4

Once the M.2 2280 PCIe NVMe SSD module has been fully inserted, push down the module until the standoff hole is aligned with the screw hole and then secure the module with the provided screw.
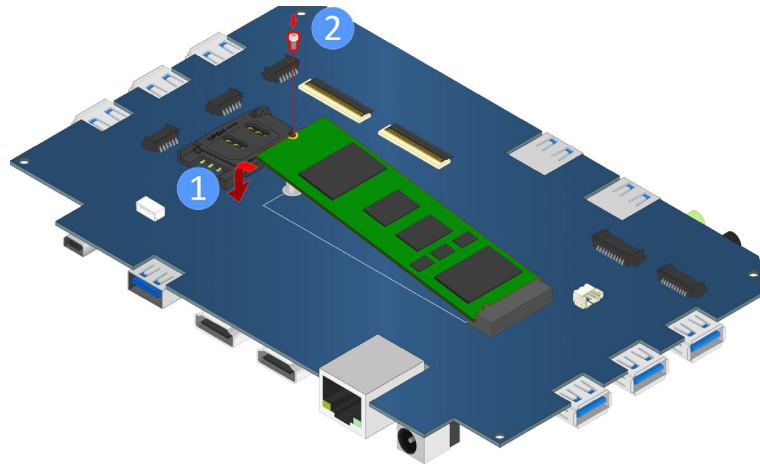
Figure 24: Securing the M.2 2280 PCIe NVMe SSD module

4.3   Installing the 4G SIM Card

Step 1

Follow the instructions in section 4.1 above to open the chassis.

Step 2

Remove the four screws of the system's mainboard then gently remove the mainboard from the chassis.

Figure 25: Removing the system's mainboard

Step 3

On the bottom side of the mainboard, firmly push back the SIM card slot to unlock the opening. Pull up the slot and place the SIM card inside. Gently lock the SIM card slot by sliding back the slot.
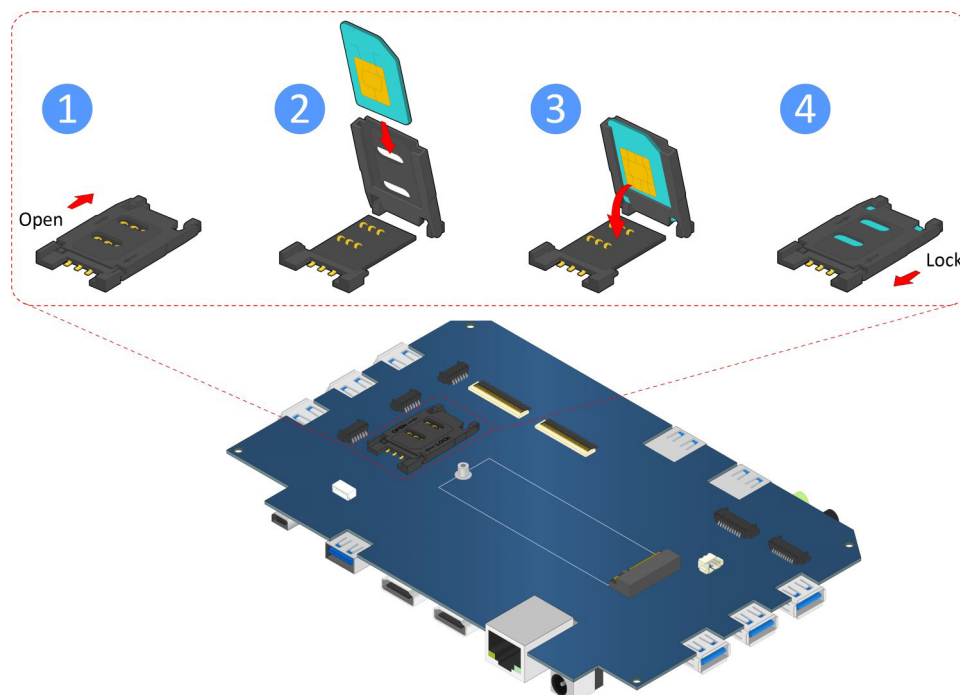
Figure 26: Installing the 4G SIM card

4.4   Installing the Stand Holder

The stand holder is designed to hold the VIA ALTA DS 3 in an upright position.

Step 1

Align the pre-installed screw of the stand holder with the mounting hole at the right side of the chassis and then gently attach the stand holder to the chassis.
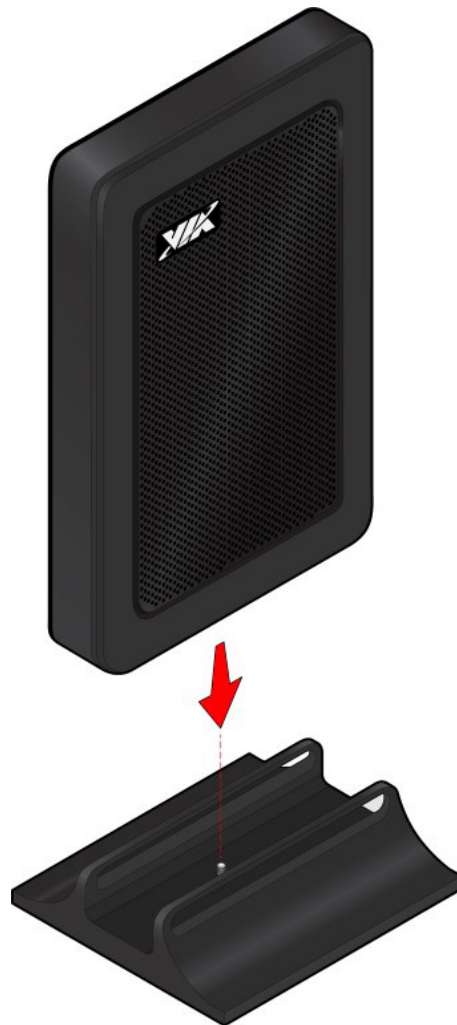

Figure 27: Installing the stand holder

Step 2

Once the stand holder has been fully attached, secure it with the pre-installed screw located on the bottom side of the stand holder.
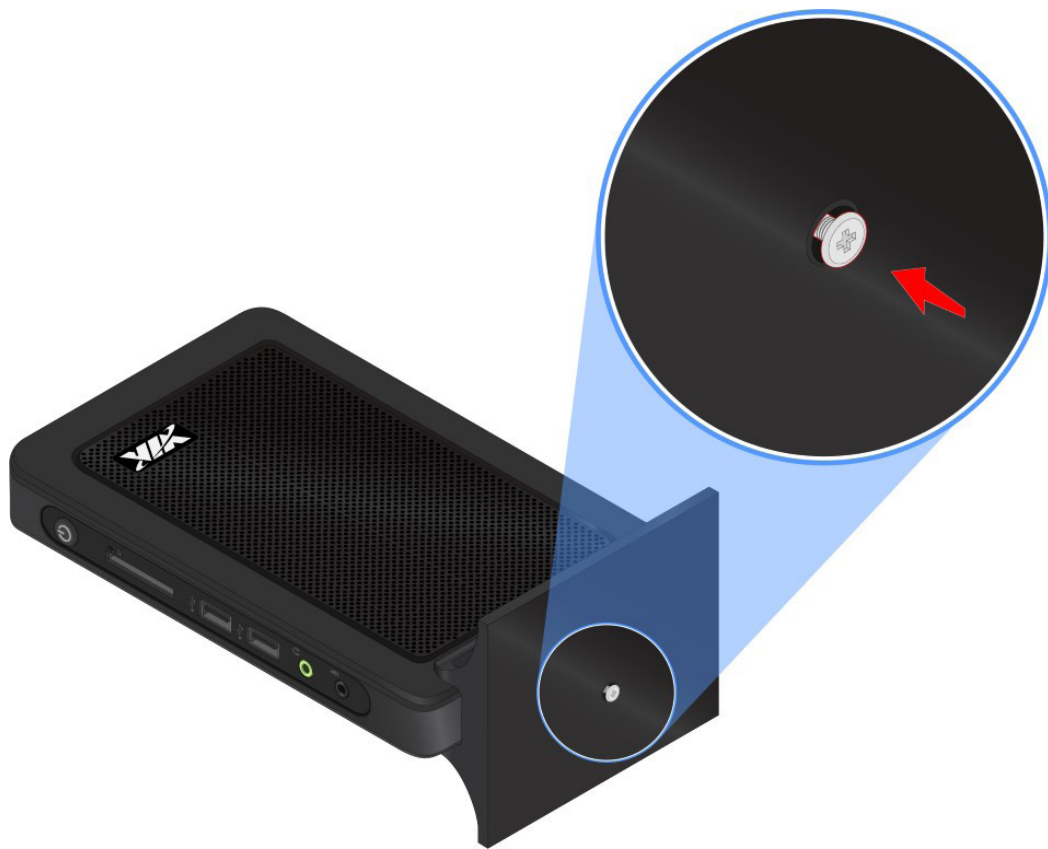

Figure 28: Securing the stand holder

5. Software and Technical Support

5.1   Android Support

The VIA ALTA DS 3 features a complete software evaluation image featuring the Android 8.0 operating system.

5.2   Technical Support and Assistance

• For utilities downloads and the latest documentation and information about the VIA ALTA DS 3, please visit our website at **https://www.viatech.com/en/systems/android-signage-players/alta-ds-3**

• For technical support and additional assistance, always contact your local sales representative or board distributor, or go to **https://www.viatech.com/en/support/driver-support-fag/technical-support/** for technical support.

• For OEM clients and system integrators developing a product for long term production, other code and resources may also be made available. Please visit our website at **https://www.viatech.com/en/about/contact/** to submit a request.

Appendix A.   Installing Wireless Accessories

This chapter provides information on how to install the VIA EMIO-2573 mobile broadband miniPCIe module in the VIA ALTA DS 3 system.

A.1. Installing VIA EMIO-2573 Mobile Broadband Module

Step 1

Follow the instructions in section 4.1 above to open the chassis.

Step 2

Align the notch on the VIA EMIO-2573 module with its counterpart on the miniPCIe slot on the mainboard. Then insert the module at a 30° angle.
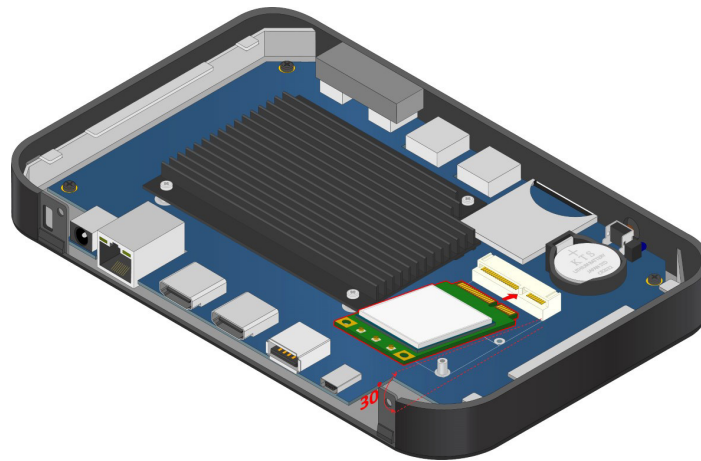

Figure 29: Installing the VIA EMIO-2573 module

Step 3

Once the VIA EMIO-2573 module has been fully inserted, push down the module until the screw hole aligns with the standoff hole and then secure the module with the provided screw. Lastly, remove the antenna hole cover from the back panel I/O plate.

Figure 30: Securing the VIA EMIO-2573 module and removing the antenna hole cover

Step 4

Insert the 4G antenna cable into the antenna hole from inside of the back panel I/O plate. Insert the washer, fasten it with the nut, and install the external antenna.
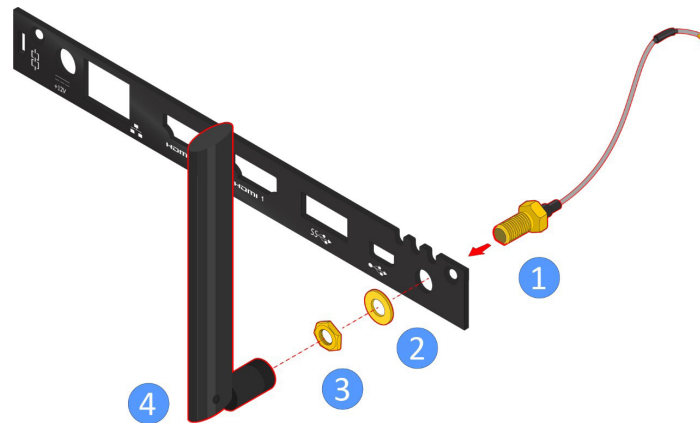

Figure 31: Installing the antenna and antenna cable of VIA EMIO-2573 module

> **Reminder:**
> Only use the provided 4G antenna cable for the VIA EMIO-2573 module which is provided in the package.

Step 5

Gently connect the other end of the 4G antenna cable to the micro-RF connector labeled "MAIN" on the VIA EMIO-2573 module.
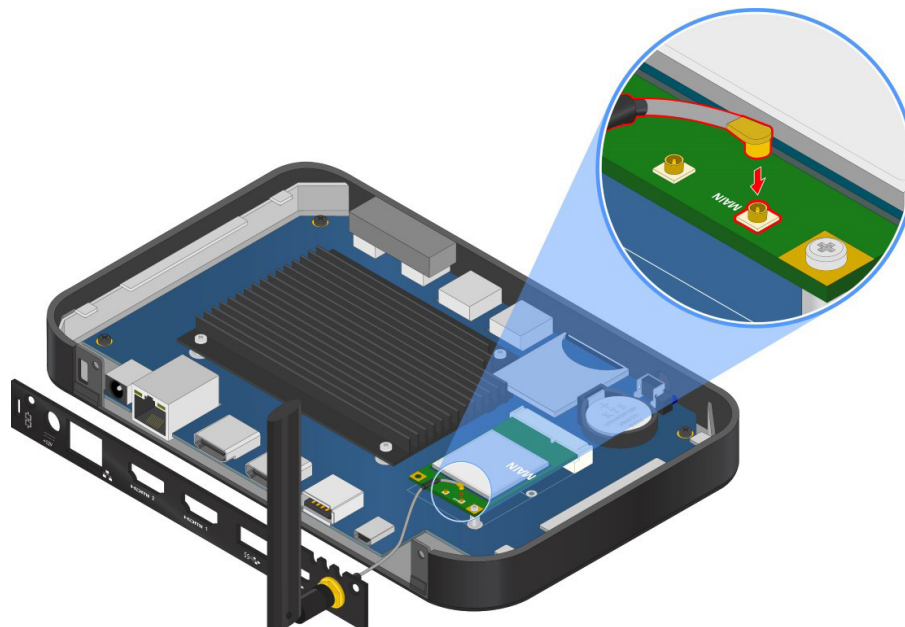
Figure 32: Connecting the antenna cable to the micro-RF connector on VIA EMIO-2573 module

Step 6

Reinstall the top cover and back panel I/O plate, and then secure it with the two screws.

Figure 33: Reinstalling the top cover and back panel I/O plate

Appendix B.   Installing VESA Mount Cradle

This chapter provides information on how to install the optional VESA mount cradle for mounting the VIA ALTA DS 3 behind the monitor.

Step 1

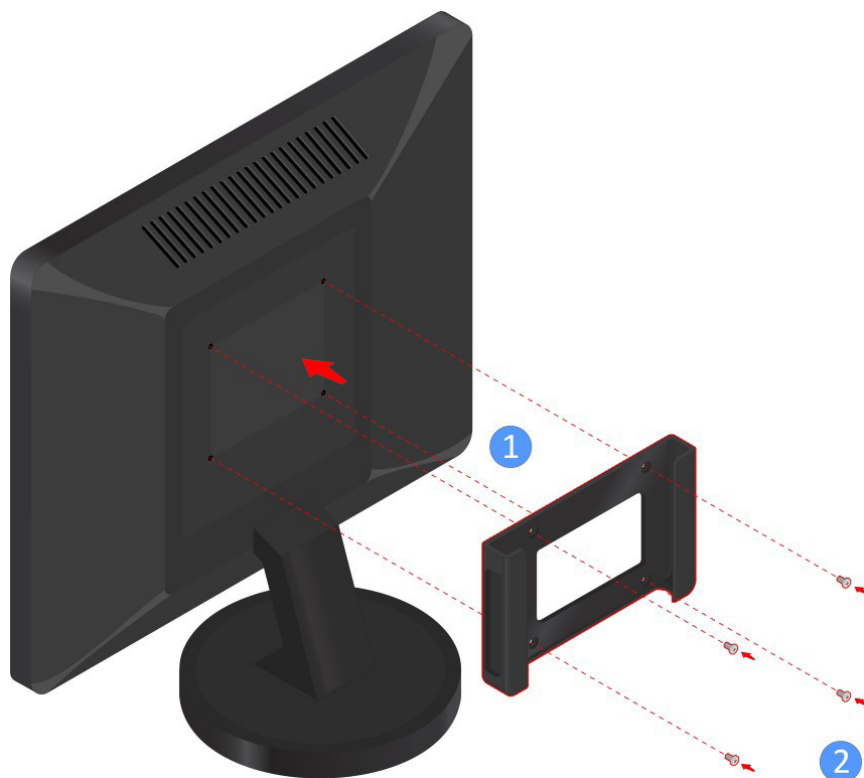Align the VESA mounting hole of the VESA mount cradle on the back of the monitor. Then secure the VESA mount cradle with the provided four screws.

Figure 34: Installing the VESA mount cradle

> **Caution:**
> Do not use any other types of screws for the VESA mount cradle because they might cause damage to the internal board of the monitor and VESA mount cradle. Please use the screws which are provided in the package.

Step 2

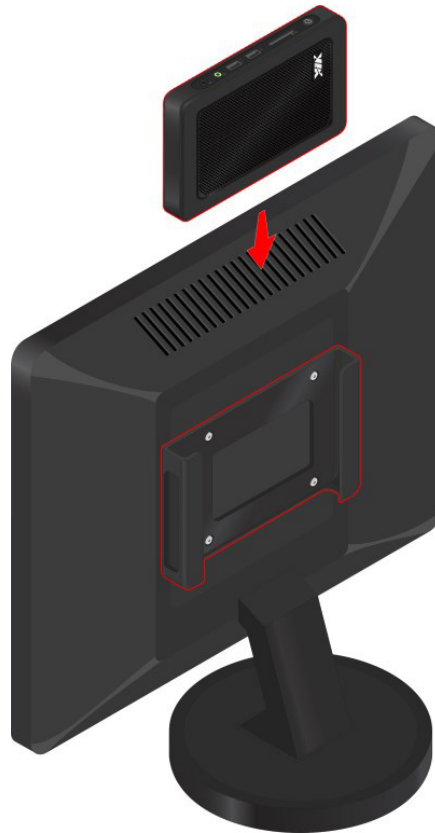Slide the VIA ALTA DS 3 system into the VESA mount cradle.

Figure 35: Inserting the VIA ALTA DS 3 to the VESA mount cradle

Step 3

Connect all the necessary cables on the front panel and back panel of the VIA ALTA DS 3 system.

Figure 36: Connecting the necessary cables to the VIA ALTA DS 3

Appendix C.   Connecting Debug Cable

This chapter provides information of how to connect the debug cable (TX/RX) to the VIA ALTA DS 3 system.

Step 1

Follow the instructions in section 4.1 above to open the chassis.

Step 2

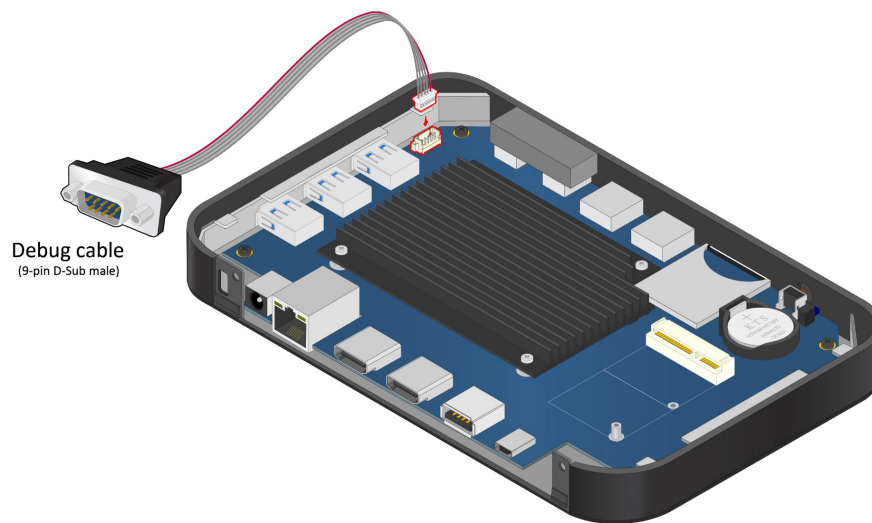Gently attach the debug cable (TX/RX) onto the onboard COM debug connector labeled as CONSOLE1.

Debug cable
(9-pin D-Sub male)

Figure 37: Connecting the debug cable (TX/RX)

Step 3

After debugging, remove the debug cable (TX/RX) then reinstall the top cover.