



USER MANUAL

# ARTiGO A630

Cost Efficient ARM based  
Fanless system



## Copyright

Copyright ©2017 VIA Technologies Incorporated. All rights reserved.

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise without the prior written permission of VIA Technologies, Incorporated.

## Trademarks

All trademarks are the property of their respective holders.

## Disclaimer

No license is granted, implied or otherwise, under any patent or patent rights of VIA Technologies. VIA Technologies makes no warranties, implied or otherwise, in regard to this document and to the products described in this document. The information provided in this document is believed to be accurate and reliable as of the publication date of this document. However, VIA Technologies assumes no responsibility for the use or misuse of the information (including use or connection of extra device/equipment/add-on card) in this document and for any patent infringements that may arise from the use of this document. The information and product specifications within this document are subject to change at any time, without notice and without obligation to notify any person of such change.

VIA Technologies, Inc. reserves the right the make changes to the products described in this manual at any time without prior notice.

## 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.

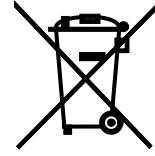


Tested To Comply  
With FCC Standards  
FOR HOME OR OFFICE USE



## 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.
- Lay this equipment on a reliable flat surface before setting it up.
- Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
- Place the power cord in such away that people cannot step on it.
- Always unplug the power cord before inserting any add-on card or module.
- If any of the following situations arises, get the equipment checked by authorized service personnel:
  - The power cord or plug is damaged.
  - Liquid has penetrated into the equipment.
  - The equipment has been exposed to moisture.
  - The equipment has not worked well or you cannot get it work according to User's Manual.
  - The equipment has dropped and damaged.
  - The equipment has obvious sign of breakage.
- Do not leave this equipment in an environment unconditioned or in a storage temperature above 60°C (140°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 ARTiGO A630 system
- 1 x AC-to-DC adapter
- 1 x Power cord
- 1 x Screw pack for miniPCle module
- 4 x Rubber feet pack

## Ordering Information

Part Number	Description
ATG-A630-1D10A1	Fanless embedded system with 1.0GHz VIA Cortex-A9 SoC, 1GB DDR3 RAM, 4GB eMMC, 2 x USB 2.0, 1 x Micro USB 2.0 OTG, 1 x HDMI, 1 x COM, 1 x DIO , 1 x 10/100Mbps Ethernet, 1 x miniPCle slot, 1 x Micro SD slot and 12V DC-in

## Optional Accessories

### Wireless Accessories

Part Number	Description
EMIO-5531-00A1	VAB-820-W IEEE 802.11b/g/n USB Wi-Fi & Bluetooth module with assembly kit and antenna
EMIO-2531-00A1	VAB-820-W-M IEEE 802.11b/g/n miniPCle Wi-Fi & Bluetooth module with assembly kit and antenna
EMIO-2550-01A1	3.75G HSPA/UMTS mobile broadband full size miniPCle module with assembly kit and antenna.

## Table of Content

<b>1. Product Overview</b>	<b>1</b>
1.1 Key Features	1
1.1.1 ARM Based System	1
1.1.2 Optimized Integration with Multiple I/O Access	1
1.1.3 Networking Support	1
1.1.4 Embedded Operating System Ready	1
1.1.5 Storage Expansion	1
1.2 Product Specifications	2
1.3 Layout Diagram	5
1.4 Dimensions	6
<b>2. External I/O Pin Descriptions and Functionality</b>	<b>7</b>
2.1 HDMI® Port	7
2.2 USB 2.0 Port	7
2.3 Micro USB 2.0 OTG Port	8
2.4 DIO Port	8
2.5 10/100 Mbps Ethernet Port	9
2.6 Audio Jack	10
2.7 Micro SD Card Slot	10
2.8 Power On/Off Button	11
2.9 DC-In Jack	11
2.10 Power LED	12
<b>3. Onboard Connector</b>	<b>13</b>
3.1 USB 2.0 Connector	13
3.2 MiniPCle Slot	14
3.3 SIM Card Slot	15
3.4 UART Connector	15
<b>4. Hardware Installation</b>	<b>16</b>
4.1 Opening the Chassis	16
4.2 Installing the Rubber feet	18
<b>5. Software and Technical Support</b>	<b>19</b>
5.1 Android Support	19
5.2 Linux Support	19
5.3 Technical Supports and Assistance	19
<b>Appendix A. Installing Wireless Accessories</b>	<b>20</b>
A.1. Installing the EMIO-5531 USB Wi-Fi & Bluetooth module	20
A.2. Installing the EMIO-2531 miniPCle Wi-Fi module & Bluetooth module	23
A.3. Installing the EMIO-2550 miniPCle Mobile Broadband module	26

## List of Figures

Figure 1: Front panel I/O layout .....	5
Figure 2: Back panel I/O layout .....	5
Figure 3: Dimensions of ARTiGO A630 (Front view) .....	6
Figure 4: Dimensions of ARTiGO A630 (Right view) .....	6
Figure 5: HDMI port diagram .....	7
Figure 6: USB 2.0 port diagram .....	7
Figure 7: Micro USB 2.0 OTG port diagram .....	8
Figure 8: DIO port diagram .....	8
Figure 9: 10/100Mbps Ethernet port diagram .....	9
Figure 10: Audio jacks diagram .....	10
Figure 11: Micro SD card slot diagram .....	10
Figure 12: Power on/off button diagram .....	11
Figure 13: DC-in jack diagram .....	11
Figure 14: DC-in jack specification diagram .....	11
Figure 15: Power LED diagram .....	12
Figure 16: USB 2.0 connector diagram .....	13
Figure 17: MiniPCIe slot diagram .....	14
Figure 18: SIM card slot diagram .....	15
Figure 19: UART connector diagram .....	15
Figure 20: Unscrewing the top cover.....	16
Figure 21: Removing the top cover .....	17
Figure 22: Installing rubber feet .....	18
Figure 23: Installing the EMIO-5531 module .....	20
Figure 24: Connecting the USB Wi-Fi cable and removing antenna hole cover .....	21
Figure 25: Installing antenna and antenna cable of EMIO-5531 module .....	21
Figure 26: Connecting the antenna cable to the micro-RF connector on EMIO-5531 module .....	22
Figure 27: Inserting EMIO-2531 module .....	23
Figure 28: Securing the EMIO-2531 module and removing the antenna cover .....	24
Figure 29: Installing antenna and antenna cable of EMIO-2531 module .....	24
Figure 30: Connecting the antenna cable to the micro-RF connector on EMIO-2531.....	25
Figure 31: Installing the SIM card .....	26
Figure 32: Inserting EMIO-2550 module .....	27
Figure 33: Securing the EMIO-2550 module and removing antenna hole cover.....	27
Figure 34: Installing antenna and antenna cable of EMIO-2550 module .....	28
Figure 35: Connecting the antenna cable to the micro-RF connector on EMIO-2550 module .....	28

## List of Tables

Table 1:	HDMI port pinouts.....	7
Table 2:	USB 2.0 port pinouts .....	7
Table 3:	Micro USB 2.0 OTG port pinouts .....	8
Table 4:	DIO port pinouts.....	8
Table 5:	10/100Mbps Ethernet port pinouts .....	9
Table 6:	10/100Mbps Ethernet port LED color definitions .....	9
Table 7:	Micro SD card slot pinouts.....	10
Table 8:	Power button behavior descriptions .....	11
Table 9:	DC-in jack pinouts .....	11
Table 10:	DC-in jack specifications .....	11
Table 11:	USB 2.0 connector pinouts .....	13
Table 12:	MiniPCIe slot pinouts.....	14
Table 13:	SIM card slot pinouts.....	15
Table 14:	UART connector pinouts.....	15

# 1. Product Overview

The VIA ARTiGO A630 is an ultra-compact and ultra-slim fanless embedded system measuring 154.40mm (H) x 27mm (H) x 106.68mm (D) that provides a flexible platform with I/O connectivity options, network features, and advanced software development tools for a wide range of interactive kiosks, signage, HMI, M2M applications and other advanced IoT.

The ARTiGO A630 system is based on the VAB-630 SBC mainboard, powered by 1.0GHz WM8880 Cortex-A9 dual-core processor and completely compatible with Android and Linux operating system. The ARTiGO A630 comes with a high performance 3D/2D graphics and video engine that supports OpenGL® ES 2.0 hardware acceleration for conditional support MPEG-2 and H.264 video decoding.

The ARTiGO A630 system features an impressive selection of dual coastline I/O in a compact form factor including one HDMI® port, two USB 2.0 ports, one Micro USB 2.0 OTG port, one COM (TX/RX), one 10/100Mbps Ethernet port, one Micro SD card slot, audio jacks for Line-out and Mic-in, 12V DC-in and four antenna holes. In addition, the ARTiGO A630 onboard I/O features include a UART connector, SIM card slot, miniPCIe slot and USB 2.0 connector for adding the optional VIA EMIO modules for miniPCIe/USB Wi-Fi & Bluetooth and 3G connectivity.

## 1.1 Key Features

### 1.1.1 ARM Based System

The ARM based ARTiGO A630 system is powered by 1.0GHz WM8880 Cortex-A9 dual-core processor that provides a full range of rich features including superb multi-tasking performance.

### 1.1.2 Optimized Integration with Multiple I/O Access

With front and back panel I/O access, the VIA ARTiGO A630 can be easily configured to support a wide variety of applications with easy integration and quick setup. It comes with an ultra-slim and ultra-compact chassis design to be installed in critical environments and to ensure maximum reliability.

### 1.1.3 Networking Support

The ARTiGO-A630 is equipped with RJ-45 port that supports 10/100Mbps Ethernet. Wireless connectivity can be added through the optional VIA EMIO modules such as miniPCIe/USB Wi-Fi & Bluetooth module and 3G network.

### 1.1.4 Embedded Operating System Ready

The ARTiGO A630 features a complete signage software evaluation image featuring Android 5.0 Linux Kernel 3.4.5 as well as the VIA Smart ETK including GPIO, UART and Watchdog timer access.

### 1.1.5 Storage Expansion

The ARTiGO A630 has an onboard 4GB eMMC flash storage and a Micro SD card slot for a maximum expandable storage of up to 32GB.



## 1.2 Product Specifications

### Processor

- 1.0GHz VIA Cortex-A9 dual-core SoC

### System Memory

- 1GB DDR3 SDRAM onboard

### Storage

- 4GB eMMC Flash memory
- Micro SD Card

### Boot Loader

- 512KB SPI Flash ROM

### Graphics

- Support Mali-400 SP GPU
- Two independent, integrated 3D/2D and video graphic processing units.
- Graphics engine supporting OpenGL<sup>®</sup> ES 2.0 hardware acceleration
- Supports MPEG-2 and H.264 video decoding up to 1080p

### LAN

- ASIC AX88772CLF

### Audio

- VIA VT1603A I2C Audio Codec

### HDMI

- Integrated HDMI 1.4 transmitter

### USB

- ASIC USB2514B-AEZC USB 2.0 hi-speed 4-port hub controller

### Expansion I/O

- 1 x miniPCIe slot (for optional miniPCIe Wi-Fi & Bluetooth and 3G module)
- 1 x USB 2.0 connector (for optional USB Wi-Fi & Bluetooth module)

**Front Panel I/O**

- 1 x Micro USB 2.0 OTG port
- 1 x DIO port supports 8 GPIO (4 GPI + 4 GPO)
- 1 x Micro SD card slot
- 2 x Audio jacks: Line-out and Mic-in
- 1 x Power LED
- 1 x Power button
- 2 x Antenna holes for 3G/Wi-Fi

**Back Panel I/O**

- 1 x HDMI port
- 2 x USB 2.0 ports
- 1 x COM port for RS-232 (TX/RX)
- 1 x 10/100Mbps Ethernet port
- 1 x DC-in jack
- 2 x Antenna holes for 3G/Wi-Fi

**Onboard Connector**

- 1 x USB 2.0 connector
- 1 x UART(Debug) connector
- 1 x miniPCIe slot
- 1 x SIM card slot

**Power Supply**

- 12V DC-in

**Operating System**

- Android 5.0, Linux Kernel 3.4.5

**VIA Smart ETK**

- GPIO, UART, Watchdog timer

**Operating Temperature**

- 0°C ~ 50°C

**Operating Humidity**

- 0% ~ 90% @ 45°C (non-condensing)

**Storage Temperature**

- -10°C ~ 60°C @ 90% (non-condensing)

**Vibration Loading During Operation**

- With onboard eMMC: 5Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1hr/axis

**Shock During Operation**

- With onboard eMMC: 50G, IEC 60068-2-27, half size, 11ms duration

**Mechanical Construction**

- Metal top cover
- Metal chassis housing

**Mounting**

- VESA Mount (75mm x 75mm) (No optional mounting kit will be provided by VIA)

**Dimensions**

- 154.40mm (W) x 27mm (H) x 106.68mm (D) (6.08" x 1.06" x 4.20")

**Weight**

- 0.50kg (1.10lbs)

**Compliance**

- CE
- FCC

**Notes:**

1. As the operating temperature provided in the specifications is a result of the test 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 suggested to execute a solid testing 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 memory chip may vary depending on the amount of access. More frequent and larger data access on eMMC memory makes its lifespan shorter. Therefore, it is highly recommended to use a replaceable external storage (e.g., Micro SD card) for large data access.

### 1.3 Layout Diagram

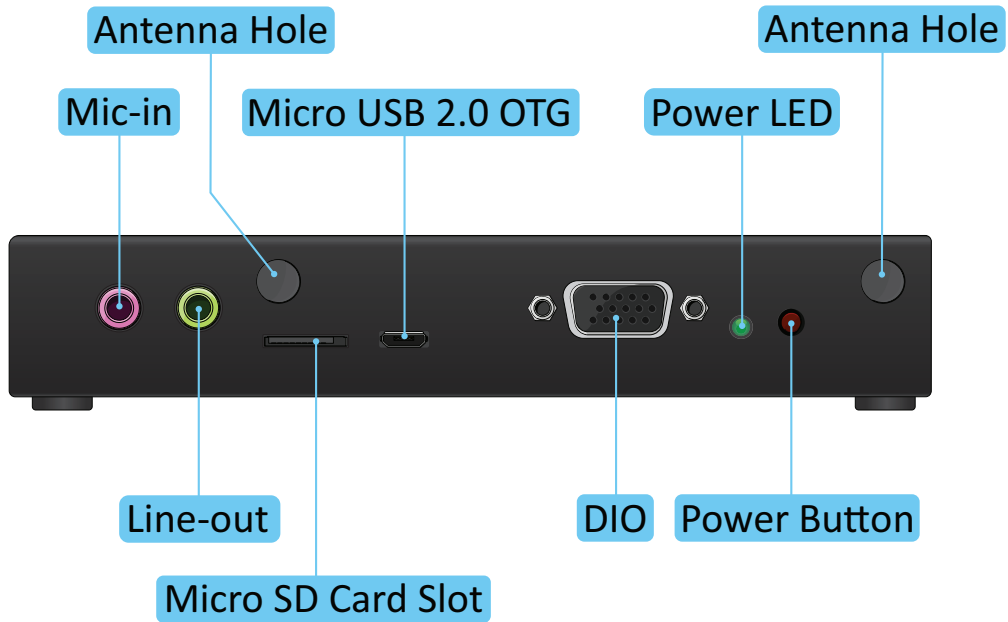


Figure 1: Front panel I/O layout

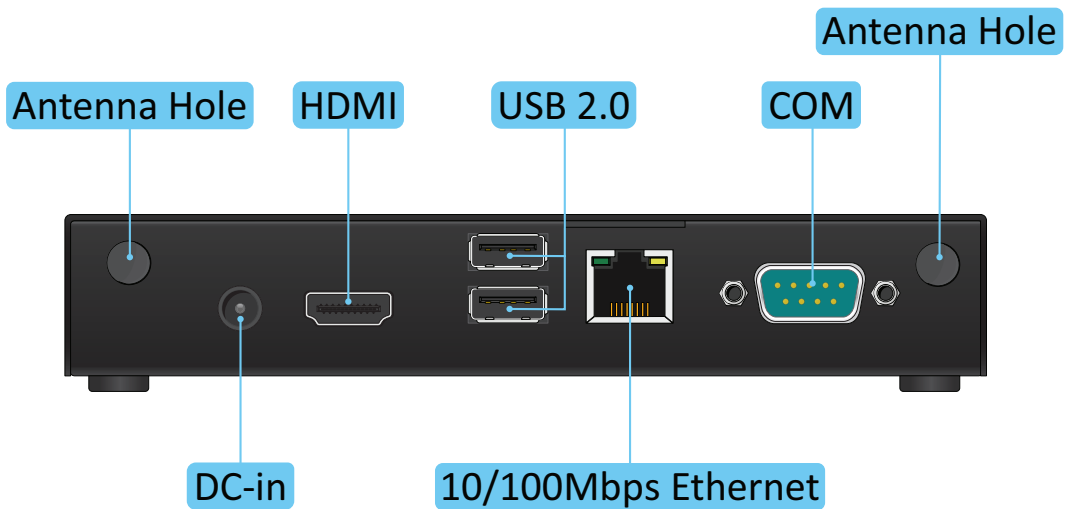


Figure 2: Back panel I/O layout

## 1.4 Dimensions

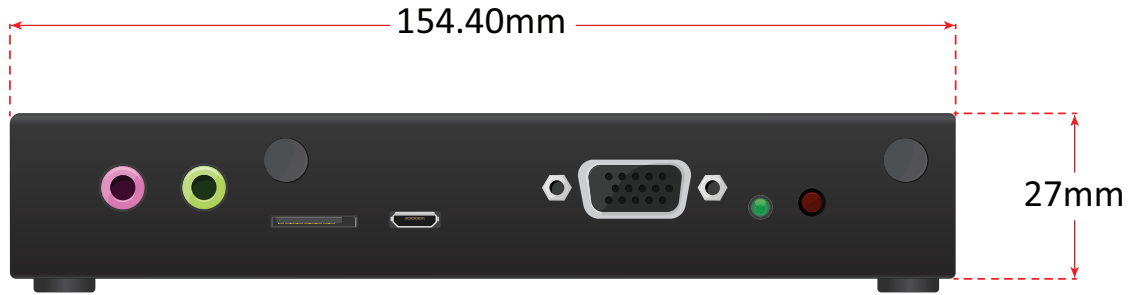


Figure 3: Dimensions of ARTiGO A630 (Front view)

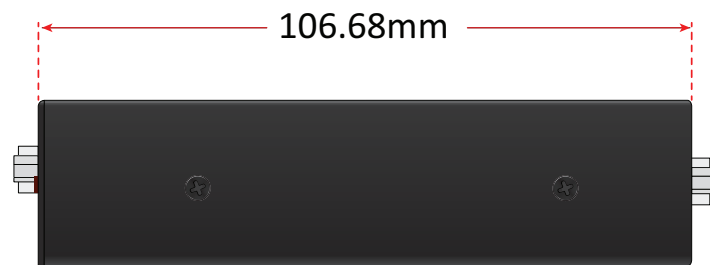


Figure 4: Dimensions of ARTiGO A630 (Right view)

## 2. External I/O Pin Descriptions and Functionality

This chapter provides information about the ARTiGO A630's external I/O ports and their functionality.

### 2.1 HDMI® Port

The ARTiGO A630 comes with an HDMI port on the back panel which features an HDMI port Type A receptacle connector that is used to connect high definition video and digital audio using a single cable. The pinout of the HDMI port is shown below.

Pin	Signal	Pin	Signal
1	HDMI2+	2	GND
3	HDMI2-	4	HDMI1+
5	GND	6	HDMI1-
7	HDMI0+	8	GND
9	HDMI0-	10	HDMICLK+
11	GND	12	HDMICLK-
13	HDMICEC	14	NC
15	HDMIDDCSCL	16	HDMIDDCSDA
17	GND	18	5V_HDMI
19	HDMIHPD		

Table 1: HDMI port pinouts



Figure 5: HDMI port diagram

### 2.2 USB 2.0 Port

The ARTiGO A630 comes with two external USB 2.0 ports on the back panel which provides complete Plug and Play and hot swap capability for external devices. The USB interface complies with USB UHCI, Rev. 2.0. The pinout of the typical USB 2.0 port is shown below.

USB0		USB1	
Pin	Signal	Pin	Signal
1	VCC	1	VCC
2	USB data -	2	USB data -
3	USB data +	3	USB data +
4	GND	4	GND

Table 2: USB 2.0 port pinouts

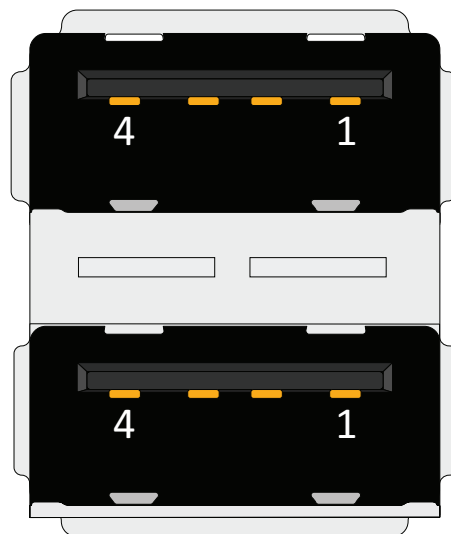


Figure 6: USB 2.0 port diagram

## 2.3 Micro USB 2.0 OTG Port

The ARTiGO A630 comes with a Micro USB 2.0 type B port located on the front panel which supports OTG and it offers expandable storage. The pinout of the Micro USB 2.0 OTG port is shown below.

Pin	Signal
1	USB_VBUS0
2	USB_HD0-
3	USB_HD0+
4	USBID0
5	GND

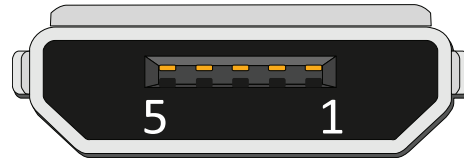


Figure 7: Micro USB 2.0 OTG port diagram

Table 3: Micro USB 2.0 OTG port pinouts

## 2.4 DIO Port

The ARTiGO A630 comes with a female DIO port for digital I/O communication interface which features a D-sub 15-pin connector. The pinout of the DIO port is shown below.

Pin	Signal
1	GPIO1
2	GPIO2
3	GPIO3
4	GPIO5
5	GPIO6
6	GPIO7
7	GPIO8
8	GND
9	NC
10	GPIO12
11	GPIO13
12	GPIO14
13	VO_33
14	VO_33
15	GND



Figure 8: DIO port diagram

Table 4: DIO port pinouts

## 2.5 10/100 Mbps Ethernet Port

The ARTiGO A630 comes with a 10/100Mbps Ethernet port. The integrated 10/100Mbps Ethernet port uses an 8 Position 8 Contact (8P8C) receptacle connector (commonly referred to as RJ-45). The pinout of the 10/100Mbps Ethernet port is shown below.

Pin	Signal
1	TD+
2	TD-
3	RD+
4	REGOUT
5	REGOUT
6	RD-
7	GND
8	GND

Table 5: 10/100Mbps Ethernet port pinouts

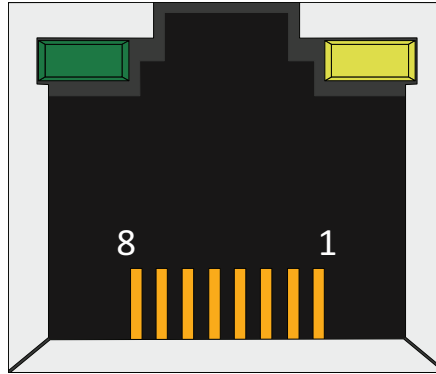


Figure 9: 10/100Mbps Ethernet port diagram

The 10/100Mbps Ethernet port has two LED indicators located 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	The Green LED is off	Yellow Flash
Speed_100Mbit	The Green LED is on	Yellow Flash

Table 6: 10/100Mbps Ethernet port LED color definitions



## 2.6 Audio Jack

The ARTiGO A630 offers High Definition Audio through a 3.5mm TRS jack on the front panel which features a 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.



Figure 10: Audio jacks diagram

Jack	Description
Mic-in	TRS jack, 3.5mm Ø 5P, 90 Degree, Female, shielded
Line-out	TRS jack, 3.5mm Ø 5P, 90 Degree, Female, shielded

## 2.7 Micro SD Card Slot

The ARTiGO A630 comes with an Micro SD card slot located on the front panel I/O which can support a maximum storage capacity of 32GB. The pinout of the Micro SD card slot is shown below.

Pin	Signal
1	SD0DATA2
2	SD0DATA3
3	SD0CMD
4	VCC33_SDO
5	SD0CLK
6	GND
7	SD0DATA0
8	SD0DATA1
9	SD0CD-

Table 7: Micro SD card slot pinouts

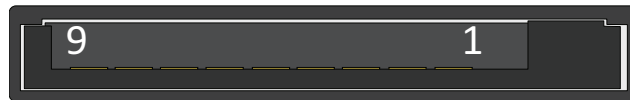


Figure 11: Micro SD card slot diagram

## 2.8 Power On/Off Button

The ARTiGO A630 comes with a power button which can support four functions. The table below will explain how the functions work.



Figure 12: Power on/off button diagram

Physical Specification	
Suspend/Resume System	Quickly press the power button once to suspend. While in suspending mode quickly press once to resume.
Popup power control menu	Occurs when the power button is pressed for longer than 3 seconds.
Power On	When the system is forced to power off, press the power button to power back on.
Reset mode	Occurs when the power button is pressed for longer than 6 seconds.

Table 8: Power button behavior descriptions

## 2.9 DC-In Jack

The ARTiGO A630 comes with a DC-in jack which carries a 12V DC external power input. The specification and pinout of power DC-in jack is shown below.

Pin	Signal
1	12VIN
2	GND

Table 9: DC-in jack pinouts

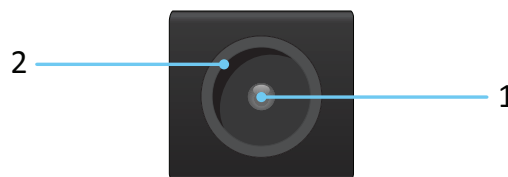


Figure 13: DC-in jack diagram

Physical Specification	
Outer Diameter	6.0mm
Inner Diameter	2.5mm
Barrel Depth	8.20 mm
Electrical Specification	
Input Voltage	+12V

Table 10: DC-in jack specifications

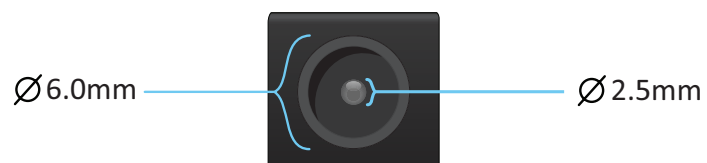


Figure 14: DC-in jack specification diagram

## 2.10 Power LED

The ARTiGO A630 is equipped with a Power LED which is located on the front panel. It is green and indicates the status of the system.

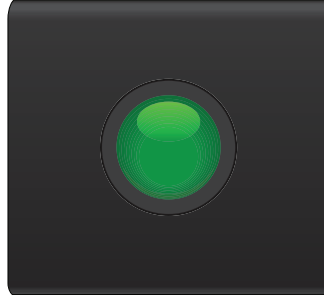


Figure 15: Power LED diagram

## 3. Onboard Connector

This chapter provides information about the onboard connector of the ARTiGO A630 system's mainboard.

### 3.1 USB 2.0 Connector

The ARTiGO A630 includes an onboard USB 2.0 connector designed for connecting the EMIO-5531 USB Wi-Fi & Bluetooth module. The USB 2.0 connector is labeled as "JUSB1". The pinout of the USB 2.0 connector is shown below.

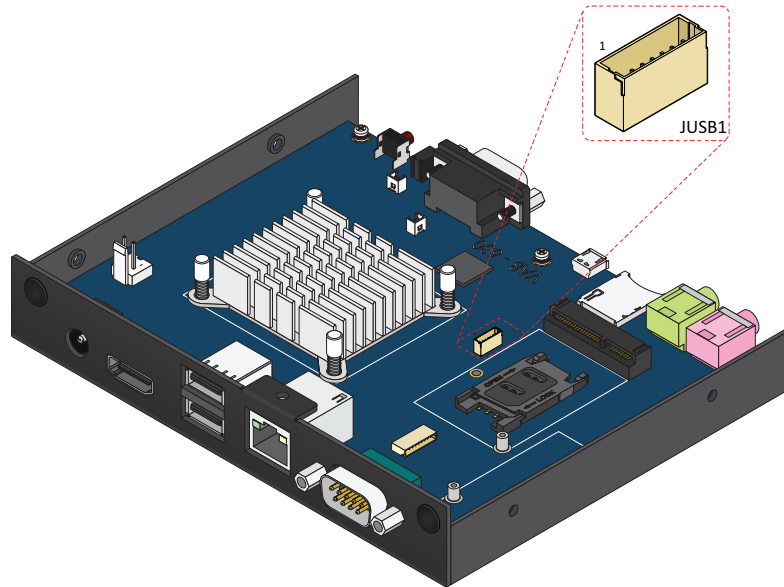


Figure 16: USB 2.0 connector diagram

Pin	Signal
1	NC
2	-
3	GND
4	USBDt1+
5	USBDt1-
6	5VUSB1

Table 11: USB 2.0 connector pinouts

## 3.2 MiniPCle Slot

The ARTiGO A630 is equipped with miniPCle slot for wireless networking option such as Wi-Fi/Bluetooth/3G using EMIO-2531 and EMIO-2550 modules. The pinout of the miniPCle slot is shown below.

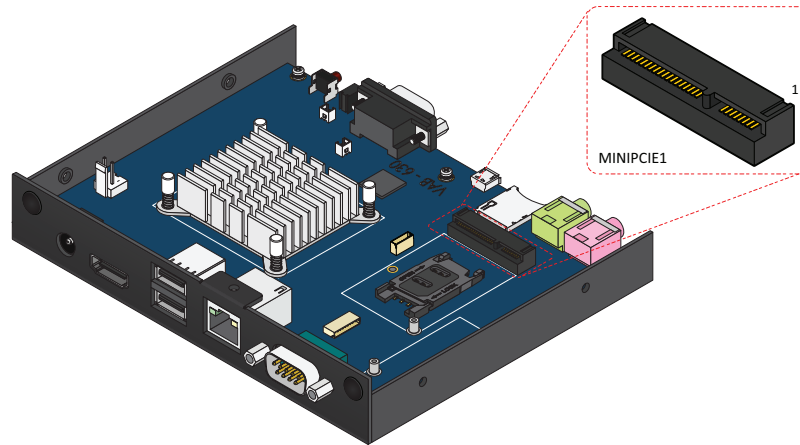


Figure 17: MiniPCle slot diagram

Pin	Signal	Pin	Signal
1	NC	2	3.3V
3	NC	4	GND
5	NC	6	+1.5V
7	3.3V	8	USIM_VCC
9	GND	10	USIM_DATA
11	NC	12	USIM_CLK
13	NC	14	USIM_RST
15	GND	16	NC
17	NC	18	GND
19	NC	20	-W_DISABLE
21	GND	22	SUSGP102
23	NC	24	3.3V
25	NC	26	GND
27	GND	28	+1.5V
29	GND	30	12C4SCL
31	NC	32	12C4SDA
33	NC	34	GND
35	GND	36	USBDT2-
37	GND	38	USBDT2+
39	3.3V	40	GND
41	3.3V	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+1.5V
49	NC	50	GND
51	NC	52	3.3V

Table 12: MiniPCle slot pinouts

### 3.3 SIM Card Slot

The ARTiGO A630 is equipped with a SIM card slot that can support 3G SIM card. Using the SIM card slot on the ARTiGO A630 mainboard requires a 3G module installed in the miniPCIe slot to enable the 3G function, otherwise the SIM card slot is disabled. The SIM card slot is designed only for 3G module without built-in SIM card slot on it. The SIM card slot is labeled as “SIM1”. The pinout of the slot is shown below.

Pin	Signal
1	USIM_VCC
2	USIM_RST
3	USIM_CLK
4	-
5	GND
6	USIM_VCC
7	USIM_DATA

Table 13: SIM card slot pinouts

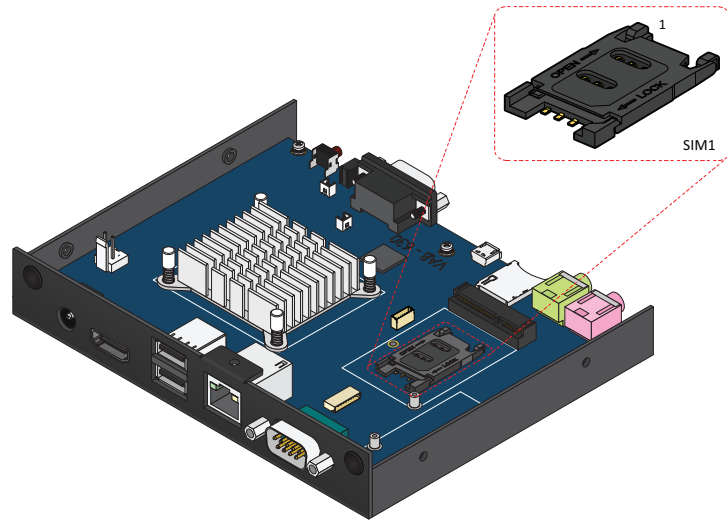


Figure 18: SIM card slot diagram

### 3.4 UART Connector

The ARTiGO A630 includes one UART connector which is for debugging purposes. It is labeled as “J1” and has 10-pin. The UART connector pinouts are shown below.

Pin	Signal
1	UART0TXD
2	UART0RXD
3	SFCLK
4	GND
5	SFDO
6	SFDI
7	SFCS0-
8	VCC_SF

Table 14: UART connector pinouts

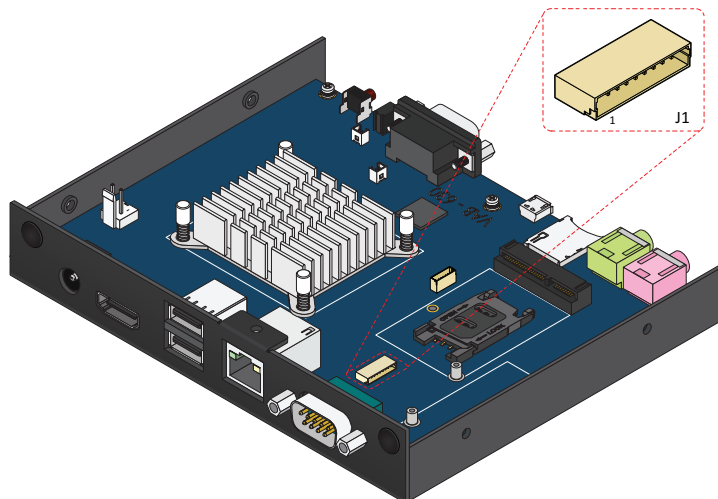


Figure 19: UART connector diagram

## 4. Hardware Installation

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

### 4.1 Opening the Chassis

#### Step 1

First, remove the two screws from left & right side of the chassis then remove the screw from top of the chassis. Lastly make sure to remove the Hex Standoff screws from the DIO port.

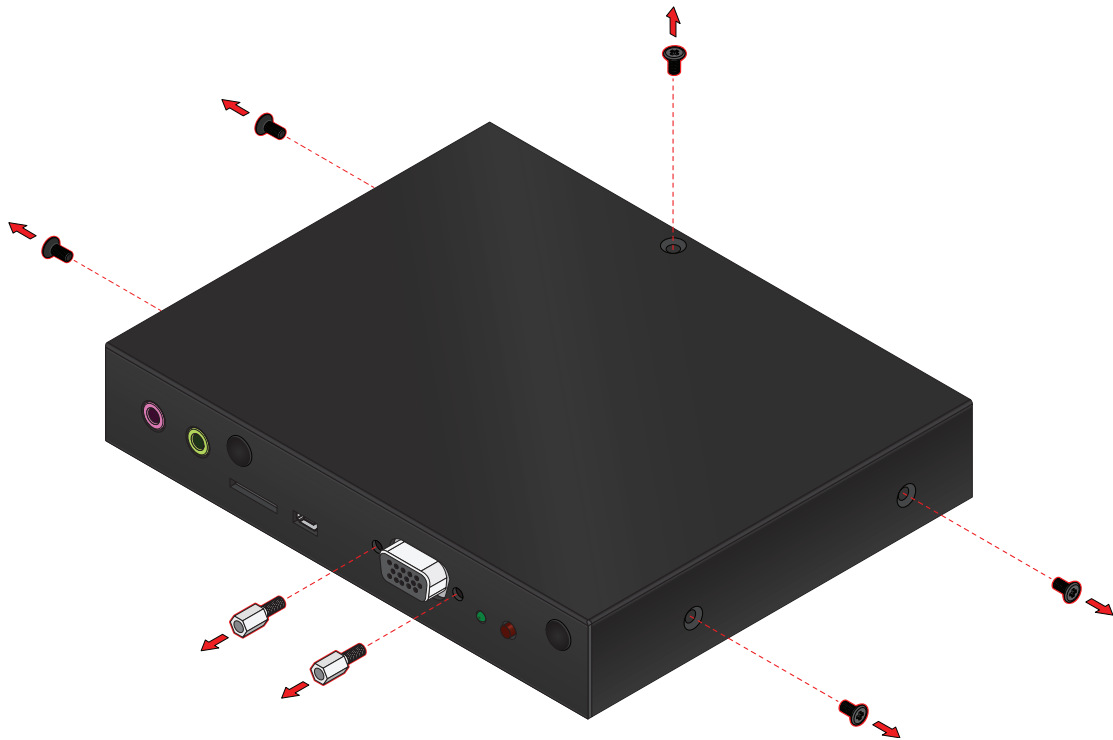


Figure 20: Unscrewing the top cover

**Step 2**

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

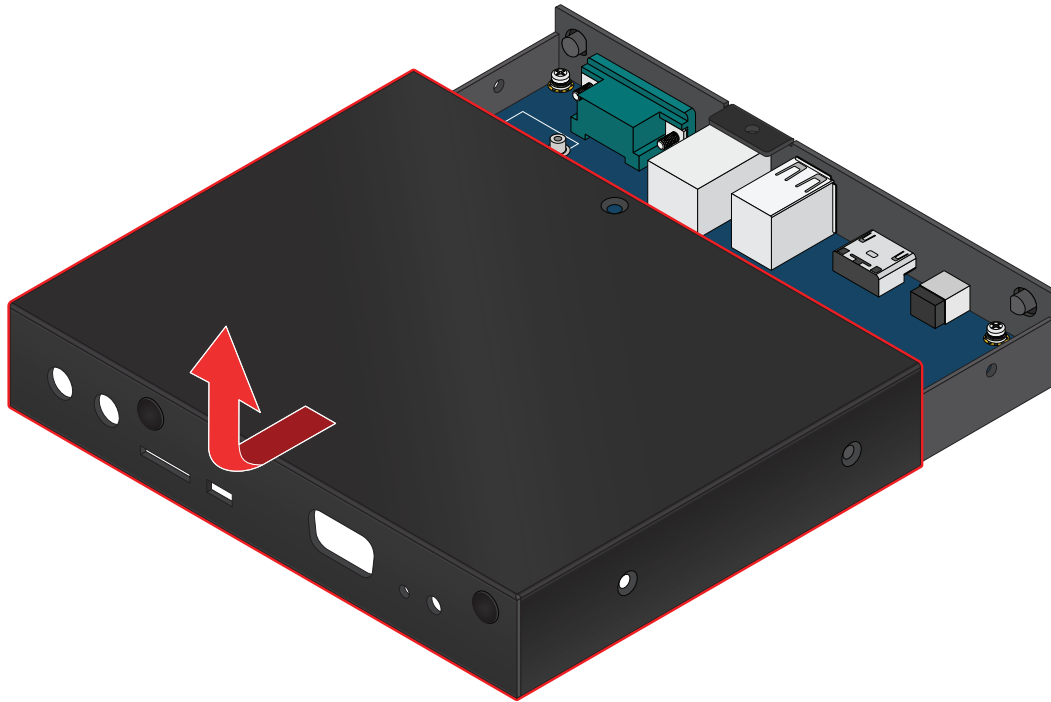


Figure 21: Removing the top cover



## 4.2 Installing the Rubber feet

### Step 1

Locate the designated areas for the rubber feet at the bottom side of the chassis.

### Step 2

Attached carefully each rubber foot and firmly press it down to ensure that the rubber foot is properly in place.



Figure 22: Installing rubber feet

## 5. Software and Technical Support

### 5.1 Android Support

The ARTiGO A630 features a complete signage software evaluation image featuring Android 5.1 operating system.

### 5.2 Linux Support

The ARTiGO A630 features a complete signage software evaluation image featuring Linux Kernel 3.4.5 operating system.

### 5.3 Technical Supports and Assistance

- For utilities downloads, latest documentation and new information about the ARTiGO A630, please visit our website at [www.viatech.com](http://www.viatech.com).
- 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-faq/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 you with information on how to install the EMIO modules (5531, 2531, & 2550) in the ARTiGO A630 system. It is recommended to use a grounded wrist strap before handling computer components. Electrostatic discharge (ESD) can damage some components.

### A.1. Installing the EMIO-5531 USB Wi-Fi & Bluetooth module

#### Step 1

Follow the instructions in [section 4.1](#) above to open the chassis.

#### Step 2

Locate the pre-mounted standoffs for the EMIO-5531 module on the board.

#### Step 3

Mount the EMIO-5531 module on the board. Align the two mounting holes on the EMIO-5531 module with the mounting holes on the standoffs. And then secure the EMIO-5531 module in place with two screws.

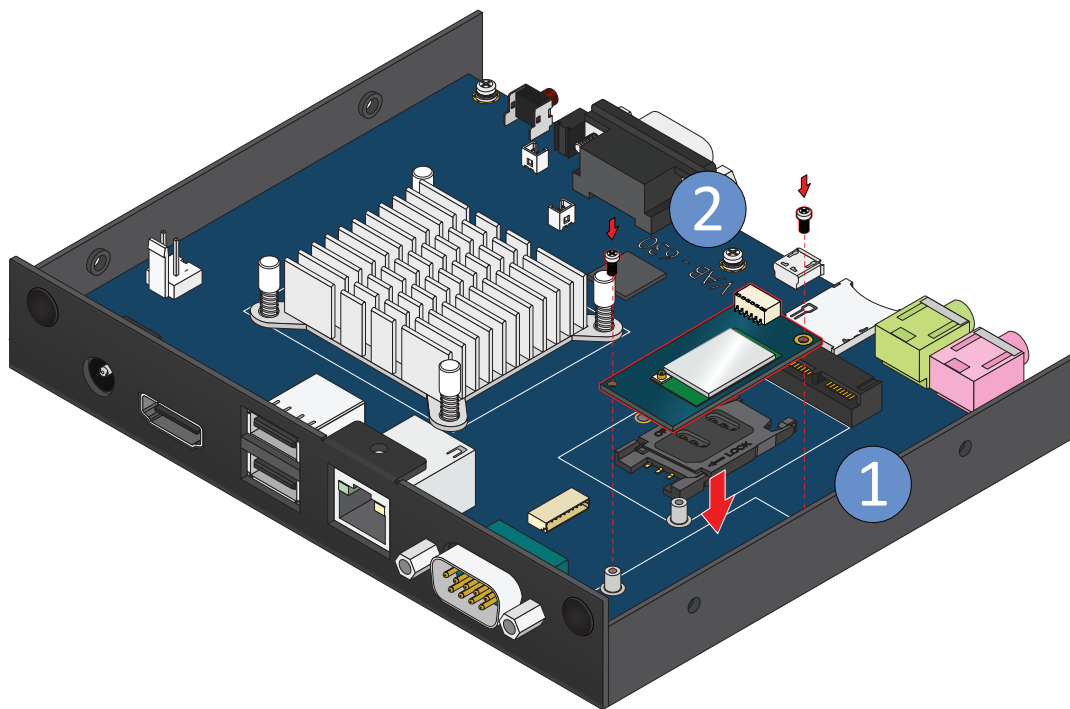


Figure 23: Installing the EMIO-5531 module

**Step 4**

Attach the USB Wi-Fi cable (P/N 99G33-193126) to the onboard USB Wi-Fi connector (JUSB1) and then connect the other end of the cable to the EMIO-5531 module. Next remove the antenna hole cover.

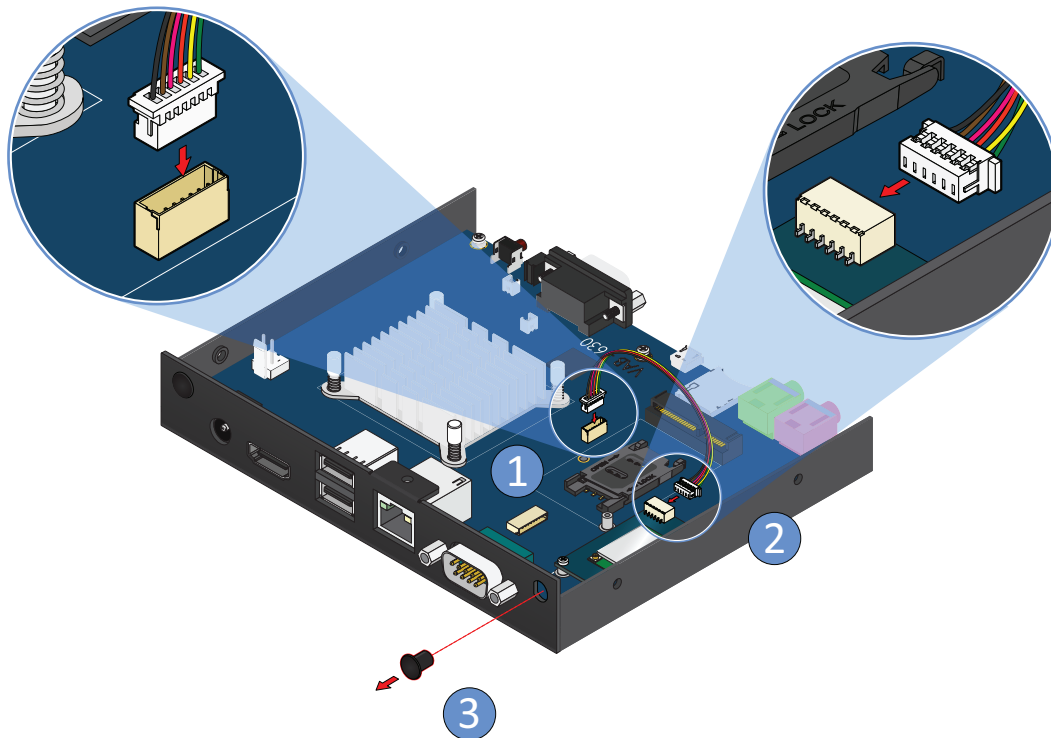


Figure 24: Connecting the USB Wi-Fi cable and removing antenna hole cover

**Step 5**

Insert the Wi-Fi antenna cable into the antenna hole from inside of the back panel plate. Insert the toothed washer, fasten it with the nut and install the external antenna.

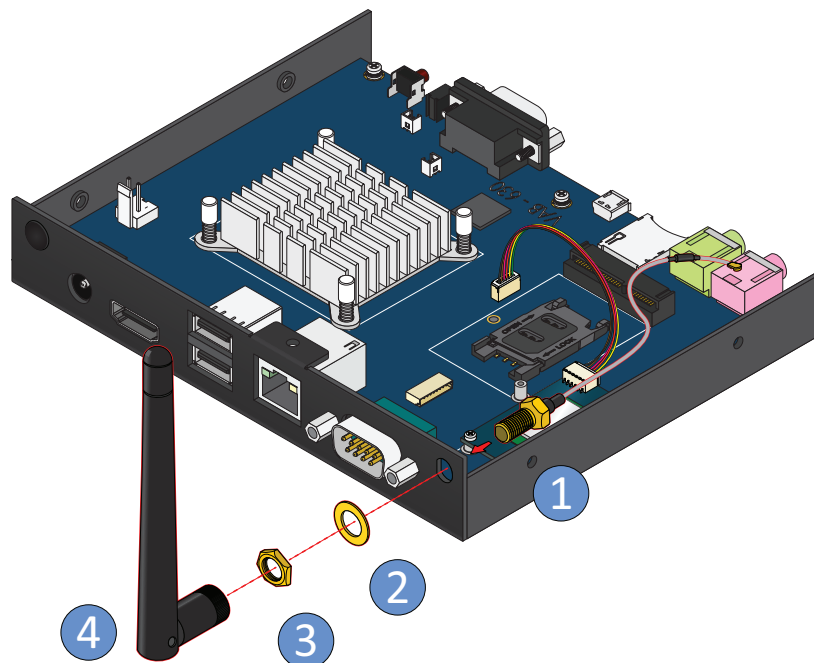


Figure 25: Installing antenna and antenna cable of EMIO-5531 module

**Step 6**

Connect the other end of the Wi-Fi antenna cable to the micro-RF connector labeled “MH2” on the EMIO-5531 module.

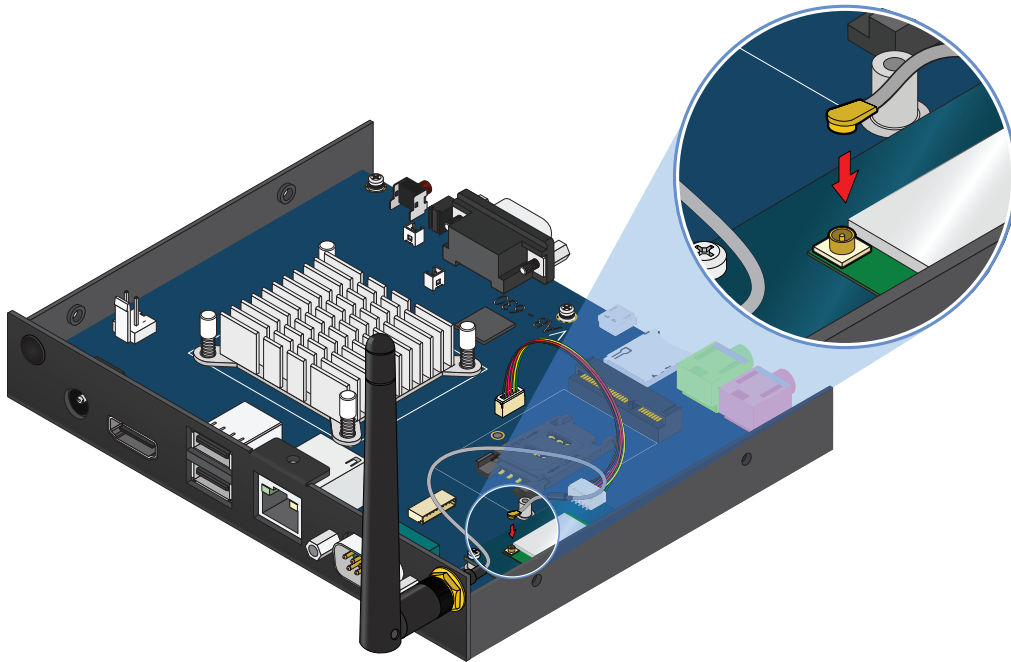


Figure 26: Connecting the antenna cable to the micro-RF connector on EMIO-5531 module

**Step 7**

Reinstall the top cover.

## A.2. Installing the EMIO-2531 miniPCle Wi-Fi module & Bluetooth module

### Step 1

Follow the instructions in [section 4.1](#) above to open the chassis.

### Step 2

Align the notch on the EMIO-2531 module with the counterpart on the miniPCle slot then insert the module at 30° angle.

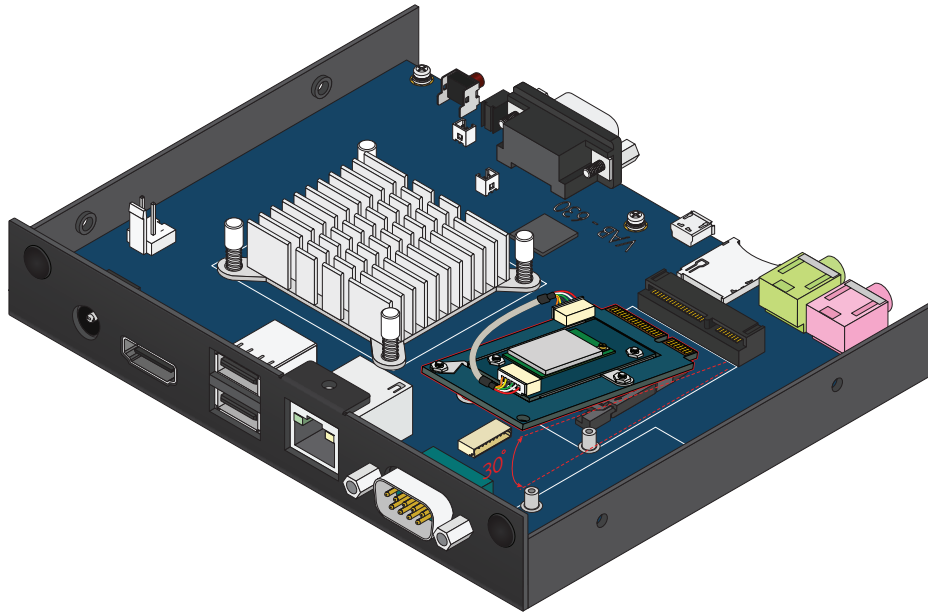


Figure 27: Inserting EMIO-2531 module

### Step 3

Once the module has been fully inserted, push down the module until the screw holes align with the mounting hole on the standoff and then secure the module with a screw to the standoff. Lastly, remove the antenna hole cover.

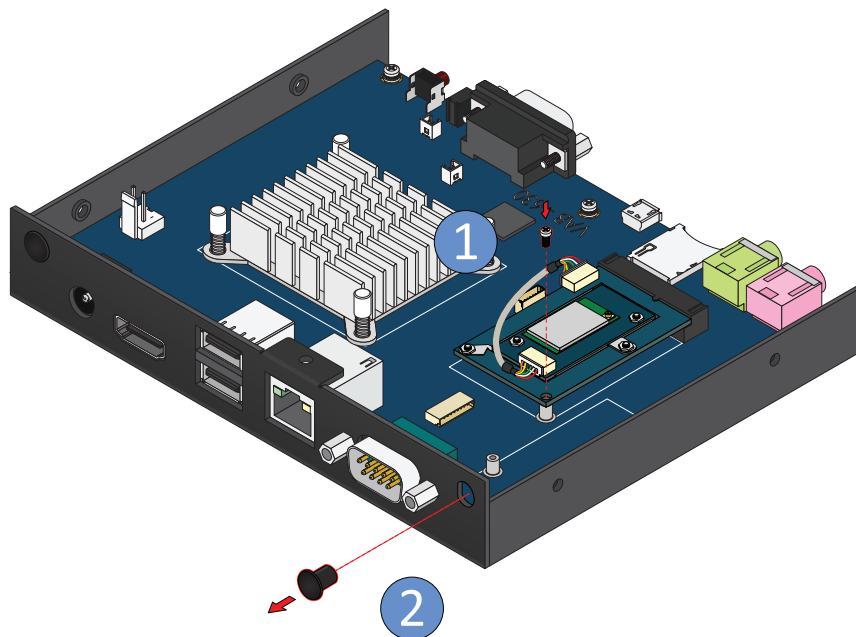


Figure 28: Securing the EMIO-2531 module and removing the antenna cover

### Step 4

Insert the Wi-Fi antenna cable into the antenna hole from inside of the back panel plate. Insert the washer, fasten it with the nut and install the external antenna.

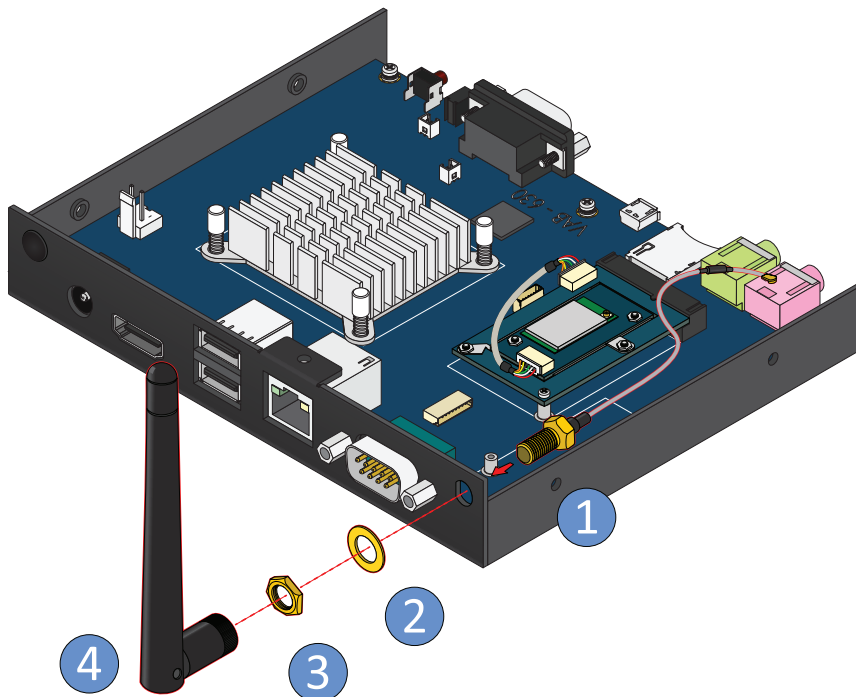


Figure 29: Installing antenna and antenna cable of EMIO-2531 module

**Step 5**

Gently connect the other end of the Wi-Fi antenna cable to the micro-RF connector labeled “MH2” on the EMIO-2531 module.

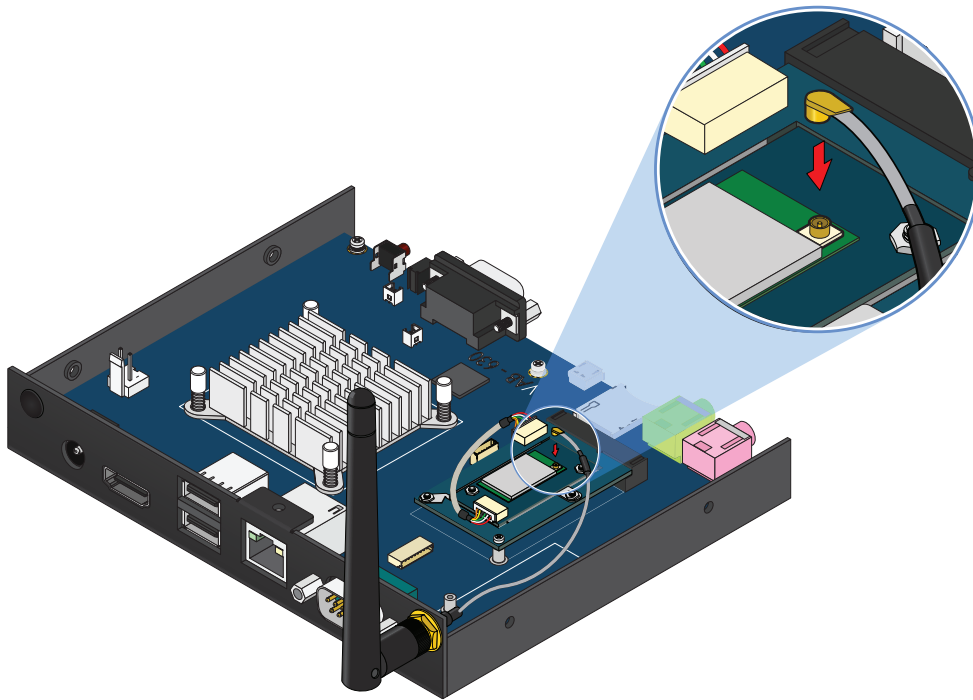


Figure 30: Connecting the antenna cable to the micro-RF connector on EMIO-2531

**Step 6**

Reinstall the top cover.



## A.3. Installing the EMIO-2550 miniPCle Mobile Broadband module

### Step 1

Please follow the instructions in [section 4.1](#) above to open the chassis.

### Step 2

Open and pull up the slot then insert an active SIM card inside the slot. Ensure the angled corner of the SIM card is placed in the correct way before closing the slot.

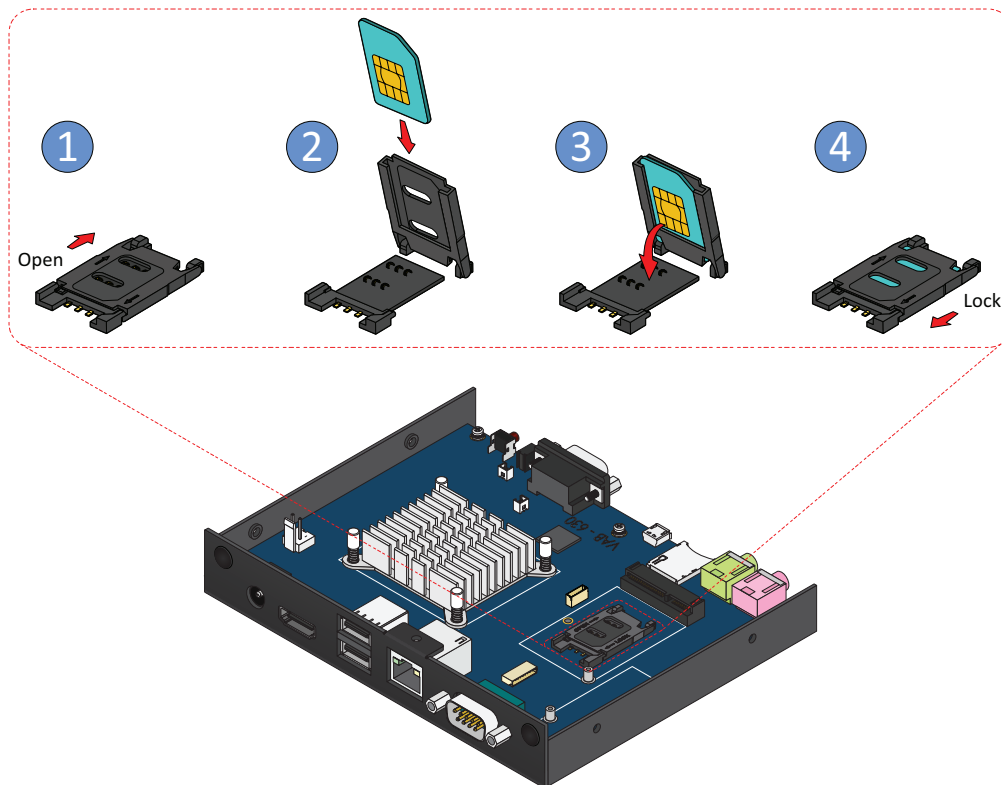


Figure 31: Installing the SIM card

### Step 3

Align the notch on the EMIO-2550 miniPCIe module with the counterpart on the miniPCIe slot then insert the module at 30° angle.

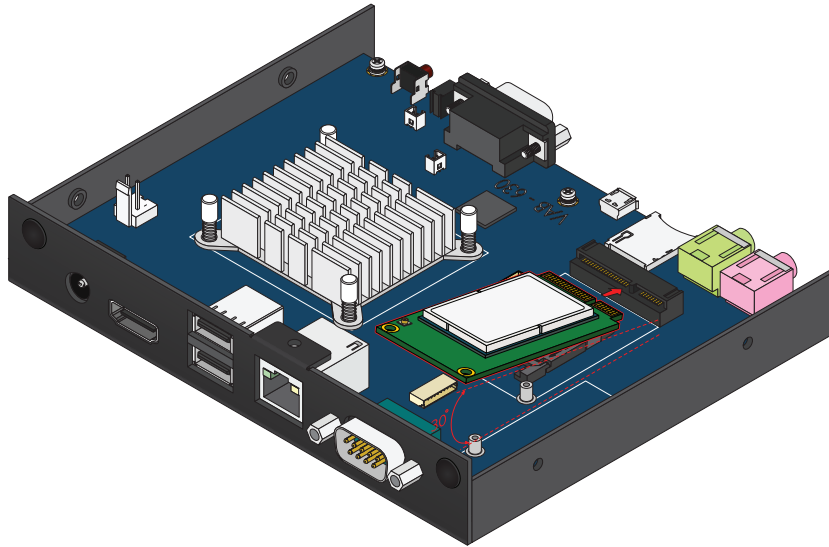


Figure 32: Inserting EMIO-2550 module

### Step 4

Once the module has been fully inserted, push down the module until the screw holes align with the mounting hole on the standoff and then secure the module with a screw to the standoff. Lastly, remove the antenna hole cover.

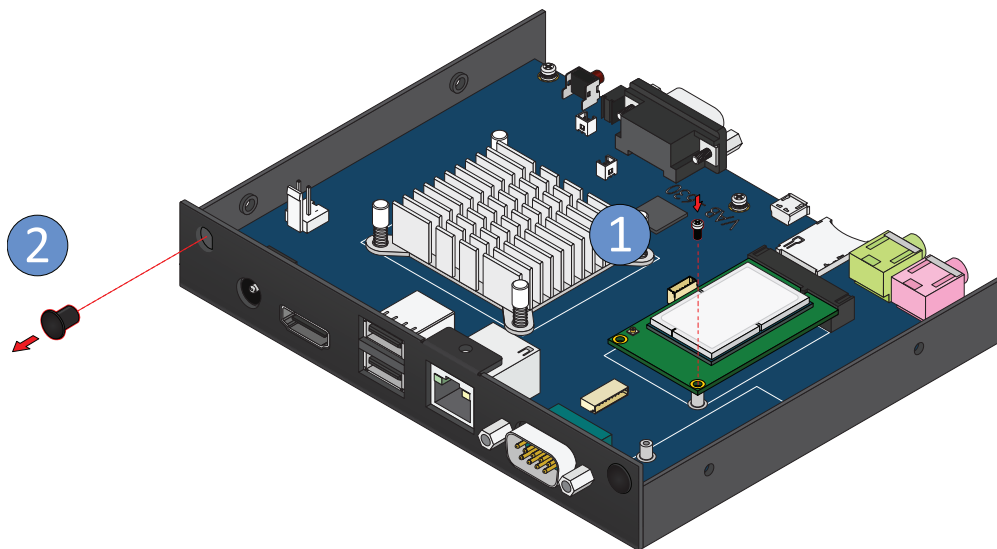


Figure 33: Securing the EMIO-2550 module and removing antenna hole cover

**Step 5**

Insert the 3G antenna cable into the antenna hole from inside of the back panel plate. Insert the washer, fasten it with the nut and install the external antenna.

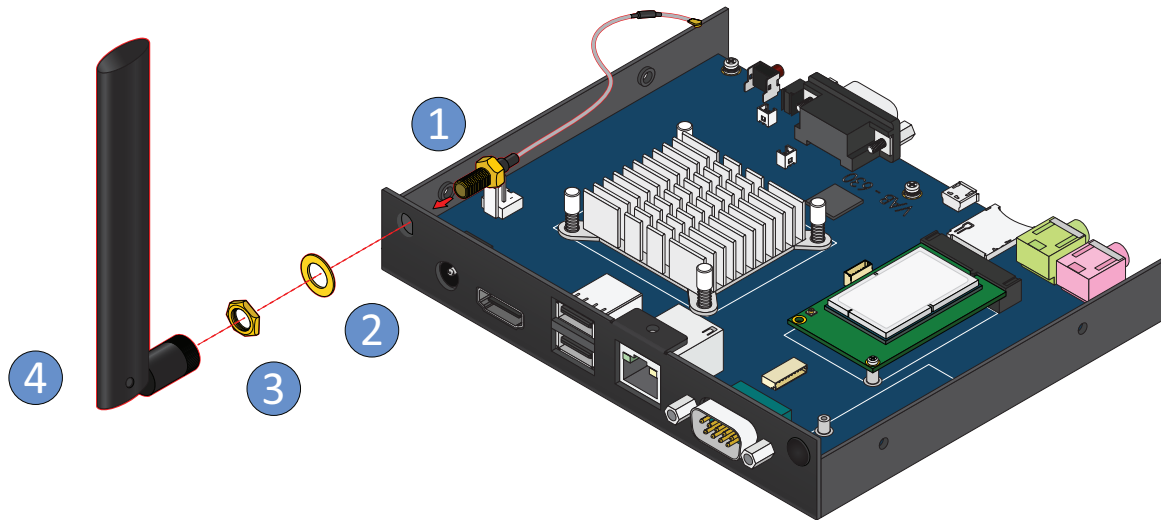


Figure 34: Installing antenna and antenna cable of EMIO-2550 module

**Step 6**

Gently connect the other end of the 3G antenna cable to the micro-RF connector labeled “MAN” on the EMIO 2550 module.

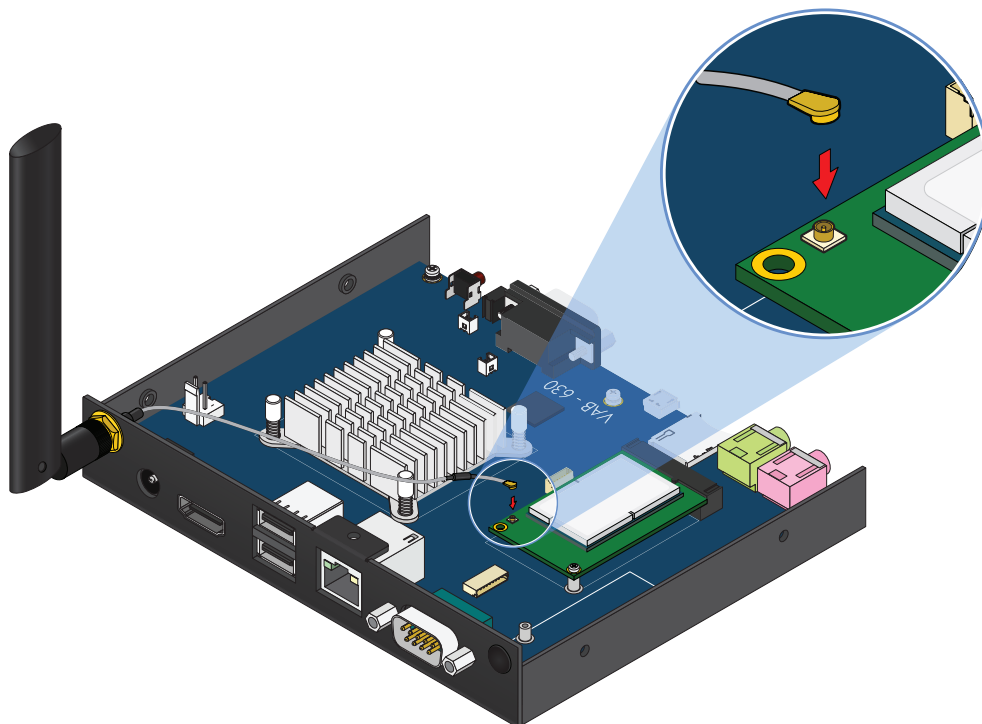


Figure 35: Connecting the antenna cable to the micro-RF connector on EMIO-2550 module

**Step 7**

Reinstall the top cover.



### Taiwan Headquarters

1F, 531 Zhong-zheng Road,  
Xindian Dist., New Taipei City 231  
Taiwan

Tel: 886-2-2218-5452  
Fax: 886-2-2218-9860  
Email: [embedded@via.com.tw](mailto:embedded@via.com.tw)



### USA

940 Mission Court  
Fremont, CA 94539,  
USA

Tel: 1-510-687-4688  
Fax: 1-510-687-4654  
Email: [embedded@viatech.com](mailto:embedded@viatech.com)



### Japan

3-15-7 Ebisu MT Bldg. 6F,  
Higashi, Shibuya-ku  
Tokyo 150-0011  
Japan

Tel: 81-3-5466-1637  
Fax: 81-3-5466-1638  
Email: [embedded@viatech.co.jp](mailto:embedded@viatech.co.jp)



### China

Tsinghua Science Park Bldg. 7  
No. 1 Zongguancun East Road,  
Haidian Dist., Beijing, 100084  
China

Tel: 86-10-59852288  
Fax: 86-10-59852299  
Email: [embedded@viatech.com.cn](mailto:embedded@viatech.com.cn)



### Europe

Email: [embedded@via-tech.eu](mailto:embedded@via-tech.eu)