NEOUSYS POC-700 Series Ultra Compact Embedded Computer Installation Guide

NEOUSYS POC-700 Series Ultra Compact Embedded Computer

Contents

Warning

- Only qualified service personnel should install and service this product to avoid injury.
- Observe all ESD procedures during installation to avoid damaging the equipment.

Preparing Tools

Unpack the equipment and make sure the following tools are available and delivered contents are correct before you begin the installation procedure.

User-provided tools

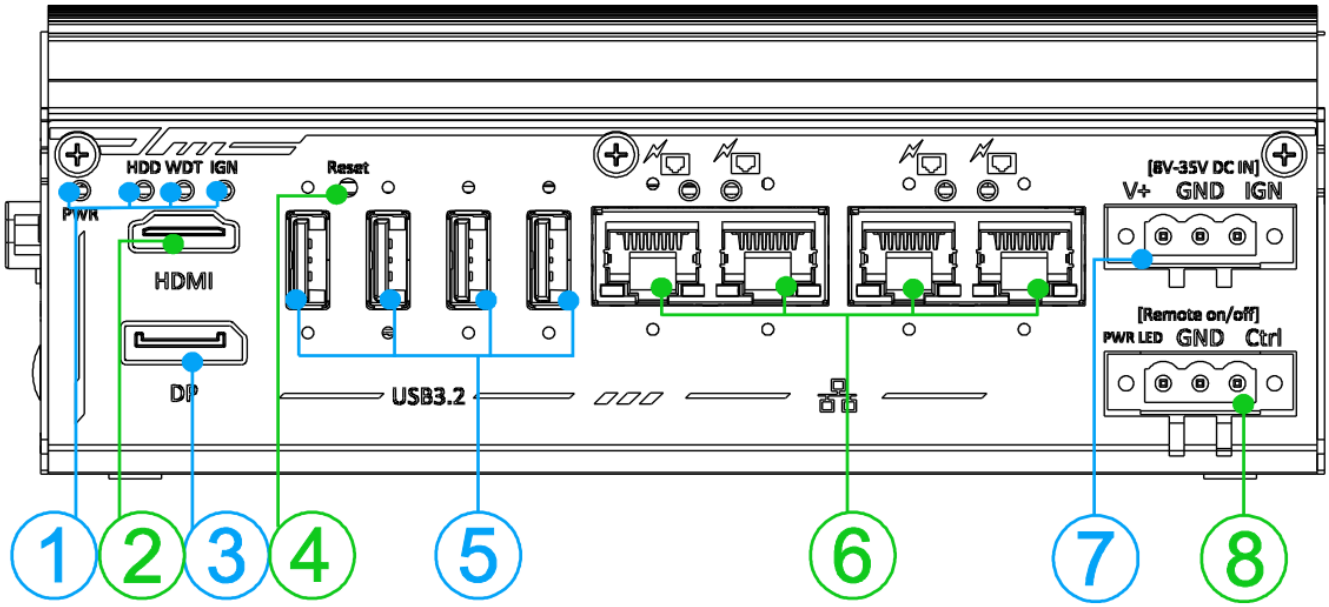
- Anti-static wrist wrap

Packing List

Item	Description	Quantity
01	POC-700 series system	1
02	3-pin pluggable terminal block	2
03	DIN-rail mount clip	1
04	Screw package	1

POC-700 Series Front Panel

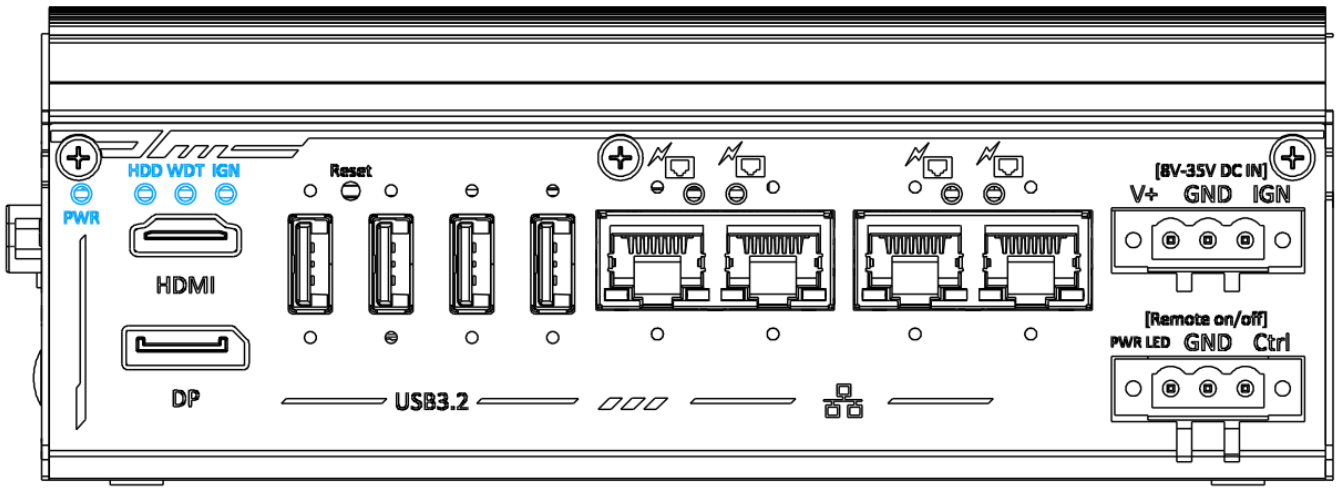
No.	Item	Description
1	System status LED	System LEDs, Hard Disk Drive (HOD), Watchdog Timer (WOT), Ignitio n control (IGN).
2	HDMI	The HDMI port is a high-resolution graphics/ data port supporting up to 3840 x 2160@ 30Hz.
3	DisplayPort output	The DisplayPort is a high-resolution graphics output supporting up to 4 096 x 2160@ 30Hz.
4	Reset button	Use this button to manually reset the system.
5	USB3.2 Gen2x1 port	USB3.1 Gen 2 port (SuperSpeed+) offers up to 10Gbps, twice the ban dwidth over existing SuperSpeed USB3.1 Gen. 1 connection. It is also backwards compatible with USB3.0 and USB2.0
6	Ethernet & PoE+	4x Gb Ethernet ports by Intel® I350-AM4 with Power over Ethernet por t (on POC-715 only) that can provide both data and electric power to d evices.
7	3-pin DC terminal block (opti onal ignition input)	Compatible with DC power input from 8V – 35V. When the system is in stalled with the optional MezIO™ – V20, the terminal block can also be used for ignition signal input.
8	3-pin Remote on/ off control	Allows for external switch extension when the system is placed inside a cabinet.



System Status LED

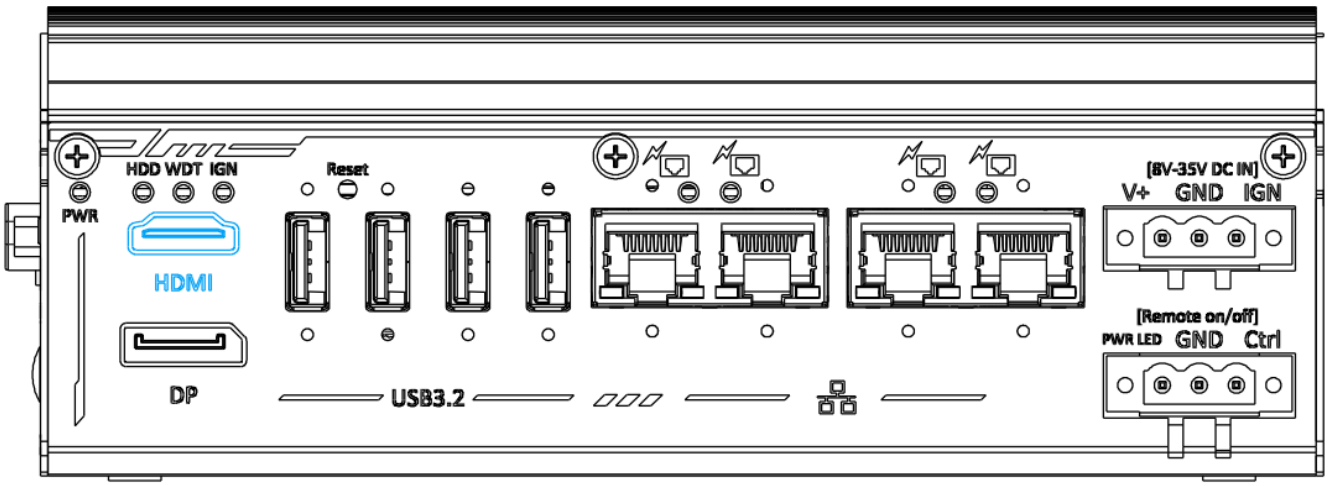
There are four LED indicators on the front panel: PWR, HDD, WDT and IGN. The descriptions of these four LEDs are listed in the following table.

Indicator	Color	Description
PWR	Green	Power indicter, lit when system is on.
HOD	Red	Hard drive indicator, flashing when SATA HOD is activ e
WDT	Yellow	Watchdog timer indicator, flashing when watchdog tim er has started
IGN	Yellow	Ignition power control, lit when IGN signal is applied.



HDMI

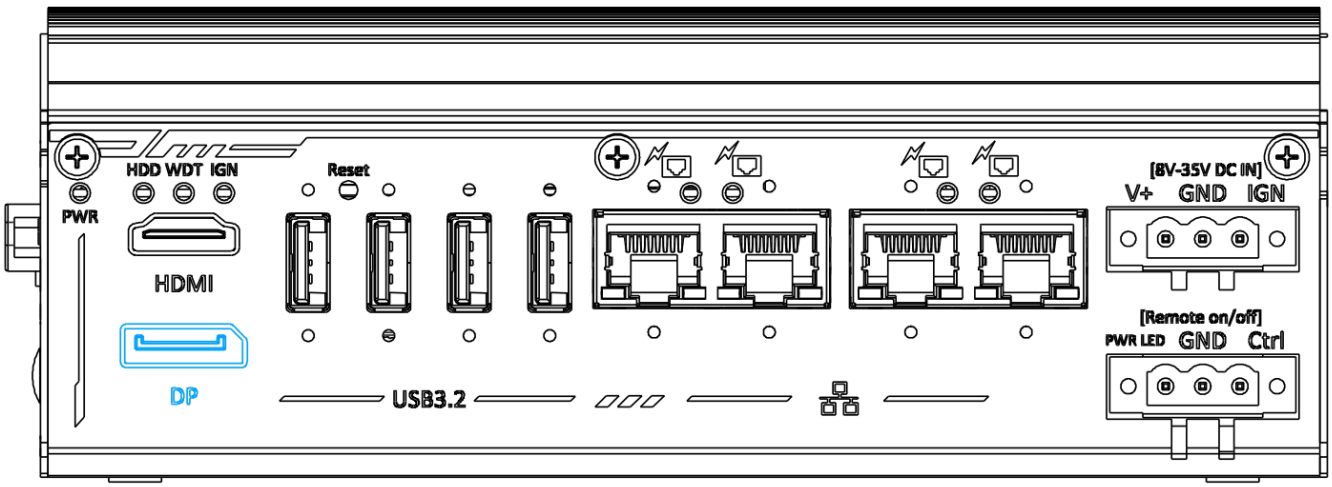
The High-Definition Multimedia Interface (HDMI) port provides uncompressed high-quality digital video and audio transmission between the system and a multimedia display device on a single cable. You can connect to other digital inputs by using a HDMI to-DVI or HDMI-to-DP cable.



The system supports dual independent display outputs by connecting display devices to HDMI and DisplayPort connection. To support dual display outputs and achieve best DisplayPort output resolution in Windows, you need to install corresponding graphics drivers.

DisplayPort

The system has two DisplayPort (DP) outputs which are digital display interfaces that mainly connect video source and carry audio to a display device. When connecting a DP, it can deliver up to 4K UHD (4096 x 2160 @ 30Hz) in resolution. The system is designed to support passive DP adapter/ cable. You can connect to other display devices using DP-to-HDMI cable or DP-to-DVI cable.



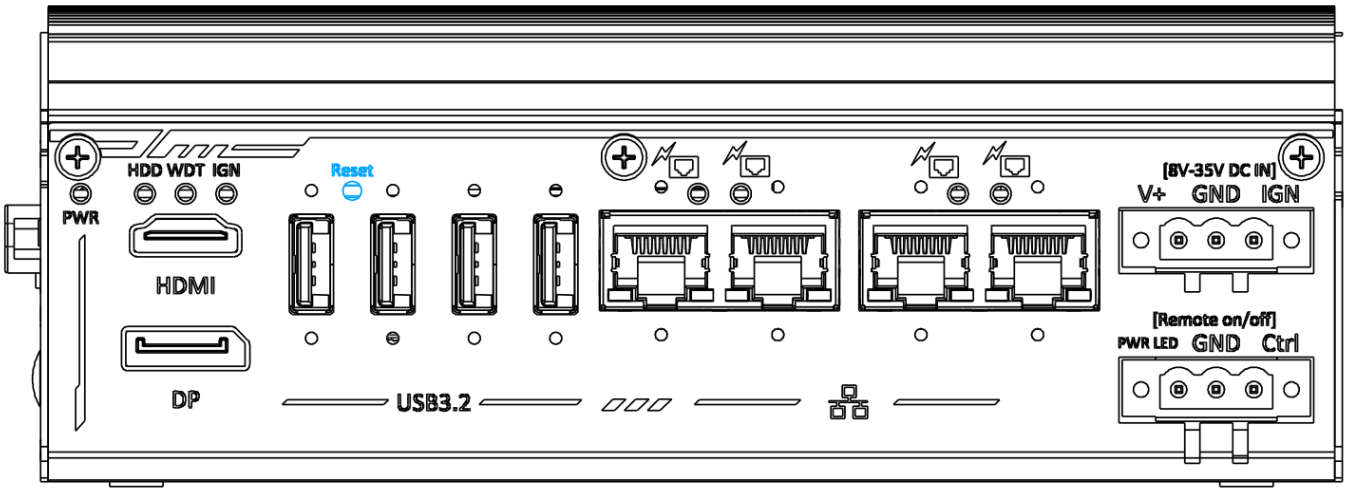
The system supports dual independent display outputs by connecting display devices DisplayPort connections. To support dual display outputs and achieve best DisplayPort output resolution in Windows, you need to install corresponding graphics drivers.

DP-to-HDMI

DP-to-DVI

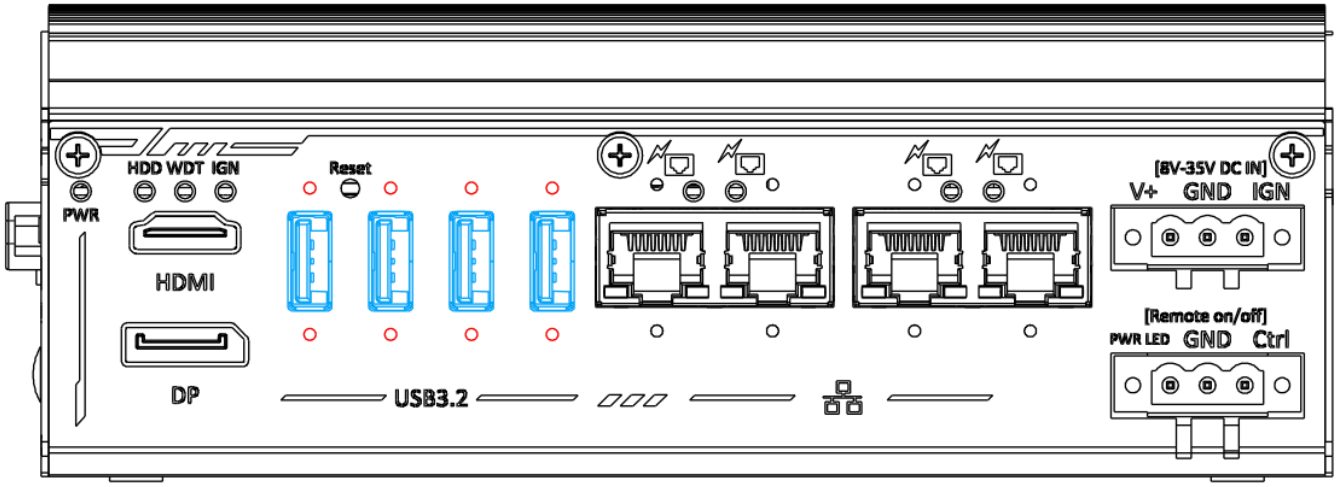
Reset Button

The reset button is used to manually reset the system in case of system halt or malfunction. To avoid unexpected reset, the button is purposely placed behind the panel. To reset, please use a pin-like object (eg. tip of a pen) to access the reset button.



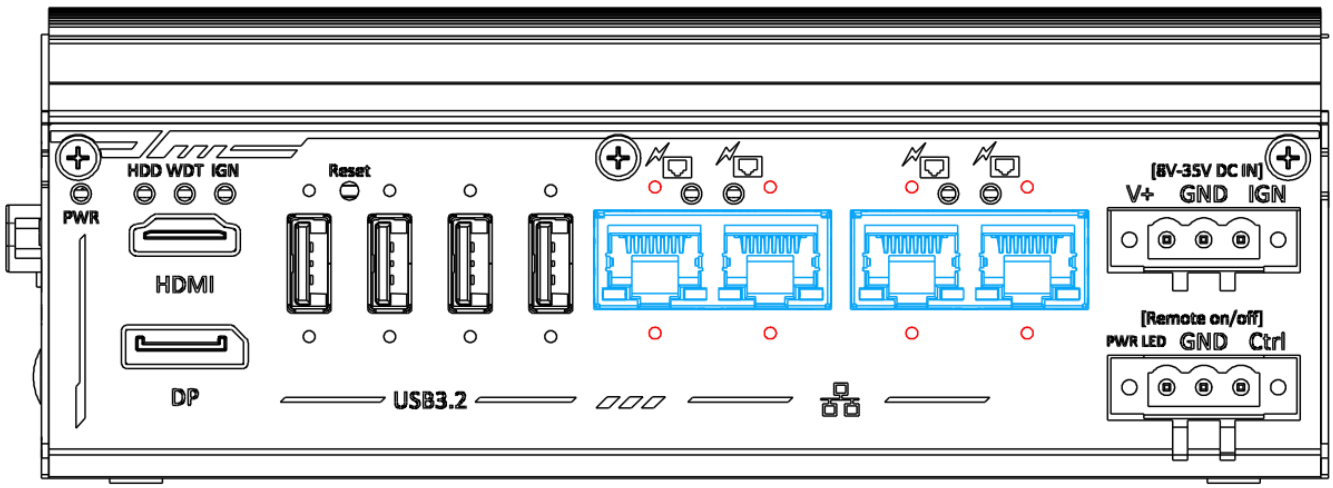
USB3.2 Gen2x1 Port

The system's USB 3.2 Gen2x1 ports (10Gbps) are implemented via native xHCI (eXtensible Host Controller Interface) controller and are backward compatible with USB3.2 Gen.1 USB 2.0, USB 1.1 and USB 1.0 devices. UFEI USB is also supported so you can use USB keyboard/ mouse in UEFI shell environment. Indicated in are screw-lock holes for the corresponding USB port.
xHCI driver is supported natively in Windows 10, therefore you do not need to install the xHCI driver prior to utilizing USB functions.



IEEE 802.3at Power over Ethernet

The system offers four Gb Ethernet ports via Intel® I350-AM4 and is backward compatible with 100/ 10Mb connection speeds.
The Gigabit Power over Ethernet (PoE) port is only available on POC-715 system that can supply power and data on a standard CAT-5/CAT-6 Ethernet cable . Acting as a PSE (Power Sourcing Equipment), compliant with IEEE 802.3at, each port delivers up to 25W to a Powered Device (PD).
PoE automatically detects and determine if the connected device is PoE PD or not before supplying power, making it compatible with standard Ethernet devices as well. Indicated in is a screw-lock hole for the corresponding Ethernet port.



Active/Link LED (Right)

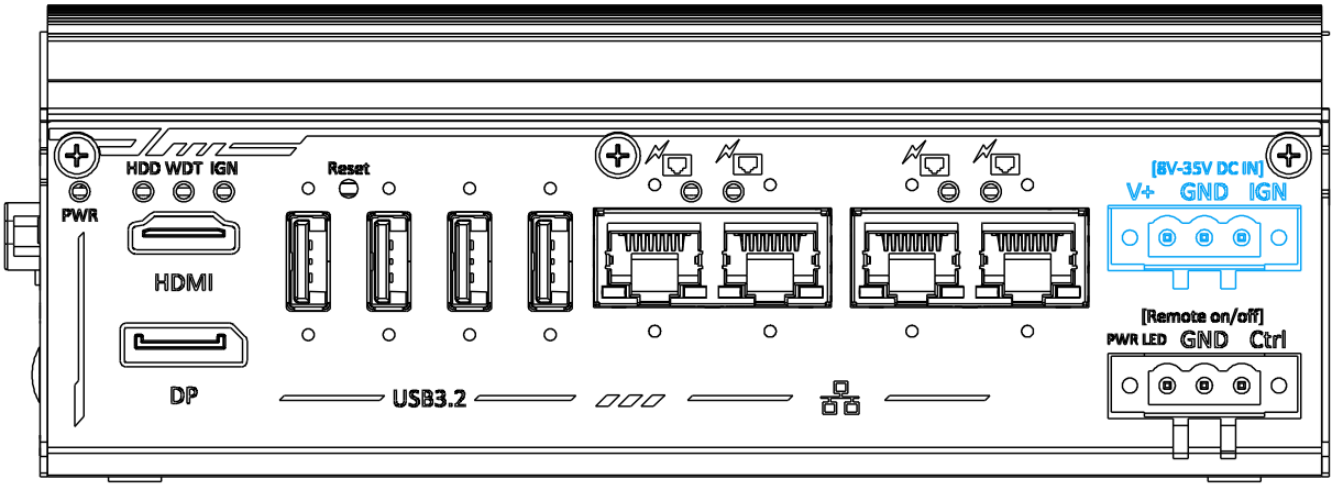
LED Color	Status	Description
Green	Off	Ethernet port is disconnected
	On	Ethernet port is connected and no data transmission
	Flashing	Ethernet port is connected and data is transmitting/receiving

Speed LED (Left)

LED Color	Status	Description
Green or Orange	Off	10 Mb s
	Green	100. Mb s
	Orange	1000 Mb s

3-pin Terminal Block for DC Input (Optional Ignition Input)

The system accepts a wide range of DC power input from 8 to 35V via a 3-pin pluggable terminal block, which is fit for field usage where DC power is usually provided. The screw clamping mechanism on the terminal block offers connection reliability when wiring DC power. In addition to DC power input, this terminal block can also accept TM ignition signal input (IGN) when you have MezIO module with IGN function installed.

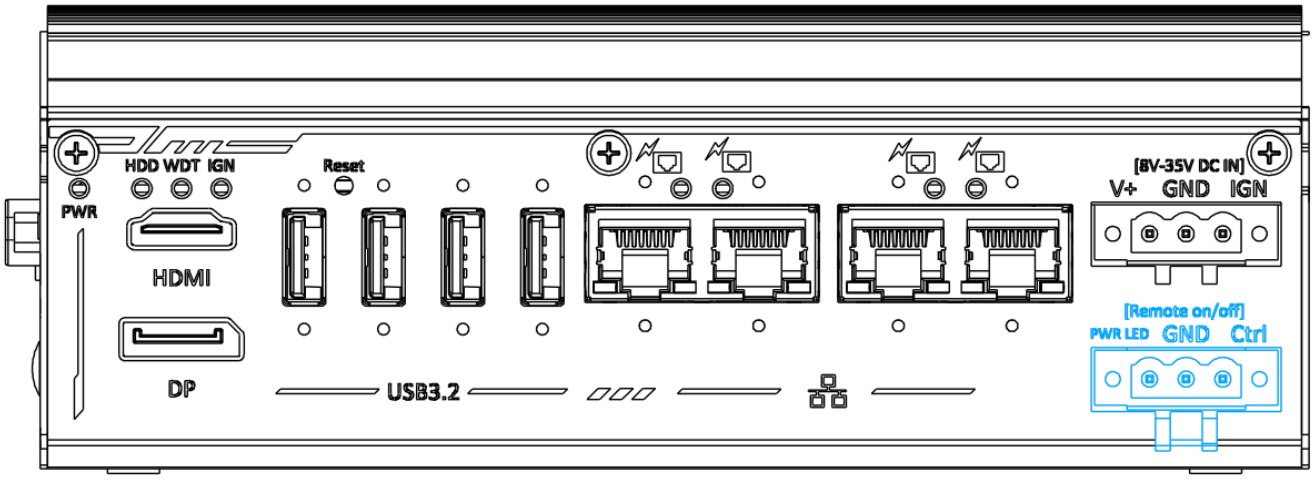


Warning

Please make sure the correct DC voltage is supplied to the system.
Supplying a voltage over 35V will damage the system.

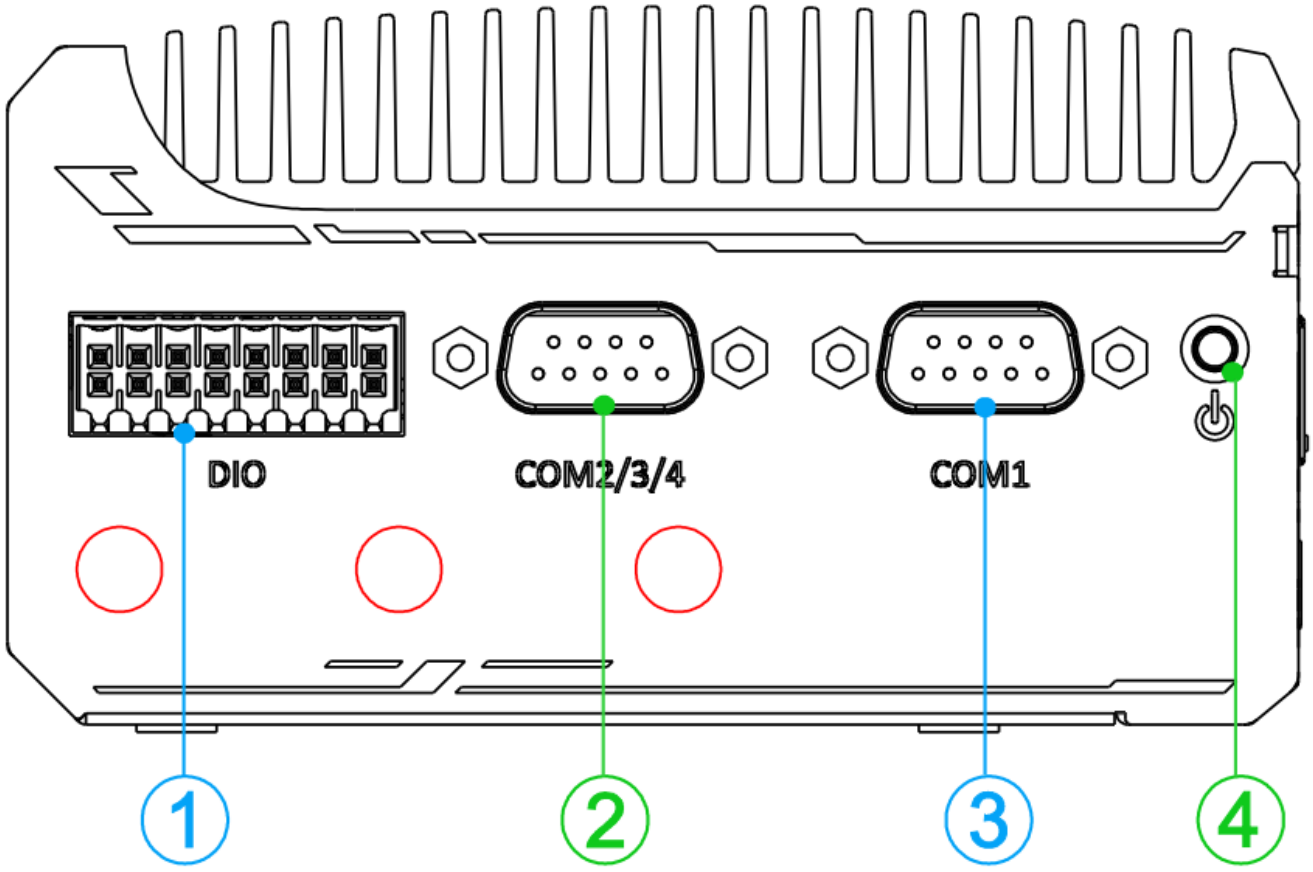
3-pin Remote On/ Off

The “Remote On/ Off” 3-pin connection allows for external switch extension. It is useful when the system is placed in a cabinet or a not easily accessed location. You may connect an external remote with an external status LED indicator (15mA) by connecting to PWR LED and GND.



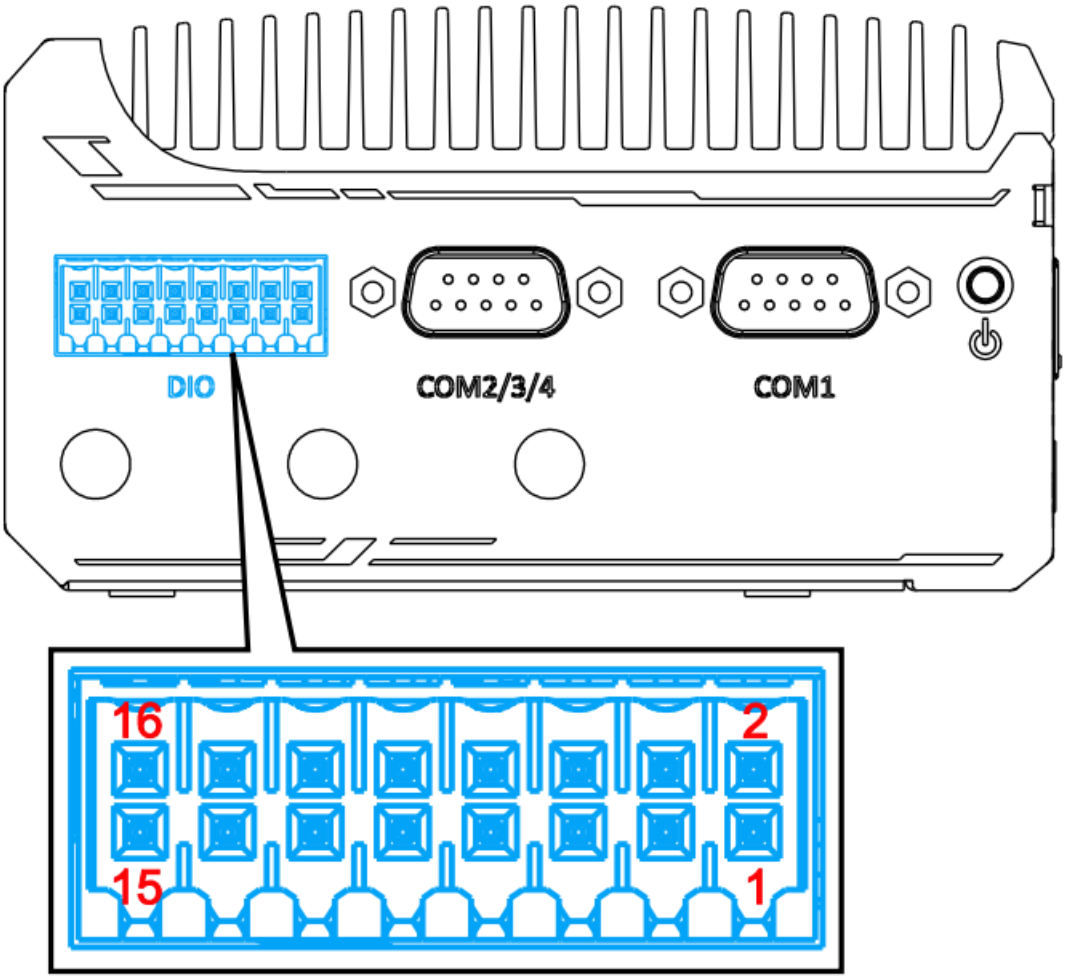
DIO/ COM Port Panel

No.	Item	Description
1	Digital 1/0	4 channel isolated digital input 4 channel isolated digital output
2	COM port 2/ 3/ 4	**Can be configured as:** **COM2:** single RS-422/ 485 port **COM2/ COM3/ COM4:** three 3-wire RS-232 ports
3	COM port 1	Software programmable RS-232/ 422/ 485 port.
4	Power button	Use this button to turn on or shutdown the system.
		Opening reserved for SMA antenna installation.



Digital Input/ Output

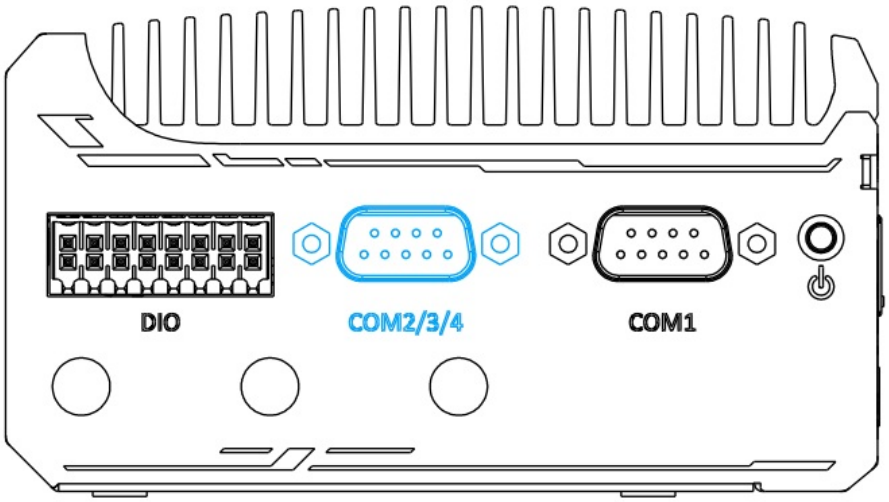
The system provides 4x isolated digital input channels and 4x isolated digital output channels. The DIO functions support polling mode I/O access and DI change-of-state interrupt.



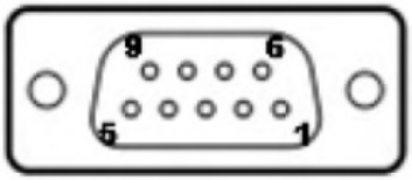
Pin#	Pin Definition	Pin#	Pin Definition
1	ISO- DIO- CN	9	ISO DO0- CN
2	IGND0	10	EOGND
3	ISO DI1 – CN	11	ISO DO1 -CN
4	IGND1	12	EOGND
5	ISO- DI2- CN	13	ISO- DO2- CN
6	IGND2	14	EOGND
7	ISO- DI3- CN	15	ISO- DO3- CN
8	IGND3	16	VDD

COM2/3/4 Port

COM2/ 3/ 4 port can be configured in the BIOS as single RS-422/ 485 port (COM2) or three 3-wire RS-232 ports (COM2/COM3/COM4).



1-to-3 Y-cable

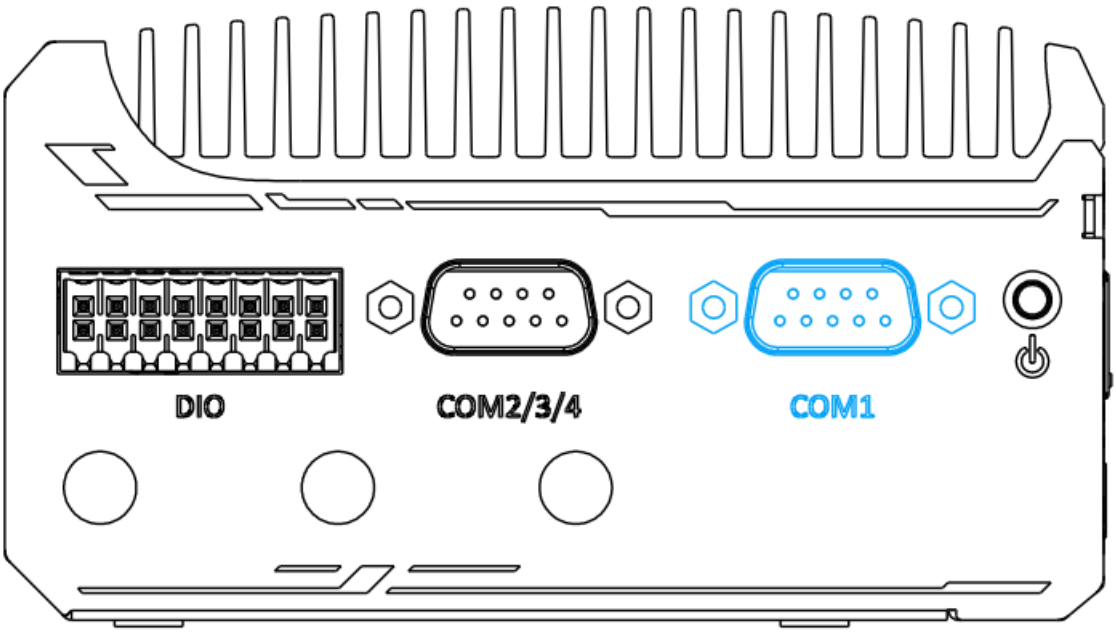


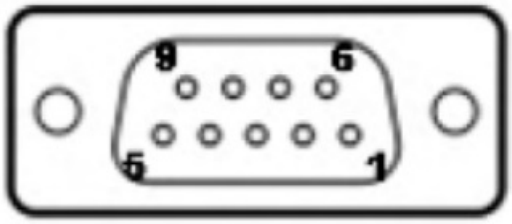
	3-port **RS-232 COM2/ 3/ 4**		
Pin#	**COM2**	**COM3**	**COM4**
1			
2	RX		
3	TX		
4		TX	
5	GND	GND	GND
6		RX	
7			TX
8			RX
9			

	Single port RS-422/ 485	
Pin#	RS-422	RS-485
1		
2	TxD+	TxD+/ RxD+
3	RxD+	
4	RxD-	
5	GND	GND
6		
7		
8	TxD-	TxD-/ RxD-
9		

COM1 Port

COM1 port operating mode (RS-232/ 422/ 485), slew-rate and termination can be set in the BIOS.

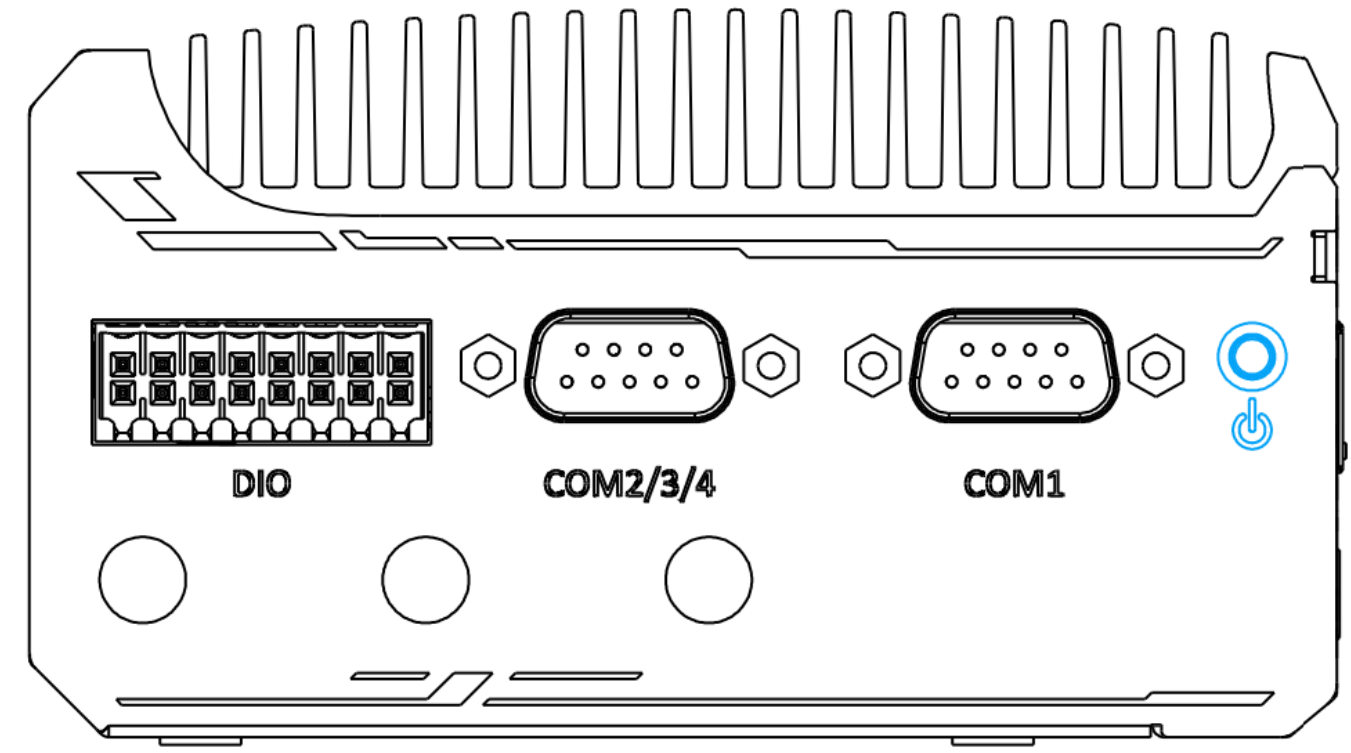




	COM1		
Pin#	**RS-232 Mode**	**RS-422 Mode**	**RS-485 Mode (Two-wire 485)**
1	DCD		
2	RX	422 TXD+	485 TXD+/RXD+
3	TX	422 RXD+	
4	DTR	422 RXD-	
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS	422 TXD-	485 TXD-/RXD-
9	RI		

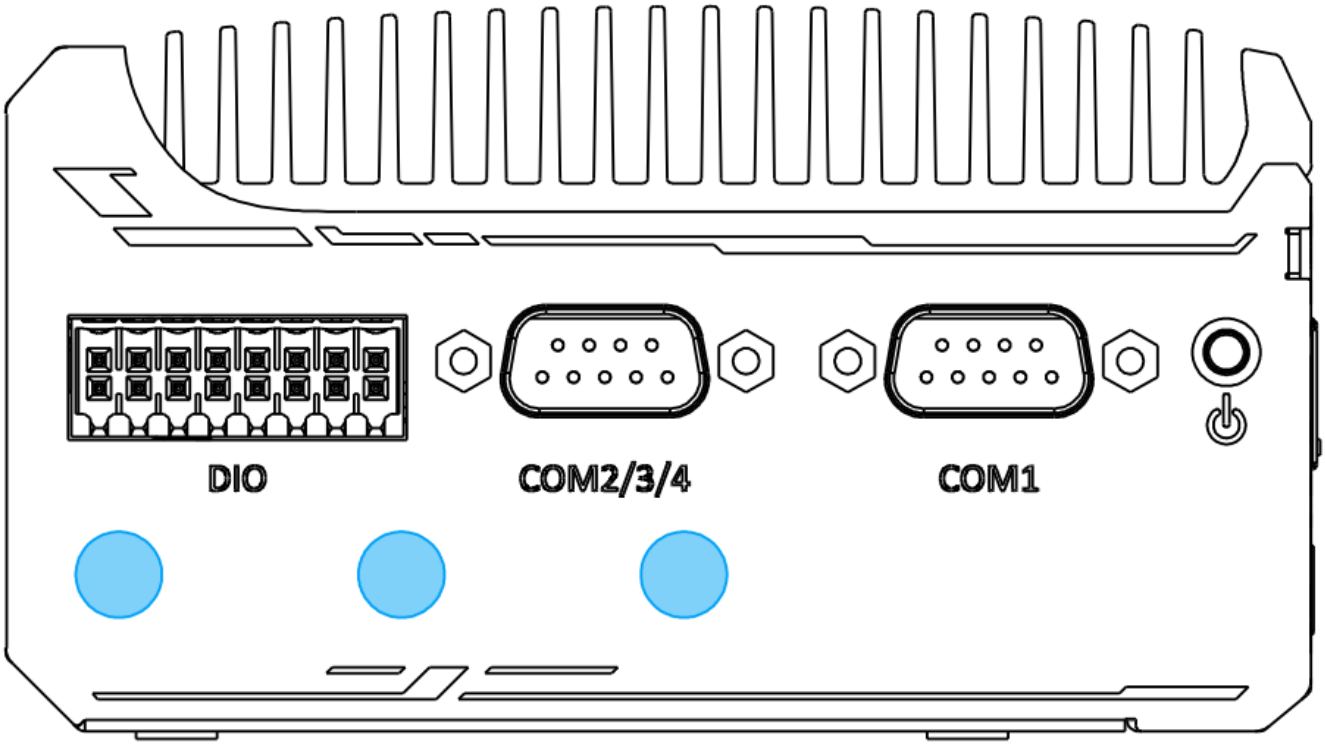
Power Button

The power button is a non-latched switch for ATX mode on/off operation. Press to turn on the system, PWR LED should light up and to turn off, you can either issue a shutdown command in the OS, or just press the power button. In case of system halts, you can press and hold the power button for 5 seconds to force-shutdown the system.
Please note that there is a 5 seconds interval between two on/off operations (i.e. once turning off the system, you will need to wait for 5 seconds to initiate another power-on operation).



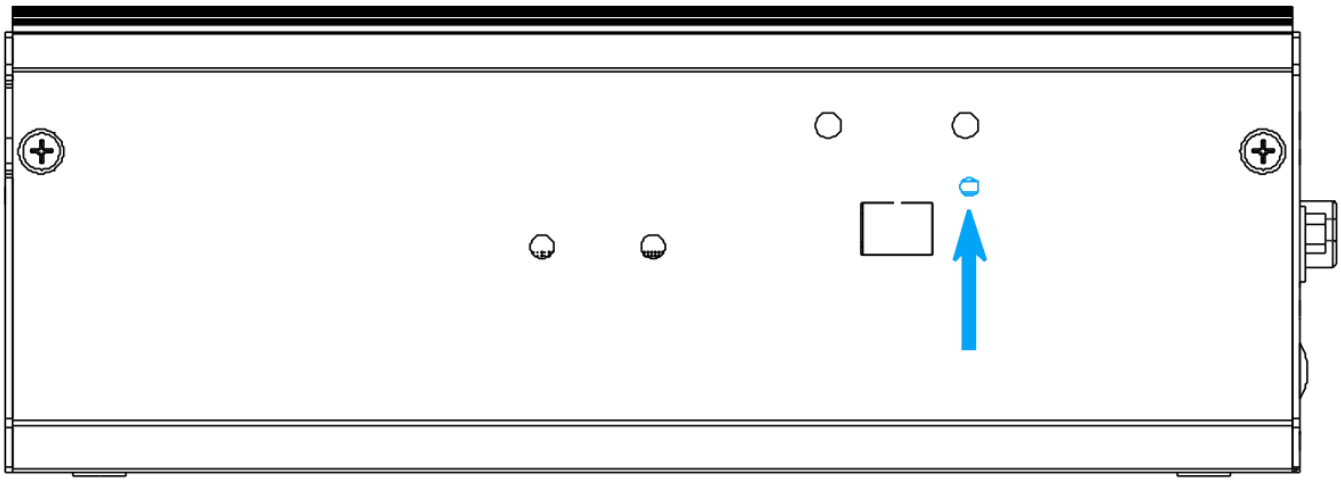
SMA Antenna Opening

The system offers three SMA antenna openings reserved for SMA antenna installations. Users can take advantage of these three openings when installing mini-PCIe module for wireless communication reception such as 3G, 4G, GPS or WiFi.



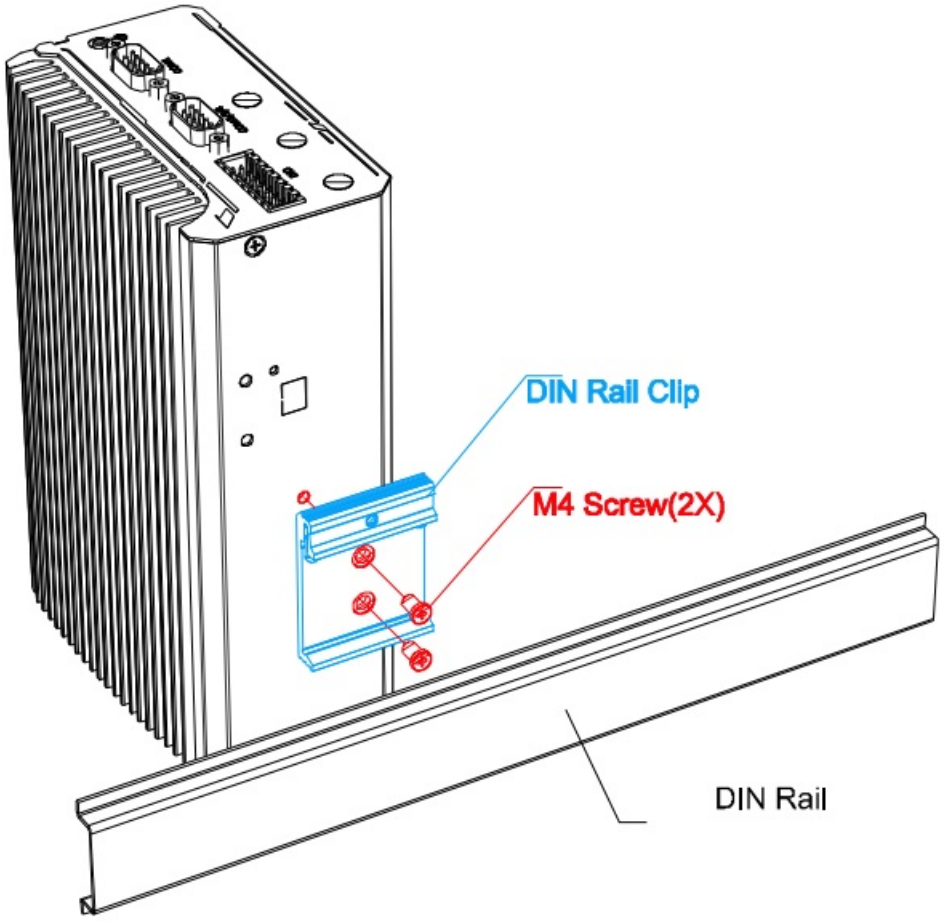
CMOS Reset Button

Positioned on the rear panel (opposite the IO panel), indicated by the , the CMOS Reset button is used to manually reset the motherboard BIOS in case of system halt or malfunction. To avoid unexpected operation, it is purposely placed behind the panel. To reset, please use the tip of a pen, press and hold for at least 5 seconds to reset the BIOS.

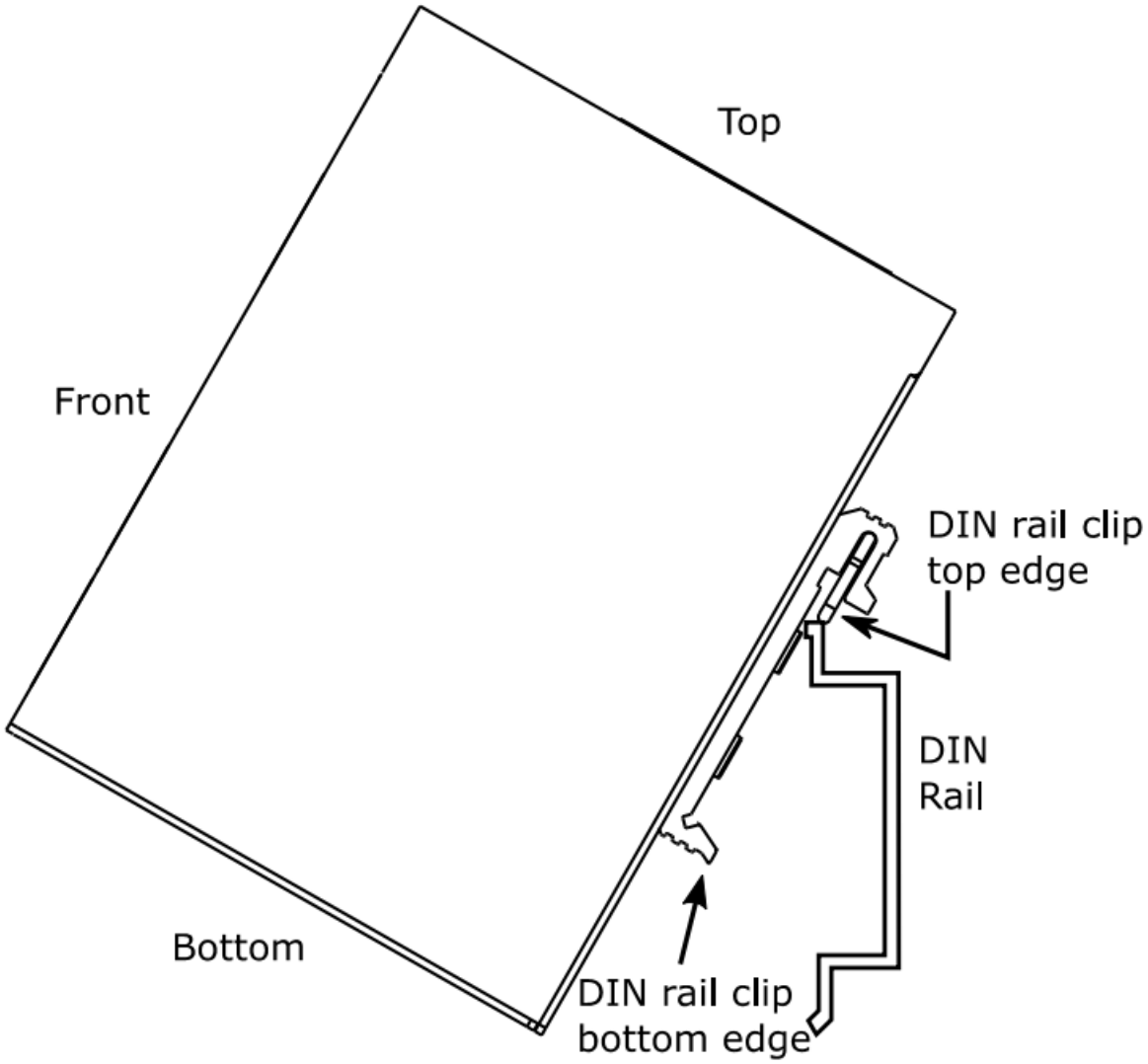


DIN-rail Installation

a. To install, secure the DIN rail clip to the rear side panel of the system enclosure using the M4 screws provided.



b. To install the DIN rail clip onto the DIN rail, you must come over the top of the DIN rail, tilting, overlap the top clip edge of the DIN rail clip onto the DIN rail first, and then firmly press the bottom-front of the enclosure to clip the bottom edge of the mount plate.



Documents / Resources

	NEOUSYS POC-700 Series Ultra Compact Embedded Computer [pdf] Installation Guide POC-700 Series, POC-700 Series Ultra Compact Embedded Computer, Ultra Compact Embedded Computer, Compact Embedded Computer, Embedded Computer, Computer