⚠ 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.

❶ Preparing tools

Unpack the equipment and make sure the following tools are available and delivered contents are correct.

1-1. User-provided tools
- Anti-static wrist wrap

1-2. Packing List

Item	Description	Quantity
01	RGS-8805GC system	1
02	Drivers & utilities disc	1
03	CPU heatsink	1
04	Wall-mount bracket	2
05	4-pin pluggable terminal block	2
06	2.5" HDD/SSD thermal pad (if HDD not installed)	4
07	Screw pack	1

❷ Overview - Front Panel
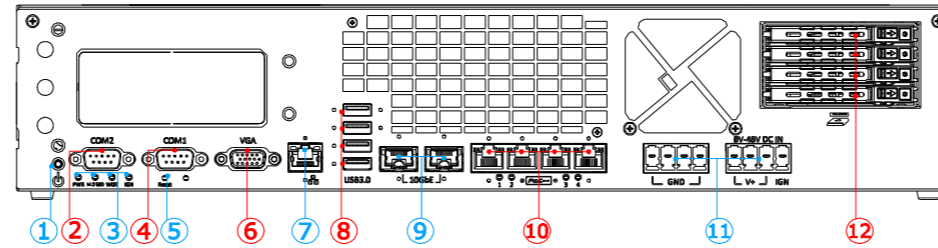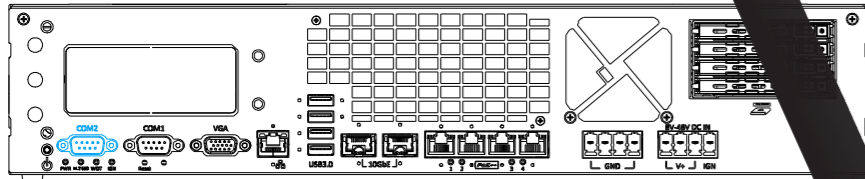

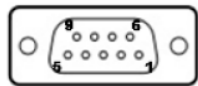| No.	Item	Description
1	Power button	Use this button to turn on or shutdown the system.
2	COM2 port	A software-selectable RS-232/422/485 port, the operation mode can be set in the BIOS.
3	Status LEDs	From left to right, the LEDs are four status LEDs on the front panel: power (PWR), M.2 SSD, Watchdog timer (WDT), and ignition control (IGN).
4	COM1 port	A software-selectable RS-232/422/485 port, the operation mode can be set in the BIOS.
5	Reset button	Use this button to manually reset the system.
6	VGA port	VGA output supports resolution up to 1920x1200@60Hz
7	Reserved	Reserved port
8	USB3.2 Gen1 port	USB3.2 Gen 1 offers up to 5Gbps of data-throughput performance
9	10GbE port	2x 10GBASE-T ports by Intel® X550-AT2, supporting NBASE-T (5G/2.5G)
10	PoE+ GbE port	4x Gigabit Ethernet ports by Intel I350-AM4 with IEEE 802.3at PoE+ PSE capability
11	DC input	2x 4-pin 7.62mm pitch pluggable terminal block for 8 to 48V DC input and ignition control input
12	2.5" Drive trays	4x easy-swappable HDD trays for 2.5" HDD/ SSD installation (supports up to 7mm drive thickness)
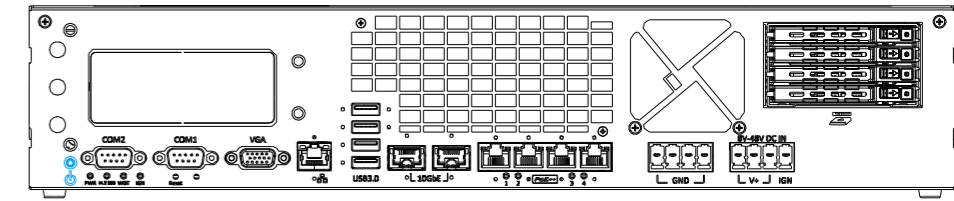
❸ Power Button

The power button is a non-latched switch for ATX mode on/off operation. To turn on the system, press the power button and the PWR LED should light-up green. To turn off the system, issuing a shutdown command in OS is preferred, or you can simply press the power button. To force shutdown when the system freezes, press and hold the power button for 5 seconds. Please note that there is a 5-second interval between on/off operations (i.e. once the system is turned off, there is a 5-second wait before you can power-on the system).
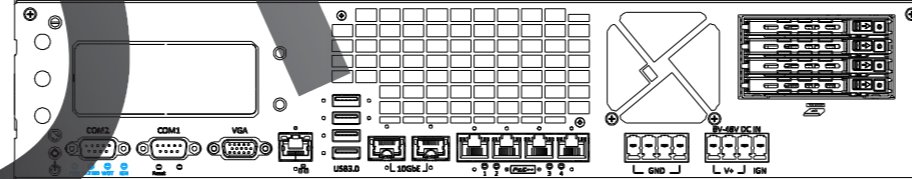
❹ COM2 Port

The COM2 port is implemented using industrial-grade ITE8786 Super IO chip (-40 to 85°C) and provide up to 115200 bps baud rate. It is a software-configurable RS-232/ 422/ 485 ports. The operation mode of COM1 and COM2 can be set in BIOS setup utility. The following table describes the pin definition of COM ports.

Pin Definition

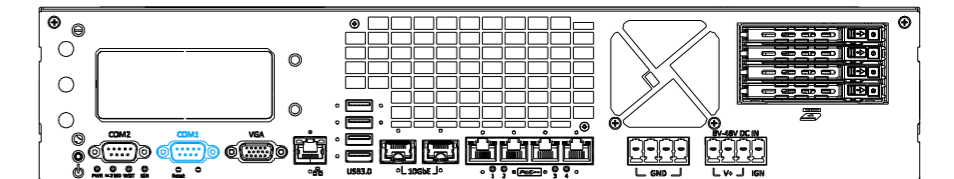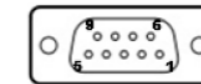|	COM2		
Pin#	RS-232 Mode	RS-422 Mode	RS-485 Mode(Two-wire 485)
1	DCD		
2	RX	422 TXD+	485 TXD+/RXD+
3	TX	422 RXD+	
4	DTR	422 RXD-	
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS	422 TXD-	485 TXD-/RXD-
9	RI		

❺ Status LED Indicator

There are four LED indicators on the I/O panel: PWR (power), M.2 SSD, WDT (Watchdog timer), and IGN (ignition). The descriptions of these four LEDs are listed below:

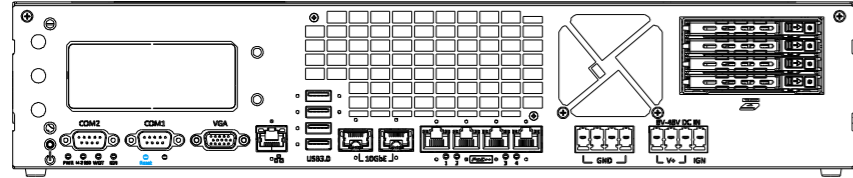| Indicator	Color	Description
PWR	Green	Power indictor, lid when system is on.
M.2 SSD	Red	M.2 SSD indicator, flashing when hard disk drive is active.
WDT	Yellow	Watchdog timer LED, flashing when WDT is active.
IGN	Yellow	Ignition signal indicator, lid when IGN is high (12V/ 24V).

❻ COM1 Port

The COM2 port is implemented using industrial-grade ITE8786 Super IO chip (-40 to 85°C) and provide up to 115200 bps baud rate. It is a software-configurable RS-232/ 422/ 485 ports. The operation mode of COM1 and COM2 can be set in BIOS setup utility. The following table describes the pin definition of COM ports.


Pin Definition

	COM2		
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		

❼ 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.
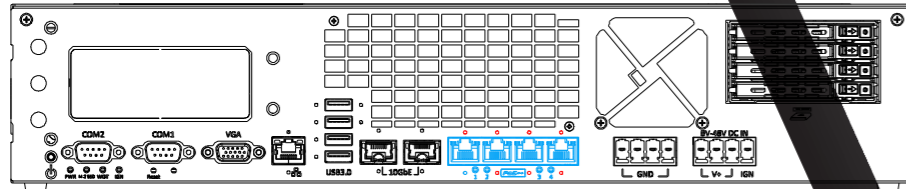
❽ VGA Port
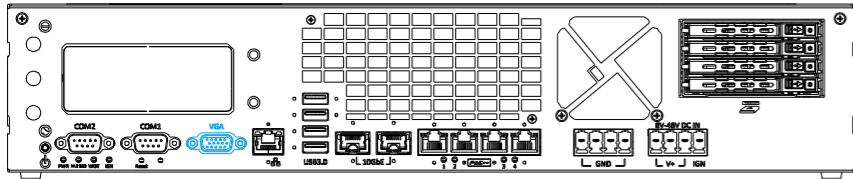
VGA connector is the most common video display connection. The VGA output supports up to 1920x1200@60Hz resolution. For the best VGA output resolution in Windows, you need to install corresponding graphics drivers.

Note

Please make sure your VGA cable includes SDA and SCL (DDC clock and data) signals for correct communication with monitor to get resolution/timing information. A cable without SDA/ SCL can cause blank screen on your VGA monitor due to incorrect resolution/timing output.

❾ USB3.2 Gen1 Port

The system's USB 3.2 Gen1x1 ports (5Gbps) are implemented via native xHCI (eXtensible Host Controller Interface) controller and are backward compatible with USB 2.0, USB 1.1 and USB 1.0 devices. UEFI USB is also supported so you can use USB keyboard/mouse in UEFI shell environment. Indicated in red is a screw-lock hole 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.

❿ 10GbE Port

The two high-speed data transmission 10G Ethernet ports are implemented by Intel® X550-AT2 and are backward compatible with 5GBASE-T and 2.5GBASE-T to work with NBASE-T industrial cameras. Indicated in red is a screw-lock hole for the corresponding Ethernet port.

Active/Link LED

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

LED Color	Status	Description
Green or Orange	Off	100 Mbps
	Orange	1000 Mbps
	Green	10 Gbps

⓫ PoE+ Ethernet Port

The Gb Ethernet ports are implemented with Intel I350-AM4 Ethernet controller. The four ports are also compatible with PoE+ IEEE 802.3at PSE capability ports and feature panel screw fix holes (indicated in red) for a firm and secure connection.

The PoE ports supply electrical power and data on a standard CAT-5/CAT-6 Ethernet cable. Acting as a PoE PSE (Power Sourcing Equipment), compliant with IEEE 802.3at, each PoE port delivers up to 25W to a Powered Device (PD), and the system has a total 100W power PoE budget.
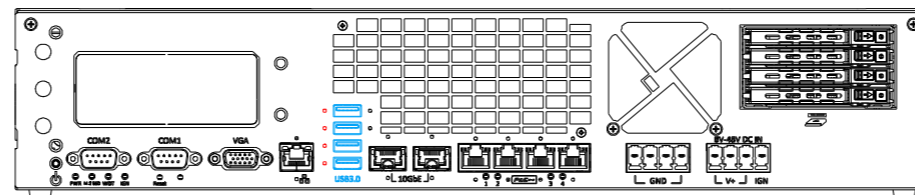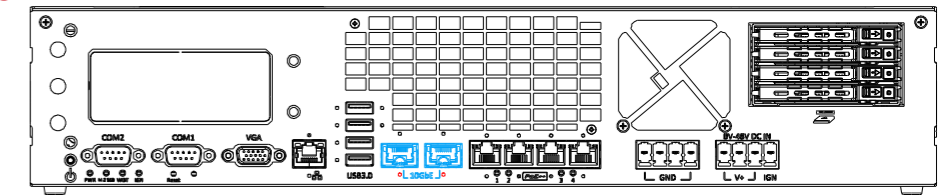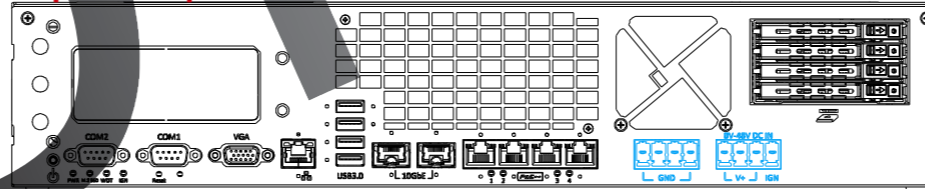
Active/Link LED

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

| LED Color	Status	Description
Green or Orange	Off	10 Mbps
	Green	100 Mbps
	Orange	1000 Mbps

⓬ 4-pin DC Input

The system accepts a wide range of DC power input from 8 to 48V via dual 4-pin pluggable terminal blocks, 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 ignition signal input (IGN) for in-vehicle applications.

Warning

Please make sure the voltage of DC power is correct before you connect it to the system. Supplying a voltage over 48V will damage the system.

⓭ 2.5" Easy-swappable Drive Trays
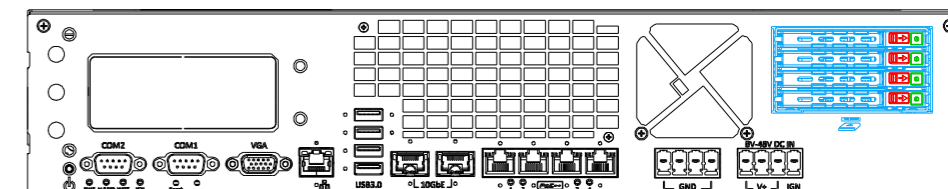
There are four 2.5 inch easy-swap hard drive trays on the front IO panel. Each 2.5" tray supports a 2.5" HDD or SSD up to 7mm thick. There is a lock (indicated in green) for each tray, and flick the switch (indicated in red) to the right to open each tray. When installing a HDD/ SSD, please make sure the SATA connector end is inserted first.