

## 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.

## 1 Preparing tools

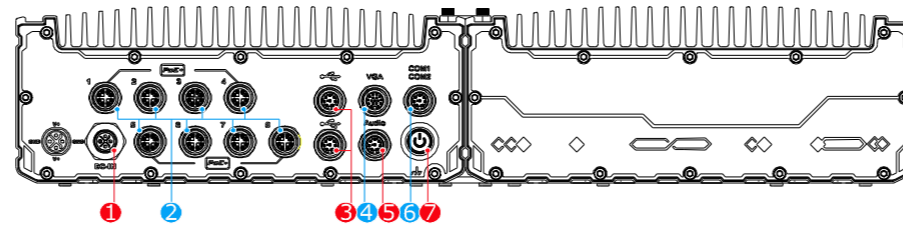
Unpack the equipment and make sure the following tools are available and delivered contents are correct before you begin the installation procedure.

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

### 1-2. Packing List

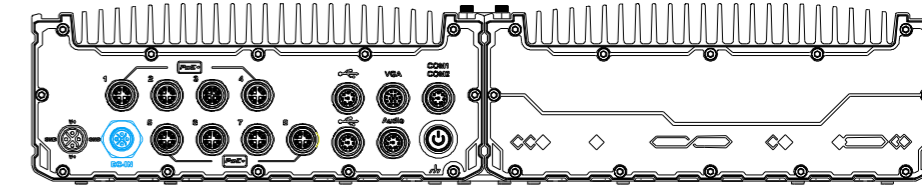
Item	Description	Quantity
01	SEMIL 1700GC series system	1
02	Drivers & utilities disc	1

## 2 Overview



No.	Item	Description
1	DC input	8V to 48V DC input (M12 S-coded)
2	PoE+ GbE ports	SEMIL - 1724GC 1x IEEE 802.3at GbE+ port via Intel® I219
		SEMIL - 1744GC 3x IEEE 802.3at GbE+ port via Intel® I210
		SEMIL - 1728GC 1x IEEE 802.3at GbE+ port via Intel® I219
		SEMIL - 1748GC 7x IEEE 802.3at GbE+ port via Intel® I210
3	USB 2.0 port	The USB 2.0 ports are backward-compatible with USB 1.1 / 1.0.
		SEMIL - 1724GC 2x USB2.0 (M12 A-coded)
		SEMIL - 1744GC 4x USB2.0 (M12 A-coded)
		SEMIL - 1748GC
4	VGA port	VGA output supports resolution up to 1920x1200@60Hz
5	Audio port	The audio port is only available on SEMIL-1728GC and SEMIL-1748GC systems only.
6	COM ports	COM 1 & 2 are RS-232 ports via an M12 A-coded connector
7	Power button	Use this button to turn on or force shutdown the system.

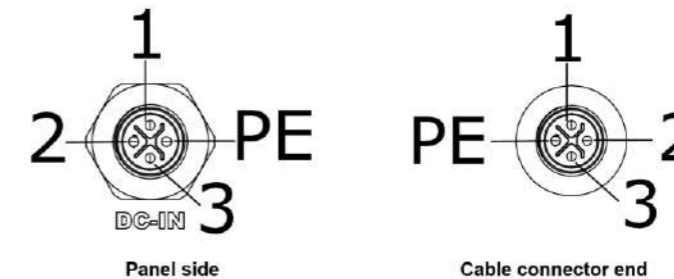
## 3 DC-IN



### Warning

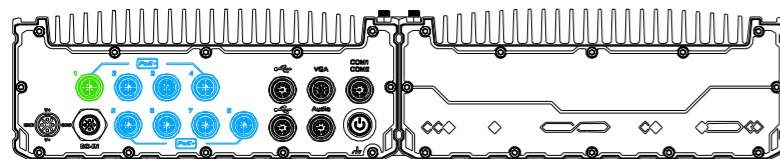
Please make sure the voltage of DC power is correct before you connect it to the system. Supplying a voltage over 48V will damage the system.

#### Connector Pin Definition



Signal	M12 panel side	M12 cable connector end	Wire color
V+	3	3	Blue
GND	2	2	White
V+	1	1	Orange
GND	PE	PE	Black

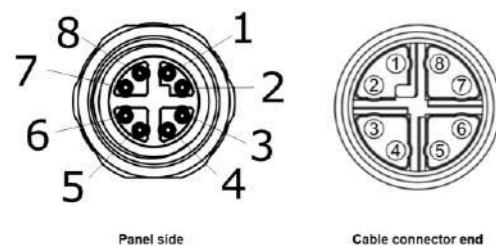
## 4 PoE+ Gigabit Ethernet Port



The number of ports for each SEMIL-1700GC model variant is listed below:

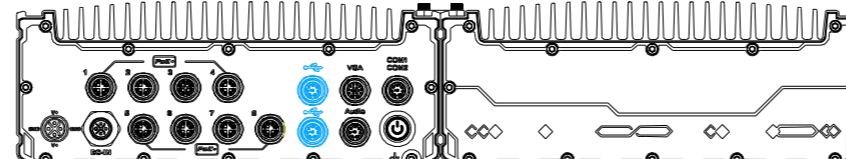
Model No.	PoE+ ports	Port description
SEMIL -1724GC	1x IEEE 802.3at GbE+ port via Intel® I219	
SEMIL -1744GC	3x IEEE 802.3at GbE+ port via Intel® I210	
SEMIL - 1728GC	1x IEEE 802.3at GbE+ port via Intel® I219	
SEMIL - 1748GC	7x IEEE 802.3at GbE+ port via Intel® I210	

#### Connector Pin Definition



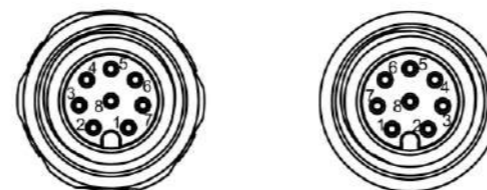
Signal	M12 panel side	M12 cable connector end	Wire color
LAN P0	1	1	Yellow
LAN N0	2	2	Yellow
LAN P1	3	3	Green
LAN N1	4	4	Green
LAN P3	5	5	Orange
LAN N3	6	6	Orange
LAN N2	7	7	Blue
LAN P2	8	8	Blue

## 5 USB Port



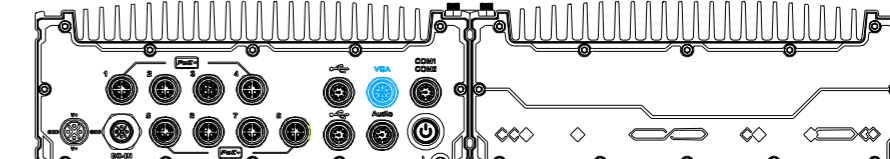
SEMIL-1724GC and SEMIL1744GC have two USB ports while SEMIL-1728GC and SEMIL-1748GC have four USB ports. The USB2.0 ports are implemented via native xHCI (eXtensible Host Controller Interface) controller and are backward compatible with USB 1.1 and USB 1.0 devices. Legacy USB is supported so you can use USB keyboard/mouse in DOS.

#### Connector Pin Definition



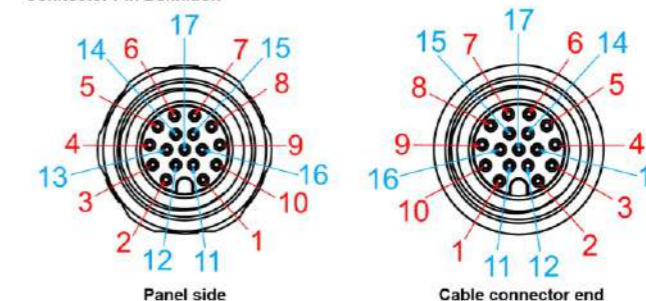
Signal	M12 panel side	M12 cable connector end	Wire color
D1+	1	1	Green
D1-	2	2	White
VCC_USB	3	3	Red
GND	4	4	Black
GND	5	5	Black
VCC_USB	6	6	Red
D2-	7	7	White
D2+	8	8	Green

## 6 VGA Port



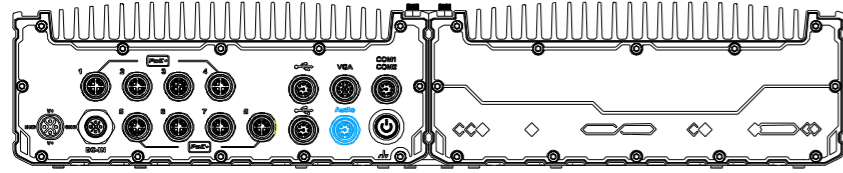
VGA connector is the most common video display connection. The VGA output supports up to 1920x1200@60Hz resolution.

#### Connector Pin Definition

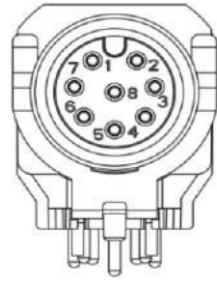


Signal	M12 panel side	M12 cable connector end	Wire color
Red	1	1	Red
GREEN	9	9	Green
BLUE	7	7	Blue
GND	6	6	White
GND	8	8	White
GND	10	10	White
GND	12	12	White
GND	13	13	White
GND	14	14	White
GND	11	11	White
GND	16	16	White
GND	15	15	White
PSV_VGA	17	17	Black
VGA_SDA	5	5	Orange
HSYNC_CN	3	3	Yellow
VSYNC_CN	2	2	Orange
VGA_SCL	4	4	Grey

**7 Audio Port (SEMIL-1728GC/ 1748GC Only)**



Pin Definition



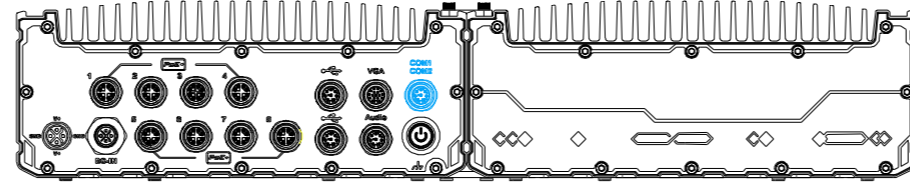
Socket end



Cable side

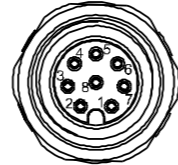
Signal	M12 Socket end	M12 cable side
Left channel	4	4
Right channel	5	5
Microphone	7	7
Ground	8	8

**8 COM1/ COM2**

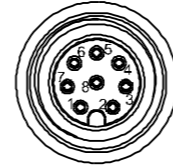


The system provides two COM ports via an M12 A-coded connector for communicating with external devices. These COM ports are 3-wire RS-232 specifications and provide up to 115200 bps baud rate.

Pin Definition



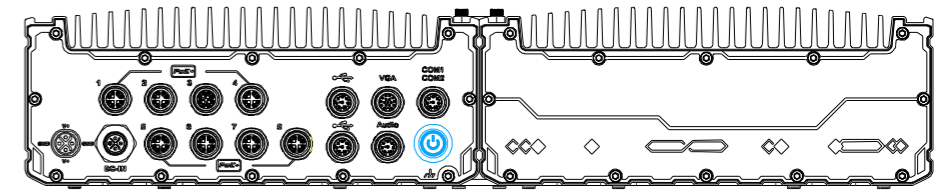
Panel side



Cable connector end

Signal	M12 panel side	M12 cable connector end	Wire color
TXD1	1	1	Black
RXD1	2	2	Orange
NC	3	3	x
PWR_IGN	4	4	Blue
GND	5	5	Grey
NC	6	6	x
RXD2	7	7	
TXD2	8	8	Light Orange

**9 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).