

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

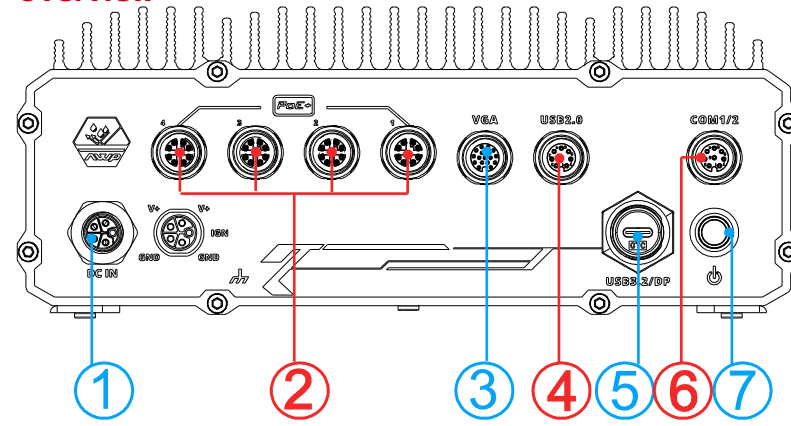
Unpack the equipment and make sure the following tools are available and delivered contents are correct before you begin the installation procedure.

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

1-2. Packing List

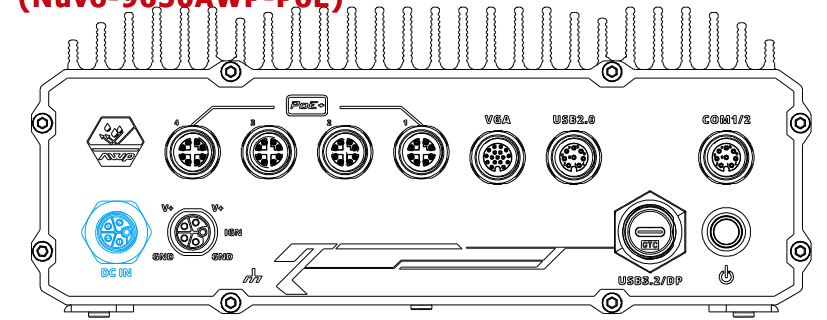
Item	Description	Quantity
01	Nuvo-9650AWP series system	1

2 Overview



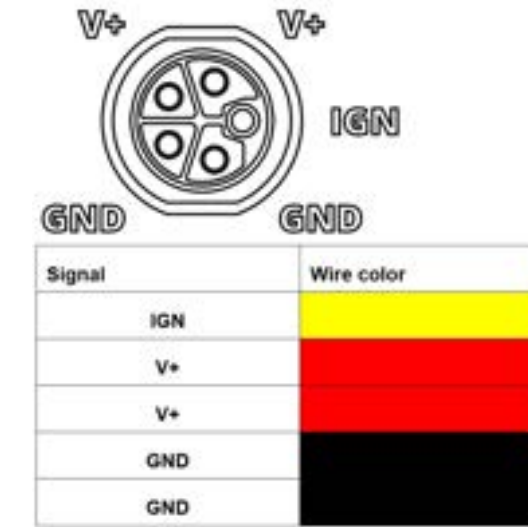
No.	Connector	Description
1	M12 DC-in with ignition power control	Nuvo-9650AWP: M12 A-coded 8V to 48V DC input with built-in ignition power control Nuvo-9650AWP-PoE: M12 L-coded 8V to 48V DC input with built-in ignition power control
2	M12 X-coded Ethernet	Port 1: 1Gb Ethernet via Intel I219-LM Port 2 – 4: 2.5Gb Ethernet via Intel I226-IT
3	M12 A-coded VGA	VGA output supports resolution up to 1920x1200@60Hz
4	M12 A-coded USB 2.0	The USB 2.0 ports offer up to 480Mbit/s bandwidth and are backward compatible with USB 1.1/ 1.0.
5	Type-C USB/ DisplayPort	Type-C USB 3.2 Gen1x1 (5Gbps) port, and supports alternative mode for DisplayPort
6	M12 A-coded Isolated COM	COM 1 is isolated RS-232 port with 15 kV ESD protection COM 2 is RS422/485 port with 15 kV ESD protection
7	Power button	Press the button to turn on/ off the system.

3 M12 L-coded DC-in Port with Ignition Power Control (Nuvo-9650AWP-PoE)

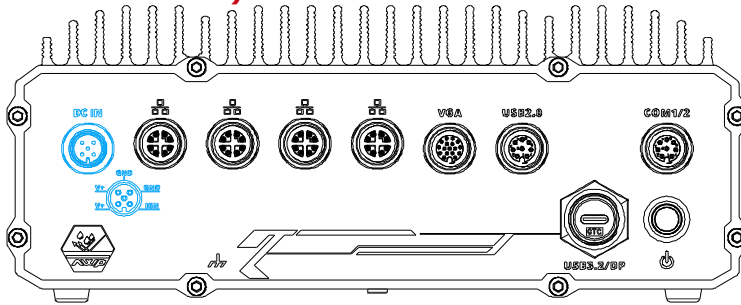


Warning

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.

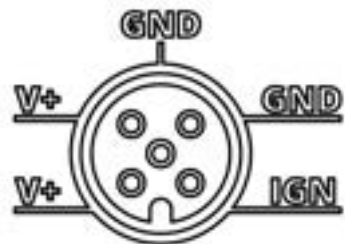


4 M12 A-coded DC-in Port with Ignition Power Control (Nuvo-9650AWP)



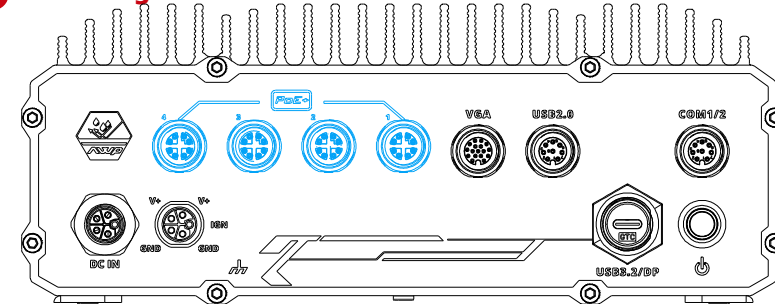
Warning

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.

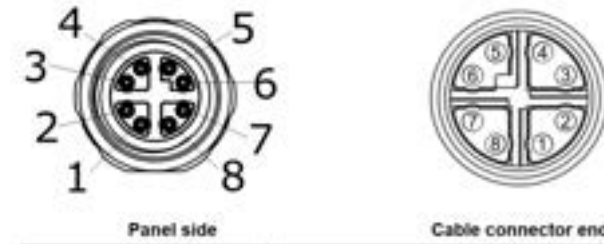


Signal	Wire color
V+	Red
IGN	Yellow
GND	Black
V+	Red
GND	Black

5 PoE+ Gigabit Ethernet Port

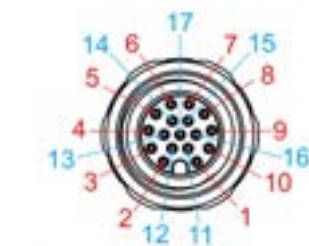
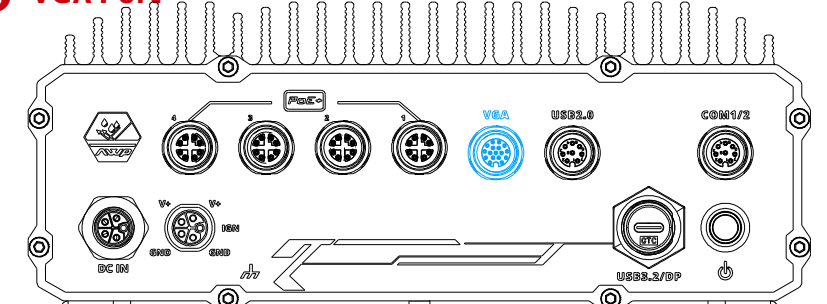


The system offers four Ethernet ports via an M12 X-coded, 8-pin connector with optional Power over Ethernet (802.3at). Port 1 is Gb and ports 2-4 are 2.5Gb specifications.



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

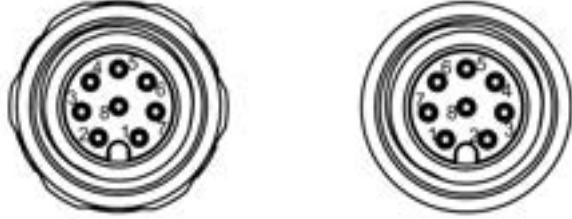
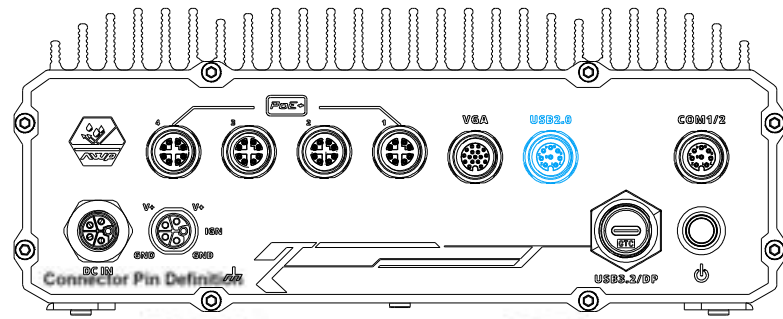
6 VGA Port



The VGA output supports up to 1920x1200@60Hz resolution. To support VGA display output and achieve best VGA output resolution in Windows, you need to install corresponding graphics drivers.

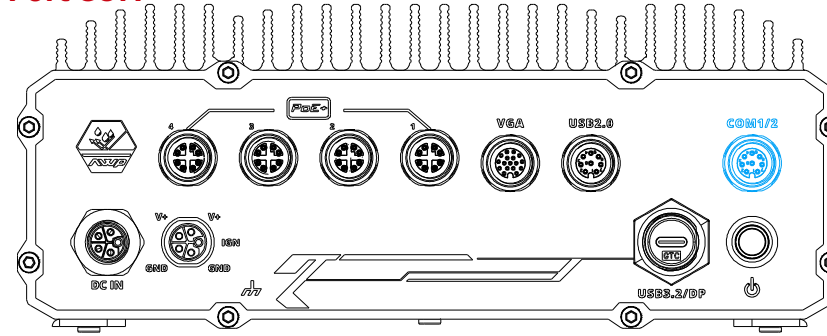
Signal	M12 panel side	M12 cable connector end
Red	1	1
Vsync_on	2	2
HSYNC_CN	3	3
VGA_SCI	4	4
VGA_SDA	5	5
GND	6	6
BLUE	7	7
GND	8	8
GREEN	9	9
GND	10	10
GND	11	11
GND	12	12
GND	13	13
GND	14	14
GND	15	15
GND	16	16
P5V_VGA	17	17

USB Port

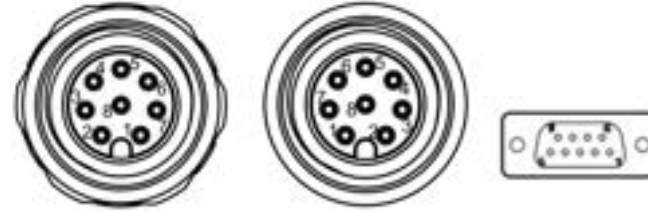


Signal	Panel side		Wire color
	M12 panel side	M12 cable connector end	
D1+	1	1	Green
D1-	2	2	White
VCC_USB	3	3	Red
GND	4	4	Black
GND	5	5	Black
VCC_USB	6	6	Red
D2-	7	7	White
D2+	8	8	Green

7 Port COM

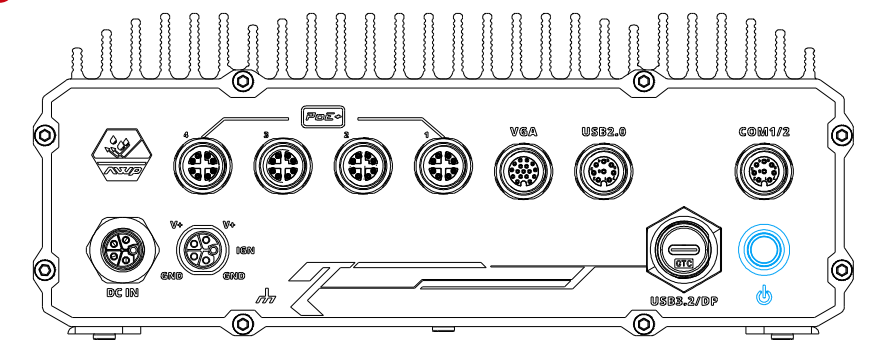


The system provides two COM ports via an M12 A-coded connector for communicating with external devices. There are one RS-232 (COM1) and a RS-422/485 (COM2) ports.



Signal	M12 Panel side		COM pin	Signal
	M12 panel pin	M12 cable pin		
RXD1	1	1	2	COM1
TXD1	6	6	3	
GND	7	7	5	
TXP5	2	2	2	COM2
TXN2	3	3	8	
RXP2	4	4	3	
RXN2	5	5	4	
GND	8	8	5	

8 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).