

**User Manual**

# **R2is / E2is**

**CYBERNET**

[www.cybernet.us](http://www.cybernet.us)

# IPC-R2is / IPC-E2is User Manual

## Declaration of Conformity



This equipment has been tested and found to comply with the limits for a Class B 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 own 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.

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

## Trademarks

All trademarks are the properties of their respective owners.

Intel® is a registered trademark of Intel Corporation.

PS/2 and OS®/2 are registered trademarks of International Business Machines Corporation.

Windows® 11/10 are registered trademarks of Microsoft Corporation.

Netware® is a registered trademark of Novell, Inc.

Award® is a registered trademark of Phoenix Technologies Ltd.

AMI® is a registered trademark of American Megatrends Inc

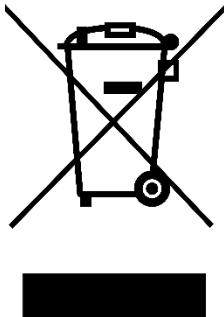
## WEEE Statement

(Waste Electrical and Electronic Equipment)

The WEEE directive places an obligation on EU-based manufacturers, distributors, retailers and importers to take-back electronics products at the end of their useful life. A sister Directive, ROHS (Restriction of Hazardous Substances) compliments the WEEE Directive by banning the presence of specific hazardous substances in the products at the design phase. The WEEE Directive covers products imported into the EU as of August 13, 2005. EU-based manufacturers, distributors, retailers and importers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

### Instructions for disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



### Cybernet's Recycling Program

Helping save our Environment!

Send us your old Computer and if it has monetary value we will apply that toward a purchase of a new computer!


If your computer does not have monetary value, we'll recycle it responsibly.

Step 1: Log-on to [www.cybernet.us](http://www.cybernet.us)

Step 2: Submit a request for an RMA number

Step 3: We will schedule a pre-paid FedEx pick-up at no cost to you

For more information, please call 888-834-4577



## Safety Instructions

1. Always read the safety instructions carefully.
2. Keep this equipment away from humidity.
3. Lay this equipment on a reliable flat surface before setting it up.
4. Confirm the voltage of the power source and adjust accordingly to 110/220V before connecting the equipment to the power inlet.
5. Place the power cord in such a way that it cannot be stepped on. Do not place anything over the power cord.
6. Always unplug the Power Cord before inserting any add-on card or module.
7. All cautions and warnings on the equipment should be noted.
8. Never pour any liquid into the opening. This will cause damage and/or electrical shock.
9. Do not disable the protective grounding pin from the plug. The equipment must be connected to a grounded main socket/outlet.
10. If any of the following situations arise, have 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 working according to the User's Guide.
  - The equipment has been dropped and damaged.
  - The equipment has obvious signs of breakage.
11. Do not attempt to remove or upgrade any components by yourself, any installation or modification should be conducted by service personnel.

**DO NOT LEAVE THIS EQUIPMENT IN AN UNCONDITIONED ENVIRONMENT WITH A STORAGE TEMPERATURE ABOVE 70° C (158°F). IT MAY DAMAGE THE EQUIPMENT.**

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

# Table of Contents

<b>Declaration of Conformity .....</b>	<b>1</b>
<b>Trademarks .....</b>	<b>1</b>
<b>WEEE Statement .....</b>	<b>2</b>
<b>Safety Instructions .....</b>	<b>3</b>
<b>Introduction .....</b>	<b>5</b>
<b>IPC R2is &amp; IPC E2is Specifications.....</b>	<b>6</b>
<b>IPC-R2is &amp; IPC-E2is Overview .....</b>	<b>8</b>
IPC-R2is Dimension .....	8
IPC-E2is Dimension.....	8
IPC-R2is Front I/O View .....	9
IPC-E2is Front I/O View.....	9
IPC-R2is / IPC-E2is Back I/O View.....	9
<b>Power Management.....</b>	<b>16</b>
Waking the System Up .....	18
<b>IPC-R2is / IPC-E2is BIOS introduction .....</b>	<b>19</b>
<b>Appendices .....</b>	<b>20</b>
A - Cybernet's Recycling Program.....	21
B - Getting Help .....	21

## Caution:



Warning, electricity



Operating Instructions



Ready to use



Direct current



Alternating current

## Introduction

Congratulations on your purchase of the IPC-R2is / IPC-E2is. We are confident the IPC-R Series is the premier Slim Rugged PC line on the market. With their sleek design and small form factor, these units can be quickly deployed anywhere they are needed and their easy-to-use, feature-packed interfaces offer an unparalleled user experience. If you have any questions about your new IPC-R2is / IPC-E2is, please do not hesitate to contact us using any of the support numbers provided at the end of this User Manual.

## IPC R2is & IPC E2is Specifications

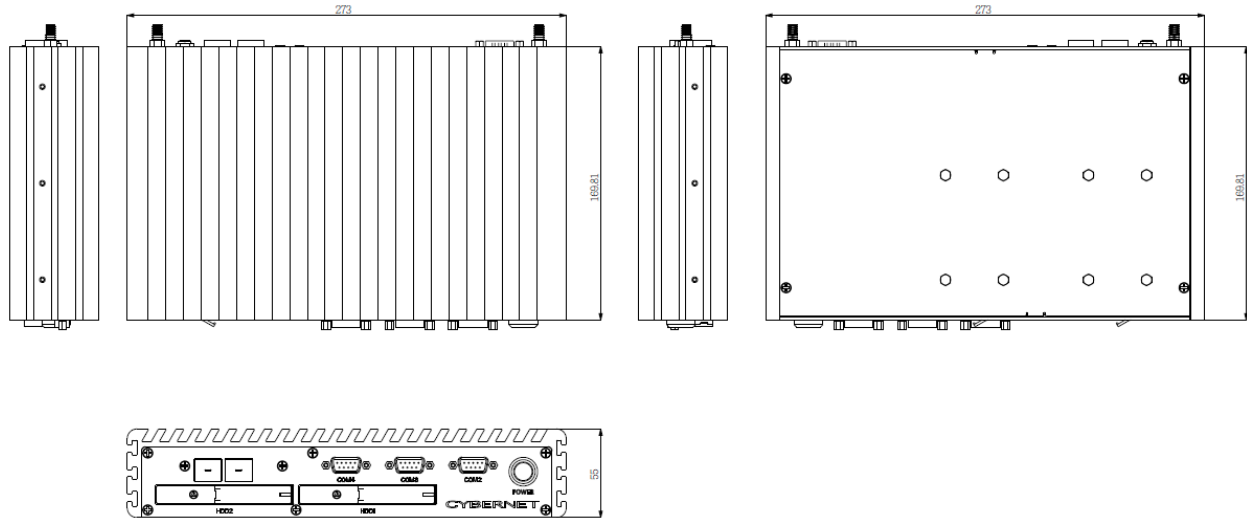
<b>CPU</b>	Supports Intel Whiskey Lake 8 <sup>th</sup> Generation Processor, FCBGA1528
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, up to 32GB combined
	Supports memory data transfer rates of 2133MHz/2400 MHz for DDR4, un-buffered non-ECC DDR4 SO-DIMMs
<b>Storage</b>	Serial ATA controller facilitates high-speed transfers up to 6Gbps
	Maximum 2 x 2.5" HDD or SSD
<b>Video &amp; Graphics</b>	Intel® UHD Graphics 620
<b>Front I/O Ports</b>	2x HDMI1.4 Port, up to 4096 x 2304 @ 60Hz
	4x USB3.1
	2x USB2.0
	2x RJ45 Gigabit (Gbe) LAN
	1x COM RS-232 / 422 / 485 and 5V / 12V / RI
	1x DC-IN Power Connector (6-36V)
	1x DC-IN Power Terminal Block (6-36V)
	1x Remote On/Off Terminal Block
<b>Rear I/O Ports</b>	3x COM RS-232
	2x Easy access HDD door with lock
	1x Power button
	2x POE LAN support, complies with IEEE 802.3at, up to 25.5W at 52V per port (Optional)
<b>Power Input</b>	19V / 3.78A Power Adapter, 72W, AC Input: 100-240V AC / 2.0A/ 50-60Hz
	19V / 6.31A Power Adapter, 120W, AC Input: 100-240V AC 2.0A/ 50-60Hz
<b>Wireless Communications</b>	Intel AC9260/AX200/AX210 support IEEE802.11ac/ax + BT5.1 above (Optional)
<b>Operating System</b>	Windows 11 / 10 / IoT / Pro
	Linux
<b>Operating Environment</b>	Ambient Temperature: -10°C ~ 50°C (operating)
<b>Relative Humidity</b>	10% ~ 95% (non-condensing)
<b>Vibration</b>	5 Grms @5-500 Hz according to IEC60068-2-64
<b>Shock</b>	Operating, 50 Grms, Half-sine 11ms duration according to IEC60068-2-27
<b>Dimensions</b>	10.74" x 6.65" x 2.16" (L,W,D)
<b>Weight</b>	5 lb
<b>System BIOS</b>	AMI Flash BIOS supports ACPI, API, DMI, Plug & Play, and security password. BIOS System POST and BIOS setup password protection. TPM version 2.0 Support.
<b>TPM</b>	1 x Trusted Platform Module (TPM2.0) Infineon SLB9665

<b>Certifications</b>	FCC part 15B class B
	EN55032 / EN55024 class B
	ICES-003

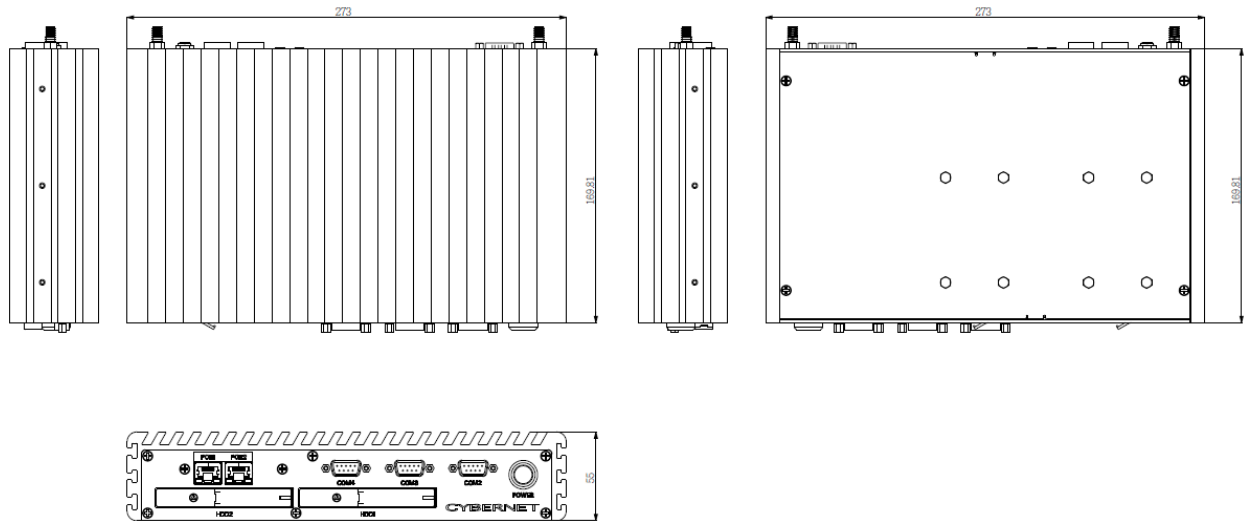


## IPC-R2is & IPC-E2is Overview

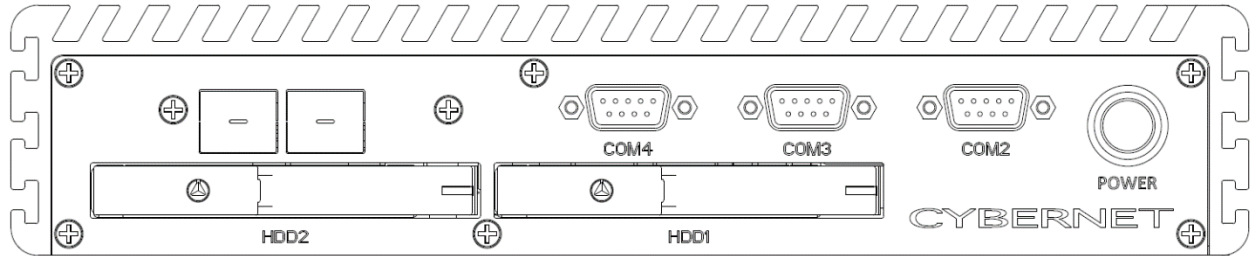
### IPC-R2is Dimension



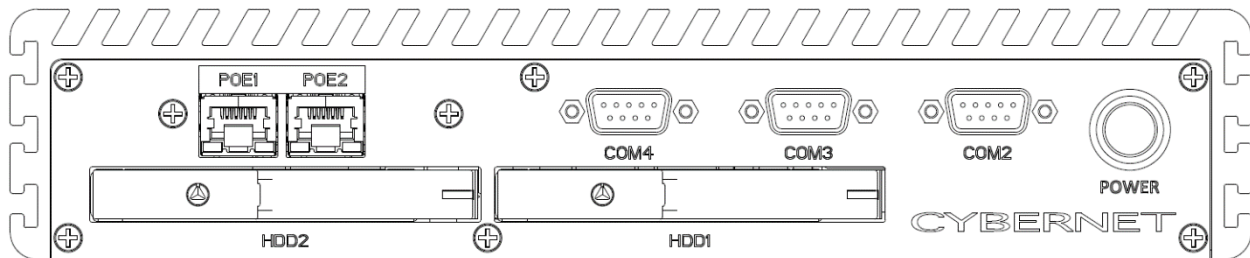
### IPC-E2is Dimension



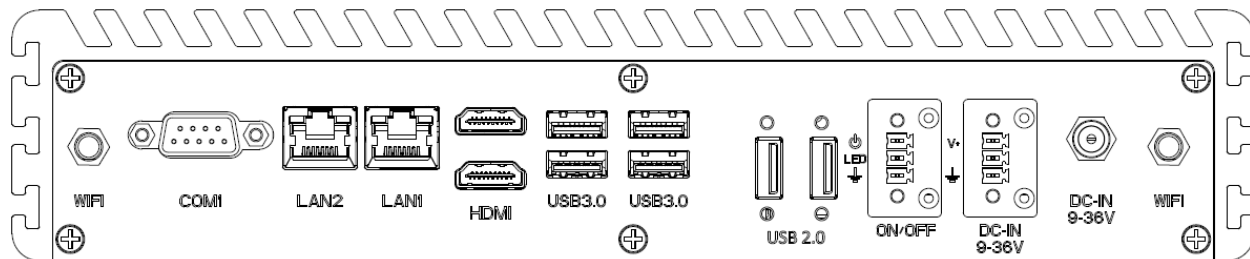
## IPC-R2is Front I/O View



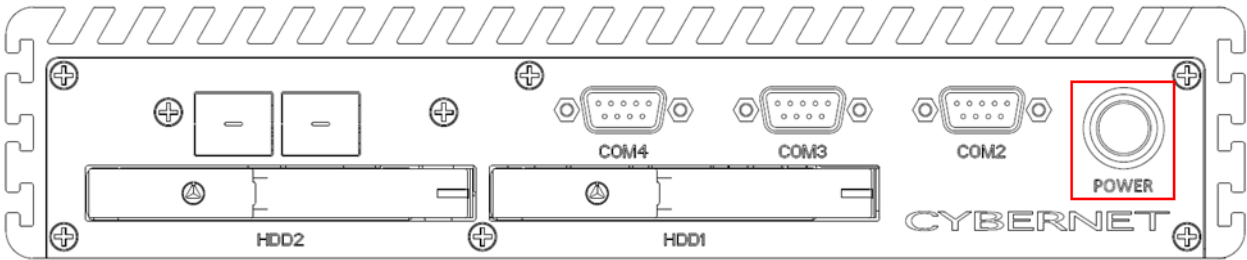
## IPC-E2is Front I/O View



## IPC-R2is / IPC-E2is Back I/O View



Power button

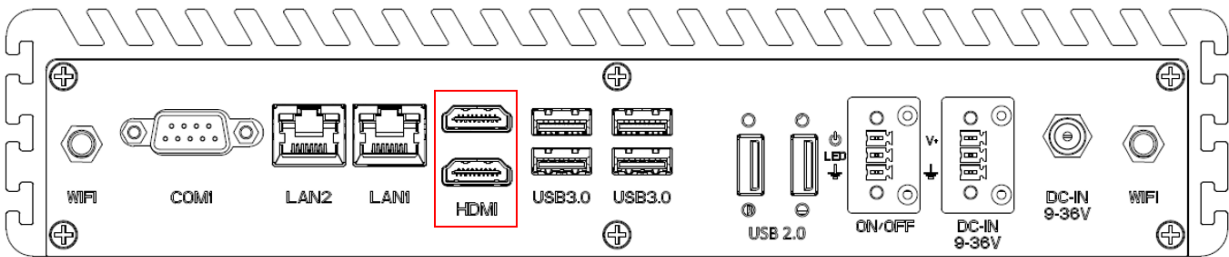


The Power Button is a momentary switch with LED indicator.

LED Color	Power Status	System Status
Solid Blue	S0	Working state
Blinking	S3	Suspend to RAM

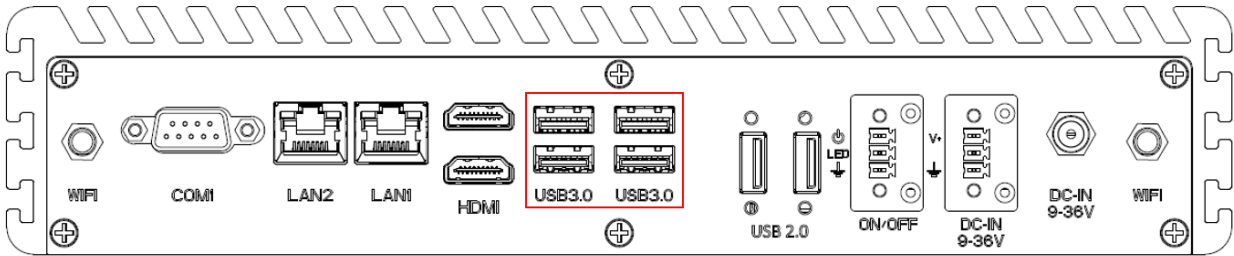
Press the power button to turn on the system. To force a shutdown, press and hold the power button for 4-seconds.

HDMI Port



HDMI1.4 supports up to 4096x2304 resolution at 60Hz.

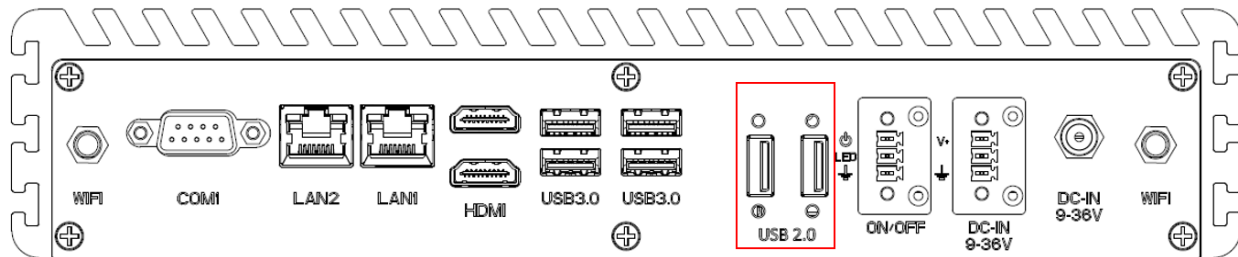
USB3.1



There are 4x USB3.1 connections available, which supports up to 5Gbps data rate. These USB ports are also compliant with Super Speed (SS), High Speed (HS), Full

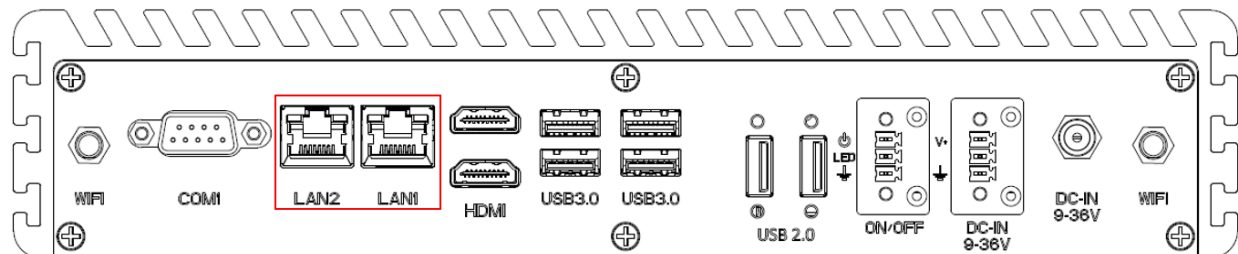
Speed (FS), and Low Speed (LS).

## USB2.0



There are 2x USB2.0 connections available, which supports up to 480Mbps data rate. These USB ports are also compliant with High Speed (HS), Full Speed (FS), and Low Speed (LS).

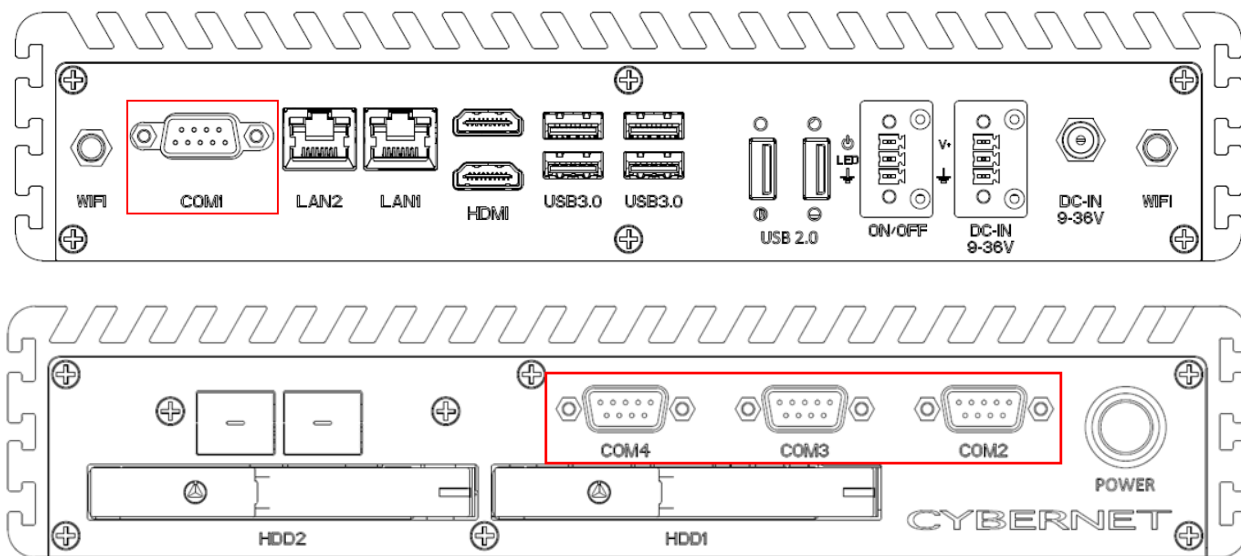
## Ethernet Port



LAN1: Intel I219LM 10/100/Gigabit LAN, supports Wake on LAN, PXE boot and vPro technology.

LAN2: Intel I210 10/100/Gigabit LAN, supports Wake on LAN, PXE boot and vPro technology.

## Serial Ports



Serial port 1 can be configured for RS-232, RS-422, or RS-485 with auto flow control communication. The default definition of COM1 is RS-232, which can be configured in the BIOS.

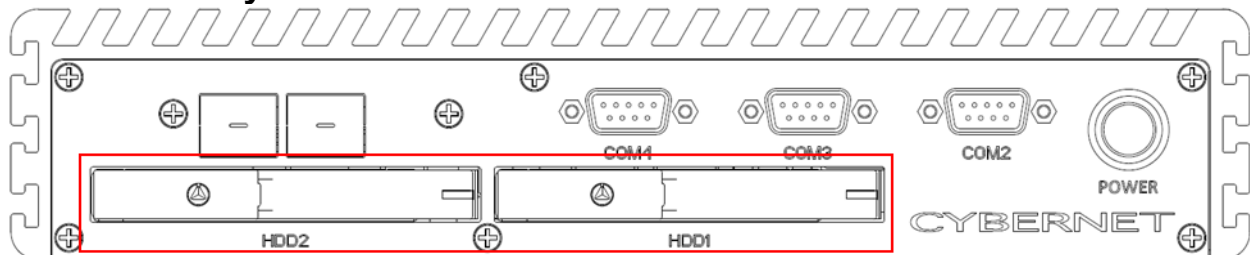
The pin assignments are listed below:

Serial Port	Pin No.	RS-232	RS-422 (5-wire)	RS-422 (9-wire)	RS-485 (3-wire)
COM1	1	DCD	TXD-	TXD-	DATA-
	2	RXD	TXD+	TXD+	DATA+
	3	TXD	RXD+	RXD+	-----
	4	DTR	RXD-	RXD-	-----
	5	GND	GND	GND	GND
	6	DSR	-----	RTS-	-----
	7	RTS	-----	RTS+	-----
	8	CTS	-----	CTS+	-----
	9	RI/5V/ 12V	-----	CTS-	-----

Serial ports 2-4 are all RS-232 and the pin assignments are listed below:

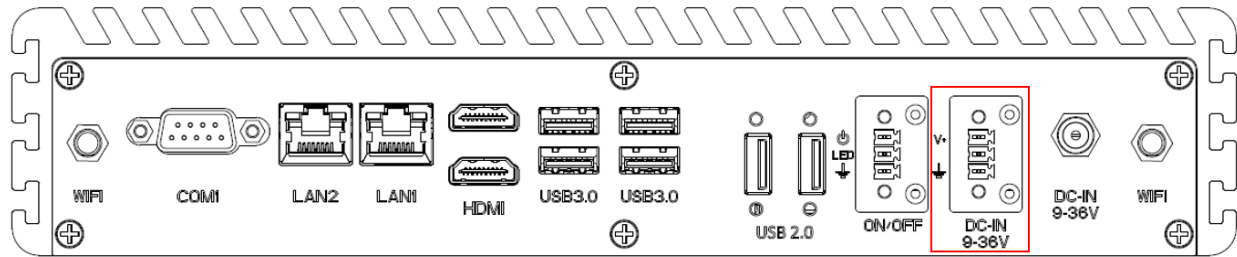
Serial Port	Pin No.	RS-232
COM2~4	1	DCD
	2	RXD
	3	TXD
	4	DTR
	5	GND
	6	DSR
	7	RTS
	8	CTS
	9	NC

## SSD/HDD Trays



There are 2x front-accessible 2.5" SSD/HDD locking trays.

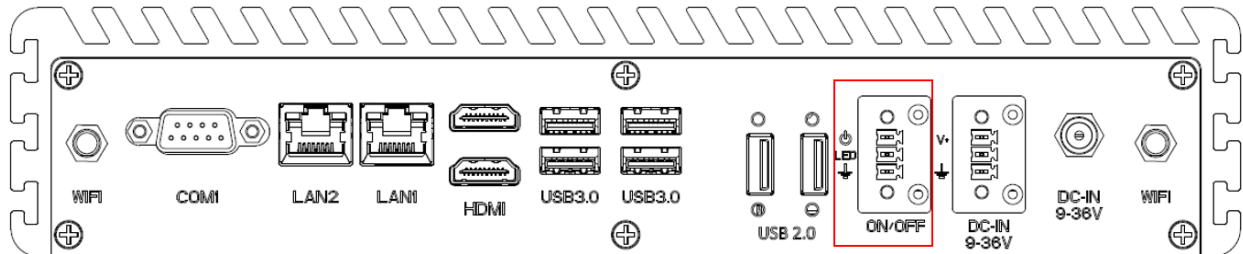
## Power Terminal Block



The system supports 9V to 36V DC power input by terminal block.

Pin No.	Definition
1	V+
2	NC
3	Chassis Ground

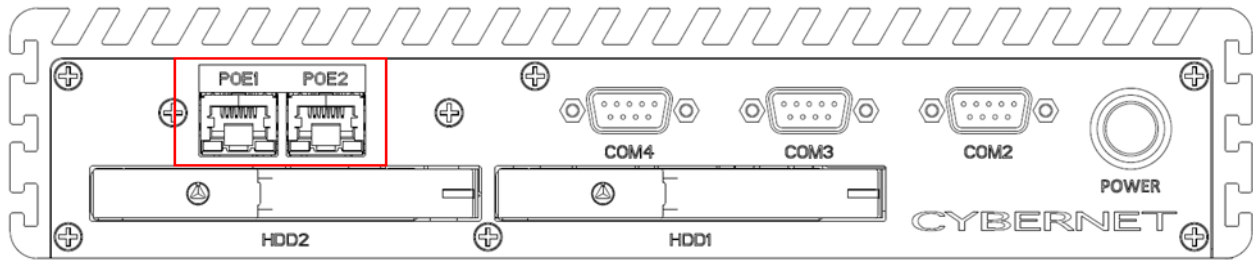
## Power On/Off Switch



This terminal block supports a 2-pin power on/off switch.

Pin No.	Definition
1	Power
2	Power LED
3	Chassis Ground

## PoE (Power over Ethernet) Ports (Optional)



There are 2x optional Ethernet ports on the IPC-R2is / IPC-E2is that supports IEEE 802.3at (PoE+) Power over Ethernet connection, delivering up to 25.5W / 52V per port and 1000BASE-T GbE data signals over standard Ethernet Cat 5/6 cable. Each PoE connection is powered by Intel® i210 GbE Ethernet controller and independent PCI express interface to connect with multi-core processor for network and data transmit optimization.

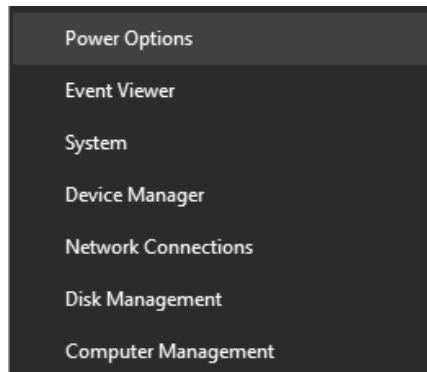


## Power Management

Taking advantage of the power management options available on Windows OS can save you significant amounts of electricity and also provide environmental benefits. For better energy efficiency, turn off your display or set your PC to sleep mode after prolonged periods of user inactivity.

### Power Management in Windows OS

Right click the start button, and select [Power Options].



Then click [Additional power settings].

#### Power & sleep

##### Screen

When plugged in, turn off after

10 minutes

##### Sleep

When plugged in, PC goes to sleep after

30 minutes

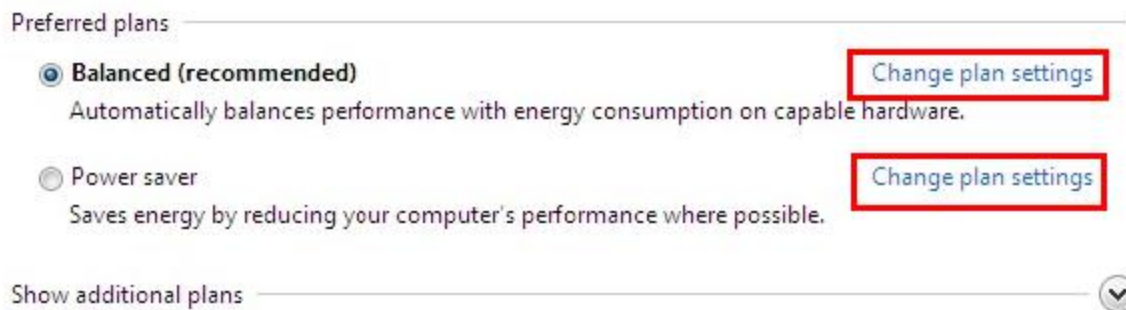
#### Save energy and battery life

Make your battery last longer by choosing shorter times for screen and sleep settings.

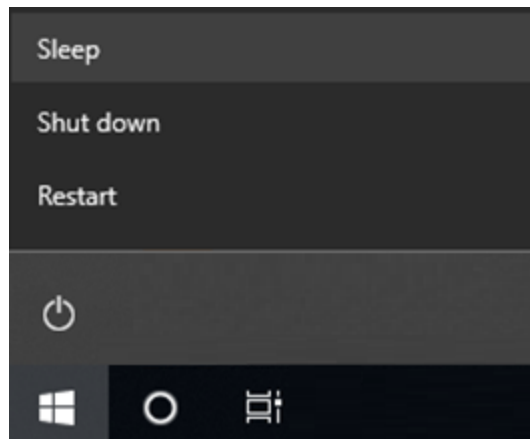
#### Related settings

[Additional power settings](#)

Select a power plan that suits your personal needs. You may also fine-tune the settings by clicking [Change plan settings].



For quick and convenient management of system power, the Shut Down Menu provides options for Sleep (S3) and Shut Down (S5).



Power Management through ENERGY STAR qualified monitors (Not supplied with the IPC-R2is / IPC-E2is)

The power management feature allows the IPC-R2is / IPC-E2is to initiate a low-power or "Sleep" mode after a period of user inactivity. When used with an external ENERGY STAR qualified monitor, this functionality also supports similar power management features for the display. To take advantage of these potential energy savings, the power management feature can be set to behave in the following ways when the system is operating on AC power:

- Turn off the display after 15 minutes.
- Initiate Sleep after 30 minutes.

## **Waking the System Up**

The IPC-R2is / IPC-E2is can wake up from power saving mode in response to a command from any of the following:

- the power button,
- the network (Wake on LAN)
- the mouse
- the keyboard

## IPC-R2is / IPC-E2is BIOS introduction

The AMI BIOS provides a Setup utility program for specifying system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the AMI BIOS is immediately activated. Pressing the <F2> or <DEL> key allows you to enter the Setup utility. If you are a little bit late pressing the <F2> or <DEL> key, POST (Power On Self-Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the “Reset” button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. Pressing the <F11> key during bootup allows you to enter the Boot menu. The following message will appear on the screen:

The image shows the word "CYBERNET" in a stylized, metallic, three-dimensional font. The letters are white with a grey shadow, giving them a 3D appearance as if they are floating or attached to a surface. The background is solid black.

## Appendices

## A - Cybernet's Recycling Program

### Cybernet's Recycling Program

Helping save our Environment!

Send us your old Computer and if it has monetary value we will apply that toward a purchase of a new computer!


If your computer does not have monetary value, we'll recycle it responsibly.

Step 1: Log-on to [www.cybernet.us](http://www.cybernet.us)

Step 2: Submit a request for an RMA number

Step 3: We will schedule a pre-paid FedEx pick-up at no cost to you

For more information, please call 888-834-4577



## B - Getting Help

### Corporate Headquarters

Cybernet Manufacturing  
5 Holland  
Irvine, California 92618  
Free: (888) 834-4577  
Phone: (949) 600-8000  
Fax: (949) 600-8013  
[www.cybernet.us](http://www.cybernet.us)  
[sales@cybernet.us](mailto:sales@cybernet.us)

### UK & European Inquiries

Cybernet Europe  
#6, Groveland Business Centre  
Boundary Way  
Hemel Hempstead, HP2 7TE  
United Kingdom  
Phone: +44.845.539.1200  
Fax: +44.0845.539.1201  
[www.cyberneteurope.co.uk](http://www.cyberneteurope.co.uk)  
[sales@cyberneteurope.com](mailto:sales@cyberneteurope.com)

### Asia & Middle East Inquiries

Cybernet Asia Co., Ltd.  
6F.-11, No. 54, Sec. 4, Minsheng E. Rd.,  
Songshan Dist., Taipei City 105,  
Taiwan (R.O.C.)  
Phone: (02) 7742-2318  
Fax: (02) 2793-3172  
[www.cybernet.com.tw](http://www.cybernet.com.tw)  
[sales@cybernet.com.tw](mailto:sales@cybernet.com.tw)

### Australia Support Center

Cybernet Australia, PTY Ltd.  
9A/38 Bridge Street  
Eltham Victoria 3095, Australia  
Phone: +61.3.9431.4557  
[au.cybernet@cybernet.us](mailto:au.cybernet@cybernet.us)