

AI Mobile NVR with 8 PoE Ports

Based on NVIDIA Jetson Nano / TX2 NX / Xavier NX

eNVP-JNN-IV-D0008 (eIVP1570DE)

eNVP-JTX-IV-D0008

eNVP-JNX-IV-D0008

User's Manual



Copyright © EverFocus Electronics Corp.
Release Date: May 2021

AI NVR with 8 PoE Ports

Based on NVIDIA Jetson Nano / TX2 NX / Xavier NX

eNVP-JNN-IV-D0008 (eIVP1570DE)

eNVP-JTX-IV-D0008

eNVP-JNX-IV-D0008

User's Manual

© 1995-2021 EverFocus Electronics Corp.

www.everfocus.com.tw

Disclaimer

All the images including product pictures or screen shots in this document are for example only. The images may vary depending on the product and software version. Information contained in this document is subject to change without notice.

Copyright

All rights reserved. No part of the contents of this manual may be reproduced or transmitted in any form or by any means without written permission of the EverFocus Electronics Corporation.

Acknowledgements

- NVIDIA is a trademark of the NVIDIA Corporation.
- All other product names or trademarks are properties of their respective owners.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references.

- All cautions and warnings on the device should be noted.
- All cables and adapters supplied by EverFocus are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by EverFocus to prevent system malfunction or fires.
- Make sure the power source matches the power rating of the device.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- Always completely disconnect the power before working on the system's hardware.
- No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
- If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
- Always disconnect this device from any AC supply before cleaning.
- While cleaning, use a damp cloth instead of liquid or spray detergents.
- Make sure the device is installed near a power outlet and is easily accessible.
- Keep this device away from humidity.
- Place the device on a solid surface during installation to prevent falls.
- Do not cover the openings on the device to ensure optimal heat dissipation.
- Watch out for high temperatures when the system is running.
- Do not touch the heat sink or heat spreader when the system is running.
- Never pour any liquid into the openings. This could cause fire or electric shock.
- As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
- If any of the following situations arises, please contact our service personnel (ts@everfocus.com.tw):
 - Damaged power cord or plug
 - Liquid intrusion to the device
 - Exposure to moisture
 - Device is not working as expected or in a manner as described in this manual
 - The device is dropped or damaged
 - Any obvious signs of damage displayed on the device
- **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE SPECIFICATION) TO PREVENT DAMAGE.**

FCC Statement

Warning!



This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.

Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

TABLE OF CONTENTS

1.	Introduction	1
1.1	Key Features and Comparison	1
1.2	Dimensions.....	2
1.3	Packing List.....	2
1.4	Front Panel.....	3
1.5	Rear Panel	4
1.6	Carrier Board.....	6
2.	Connection and Installation.....	7
2.1	SSD Installation	7
3.	Specification.....	9
3.1	eNVP-JNN-IV-D0008 (eIVP1570DE)	9
3.2	eNVP-JTX-IV-D0008.....	11
3.3	eNVP-JNX-IV-D0008	13

Chapter 1

1. Introduction

EverFocus eNVP-JNN-IV-D, eNVP-JTX-IV-D and eNVP-JNX-IV-D are AI NVRs based on NVIDIA® Jetson™ Nano, TX2 NX and Xavier NX respectively, all of the models are designed for general and commercial markets.

The models can be installed with EverFocus in-house designed NVR software, providing basic NVR functions like real-time live view, video recording, video playback, alarm notification and etc. AI functions such as Face Recognition, People Counting and Loitering Detection can be performed using the NVR software.

The models support up to 8 PoE ports and operating temperature ranging from 0°C ~+40°C. It also features up to two removable 2.5 SATA SSD trays, RS-232/RS-485 interfaces, which carries everything you need for computing in your application.

1.1 Key Features and Comparison

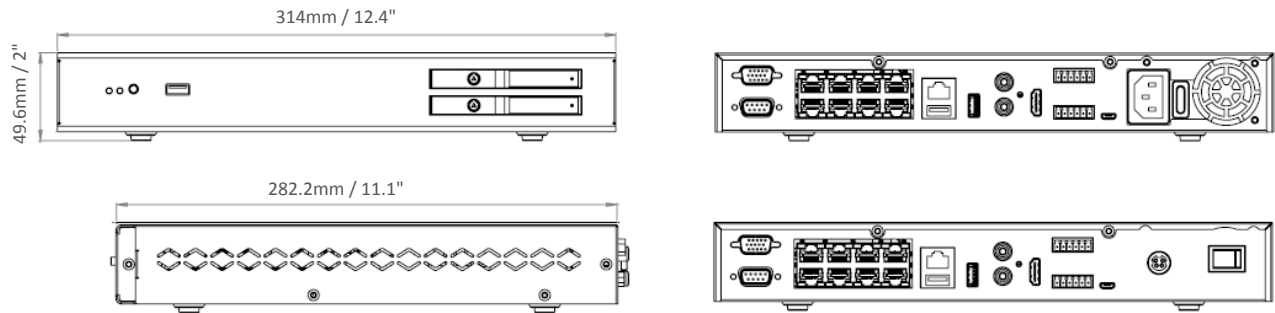
eNVP-JNN-IV-D0008					
SKU	Jetson Family	PoE	Video Input	SSD	Power
SKU1	Based on NVIDIA Jetson Nano	PoE x 8	IP camera x 8	1	100~240VAC
SKU2	Based on NVIDIA Jetson Nano	PoE x 8	IP camera x 8	2	100~240VAC
SKU3	Based on NVIDIA Jetson Nano	PoE x 8	IP camera x 8	1	48VDC
SKU4	Based on NVIDIA Jetson Nano	PoE x 8	IP camera x 8	2	48VDC

eNVP-JTX-IV-D0008					
SKU	Jetson Family	PoE	Video Input	SSD	Power
SKU1	Based on NVIDIA Jetson TX2 NX	PoE x 8	IP camera x 16	1	100~240VAC
SKU2	Based on NVIDIA Jetson TX2 NX	PoE x 8	IP camera x 16	2	100~240VAC
SKU3	Based on NVIDIA Jetson TX2 NX	PoE x 8	IP camera x 16	1	48VDC
SKU4	Based on NVIDIA Jetson TX2 NX	PoE x 8	IP camera x 16	2	48VDC

eNVP-JNX-IV-D0008					
SKU	Jetson Family	PoE	Video Input	SSD	Power
SKU1	Based on NVIDIA Jetson Xavier NX	PoE x 8	IP camera x 16	1	100~240VAC
SKU2	Based on NVIDIA Jetson Xavier NX	PoE x 8	IP camera x 16	2	100~240VAC
SKU3	Based on NVIDIA Jetson Xavier NX	PoE x 8	IP camera x 16	1	48VDC
SKU4	Based on NVIDIA Jetson Xavier NX	PoE x 8	IP camera x 16	2	48VDC

For more details about the model spec, please refer to *Chapter 3 Specification*.

1.2 Dimensions



1.3 Packing List

- | | |
|--|--|
| <ul style="list-style-type: none"> AI NVR x 1 SSD Lock Key x 2 | <ul style="list-style-type: none"> Power Cord x 1 (for AC100-240V only) Power Adapter x 1 (for DC48V only) |
|--|--|

Note:

- Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
- Contact the shipper if any items appear to have been damaged in the shipping process.

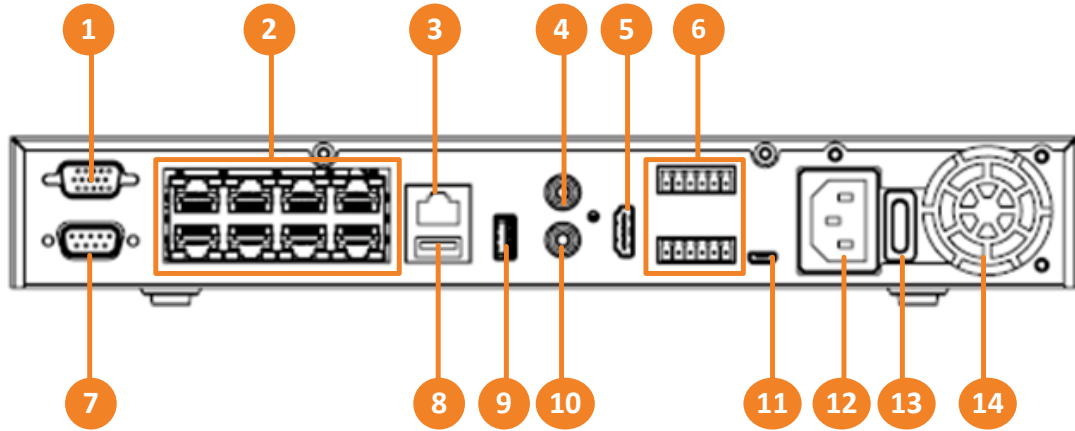
1.4 Front Panel



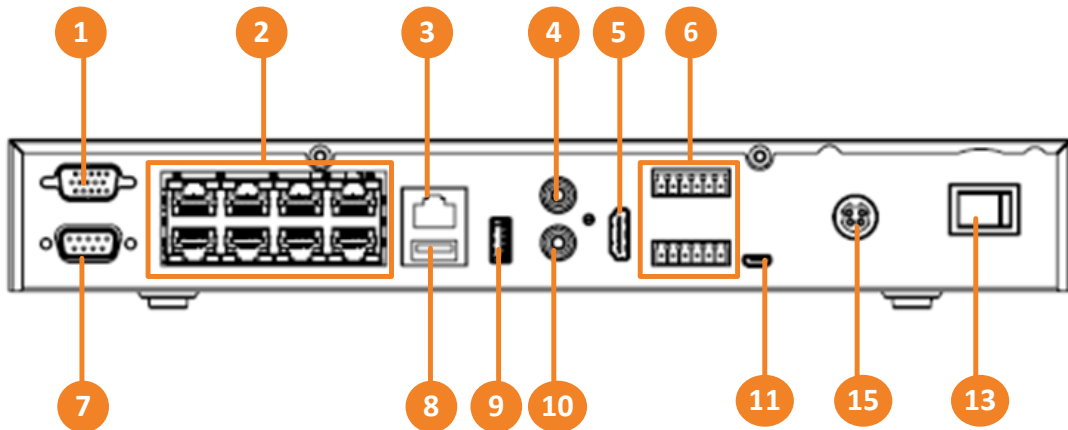
No.	Name	Description
1	HDD Indicator	HDD LED indicator.
2	Power Indicator	Power LED indicator.
3	Power Button	Turn On/Off the system power.
4	Reset Button	Push Reset Button to reset the system.
5	USB2.0	USB2.0 port.
6	SSD Key Lock	Lock and unlock the SSD tray (see <i>2.1 SSD Installation</i>).
7	SSD Tray	For installing 2.5" SSD.

1.5 Rear Panel

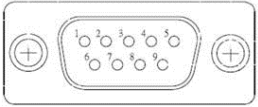
For 100~240VAC Model:



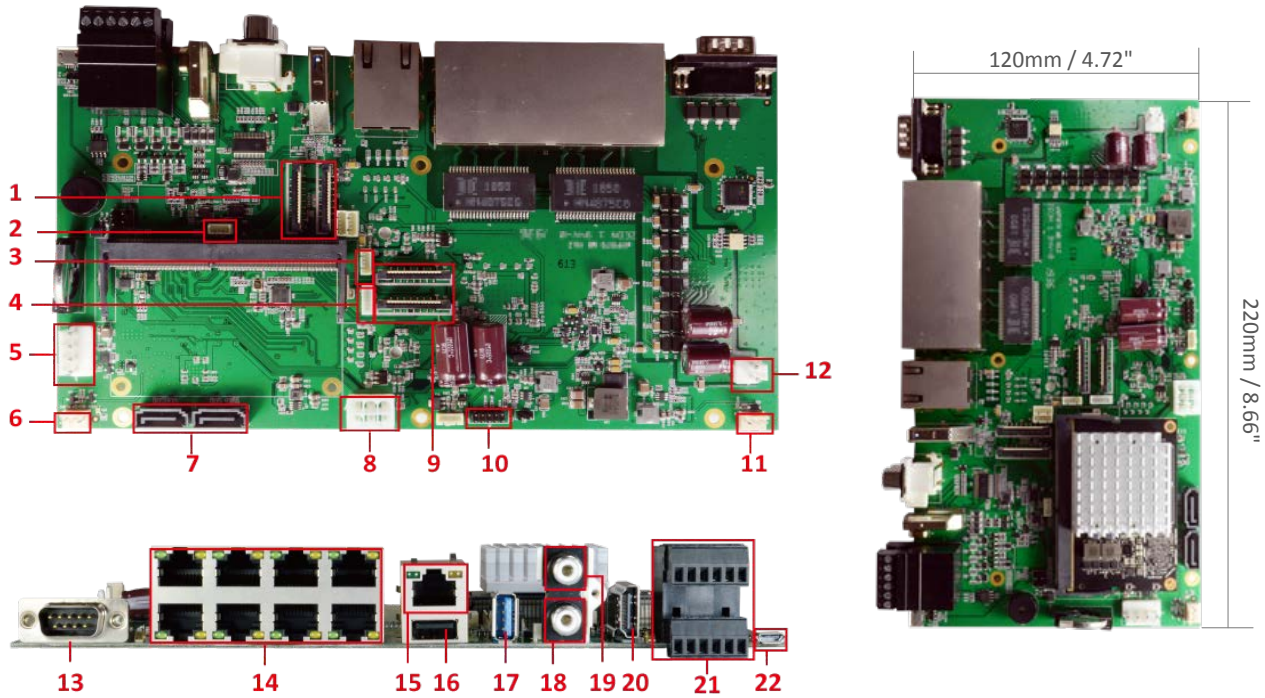
For 48VDC Model:



No.	Name	Description
1	VGA Port	This port is currently reserved.
2	PoE Port	PoE ports (10/100 MbE, total 130W) for connecting to the IP cameras or other PoE devices.
3	GIGA Ethernet	One 10/100/1000 Base-Tx Ethernet ports for connecting to the network.
4	Audio Output	Connects to an audio output device, such as speakers. Note that the speakers with a (built-in) amplifier and external power supply are required.
5	HDMI Port	HDMI display output.
6	Alarm IO/ RS-485	Provides 4 alarm inputs, 4 alarm outputs and RS-485.

7	RS-232 Port	COM port for RS-232.  PIN1: N/A PIN4: N/A PIN7: 232-RTS PIN2: 232-RX PIN5: GND PIN8: 2323-CTS PIN3: 232-TX PIN6: N/A PIN9: N/A
8	USB2.0	USB2.0 port.
9	USB3.0	USB3.0 port.
10	Audio Input	Connects to audio input devices, such as microphones. Note that the microphones with a (built-in) amplifier and external power supply are required.
11	OTG	USB OTG port.
12	AC Power Input Port	Connecting to the power source.
13	Power Switch	Turn On/Off the Power Switch.
14	Fan	Internal fan.
15	DC Power Input Port	Connecting to the power source.

1.6 Carrier Board



eIVP1570DE-CB			
1	MIPI	12	PoE Power
2	Console	13	RS232
3	USB2.0	14	10/100 Ethernet PoE port x 8
4	VGA	15	GbE LAN
5	HDD Power	16	USB2.0
6	Fan	17	USB3.0
7	SATA Port x 2	18	Audio In
8	12VDC Input	19	Audio Out
9	MIPI	20	HDMI
10	Front Panel Button	21	Alarm IO (4-input, 4-output); RS485
11	Fan	22	OTG

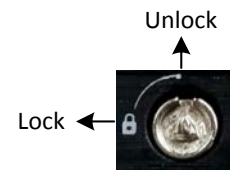
2. Connection and Installation

2.1 SSD Installation

Users can install up to two 2.5" SSD into the AI NVR for recording. Please follow the steps below to install the SSD.

Note: The AI NVR does not support hot swap for the SSD. Ensure to power off the device before removing the SSD. Also ensure to remove the SSD only after the power was completely shut off. This would protect and extend the operating life of the SSD.

1. Make sure the AI NVR is powered-off. Unlock the SSD Tray (turn clockwise) using the supplied **SSD Lock Key**.



2. To install the SSD, pull the **Release Latch** to open the **SSD Tray Arm**.



3. Insert an SSD into the SSD tray and then push back the **SSD Tray Arm**.

Note: The models support SSD height with 7mm and 9.5mm. If 7mm SSD is in use, it is strongly recommended to use a spacer to increase the SSD height from 7mm to 9.5mm to prevent from wobbling and vibration.

4. Lock the SSD Tray using the supplied **SSD Lock Key**.



Chapter 3

3. Specification

3.1 eNVP-JNN-IV-D0008 (eIVP1570DE)

System	
CPU	Quad-core ARM® Cortex®-A57 MPCore processor
GPU	NVIDIA Maxwell™ architecture with 128 NVIDIA CUDA® cores
Main Memory	Onboard 4 GB 64-bit LPDDR4
OS	16 GB eMMC
Video	
Format	H.265 / H.264
Video Input	IP camera x 8 EverFocus AiO NVR: up to 8ch
Video Output	HDMI x 1 (2.0 a/b maximum 3840 x 2160); VGA x 1 (optional)
Resolution	4K @ 60fps x 1 4K @ 30fps x 2 1080p @ 30fps x 8
Audio	
Audio Input	RCA x1
Audio Output	RCA x1
Recording	
Format	H.265 / H.264
Resolution	4K @ 60fps x 1 4K @ 30fps x 2 1080p @ 30fps x 8
Storage	
2.5" SATA HDD	SKU1/SKU3: x 1; SKU2/SKU4: x 2
Removable SSD Tray	Supported
RAID	NA
Network	
Ethernet	GbE port x1, PoE port (10/100 MbE, 52V/2.5A, total 130W based) x 8
Wi-Fi / 3G / 4G	NA
GPS / G-Sensor	NA

Alarm	
Alarm In/Out	Alarm Input x 4; Alarm Output x 4
Interface	
Front I/O Panel	LED indicator x 2 (HDD, power) Power button x 1 USB 2.0 x 1
Rear I/O Panel	USB 3.0 x 1 USB 2.0 x 1 Micro USB 2.0 (Internal OTG) x 1 RS-485 x 1, RS-232 x 1 GbE port x 1 PoE port x 8 Audio in x 1, Audio out x 1 HDMI x 1VGA x 1 (optional) Power switch x 1, Power input port x 1 Alarm IO (4-input, 4-output) x 1
Expansion Slot	NA
General	
Power Supply	SKU1/SKU2: AC100-240V, 180W ATX SKU3/SKU4: DC48V, 2.5A, 120W
Dimensions (W x D X H)	314 x 282.2 x 49.6mm (12.4" x 11.1" x 2")
Gross Weight	SKU1: 3kg / 6.6lb; SKU2: 3.1kg / 6.8lb SKU3: 2.5kg / 5.5lb; SKU4: 2.6kg / 5.7lb
Operating Temp.	32°F ~104°F (0°C ~+40°C)
Storage Temp.	-4°F ~185°F (-20°C ~+85°C)
Storage Humidity	95% @ 40 °C (non-condensing)
Vibration/Shock	0.25 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
Certification	CE, FCC

Note: All specifications are subject to change without notice.

3.2 eNVP-JTX-IV-D0008

System	
CPU	Dual-core NVIDIA Denver 2 64-bit CPU and quad-core ARM A57 Complex
GPU	NVIDIA Pascal™ Architecture GPU with 256 CUDA cores
Main Memory	Onboard 4GB 128-bit LPDDR4, 1600 MHz - 51.2 GBs
OS	16 GB eMMC 5.1
Video	
Format	H.265 / H.264
Video Input	Based on the installed software EverFocus AiO NVR: up to 8ch
Video Output	HDMI x 1 (2.0 a/b maximum 3840 x 2160); VGA x 1 (optional)
Resolution	4K @ 60fps x 2 4K @ 30fps x 4 1080p @ 30fps x 16
Audio	
Audio Input	RCA x1
Audio Output	RCA x1
Recording	
Format	H.265 / H.264
Resolution	4K @ 60fps x 2 4K @ 30fps x 4 1080p @ 30fps x 16
Storage	
2.5" SATA HDD	SKU1/SKU3: x 1; SKU2/SKU4: x 2
Removable SSD Tray	Supported
RAID	NA
Network	
Ethernet	GbE port x1, PoE port (10/100 MbE, 52V/2.5A, total 130W based) x 8
Wi-Fi / 3G / 4G	NA
GPS / G-Sensor	NA
Alarm	
Alarm In/Out	Alarm Input x 4; Alarm Output x 4
Interface	
Front I/O Panel	LED indicator x 2 (HDD, power) Power button x 1 USB 2.0 x 1

Rear I/O Panel	USB 3.0 x 1 USB 2.0 x 1 Micro USB 2.0 (Internal OTG) x 1 RS-485 x 1, RS-232 x 1 GbE port x 1 PoE port x 8 Audio in x 1, Audio out x 1 HDMI x 1VGA x 1 (optional) Power switch x 1, Power input port x 1 Alarm IO (4-input, 4-output) x 1
Expansion Slot	NA
General	
Power Supply	SKU1/SKU2: AC100-240V, 180W ATX SKU3/SKU4: DC48V, 2.5A, 120W
Dimensions (W x D X H)	314 x 282.2 x 49.6mm (12.4" x 11.1" x 2")
Gross Weight	SKU1: 3kg / 6.6lb; SKU2: 3.1kg / 6.8lb SKU3: 2.5kg / 5.5lb; SKU4: 2.6kg / 5.7lb
Operating Temp.	32°F ~104°F (0°C ~+40°C)
Storage Temp.	-4°F ~185°F (-20°C ~+85°C)
Storage Humidity	95% @ 40 °C (non-condensing)
Vibration/Shock	0.25 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
Certification	CE, FCC

Note: All specifications are subject to change without notice.

3.3 eNVP-JNX-IV-D0008

System	
CPU	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6MB L2 + 4MB L3 processor
GPU	NVIDIA Volta™ architecture with 384 NVIDIA CUDA® cores (21 TOPS [INT8])
Main Memory	Onboard 8 GB 128-bit LPDDR4x @ 1600 MHz 51.2GB/s
OS	16 GB eMMC 5.1
Video	
Format	H.265 / H.264
Video Input	IP camera x 16 EverFocus AiO NVR: up to 8ch
Video Output	HDMI x 1 (2.0 a/b maximum 3840 x 2160); VGA x 1 (optional)
Resolution	4K @ 60fps x 2 4K @ 30fps x 4 1080p @ 30fps x 16
Audio	
Audio Input	RCA x1
Audio Output	RCA x1
Recording	
Format	H.265 / H.264
Resolution	4K @ 60fps x 2 4K @ 30fps x 4 1080p @ 30fps x 16
Storage	
2.5" SATA HDD	SKU1/SKU3: x 1; SKU2/SKU4: x 2
Removable SSD Tray	Supported
RAID	NA
Network	
Ethernet	GbE port x1, PoE port (10/100 MbE, 52V/2.5A, total 130W based) x 8
Wi-Fi / 3G / 4G	NA
GPS / G-Sensor	NA
Alarm	
Alarm In/Out	Alarm Input x 4; Alarm Output x 4
Interface	
Front I/O Panel	LED indicator x 2 (HDD, power) Power button x 1 USB 2.0 x 1

Rear I/O Panel	USB 3.0 x 1 USB 2.0 x 1 Micro USB 2.0 (Internal OTG) x 1 RS-485 x 1, RS-232 x 1 GbE port x 1 PoE port x 8 Audio in x 1, Audio out x 1 HDMI x 1VGA x 1 (optional) Power switch x 1, Power input port x 1 Alarm IO (4-input, 4-output) x 1
Expansion Slot	NA
General	
Power Supply	SKU1/SKU2: AC100-240V, 180W ATX SKU3/SKU4: DC48V, 2.5A, 120W
Dimensions (W x D X H)	314 x 282.2 x 49.6mm (12.4" x 11.1" x 2")
Gross Weight	SKU1: 3kg / 6.6lb; SKU2: 3.1kg / 6.8lb SKU3: 2.5kg / 5.5lb; SKU4: 2.6kg / 5.7lb
Operating Temp.	32°F ~104°F (0°C ~+40°C)
Storage Temp.	-4°F ~185°F (-20°C ~+85°C)
Storage Humidity	95% @ 40 °C (non-condensing)
Vibration/Shock	0.25 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
Certification	CE, FCC

Note: All specifications are subject to change without notice.

EverFocus Electronics Corp.

EverFocus Taiwan:

2F., No.12, Ln. 270, Sec. 3, Beishen Rd., Shenkeng
Dist., New Taipei City 222, Taiwan
TEL: +886 2 2662 2338
FAX: +886 2 2662 3632
www.everfocus.com.tw
marketing@everfocus.com.tw

EverFocus USA - California:

324 W Blueridge Avenue,
Orange, CA 92865, USA
TEL: +1 626 844 8888
FAX: +1 714 792 0481
www.everfocus.com
sales@everfocus.com

EverFocus China - Shenzhen:

3F, Building 7, Longcheng Industrial Park, No.39,
Longguan No.7 Road, Dalang Street, Longhua,
Shenzhen, Guangdong, China
TEL: +86 755 2765 1313
FAX: +86 755 2765 0337
www.everfocus.com.cn
marketing@everfocus.com.cn

EverFocus Japan:

3F, Kuramochi, Building II, 2-2-3 Koto-
Bashi, Sumida-Ku, Tokyo, 130-0022, Japan
TEL: +81 3 5625 8188
FAX: +81 3 5625 8189
www.everfocus.co.jp
info@everfocus.co.jp



Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!



EverFocus