Product Specification

Customer Name	
Product Name	Kepler
Product	2U 19-inch Rack Mount Fanless case with Power Supply
Designed for	Micro-ATX Main Board
Project Code	PR-EC939
Product Code	A-ATX11-M1B
Issue Date	2025-06-25
Version	V1.4

Customer Approved By	Design	Inspect	Check
	Leo Liao		

錸立康科技股份有限公司
新北市三重區新北大道二段260號13樓之5
Akasa (Asia) Corp.
13F-5, No. 260, Sec.2, New Taipei Blvd., Sanchong District, New Taipei City, Taiwan
Tel +886 29996289 fax +886 29996228
sales@akasa.com.tw
www.akasa.com.tw

Revision History

No.	Rev	Modified Description	Date
01	V1.0	Primary Issue	Jun-25-2025
02	V1.1	Update spec content and wording	Aug-14-2025
03	V1.2	Update content	Aug-15-2025
04	V1.3	1. Modify Model number 2. Add MB / CPU support list	Aug-19-2025
05	V1.4	Update Power Specification	Sep-22-2025

Product images

Chassis Specification

(Item)		(Specification/Condition)
01	Material	Black Sandblasted Steel (SGCC) with Aluminum Heatsink
02	Motherboard Type	Micro-ATX
03	Socket Support	Intel LGA1700 / LGA1851
04	Maximum TDP Support	35 W
05	Dimensions	481.8 x 307.5 x 87mm (W x D x H)
06	Drive Bay	4 x 2.5” tool free SATA SSD/HDD Mobile Rack with door lock (9.5mm height drive compatibility)
07	Front Panel	2 x USB 5Gbps Type-A, 4 x 2.5” Mobile SATA Rack, Power button, PW / HDD LED opening
08	Rear I/O Opening	4 x Low profile PCIe slot Micro ATX Main Board Rear I/O Opening Power AC Inlet and Switch
09	PSU	150W Fanless AC to DC Multi-Voltage Output POWER SUPPLY
10	Product code	A-ATX11-M1B-US (with US AC Power Lead) A-ATX11-M1B-EU (with EU AC Power Lead) A-ATX11-M1B-UK (with UK AC Power Lead)

Micro ATX Main Board Support List

Kontron	Operating Temp	Power	Processors	TDP	Socket
K3843-B2 mATX	10 - 50°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
K3843-B mATX	10 - 50°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
K3841-Q mATX	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
K3842-Q mATX	10 - 50°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

Advantech	Operating Temp	Power	Processors	TDP	Socket
AIMB-589	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Ultra Series 2 Processors (15th Gen)	35W	LGA1851
AIMB-508	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
AIMB-588QM-0AB1	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
AIMB-588RF-0AB1	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
AIMB-588HL-0AB1	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

Supermicro	Operating Temp	Power	Processors	TDP	Socket
X13SAQ	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

Asrock	Operating Temp	Power	Processors	TDP	Socket
IMB-1318	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-X1316-10G	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-X1316	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-1316	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-1315	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-X1314	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700
IMB-1314	-20 - 70°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

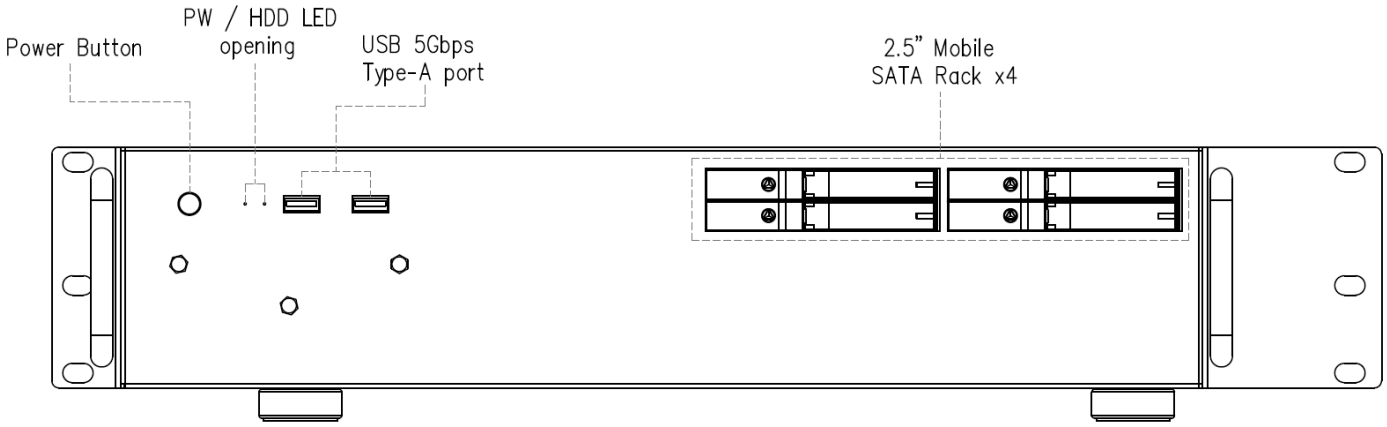
Aaeon	Operating Temp	Power	Processors	TDP	Socket
MAX-Q670A	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

ASUS AIoT	Operating Temp	Power	Processors	TDP	Socket
Q670M-EM-A	0 - 60°C	ATX-PWR (24+8-pin)	Intel Core Processors (12th/13th/14th)	35W	LGA1700

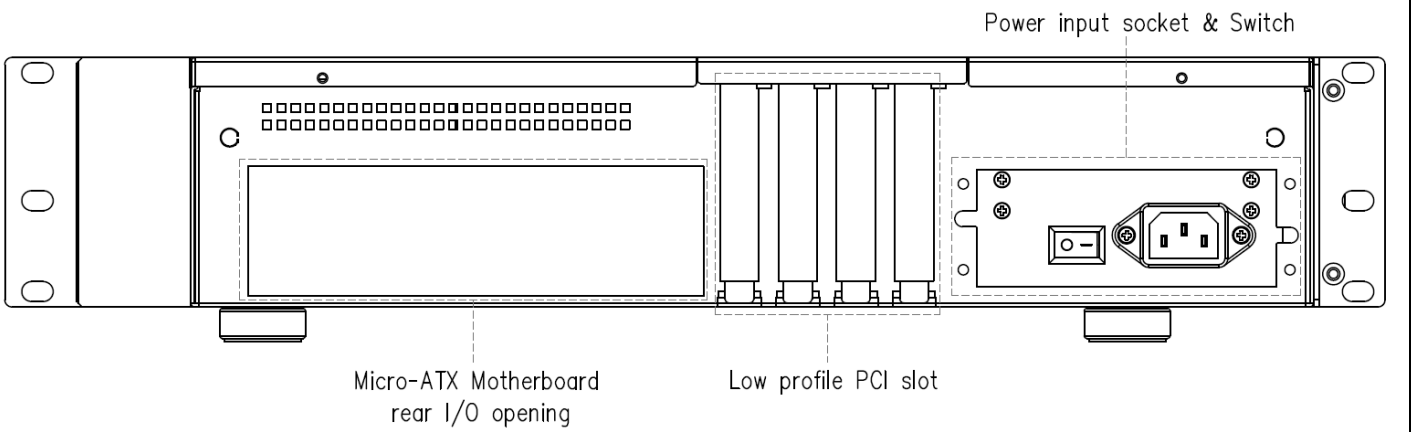
Intel Core Processors Support List

Ultra 2 LGA1851	Ultra 5 225T	Ultra 5 235T	Ultra 5 245T	Ultra 7 265T	Ultra 9 285T	
14th Gen LGA1700	i3-14100T	i5-14400T	i5-14500T	i7-14700T	i9-14900T	
13th Gen LGA1700	i3-13100T i3-13100TE	i5-13400T	i5-13500T i5-13500TE	i7-13700T i7-13700TE	i9-13900T i9-13900TE	
12th Gen LGA1700	G6900TE G6900T	G7400TE G7400T	i3-12100TE i3-12100T	i5-12500TE i5-12500T	i7-12700TE i7-12700T	i9-12900TE i9-12900T

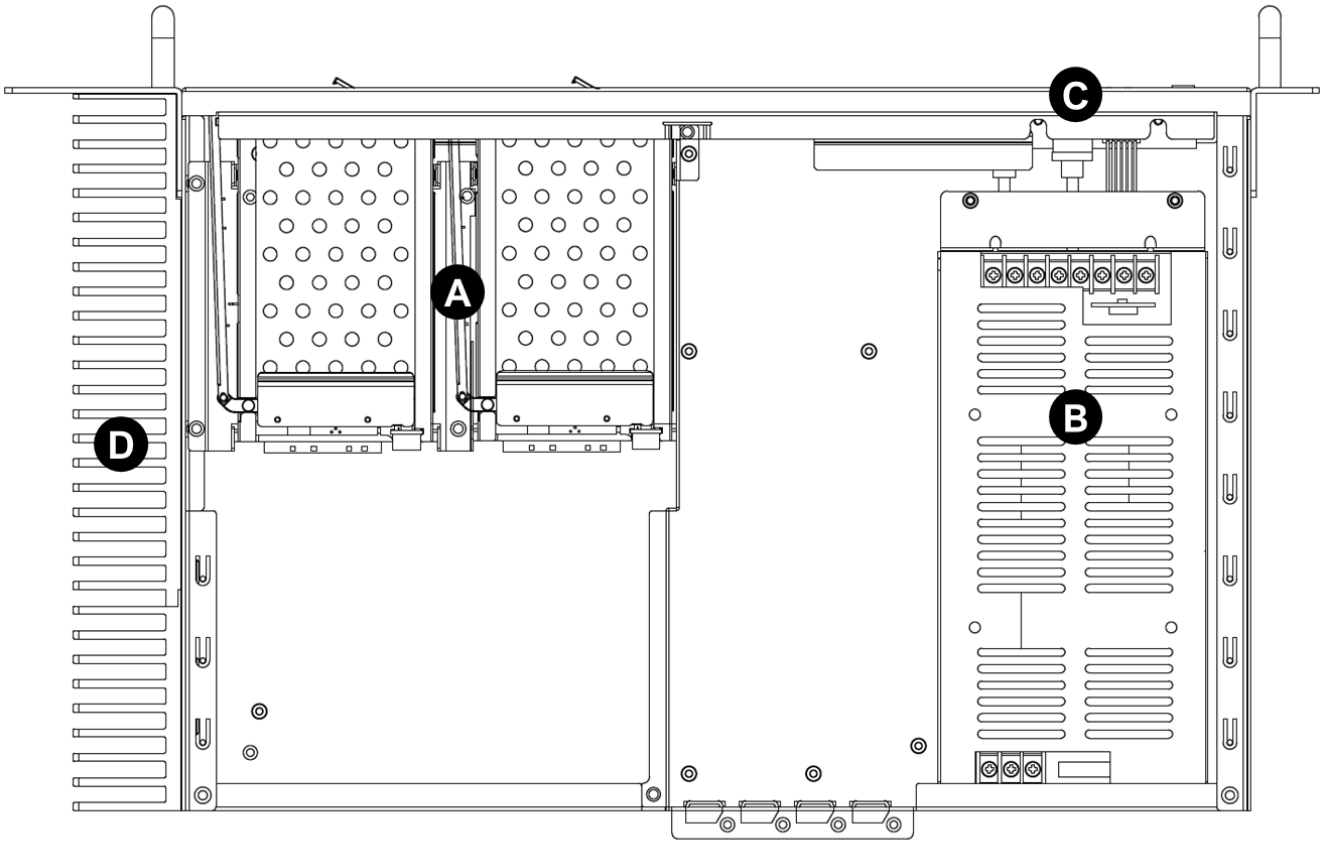
Front panel layout



Rear panel layout



Internal layout

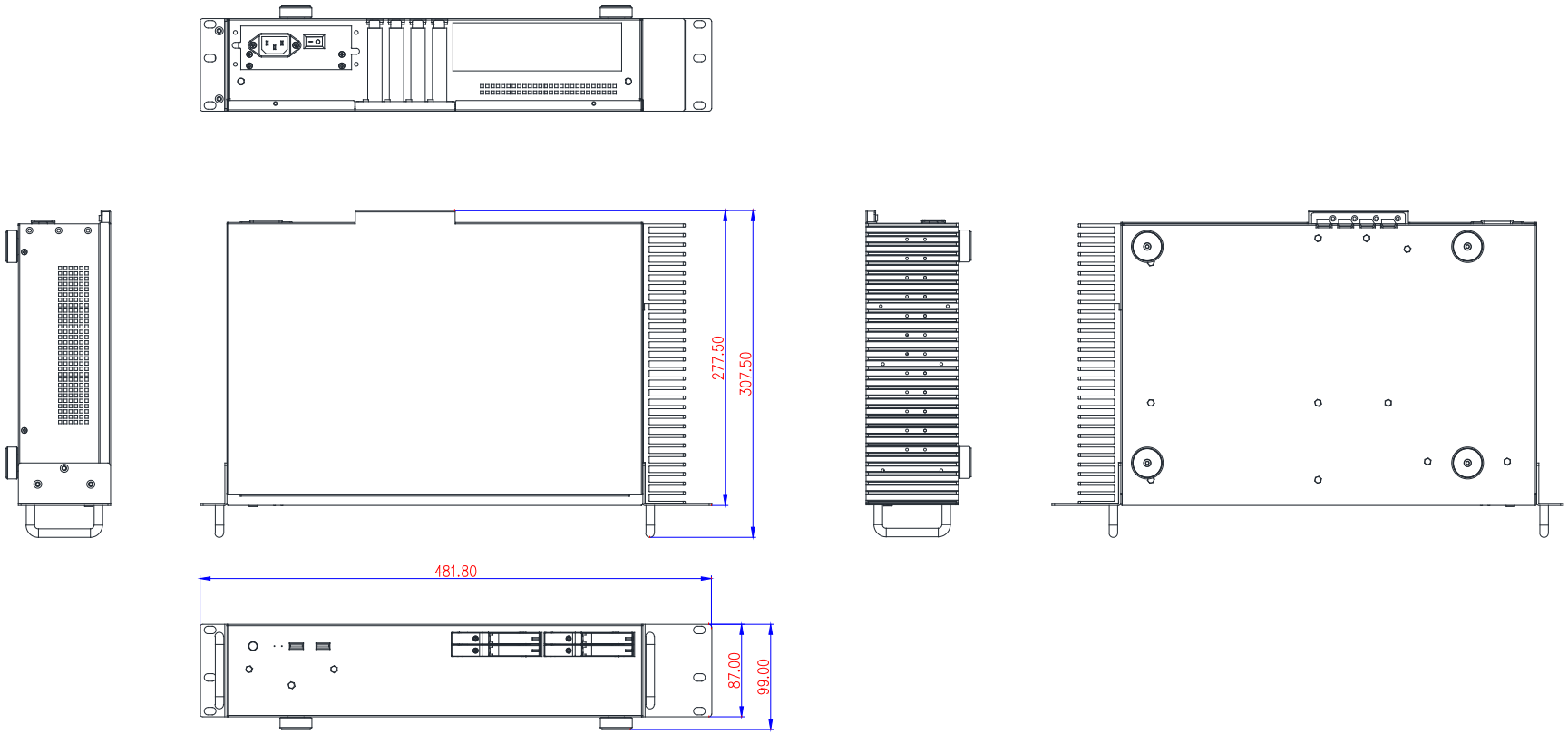


A 2.5”Tool free SATA mobile rack with door lock x4

B Power supply C Front panel PCB D Side heatsink

Product dimensions

		REVISIONS		
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	V1.0	Primary Issue	20250626	



				NAME	DATE
		UNIT: MM TOLERANCES:±0.2mm FRACTIONAL± ANGULAR: MACH±1° BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		MATERIAL	Q.A.		
			COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

Akasa (Asia) Corp

MODEL. NO.	A-ATX11-M1B
PR. NO.	
PRODUCT NAME.	

SIZE	DWG. NO.	REV.
A		V 1.0.

WEIGHT: SHEET 1 OF 1

Power Supply Specification

Features

- 150W convection cooled open frame ATX with cover.
- Active PFC Class D.
- 1U chassis design for thermal conduction.
- Operating temperature: -10°C to 70°C.
- Input wattage <0.5W at no load condition.
- Meets EMI EN 55022 Class B.
- ITE safety standard BS IEC 62368-2, UL 62368-1 approved.

Ratings

Wattage (Rated / Max.)	Output Voltage		Min. Current	Rated Current
150W	V1	+5 V	2.5 W	11.0 A
	V2	+12 V		5.0 A
	V3	-12 V	0 A	0.5 A
	V4	+3.3 V	0 A	7.5 A
	V5	+5Vsb	0 A	0.75 A

Total Output Power: 150W convection cooled at 40°C and 135W convection cooled at 50°C environment temperature. Rating measured with power covered.

Input Characteristics

Characteristic	Min.	Typical	Max.	Units	Note
Input Voltage	90	115 / 230	264	VAC	Continuous input range.
Input Frequency	47		63	Hz	AC input.
Input Current			4 / 2	A	Nominal AC Input Voltage (115VAC/230VAC), rated load.
Inrush Current			30 / 60	A	Nominal AC Input Voltage (115VAC/230VAC), one cycle at 25°C.
No-load power consumption	0.14		0.5	W	Nominal AC Input Voltage (115VAC/230VAC), no any output except 5Vsb, and no any loading in secondary side.
Input Protection	Non-user serviceable internally located AC input line fuse. Fuse：5A / 250VAC * 1pcs				

Output Characteristics

Characteristic	Min.	Typical	Max.	Units	Note
Output Voltage		+5 V		VDC	
		+12 V			
		-12 V			
		+3.3 V			
		+5 Vsb			
Output Current		11.0	14.0	A	
		5.0	12.0		
		0.5	1.0		
		7.5	12.0		
		0.75	2.0		
Initial Set Accuracy	4.95		5.05	V	Initial Setting Accuracy is at Input 115VAC and all output at 60% rated load.
	11.6		12.6		
	-11.4		-12.6		
	3.20		3.40		
	4.80		5.20		
Minimum Load		2.5		W	At Output Voltage +5V, +12 V (Note 1)
		0		A	At Output Voltage -12 V, +3.3 V, +5Vsb
Start Up Delay	0.3		5	Sec	Time required for initial output voltage stabilization.
Hold Up Time	20 / 30	24 / 36		mS	Nominal AC Input Voltage (115VAC/230VAC),
Line Regulation		±1.0(V1) ±1.0(V2) ±1.0(V3) ±1.0(V4) ±1.0(V5)		%	Less than ±1% at rated load with ±10% changing in input voltage.
Load Regulation		±2.0(V1) ±4.0(V2) ±5.0(V3) ±4.0(V4) ±4.0(V5)		%	Measured from 60% to 100% rated load and from 60% to 20% rated load (60% ±40% rated load) for each output, and keep other outputs at 60% rated load.
Ripple & Noise		50(V1) 120(V2) 120(V3) 50(V4) 100(V5)		mV	Measured at rated load by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10μF Electrolytic Capacitor and a 0.1uF Ceramic Capacitor.
Short Circuit Protection	Fully protected against short circuit. Latch off mode upon of short circuit condition (Note 2)				
Overvoltage Protection	If for some reason the power supply fails to control itself, the build-in over voltage protection circuit will shut down the outputs to prevent damaging external circuits. The trigger point is 7V max. at +5V. If the OVP occur, PSU cannot be recovered.				
Over Temperature Protection	When the power supply operating over the temperature or over load limit, the power supply will be shut down automatically to protect itself. After the temperature going down, the power supply will restart automatically.				

Note:

1. Total minimum load 2.5 watts, which is combination or any one from +5V & +12V output, is required.

2. Only +5Vsb and -12V is protected by auto recovery

General Characteristics

Characteristic		Min.	Typical	Max.	Units	Note
Efficiency				83	%	At 200VAC, rated load, without cover provided.
Isolation	IP to OP	3000			VAC	
Switching Frequency			65		KHz	
Power Good Signal		When power is turned on, the power good signal will go high 100ms to 500ms after all output DC voltages are within regulation limits.				
Power Fail Signal		The power fail signal will go low at least 1ms before any of the output voltages fall below the regulation limits.				
Power On / Off		The power supply will be turned on when the power On / Off pin is connected to secondary GND.				

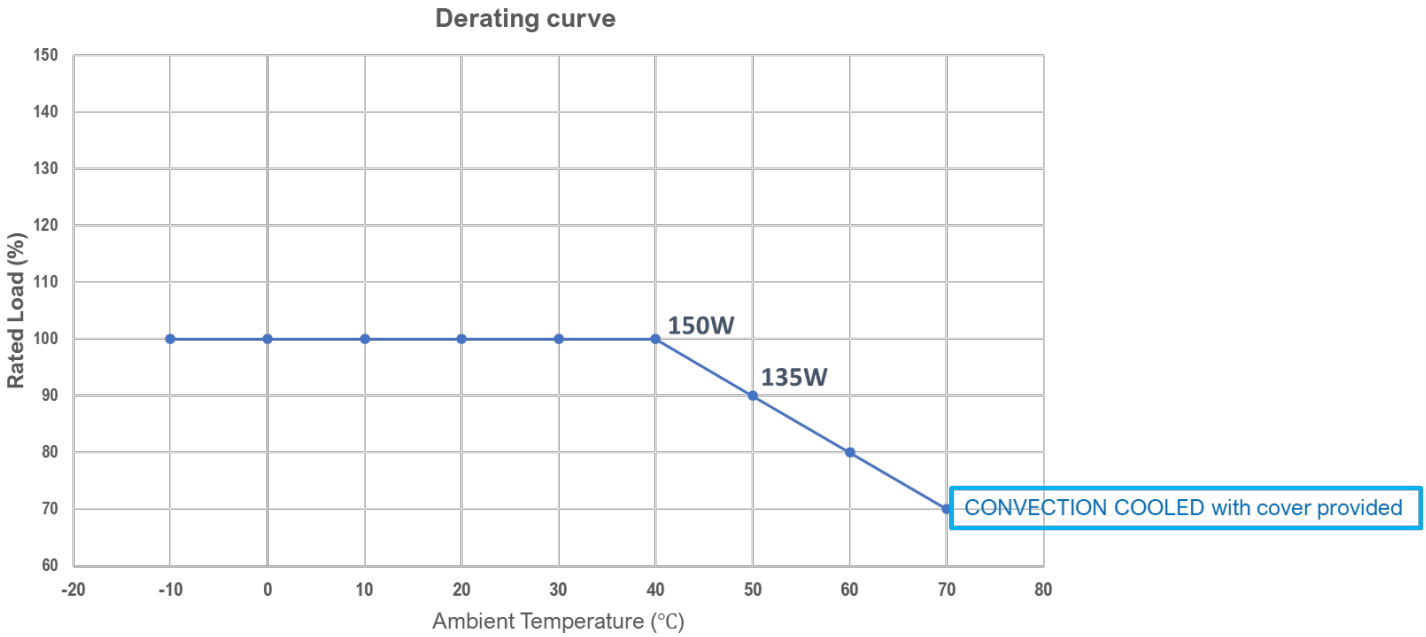
Environmental Characteristics

Characteristic	Min.	Typical	Max.	Units	Note
Operating Temperature	-10 (Note 1)		+70	°C	Derate linearly above 50°C (Note 2)
Storage Temperature	-40		+70	°C	
Relative Humidity	5		95	% RH	Non-condensing.
perating / Non - Operating Altitude			4000	m	

Note:

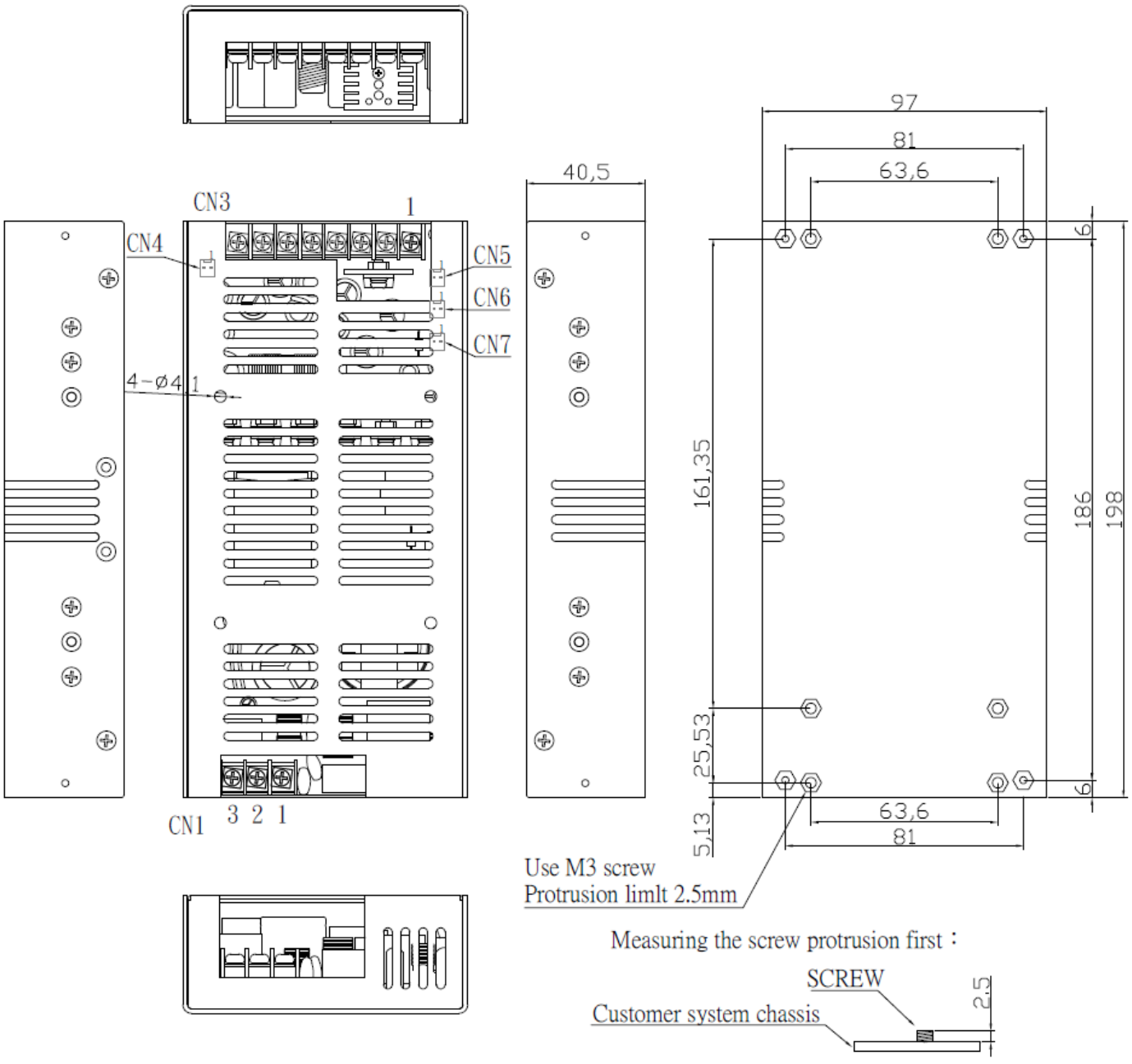
1. The min. operating temperature would be 0°C if input is lower than 115Vac.
2. Derate linearly above 40°C with cover provided version.

Derating curve

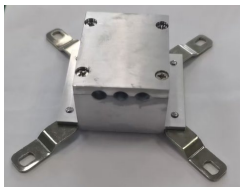
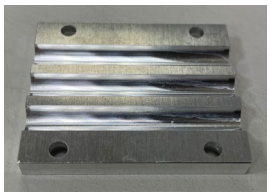


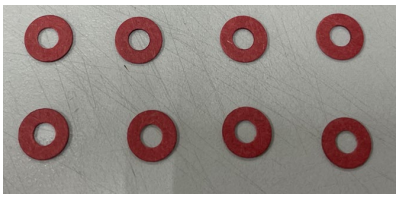
Power supply Dimension

SIZE：198.0 (L) x 97.0 (W) x 40.5 (H) mm, Tolerance +/- 0.4mm.

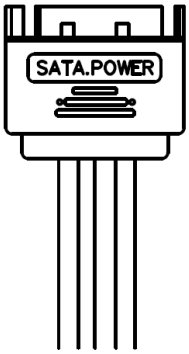


Contents

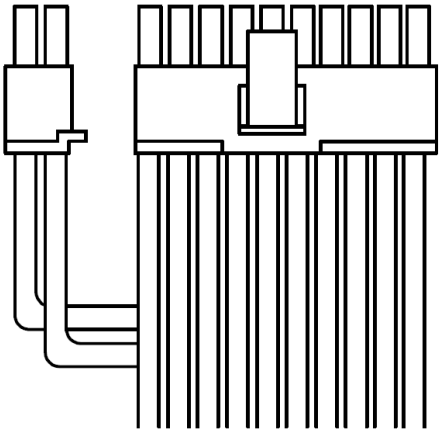
No	Name	Photo	Qty
1	CPU Thermal module kit (Top cover pre-install on CPU module)		1
1-1	Top Cover for CPU thermal module		1
1-2	CPU Thermal module		1
1-3	M3 screws for CPU module Top Cover		4
2	Heatpipe for CPU Module		2
3	M3 screws for CPU Socket Installation		4
4	Backplate for CPU Socket		1
5	Heatpipe mounting block for side Heatsink		4
6	M3 screws for Heatpipe mounting block for the Side Heatsink		16

7	Main Board Mounting Screws		8
8	Washer for Main Board Screws		8
9	SSD/HDD protective film		4
10	Key for SSD/HDD Mobile tray Lock		1
11	Cable Tie		3
12	Thermal Grease for Thermal module		2

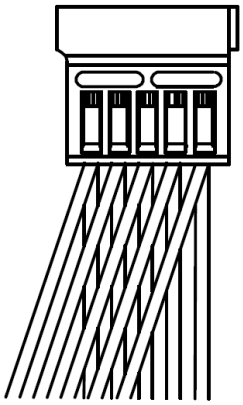
Internal Cable



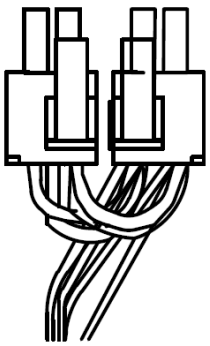
SATA Power cable from
SSD/HDD mobile tray
(Length: 150mm)



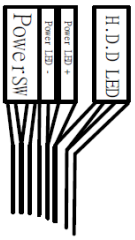
24P ATX Power cable
for PSU
(Length: 380mm)



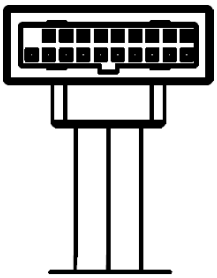
SATA Power cable
for PSU
(Length: 200mm)



4+4 ATX Power cable
for PSU
(Length: 500mm)



PW/HDD LED cable
for Front panel PCB
(Length: 300mm)



90 degree USB3.0 19 PIN
cable for Front panel PCB
(Length: 250mm)