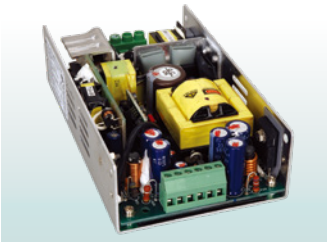
Power Supply

IEI power supply solutions are complete and flexible. Normal (PS2, 1U, 2U) or redundant form, close or open frame, DC or AC input, AT or ATX model, 10 to 600 watts or higher, all of these features are available within a reliable and highly efficient power solution.
IEI's embedded system power supply solution is efficient and stable. IEI also provides customized power supply services to meet your demands.

Selection

■ Open Frame
- Fanless Chassis



■ 1U Series
- 1U Chassis

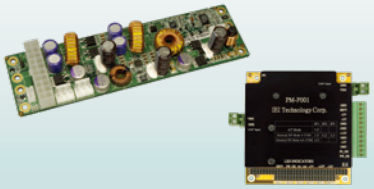
■ 2U Series
- 1U ~ 2U Chassis

■ PS2 Series
- 2U ~ 4U Chassis

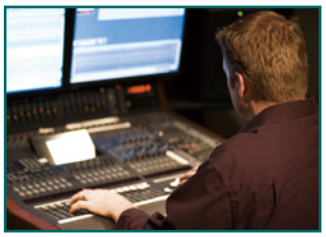
■ Redundant
- 2U ~ 4U Chassis

■ Adapter
- LCD Monitor
- AFL Series
- Embedded System

■ DC to DC Module
- Battery Backup System
- Embedded System
- Mobile Auto Solution

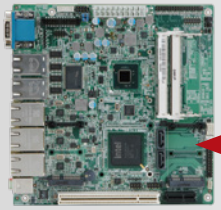


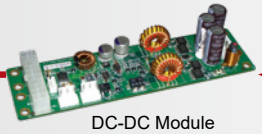
AC-DC Adapter



Type	Temperature
AC-DC Adapter	0°C ~ 40°C

Current





DC-DC Module

AC-DC Adapter

AC

Wide Temperature

Medical

Item	Model	Watt	AC/DC
PS/2	ACE-4840APM	400W	AC

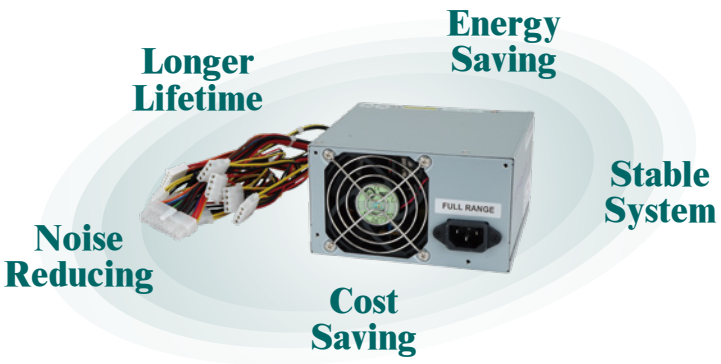
-20°C ~ 70°C

Item	Model	Watt	AC/DC
PS/2	ACE-160B	600W	AC
	ACE-A140B	400W	AC

80 PLUS & ErP

■ 80 PLUS

The 80 PLUS power supply saves energy and money to keep up with the latest market trends.



Efficiency Trend

Multiple output for computers and servers Eff. ≥ 80% at 20%, 50% and 100% of rated load PFC ≥ 0.9

	80 PLUS	80 PLUS BRONZE	80 PLUS SILVER	80 PLUS GOLD
20% (loading)	80%	82%	85%	87%
50% (loading)	80%	85%	88%	87%
100% (loading)	80%	82%	85%	87%

■ **Energy Saving**
A high efficiency power supply saves energy by reducing the amount of energy used during the current transferring process.

■ **System Reliability**
Reducing the heat output helps to lower the system temperature and increase system reliability.

■ **Cost Saving**
A high efficiency power supply reduces energy consumption, which means savings on your electric bills.

■ **Noise Reducing**
A high efficiency power supply can achieve a lower operating temperature. When the fan operates at a lower speed, it produces less noise.

■ **Longer Lifetime**
A high efficiency power supply can reduce heat generated inside the power supply and increase its operating hours.

■ ErP

ErP ➔ Energy-Related Products

These products are aimed at improving energy efficiency and reducing energy consumption.
Scope: Anything that is Class B EMC (Class A out of scope)

Power Supply
Off mode & Standby mode

Off mode	≤ 1.0 W
Standby mode	≤ 1.0 W

Adapter
Maximum Energy Consumption in No-Load Mode

Output power	AC-DC external power supplies, except low voltage external power supplies	Low voltage external power supplies
≤ 51W	0.30W	0.30W
Po > 51W	0.50W	N/A

Open Frame Selection Guide

Safety (ITE Stardard) - CB IEC 60950, UL 60950, CSA C 22.2 No. 60950, TUV EN 60950
Safety (Medical Stardard) - CB IEC 60601, UL 60601, CSA C 22.2 No. 60601, TUV EN 60601
EMI - Meets EN 55022, FCC Part 15, CISPR 22
Meets EN 61000-3-2, EN 61000-3-3 (PFC function)
EMS - Meets EN 55024, EN 61000-4-2/3/4/5/6/8/11

** For detailed specs, please refer to official certification*

AC Input

Product	Model No.	Watt AT/ATX PFC	Input Range	Output Current Range					Efficiency	Operating Temperature	Safety	Dimensions (mm)
			Voltage	+5 V	+12 V	-5 V	-12 V	+5 Vsb				
	ACE-890A	86W AT -	85 ~ 264 VAC	10 A	2.5 A		0.5 A		70%	0°C ~ 50°C	CSA CE	152.4 x 89 x 39

Open Frame AC Input AT Type

ACE-890A

86 W AC-DC Open Frame AT Power Supply

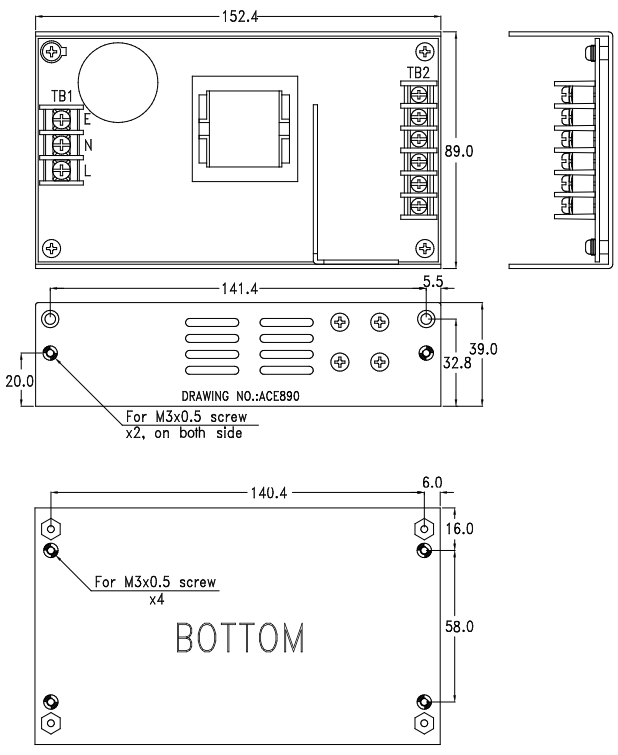
86W

CB cULus PFC CE

Specifications

Input Type	85 ~ 264 VAC Full Range				
Input Frequency	47 Hz ~ 63 Hz				
Input Current	2A (RMS)@115VAC, 1A (RMS)@230VAC				
Inrush Current	25A max. for 115VAC, 50A max. for 230VA				
Output Voltage	+5 V	+12 V	-5 V	-12 V	+24 V
ACE-890A	10 A	2.5 A		0.5 A	
Efficiency	70%				
Temperature	0°C ~ 50°C (Operating), -20°C ~ 85°C (Storage)				
MTBF (hrs)	268,000				
Output Connector	Optional cable				
Dimensions (mm)	152.4 x 89 x 39				

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ACE-890A-RS	86W AC input industrial AT power supply;CCL;RoHS

1U/2U Type Selection Guide

Safety (ITE Standard) - CB IEC 60950, UL 60950, CSA C 22.2 No. 60950, TUV EN 60950
Safety (Medical Standard) - CB IEC 60601, UL 60601, CSA C 22.2 No. 60601, TUV EN 60601
EMI - Meets EN 55022, FCC Part 15, CISPR 22
Meets EN 61000-3-2, EN 61000-3-3 (PFC function)
EMS - Meets EN 55024, EN 61000-4-2/3/4/5/6/8/11

** For detailed specs, please refer to official certification*

1U AC Input

Products	Model No.	Watt AT/ ATX PFC	Input Range	Output Current Range							Efficiency	ErP	Operating Temperature	Safety	Dimensions (mm)
			Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb	+24 V					
	ACE-A630C	300W ATX -	90 ~ 265 VAC	12 A (0 A)	14 A (0 A)	25 A (0.1 A)		0.5 A	3 A		80 PLUS BRONZE 87%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A622C	220W ATX -	90 ~ 264 VAC	10 A (0.1 A min.)	14 A (0.2 A min.)	14 A (0.6 A min.)		0.3 A	2.5 A		80 PLUS SILVER 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A618C	180W ATX -	90 ~ 264 VAC	10 A (0.1 A min.)	14 A (0.2 A min.)	10 A (0.6 A min.)		0.3 A	2.5 A		80 PLUS 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A615C	150W ATX -	90 ~ 264 VAC	10 A (0.1 A min.)	14 A (0.2 A min.)	10 A (0.6 A min.)		0.3 A	2.5 A		80 PLUS SILVER 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5

1U DC Input

Products	Model No.	Watt AT/ ATX PFC	Input Range	Output Current Range							Efficiency	Operating Temperature	Safety	Dimensions (mm)
			Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb	+24V				
	ACE-A4520D	250W ATX -	24 VDC (18 ~ 36 VDC)	10 A	14 A	18 A (0.05A min.)		0.3 A	2.5 A		80%	0°C ~ 50°C	CB UL TUV CCC NEMKO CE FCC	150 x 81.5 x 40.5
	ACE-716C	150W AT -	24 VDC (19 ~ 30 VDC)		18 A (2 A min.)	4 A	0.5 A	1 A			70%	-20°C ~ 70°C	UL TUV CE	198 x 97 x 40.5

1U AC Input ATX Type

ACE-A630C

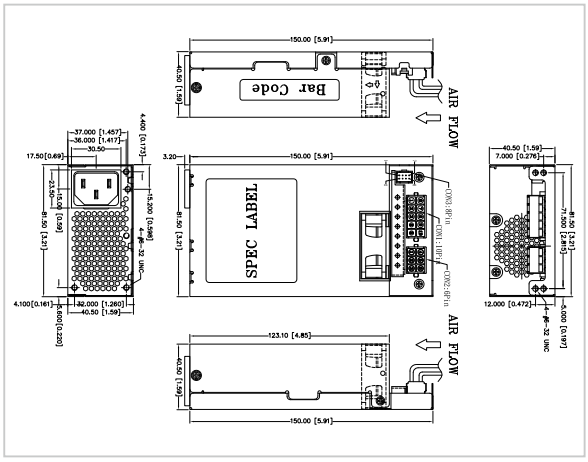
1U Flex ATX 300 W Power Supply

300W

Specifications

Input Type	90~264VAC Full Range				
Output Voltage	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
	12 A (0 A)	14 A (0 A)	25 A (0.1 A)	0.3 A	3 A
Efficiency	87%				
Temperature	Operating: 0°C ~ 50°C, Storage: -40°C ~ 80°C				
MTBF (hrs)	100,000				
Output Connector	20+4-pin ATX, 4-pin 12V CPU, 1 x FDD, 1 x HDD, 2 x SATA, 2 x Graphics card power				
Dimensions (mm)	150 x 81.5 x 40.5				

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
ACE-A630C-R10	1U Flex ATX 300W Power Supply, 90~264 VAC, ErP, CCL, RoHS

ACE-A622C

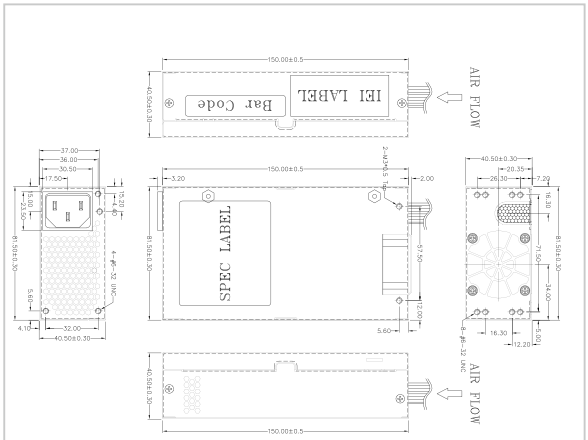
220 W 1U Type ATX Power Supply

220W

Specifications

Input Type	90~264 VAC Full Range						
Output Voltage	+3.3 V	+5 V	+12 V	+12 V 2	-12 V	+5 Vsb	+5 Vsb
	10 A (0.1 A min.)	14 A (0.2 A min.)	14 A (0.6 A min.)		0.3 A	2.5 A	2.5 A
Efficiency	85%						
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C						
MTBF (hrs)	100,000						
Output Connector	20+4-pin ATX, 4-pin 12V CPU, 2 x HDD, 2 x SATA, 1 x Graphics card power						
Dimensions (mm)	150 x 81.5 x 40.5						

Dimensions *(Unit: mm)*



Ordering Information

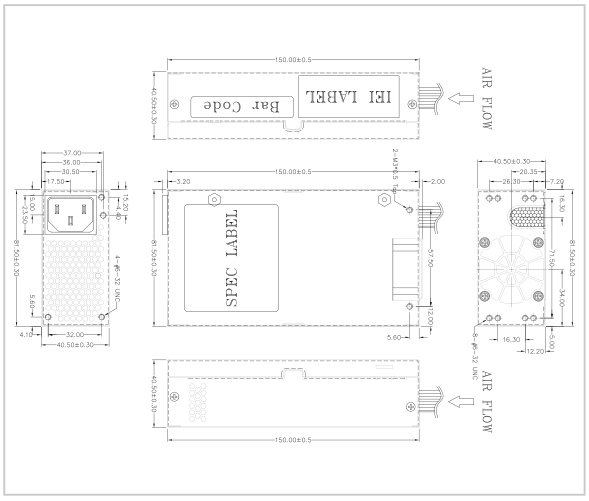
Part No.	Description
ACE-A622C-R10	1U Flex ATX 220W Power Supply, 90~264VAC, ErP, CCL, RoHS

ACE-A618C

180 W 1U Type ATX Power Supply

180W

Dimensions *(Unit: mm)*



Specifications

Input Type	90~264 VAC Full Range				
Output Voltage	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
	10 A (0.1 A min.)	14 A (0.2 A min.)	10 A (0.6 A min.)	0.3 A	2.5 A
Efficiency	85%				
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C				
MTBF (hrs)	100,000				
Output Connector	20+4-pin ATX, 4-pin 12V CPU, 1 x FDD, 1 x HDD, 2 x SATA				
Dimensions (mm)	150 x 81.5 x 40.5				

Ordering Information

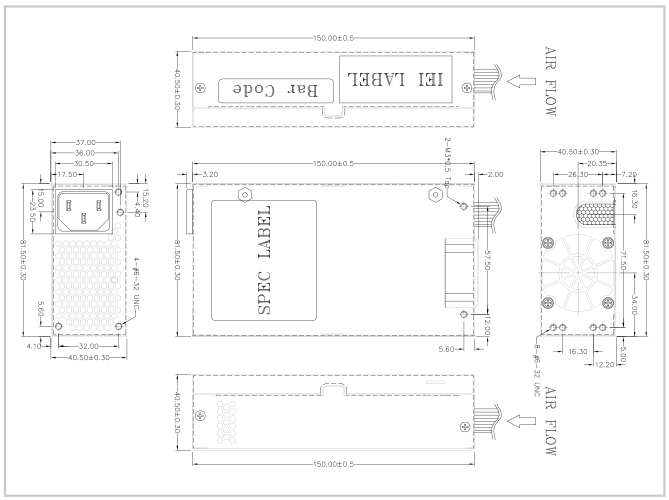
Part No.	Description
ACE-A618C-R10	1U Flex ATX 180W Power Supply, 90~264VAC, ErP, CCL, RoHS

ACE-A615C

150 W 1U Type ATX Power Supply

150W

Dimensions *(Unit: mm)*



Specifications

Input Type	90~264 VAC Full Range				
Output Voltage	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
	10 A (0.1 A min.)	14 A (0.2 A min.)	10 A (0.6 A min.)	0.3 A	2.5 A
Efficiency	85%				
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C				
MTBF (hrs)	100,000				
Output Connector	20+4-pin ATX, 4-pin 12V CPU, 1 x FDD, 2 x HDD, 2 x SATA				
Dimensions (mm)	150 x 81.5 x 40.5				

Ordering Information

Part No.	Description
ACE-A615C-R10	1U Flex ATX 150W Power Supply, 90~264VAC, ErP, CCL, RoHS

1U AC Input AT Type

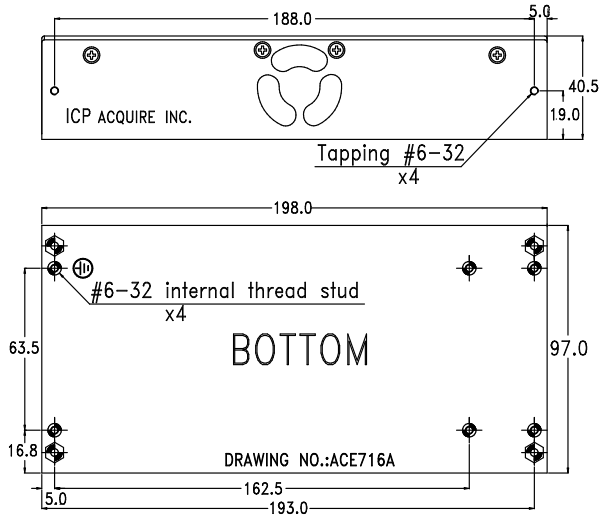
ACE-716AP

150 W 1U Type AT Power Supply

Specifications

Input Type	85 ~ 265 VAC Full Range (ACE-716AP)			
Output Voltage	+5V	+12V	-5V	-12V
	18 A (1 A min.)	4 A	0.5 A	1 A
Efficiency	75%			
Temperature	Operating: -20°C ~ 70°C (50°C ~ 70°C derating curve) Storage: -20°C ~ 85°C			
MTBF (hrs)	149,000			
Output Connector	Optional cable			
Dimensions (mm)	198 x 97 x 40.5			

Dimensions *(Unit: mm)*

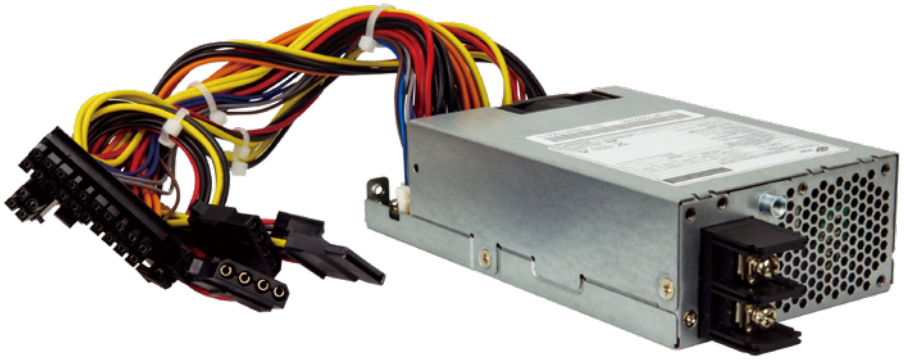


Ordering Information

Part No.	Description
ACE-716AP-RS	150W AC-DC AT Power Supply, with PFC

ACE-A4520D

250 W 24V DC input 1U ATX Power Supply



High power capacity 250W in 1U size!!

Meets ATX revision 2.0 with 20+4-pin ATX power and SATA

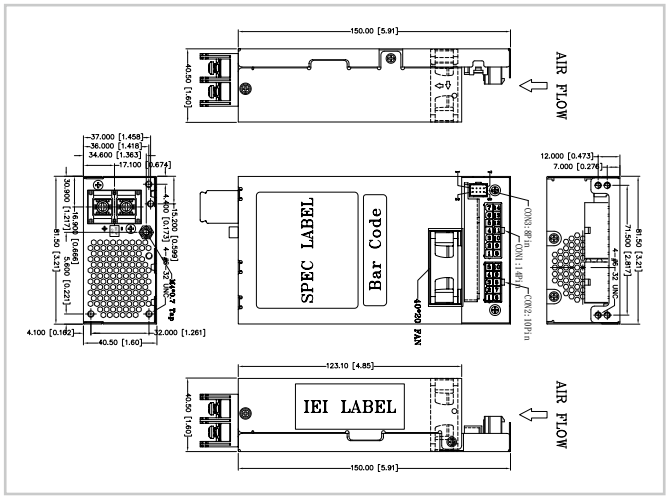
Specifications

Input	**Voltage**	18 ~ 36 VDC input		
	Input Current	15 A (RMS) @ -24 VDC		
	Inrush Current	18 A max. for -24 VDC		
Output	**Voltage**	**Min. Load**	**Max. Load**	**Ripple & Noise**
	+5 V	0 A	14 A	50 mV P-P
	+12 V	0.05 A	18 A	120 mV P-P
	-12 V	0 A	0.3 A	120 mV P-P
	+3.3 V	0 A	10 A	50 mV P-P
	+5 Vsb	0 A	2.5 A	50 mV P-P
	+3.3V, +5V, +12V total current not exceed 184W			
	Overvoltage Protection	+5 V output: 5.7 V ~ 6.5 V +12 V output: 13.3 V ~ 15.5 V +3.3 V output: 3.7 V ~ 4.5 V		
	Over Circuit Protection	+5 V output: 18 V ~ 22 V +12 V output: 20 V ~ 26 V +3.3 V output: 15 V ~ 20 V		
	Short Circuit Protection	+3.3 V, +5 V, +12 V shut down and latch off		
General Specifications	**Output Rise Time**	20 ms max.		
	Efficiency	80%		
	MTBF	100,000 hours on max. load at +25°C		
	Temperature	Operating: 0°C ~ 50°C Storage: -20°C ~ 80°C		
	Relative Humidity	5% ~ 95% RH non-condensing		
	Output Connector	20+4-pin ATX, 4-pin 12 V CPU, FDD, SATA, 2 x HDD		

Features

- High efficiency
- Low ripple & noise
- Output overvoltage protection
- Short circuit protection on all output
- 100% burn-in under high ambient temperature (50°C)
- Vacuum-impregnated transformer
- MTBF: 100K hours at 25°C
- 100% hi-pot tested
- Line input fuse protection

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
ACE-A4520D-R10	250W 24 V DC Input 1U ATX Power Supply

PS/2 Selection Guide

Safety (ITE Standard) - CB IEC 60950, UL 60950, CSA C 22.2 No. 60950, TUV EN 60950
Safety (Medical Standard) - CB IEC 60601, UL 60601, CSA C 22.2 No. 60601, TUV EN 60601
EMI - Meets EN 55022, FCC Part 15, CISPR 22
Meets EN 61000-3-2, EN 61000-3-3 (PFC function)
EMS - Meets EN 55024, EN 61000-4-2/3/4/5/6/8/11

** For detailed specs, please refer to official certification*

AC Input

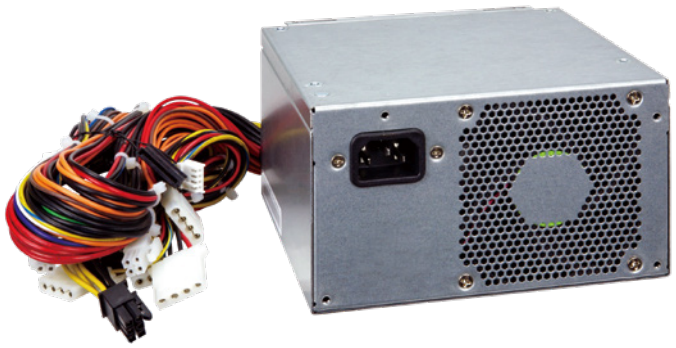
Product	Model No.	Watt AT/ATX PFC	Input Range	Output Current Range						Efficiency	ErP	Operating Temperature	Safety
			Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb				
	**ACE-A160B**	600W ATX PFC	90~264 VAC	25 A (0 A)	25 A (0.2 A)	V1: 16 A (0.05 A) V2: 16 A (0 A) V3: 16 A (0 A) V4: 16 A (0 A)	0.5 A (0 A)	0.5 A	4 A	80 PLUS BRONZE 82%	v	0°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	*Medical* **ACE-4840APM**	400W ATX PFC	90 ~ 265 VAC	30 A (0.5 A min.)	30 A (0.3 A min.)	V1: 17 A (1 A min.) V2: 17 A (1 A min.)	0.3 A	0.8 A	2 A	68%		0°C ~ 50°C	CB / UL CCC / VDE
	**ACE-A140B**	400W ATX PFC	90 ~ 264 VAC	21 A (0 A)	16 A (0.2 A)	V1: 17 A (0.05 A) V2: 17 A (0 A)	0.1 A (0 A)	0.5 A	3 A	80 PLUS GOLD 87%	v	-5°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	**ACE-A140B-S**	400W ATX PFC	90 ~ 264 VAC	21 A (0 A)	16 A (0.2 A)	V1: 17 A (0.05 A) V2: 17 A (0 A)	0.1 A (0 A)	0.5 A	3 A	80 PLUS GOLD 87%	v	-5°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	**ACE-A130C**	300W ATX PFC	90 ~ 264 VAC	19 A (0 A)	16 A (0.2 A)	V1: 17 A (0.05 A) V2: 17 A (0 A)	0.1 A (0 A)	0.5 A (0 A)	3 A (0 A)	80 PLUS GOLD 87%	v	0°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	**ACE-A130C-S**	300W ATX PFC	90 ~ 264 VAC	19 A (0 A)	16 A (0.2 A)	V1: 17 A (0.05 A) V2: 17 A (0 A)	0.1 A (0 A)	0.5 A (0 A)	3 A (0 A)	80 PLUS GOLD 87%	v	0°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	**ACE-935AL**	300W AT -	85 ~ 140 VAC 170 ~ 270 VAC		40 A (3 A min.)	8 A (0.1 A min.)	0.3 A	0.7 A		68%		0°C ~ 50°C	UL / CE

PS/2 AC Input ATX Type

ACE-A160B

600W PS/2 ATX Power Supply with ErP

600W



80 PLUS BRONZE

PFC

ErP 5Vsb < 0.5W Input

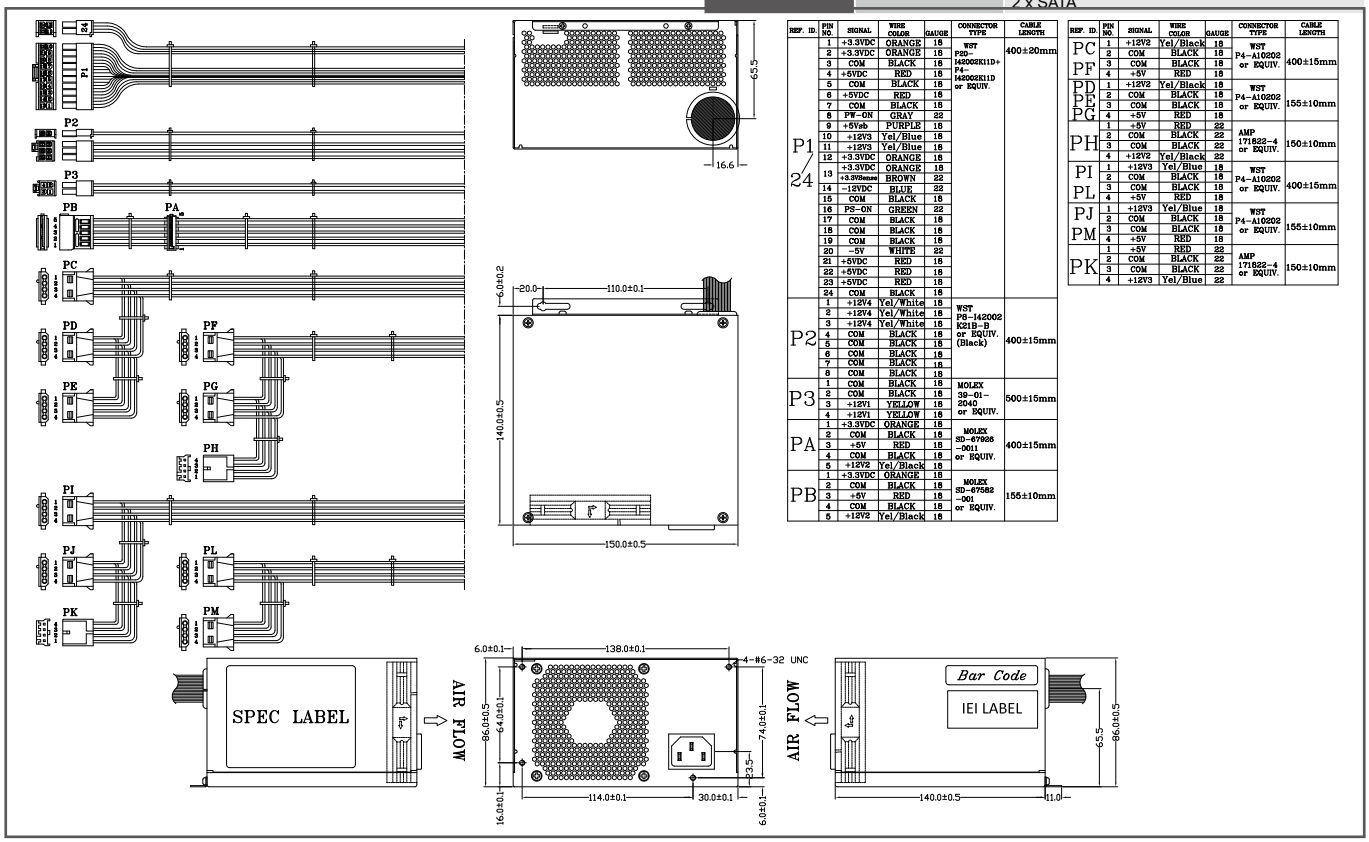
Specifications

Input	**Voltage**	90~265 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	10A (RMS)@115VAC, 5A (RMS)@230VAC		
	Inrush Current	40A max. for 115VAC, 80A max. for 230VAC		
Output	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3V	0 A	25 A	50mV
	+5V	0.2 A	25 A	50mV
	+12V1	0.05 A	16 A	120mV
	+12V2	0 A	16 A	120mV
	+12V3	0 A	16 A	120mV
	+12V4	0 A	16 A	120mV
	-12V	0 A	0.5 A	120mV
	+5VSB	0 A	4.0 A	50mV
	-5V	0A	0.5A	50mV
	Maximum continuous combined load on +3.3VDC and +5VDC outputs shall not exceed 150W.			
	Maximum continuous total DC output power should not exceed 600W			
	Over Voltage Protection	5V: 5.7V-6.5V 12V1 ~ 12V4: 13.3V-16.7V 3.3V: 3.9V-4.5V		
	Short Circuit Protection	3.3V, 5V, +12V1, +12V2, +12V3, +12V4, -12V, -5V shutdown and latch off		
General Specifications	**Watt**	600W		
	PFC	Active		
	Hold-up Time	16 ms min.		
	Efficiency	82%		
	MTBF	100,000 hours		
	Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Connector	1 x 20+4-pin ATX, 1 x 4-pin 12V CPU, 9 x HDD/ CDROM, 1 x Graphics card power, 2 x FDD, 2 x SATA		

Ordering Information

Part No.	Description
ACE-A160B-R10	600W PS/2 ATX Power Supply with ERP, RoHS

Dimensions *(Unit: mm)*



REF. ID	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1 / 24	1	+3.3VDC	ORANGE	18	WST P20-142002K11D+ P4-142002K11D or EQUIV.	400±20mm
	2	+3.3VDC	ORANGE	18		
	3	COM	BLACK	18		
	4	+5VDC	RED	18		
	5	COM	BLACK	18		
	6	+5VDC	RED	18		
	7	COM	BLACK	18		
	8	PW-OK	GRAY	22		
	9	+5Vsb	PURPLE	18		
	10	+12V3	Yel/Blue	18		
	11	+12V3	Yel/Blue	18		
	12	+3.3VDC	ORANGE	18		
	13	+3.3VDC +3.3VSense	ORANGE BROWN	18 22		
	14	-12VDC	BLUE	22		
	15	COM	BLACK	18		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	18		
	18	COM	BLACK	18		
	19	COM	BLACK	18		
	20	-5V	WHITE	22		
	21	+5VDC	RED	18		
	22	+5VDC	RED	18		
	23	+5VDC	RED	18		
	24	COM	BLACK	18		
P2	1	+12V4	Yel/White	18	WST P8-142002 K21B-B or EQUIV. (Black)	400±15mm
	2	+12V4	Yel/White	18		
	3	+12V4	Yel/White	18		
	4	COM	BLACK	18		
	5	COM	BLACK	18		
	6	COM	BLACK	18		
	7	COM	BLACK	18		
	8	COM	BLACK	18		
P3	1	COM	BLACK	18	MOLEX 39-01-2040 or EQUIV.	500±15mm
	2	COM	BLACK	18		
	3	+12V1	YELLOW	18		
	4	+12V1	YELLOW	18		
PA	1	+3.3VDC	ORANGE	18	MOLEX SD-67926 -0011 or EQUIV.	400±15mm
	2	COM	BLACK	18		
	3	+5V	RED	18		
	4	COM	BLACK	18		
	5	+12V2	Yel/Black	18		
PB	1	+3.3VDC	ORANGE	18	MOLEX SD-67582 -001 or EQUIV.	155±10mm
	2	COM	BLACK	18		
	3	+5V	RED	18		
	4	COM	BLACK	18		
	5	+12V2	Yel/Black	18		

REF. ID	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
PC	1	+12V2	Yel/Black	18	WST P4-A10202 or EQUIV.	400±15mm
PF	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PD PE PG	1	+12V2	Yel/Black	18	WST P4-A10202 or EQUIV.	155±10mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PH	1	+5V	RED	22	AMP 171822-4 or EQUIV.	150±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V2	Yel/Black	22		
PI PL	1	+12V3	Yel/Blue	18	WST P4-A10202 or EQUIV.	400±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PJ PM	1	+12V3	Yel/Blue	18	WST P4-A10202 or EQUIV.	155±10mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PK	1	+5V	RED	22	AMP 171822-4 or EQUIV.	150±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V3	Yel/Blue	22		

ACE-4840APM

400 W PS/2 Medical Type ATX Power Supply

400W

Medical

New Version 20+4 Pins Power Supply

PFC

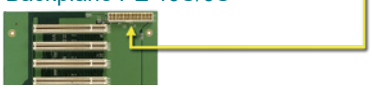
Features

1. Internal 8 cm fan
2. Meets medical safety standards
3. Line input fuse protection
4. Output overvoltage protection
5. Short circuit protection on all outputs
6. Total +12 V output up to 34 A

PICMG 1.0 Form Factor Backplane

20+4-pin ATX power connector

PICMG 1.3 Form Factor Backplane PE-10S/6S



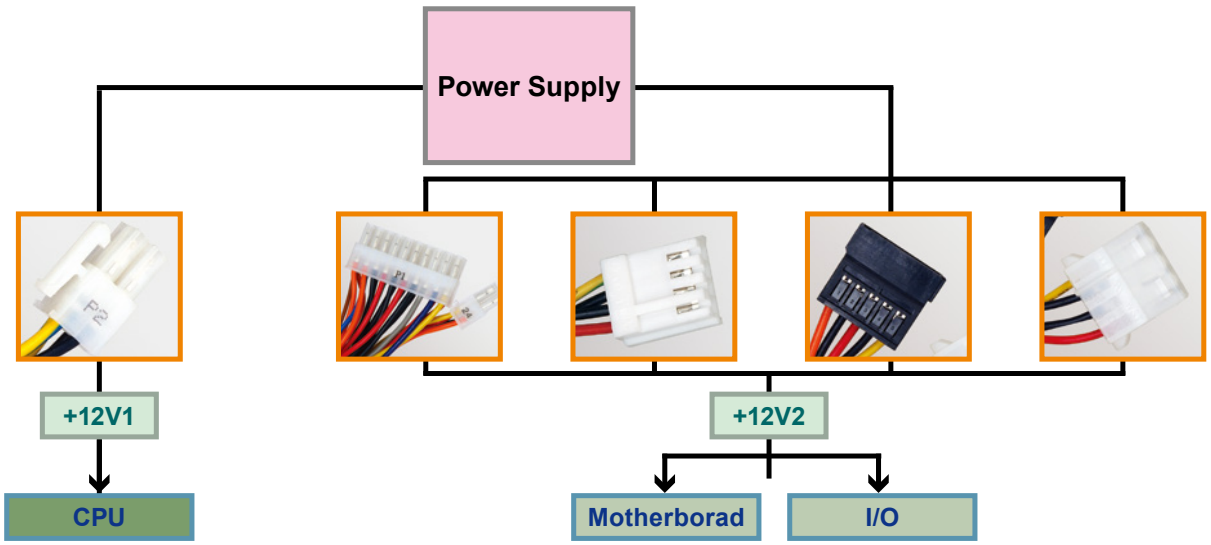
Specifications

Input Voltage	90 ~ 265 VAC Full Range			
Input Frequency	47 Hz ~ 63 Hz			
Input Current	8 A (RMS) for 115 VAC, 4 A (RMS) for 230 VAC			
Inrush Current	60 A max. for 115 VAC, 100 A max. for 230 VAC			
Output Voltage	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3 V	0.5 A min	30 A	50 mV
	+5 V	0.3 A min	30 A	50 mV
	+12 V1	1 A min	17 A	120 mV
	+12 V2	1 A min	17 A	120 mV
	-5 V		0.3 A	100 mV
	-12 V		0.8 A	120 mV
	+5 V sb		2 A	50 mV
	+3.3 V & +5 V total output not exceed 180 W +3.3 V & +5 V & +12 V total output not exceed 380 W			
Overvoltage Protection	+5 V +3.3 V +12 V	5.7 V ~ 6.5 V 3.7 V ~ 4.5 V 13.3 V ~ 15.6 V		
Hold Up Time	20 ms min.			
MTBF	100,000 hours			
Operating Temperature	0°C ~ 50°C			
Storage Temperature	-20°C ~ 80°C			
Efficiency	68%			
Dimensions (mm)	140 x 150 x 86			
Output Connector	1 x 20+4-pin ATX, 1 x 4-pin 12V CPU, 5 x HDD/CDROM, 2 x FDD, 2 x SATA, 1 x Extra +5V (P10)			

Ordering Information

Part No.	Description
ACE-4840APM-RS	400 W AC-DC PS/2 ATX Power Supply, meets medical standard, with PFC

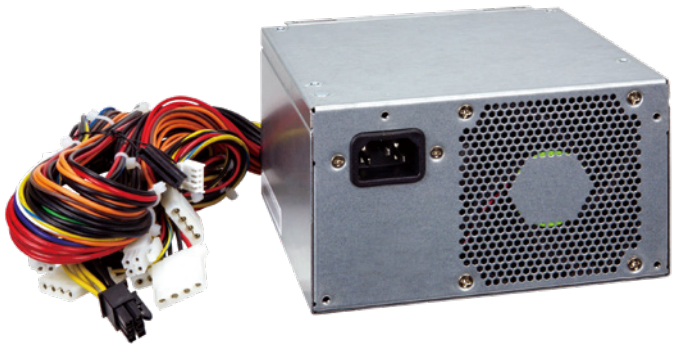
■ Power Connector +12 V



ACE-A140B

400 W PS/2 ATX Power Supply with ErP

400W



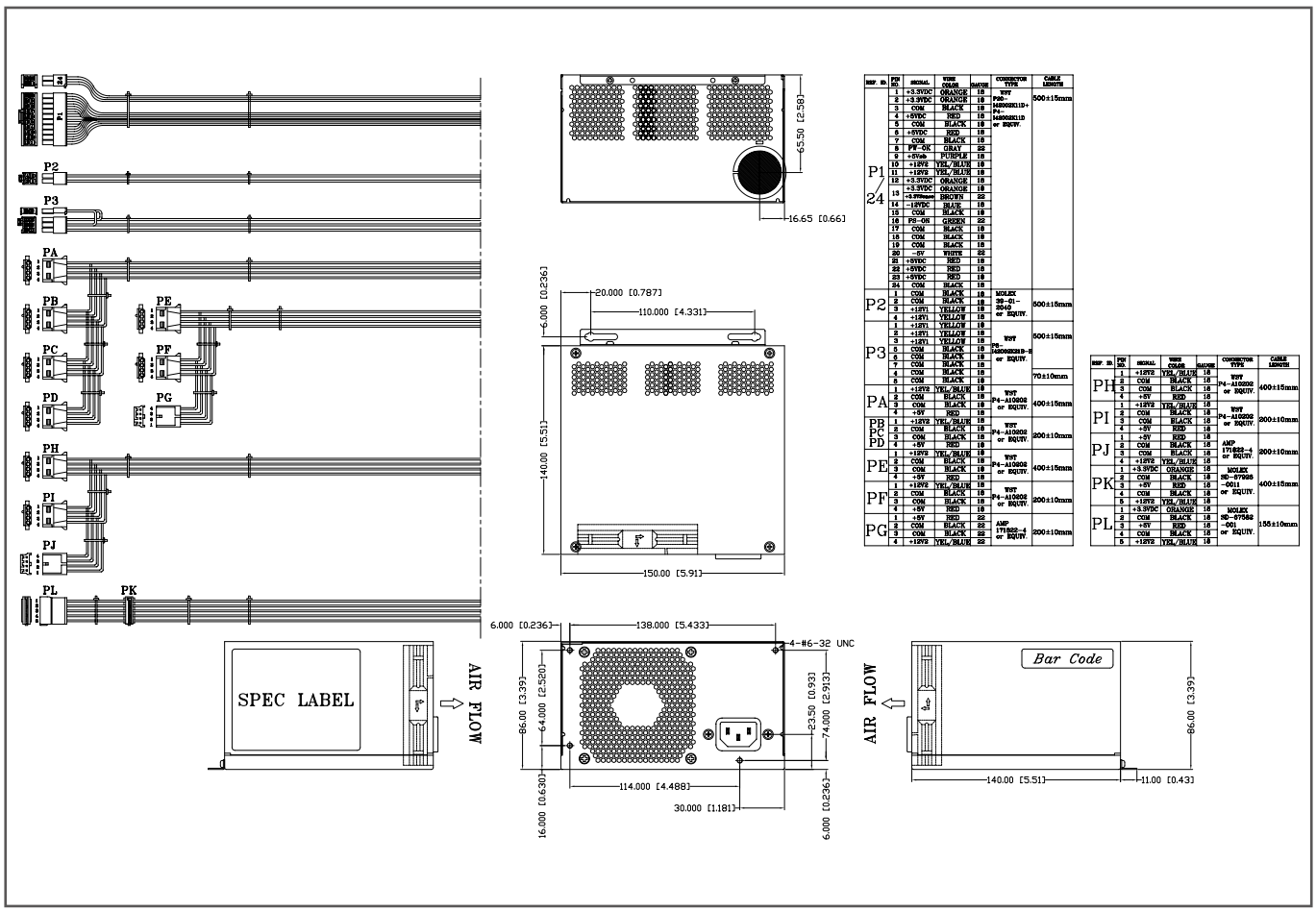
Specifications

Input	**Voltage**	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	5A (RMS)@115VAC, 2.5A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC 160A max. for 230VAC		
Output	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3V	0 A	21 A	50mV
	+5V	0.2 A	16 A	50mV
	+12V1	0.05A	17 A	120mV
	+12V2	0 A	17 A	120mV
	-12V	0 A	0.5 A	120mV
	-5V	0 A	0.1 A	100mV
	+5VSB	0 A	3 A	50mV
	The +3.3V and +5V total output shall not exceed 103W.			
	Total output for this power supply is 400 watts.			
	Over Voltage Protection	+3.3V: 3.76V-4.3V +5V: 5.74V-7.0V +12V1 and +12V2: 13.4V-15.6V		
	Short Circuit Protection	+3.3V, +5V, +12V or -12V shutdown and latch off		
General Specifications	**Watt**	400W		
	PFC	Active		
	Hold-up Time	16 ms min.		
	Efficiency	87%		
	MTBF	100000 hours		
	Temperature	Operating: 0°C ~ 50°C Storage: -20°C ~ 80°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Connector	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 8 x HDD/CDROM, 1 x Graphics card power, 2 x FDD, 2 x SATA		

Ordering Information

Part No.	Description
ACE-A140B-R10	400W AC-DC PS/2 ATX Power Supply with ErP, meets 80 PLUS (Bronze)

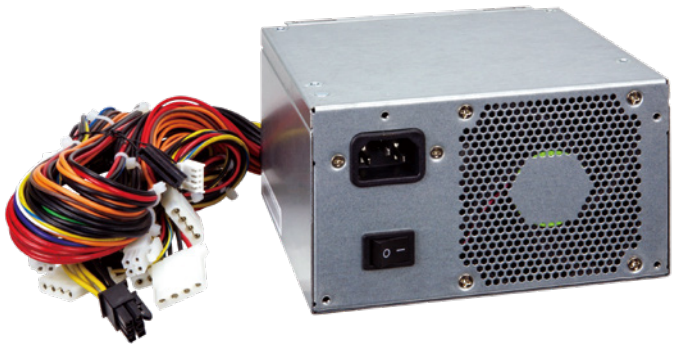
Dimensions *(Unit: mm)*



ACE-A140B-S

400 W PS/2 ATX Power Supply with ErP

400W



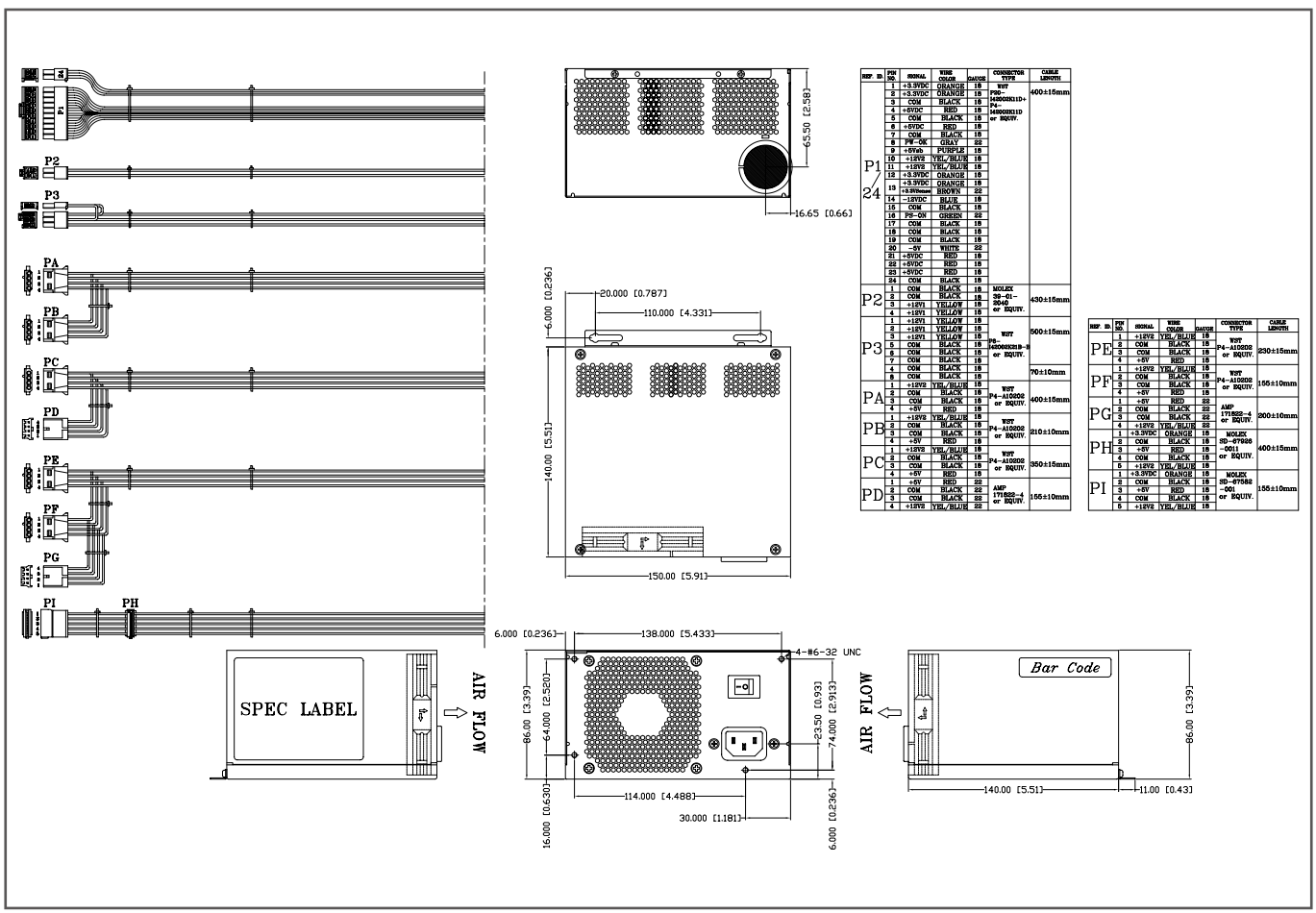
Specifications

Input	**Voltage**	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	5A (RMS)@115VAC, 2.5A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC 160A max. for 230VAC		
Output	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3V	0 A	21 A	50mV
	+5V	0.2 A	16 A	50mV
	+12V1	0.05 A	16 A	120mV
	+12V2	0 A	17 A	120mV
	-12V	0 A	17 A	120mV
	-5V	0 A	0.1 A	100mV
	+5VSB	0 A	3 A	50mV
	The +3.3V and +5V total output shall not exceed 103W			
	Total output for this power supply is 400 watts.			
	Over Voltage Protection	+3.3V: 3.76V-4.3V +5V: 5.74V-7.0V +12V1 and +12V2: 13.4V-15.6V		
	Short Circuit Protection	+3.3V, +5V, +12V or -12V shutdown and latch off		
General Specifications	**Watt**	400W		
	PFC	Active		
	Hold-up Time	16ms min.		
	Efficiency	87%		
	MTBF	100000 hours		
	Temperature	Operating: 0°C ~ 50°C Storage: -20°C ~ 80°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Connector	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 8 x HDD/CDROM,1 x Graphics card power, 2 x FDD, 2 x SATA		

Ordering Information

Part No.	Description
ACE-A140B-S-R10	400W PS/2 ATX Power Supply with ERP & on/off switch, meets 80 plus(Gold), RoHS

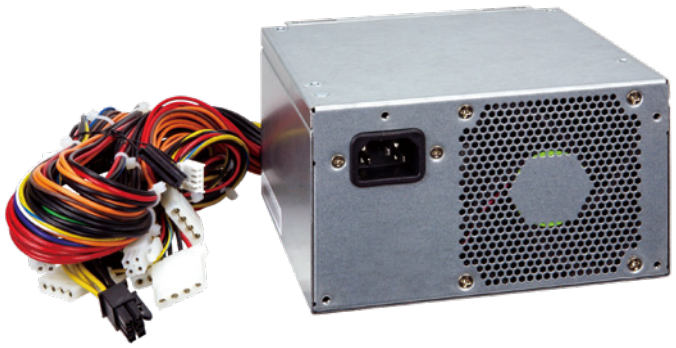
Dimensions *(Unit: mm)*



ACE-A130C

300 W PS/2 ATX Power Supply with ErP

300W



80 PLUS GOLD PFC

ErP 5Vsb < 0.5W Input

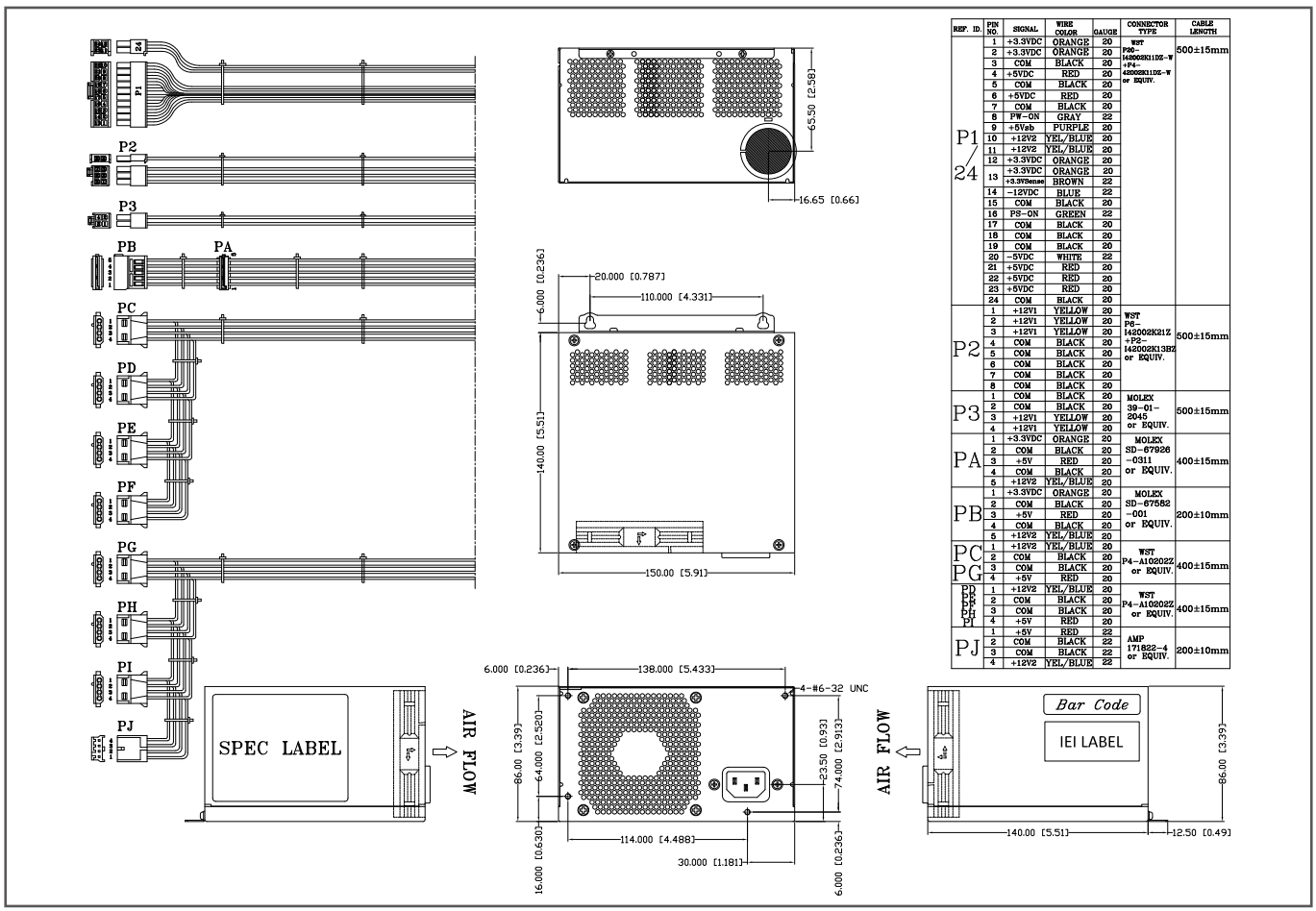
Specifications

Input	**Voltage**	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	4A (RMS)@115VAC, 2A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC, 160A max. for 230VAC		
Output	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3V	0 A	19 A	50mV
	+5V	0.2 A	16 A	50mV
	+12V1	0.05 A	17 A	120mV
	+12V2	0 A	17 A	120mV
	-12V	0 A	0.5A	120mV
	+5VSB	0 A	3 A	50mV
	-5V	0 A	0.1 A	100mV
	Total combined output of +3.3V and +5V is ≤103W			
	Total output for this power supply is 300 watts			
	Over Voltage Protection	+3.3V: 3.76V-4.3V +5V: 5.74V-7.0V +12V1 and +12V2: 13.4V-15.6V		
	Short Circuit Protection	+3.3V, +5V, +12V shutdown and latch off		
General Specifications	**Watt**	300W		
	PFC	Active		
	Hold-up Time	16 ms min.		
	Efficiency	87%		
	MTBF	100,000 hours		
	Temperature	Operating: 0°C ~ 50°C Storage: -40°C ~ 70°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Conntrctor	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 7 x HDD/ CDROM, 1 x Graphics card power, 1 x FDD, 2 x SATA		

Ordering Information

Part No.	Description
ACE-A130C-R10	300W PS/2 ATX Power Supply with ERP&PFC, meets 80 plus (Gold), RoHS

Dimensions *(Unit: mm)*

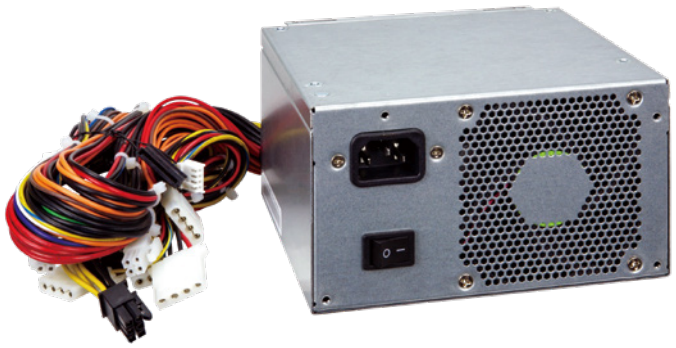


REF. ID.	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1 / 24	1	+3.3VDC	ORANGE	20	WST P20-1420028K11D2-W +P4-420028K11D2-W or EQUIV.	500±15mm
	2	+3.3VDC	ORANGE	20		
	3	COM	BLACK	20		
	4	+5VDC	RED	20		
	5	COM	BLACK	20		
	6	+5VDC	RED	20		
	7	COM	BLACK	20		
	8	PW-ON	GRAY	22		
	9	+5Vsb	PURPLE	20		
	10	+12V2	YEL/BLUE	20		
	11	+12V2	YEL/BLUE	20		
	12	+3.3VDC	ORANGE	20		
	13	+3.3VDC	ORANGE	20		
		+3.3VSense	BROWN	22		
	14	-12VDC	BLUE	22		
	15	COM	BLACK	20		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	20		
	18	COM	BLACK	20		
	19	COM	BLACK	20		
	20	-5VDC	WHITE	22		
	21	+5VDC	RED	20		
	22	+5VDC	RED	20		
	23	+5VDC	RED	20		
	24	COM	BLACK	20		
P2	1	+12V1	YELLOW	20	WST P2-1420026K21Z +P2-1420026K13B2 or EQUIV.	500±15mm
	2	+12V1	YELLOW	20		
	3	+12V1	YELLOW	20		
	4	COM	BLACK	20		
	5	COM	BLACK	20		
	6	COM	BLACK	20		
	7	COM	BLACK	20		
	8	COM	BLACK	20		
P3	1	COM	BLACK	20	MOLEX 39-01-2045 or EQUIV.	500±15mm
	2	COM	BLACK	20		
	3	+12V1	YELLOW	20		
	4	+12V1	YELLOW	20		
PA	1	+3.3VDC	ORANGE	20	MOLEX SD-67926-0311 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
PB	5	+12V2	YEL/BLUE	20	MOLEX SD-67582-001 or EQUIV.	200±10mm
	1	+3.3VDC	ORANGE	20		
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
PC / PG	5	+12V2	YEL/BLUE	20	WST P4-A102022 or EQUIV.	400±15mm
	1	+12V2	YEL/BLUE	20		
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PD / PE / PH / PI	1	+12V2	YEL/BLUE	20	WST P4-A102022 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PJ	1	+5V	RED	22	AMP 171822-4 or EQUIV.	200±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V2	YEL/BLUE	22		

ACE-A130C-S

300 W PS/2 ATX Power Supply with ErP

300W



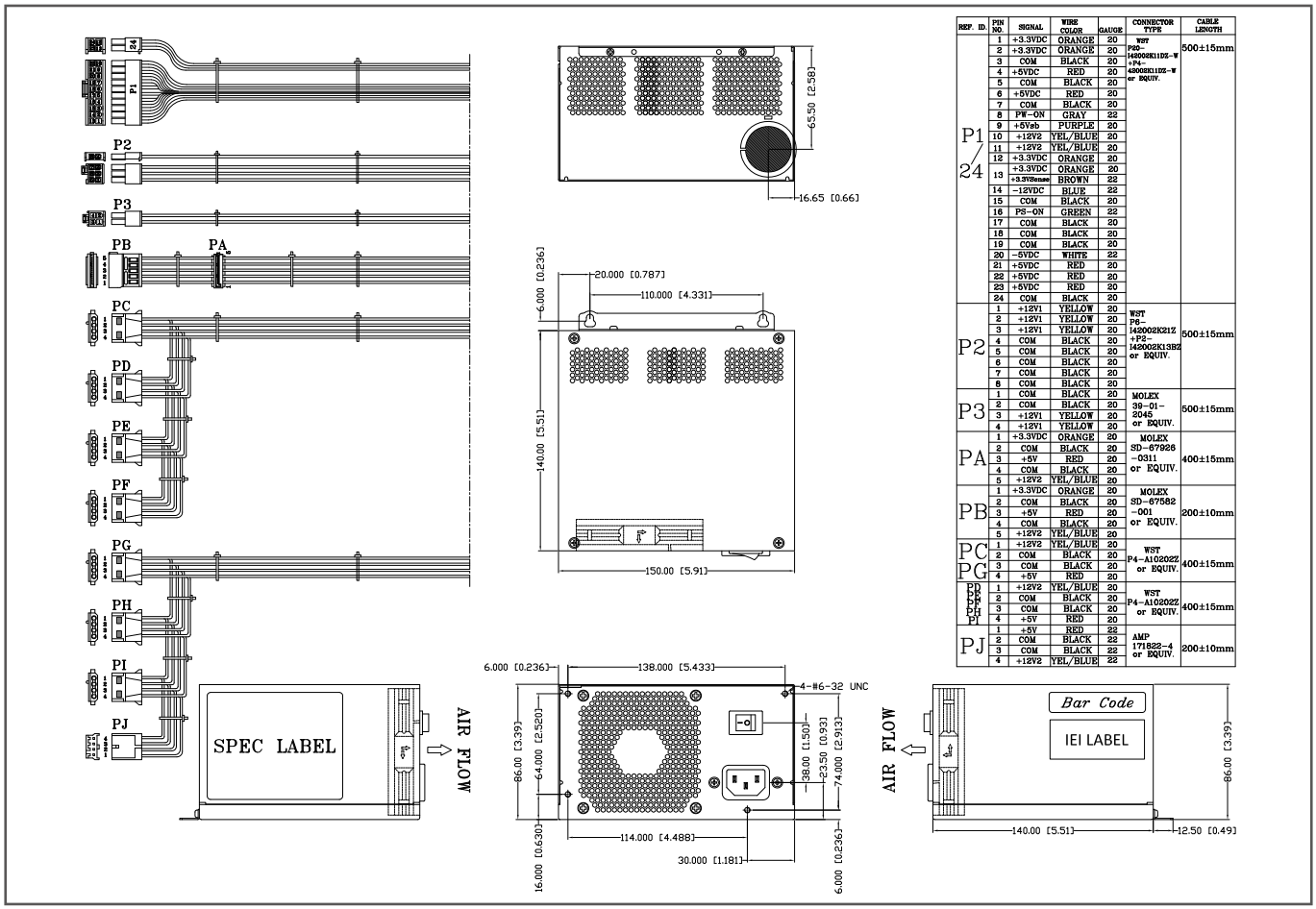
Specifications

Input	**Voltage**	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	4A (RMS)@115VAC, 2A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC, 160A max. for 230VAC		
Output	**Voltage**	**Min. load**	**Max. load**	**Ripple & Noise**
	+3.3V	0 A	19 A	50mV
	+5V	0.2 A	16 A	50mV
	+12V1	0.05 A	17 A	120mV
	+12V2	0 A	17 A	120mV
	-12V	0 A	0.5A	120mV
	+5VSB	0 A	3 A	50mV
	-5V	0 A	0.1 A	100mV
	Total combined output of +3.3V and +5V is ≤103W			
	Total output for this power supply is 300 watts			
	Over Voltage Protection	+3.3V: 3.76V-4.3V +5V: 5.74V-7.0V +12V1 and +12V2: 13.4V-15.6V		
	Short Circuit Protection	+3.3V, +5V, +12V shutdown and latch off		
General Specifications	**Watt**	300W		
	PFC	Active		
	Hold-up Time	16 ms min.		
	Efficiency	87%		
	MTBF	100,000 hours		
	Temperature	Operating: 0°C ~ 50°C Storage: -40°C ~ 70°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Conntrctor	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 7 x HDD/ CDROM, 1 x Graphics card power, 1 x FDD, 2 x SATA		

Ordering Information

Part No.	Description
ACE-A130C-S-R10	300W PS/2 ATX Power Supply with ERP/PFC & on/off switch, meets 80 plus (Gold), RoHS

Dimensions *(Unit: mm)*



REF. ID	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1/24	1	+3.3VDC	ORANGE	20	WST P20-1420024K11DZ-W +P4-42003K11DZ-W or EQUIV.	500±15mm
	2	+3.3VDC	ORANGE	20		
	3	COM	BLACK	20		
	4	+5VDC	RED	20		
	5	COM	BLACK	20		
	6	+5VDC	RED	20		
	7	COM	BLACK	20		
	8	PW-ON	GRAY	22		
	9	+5Vsb	PURPLE	20		
	10	+12V2	YEL/BLUE	20		
	11	+12V2	YEL/BLUE	20		
	12	+3.3VDC	ORANGE	20		
	13	+3.3VDC	ORANGE	20		
		+3.3Vsense	BROWN	22		
	14	-12VDC	BLUE	22		
	15	COM	BLACK	20		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	20		
	18	COM	BLACK	20		
	19	COM	BLACK	20		
	20	-5VDC	WHITE	22		
	21	+5VDC	RED	20		
	22	+5VDC	RED	20		
	23	+5VDC	RED	20		
	24	COM	BLACK	20		
P2	1	+12V1	YELLOW	20	WST P20-1420024K21Z +P2-1420023K13BZ or EQUIV.	500±15mm
	2	+12V1	YELLOW	20		
	3	+12V1	YELLOW	20		
	4	COM	BLACK	20		
	5	COM	BLACK	20		
	6	COM	BLACK	20		
	7	COM	BLACK	20		
	8	COM	BLACK	20		
P3	1	COM	BLACK	20	MOLEX 39-01-2046 or EQUIV.	500±15mm
	2	COM	BLACK	20		
	3	+12V1	YELLOW	20		
	4	+12V1	YELLOW	20		
PA	1	+3.3VDC	ORANGE	20	MOLEX SD-67926-0311 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
PB	5	+12V2	YEL/BLUE	20	MOLEX SD-67582-001 or EQUIV.	200±10mm
	1	+3.3VDC	ORANGE	20		
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
PC/PG	5	+12V2	YEL/BLUE	20	WST P4-A10202Z or EQUIV.	400±15mm
	1	+12V2	YEL/BLUE	20		
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PD/PE/PF/PI	1	+12V2	YEL/BLUE	20	WST P4-A10202Z or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
	1	+5V	RED	22		
PJ	2	COM	BLACK	22	AMP 171822-4 or EQUIV.	200±10mm
	3	COM	BLACK	22		
	4	+12V2	YEL/BLUE	22		

PS/2 AC Input AT Type

ACE-935AL

300 W PS/2 Type AT Power Supply, AC Select Swithch

Specifications

Input Type	**85 ~ 140 VAC, 170 ~ 270 VAC Auto Range**					
Output Voltage	**+3.3 V**	**+5 V**	**+12 V**	**-5 V**	**-12 V**	**+5 Vsb**
		40 A (3A min.)	8 A (0.1A min.)	0.3 A	0.7 A	
Efficiency	68%					
Temperature	0°C ~ 50°C (Operating), -40°C ~ 75°C (Storage)					
MTBF (hrs)	100,000					
Output Connector	1 x P8+P9, 1 x Extra +5V (P10), 5 x HDD/CDROM, 2 x FDD					

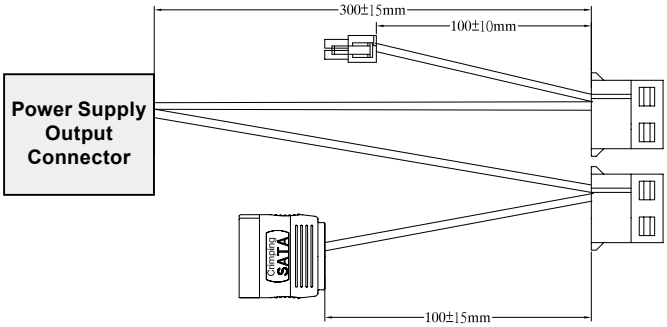
Ordering Information

Part No.	Description
ACE-935AL-RS	300 W AC-DC PS/2 AT Power Supply, AC select switch

Optional Power Supply Cables

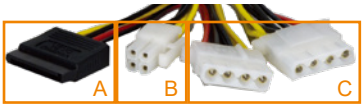
AC Input Solution

20 cm AC input cable with I/O connector and fuse

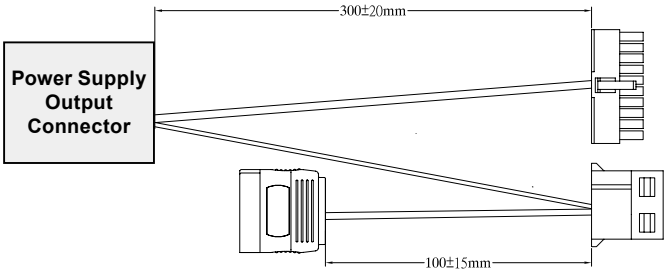


Embedded Solution

30 cm cable with SATA, 12 V and IDE device connectors

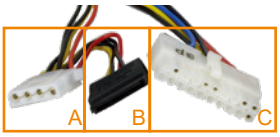


A. SATA device connector
B. 12V only connector
C. IDE device connector

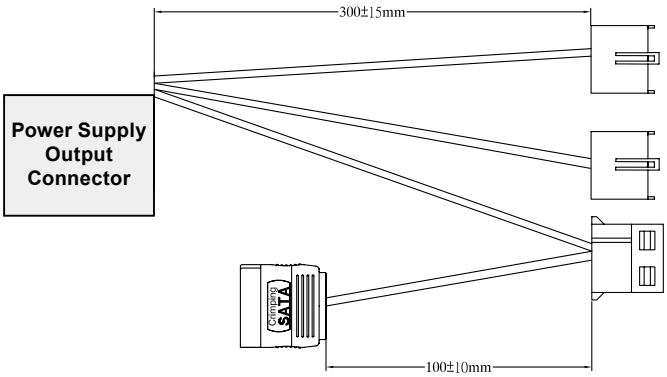


ATX Backplane Solution

30 cm cable with IDE, ATX and SATA device connectors

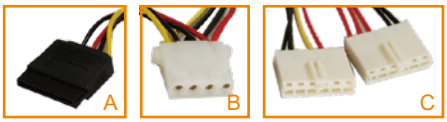


A. IDE device connector
B. SATA device connector
C. ATX backplane connector



AT P8P9 Backplane Solution

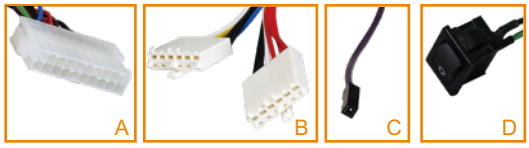
30 cm cable with SATA, IDE and P8P9 AT device connectors



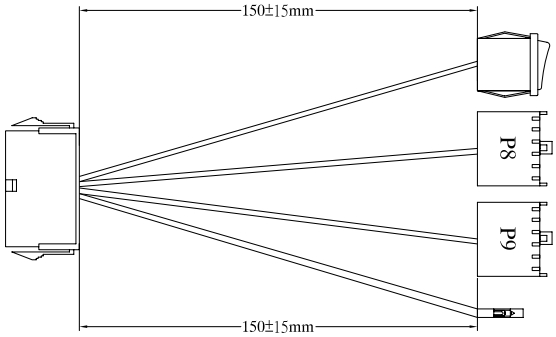
A. SATA device connector
B. IDE device connector
C. P8P9 AT connector

AT Backplane with ATX Power Supply Solution

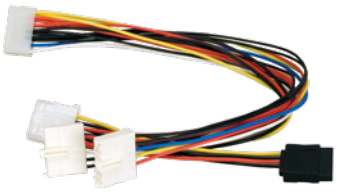
15 cm cable with ATX, P8P9 and 5VSB connectors, and on/off switch



A. ATX backplane connector
B. P8P9 AT connector
C. 5Vsb connector
D. On/off switch



CB-870P8P9



Redundant Type Selection Guide

AC Input

Product	Model No.	Watt AT/ATX PFC	Input Range Voltage	Output Current Range +3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb	24V	Efficiency	Operating Temperature	Safety	Dimensions (mm)
	ACE-R4150AP	500W ATX PFC	90 ~ 264 VAC	20A (0A min.)	20A (0A min.)	40A (1A min.)	0.3 A (0A min.)	0.5 A (0A min.)	3 A		84%	0°C ~ 50°C	CB, UL, TUV, CCC, CE, FCC	150 × 84× 190
	ACE-R4130AP	300W ATX PFC	90 ~ 264 VAC	18 A (1 A min.)	25 A (3 A min.)	16 A (2 A min.)	0.5A	0.5 A	2 A (0.1 A min.)		65%	0°C ~ 50°C	CB, UL, TUV, CCC, CE, FCC	150 × 84 × 190

ACE-R4150AP

500 W ATX Mini Redundant Power Supply

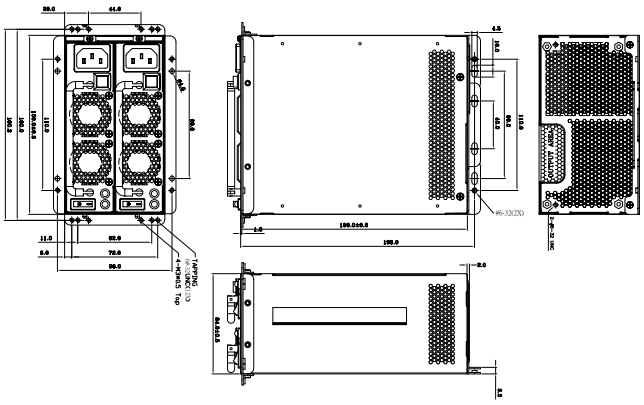
500W

New

Specifications

Input	Voltage	90 ~ 264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6 A (RMS) @115 VAC, 3 A (RMS) @230 VAC		
	Inrush Current	40 A max. for 115 VAC, 80 A max. for 230 VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3 V	0 A	20.0 A	50mVp-p
	+5 V	0 A	20.0 A	50mVp-p
	+12V	1 A	40.0 A	1200mVp-p
	-5 V	0 A	0.3 A	200mVp-p
	-12 V	0 A	0.5 A	200mVp-p
	+5 VSB	0 A	3 A	50mVp-p
General Specifications	Watt	500 W		
	Hold-up Time	The power supply holdup time requirements to 100% of maximum load.		
	Efficiency	84% min		
	MTBF	100,000 hours		
	Temperature	Operating: 0ºC ~ 50ºC, Storage: -20ºC ~ 80ºC		
	Dimensions	150 × 84× 190 (mm)		
	Output Connector	1 x 24-pin ATX, 2 x 4+4-pin 12V CPU, 2 x HDD/ CDROM, 1 x FDD, 2 x SATA, 1 x T.T.L signal, 1 x LED power		

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
ACE-A4150AP-R10	500W ATX Redundant Power Supply,includes two ACE-R4150AP1-RS,with PFC function;CCL
ACE-A4150AP1-R10	500W AC-DC ATX Redundant module, for ACE-R4150AP,with PFC,CCL;RoHS

ACE-R4130AP

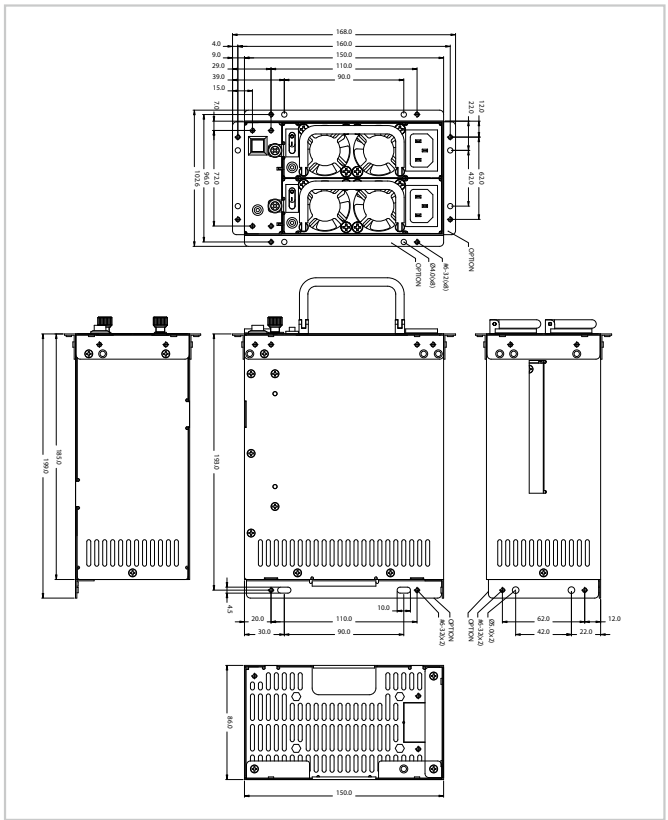
300 W ATX Mini Redundant Power Supply

300W

Specifications

Input	Voltage	90 ~ 264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6 A (RMS) @110 VAC, 3 A (RMS) @220 VAC		
	Inrush Current	60 A max. for 110 VAC, 80 A max. for 220 VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+5 V	3 A	25 A	50mV P-P
	+12 V	2 A	16 A	120mV P-P
	-5 V	0 A	0.5 A	150mV P-P
	-12 V	0 A	0.5 A	150mV P-P
	+3.3 V	1 A	18 A	50mV P-P
	+5 Vsb	0.1 A	2 A	60mV P-P
	*Total current of +5 V and + 3.3 V not exceed 35 A *Total current of +5 V, +3.3 V and +12 V not exceed 282 W			
General Specifications	Watt	300 W		
	Hold-up Time	16 ms min.		
	Efficiency	65% min.		
	MTBF	160,000 hours		
	Temperature	Operating: 0ºC ~ 50ºC, Storage: -20ºC ~ 80ºC		
	Dimensions	185 x 150 x 86 (mm), 7.28 x 5.91 x 3.39 (inch)		
	Output Connector	1 x 20+4-pin ATX, 1 x 4-pin 12V CPU, 8 x HDD/ CDROM, 2 x FDD, 2 x SATA, 1 x Buzzer reset, 1 x T.T.L signal, 1 x LED power		

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
ACE-R4130AP-RS	300 W Mini Redundant ATX Power Supply, with PFC
ACE-R4130AP1-RS	300 W AC-DC ATX Redundant Module, for ACE-R4130AP, with PFC

Adapter Type Selection Guide

Safety (ITE Stardard) - CB IEC 60950, UL 60950, CSA C 22.2 No. 60950, TUV EN 60950
Safety (Medical Stardard) - CB IEC 60601, UL 60601, CSA C 22.2 No. 60601, TUV EN 60601
EMI - Meets EN 55022, FCC Part 15, CISPR 22
Meets EN 61000-3-2, EN 61000-3-3 (PFC function)
EMS - Meets EN 55024, EN 61000-4-2/3/4/5/6/8/11

** For detailed specs, please refer to official certification*

AC Input

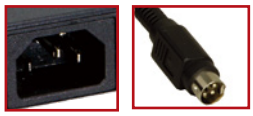
Product	Model No.	Watt	Input Range	Output Current Range			Plug Type	Efficiency	Operating Temperature	Safety	Dimensions (mm)
			Voltage	+5V	+12 V	+19 V					
	New FSP150-ABAN3	150W	90~264 VAC		10 A	7.89A		87%	0°C ~ 40°C	UL/TUV CCC/CE/ GS/PSE/KC/ BSMI	75.6 x 151.3 x 25.4
	FSP120-AHAN3	120W	90~264 VAC		10 A			87%	0°C ~ 40°C	UL/TUV CCC/CE/ GS/PSE/KC/ BSMI	75.6 x 151.3 x 25.4
	FSP096-AHAN3	96W	90~264 VAC		8 A			88%	0°C ~ 40°C	UL/TUV/CCC/ CE/GS/PSE/ KC/BSMI/ RCM	75.6 x 151.3 x 25.4
	FSP090-DBBN3	90W	90~264 VAC			4.74 A		88%	0°C ~ 40°C	UL/TUV/CCC/ CE/GS/PSE/ KC/BSMI/ RCM/PSE	51 x 129 x 30.9
	FSP065-RBBN3	65W	90~264 VAC			3.42 A		89.54%	0°C ~ 40°C	UL/TUV/CCC/ CE/BSMI/ PSE/PSB/GS/ EAC/NOM/ RCM/IRAM/ Nrcan/Nemko	46.3 x 108.3 x 30
	FSP060-DHAN3	60W	90 ~ 264 VAC		5V			85%	0°C ~ 40°C	UL/TUV/CCC/ GS/PSE/RCM/ CE/KC /BSMI	62 x 110 x 31.5
	FSP036-RHBN3	36W	90 ~ 264 VAC		3 A			88.3%	0°C ~ 40°C	UL/TUV/CCC/ GS/CE/BSMI/ PSE/RCM/KC	37.8 x 89.8 x 27

FSP150-ABAN3

150 W AC/DC Adapter

150W

New



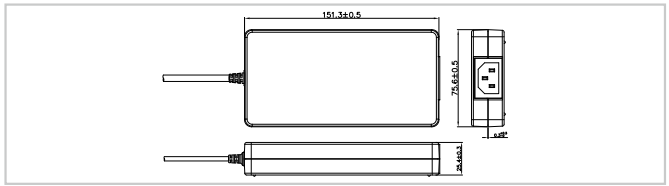
Plug Type: Power mini-DIN (4P)

**Meet ErP & PSE

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 19 V
- Output Current: 7.89 A
- Output Watts: 150 W
- Efficiency: 87%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions *(Unit: mm)*



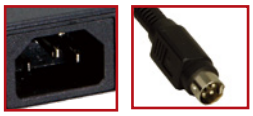
Ordering Information

Part No.	Description
63040-010150-700-RS	19 V 150W power adapter, 90~264 VAC input, ErP, PSE

FSP120-AHAN3

120 W AC/DC Adapter

120W



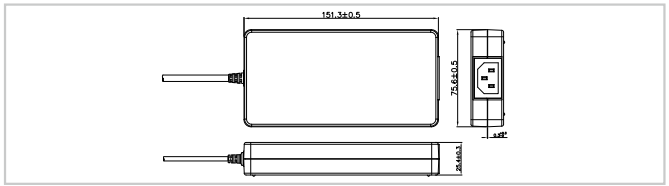
Plug Type: Power mini-DIN (4P)

**Meet ErP & PSE

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 12 V
- Output Current: 10 A
- Output Watts: 120 W
- Efficiency: 87%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
63040-010120-300-RS	12 V 120W power adapter, 90~264 VAC input, ErP, PSE

FSP096-AHAN3

96 W AC/DC Adapter

96W

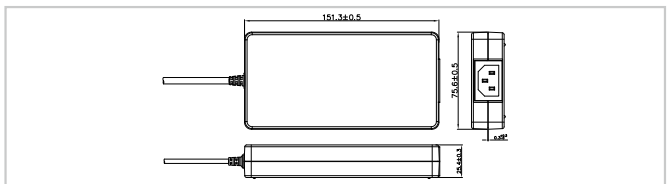
**Meet ErP & PSE

Plug Type: Power mini-DIN (4P)

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 12 V
- Output Current: 8 A
- Output Watts: 96 W
- Efficiency: 88%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
63040-010096-200-RS	12 V 96W power adapter with DIN 4-pin/lock 90~264 VAC input, ErP, PSE, KC, BSMI

FSP090-DBBN3

87 W AC/DC Adapter

90W

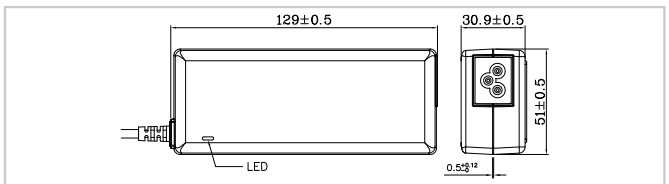
**Meet ErP & PSE

Plug Type: Power mini-DIN (4P)

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 19 V
- Output Current: 4.74 A
- Output Watts: 90 W
- Efficiency: 88%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
待提供	19 V 90W power adapter with DIN 4-pin/lock 90~264 VAC input, ErP

FSP065-RBBN3

65 W AC/DC Adapter

65W

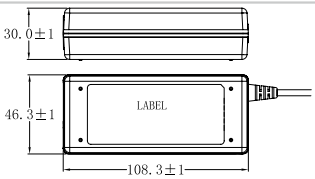
Plug Type: øin 2.1 mm / øout 5.5 mm

**Meet ErP & PSE

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 19 V
- Output Current: 3.42 A
- Output Watts: 65 W
- Efficiency: 86%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~80°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010065-710-RS	19 V 65W power adapter with Φ2.1/Φ5.5/lock 90~264 VAC input, ErP, PSE

FSP060-DHAN3

60 W AC/DC Adapter

60W

Plug Type: øin 2.5 mm / øout 5.5 mm

**Meet ErP & PSE

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 12 V
- Output Current: 5 A
- Output Watts: 60 W
- Efficiency: 85%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 65°C

Dimensions (Unit: mm)

Ordering Information

Part No.	Description
63040-010060-211-RS	12 V 60W power adapter with lock screw 90~264 VAC input, ErP, PSE
63040-010060-200-RS	12 V 60W power adapter with none lock 90~264 VAC input, ErP, PSE

FSP036-RHBN3

36 W AC/DC Adapter

36W

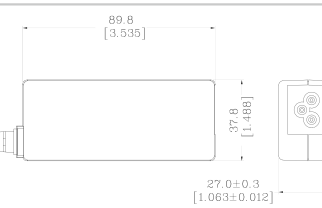
Plug Type: øin 2.5 mm / øout 5.5 mm

**Meet ErP & PSE

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 12 V
- Output Current: 3 A
- Output Watts: 36 W
- Efficiency: 88.3%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010036-210-RS	12 V 36W Power adapter with lock screw, 90~264VAC input, ErP, PSE
63040-010036-220-RS	12 V 36W Power adapter without lock, 90~264VAC input, ErP, PSE

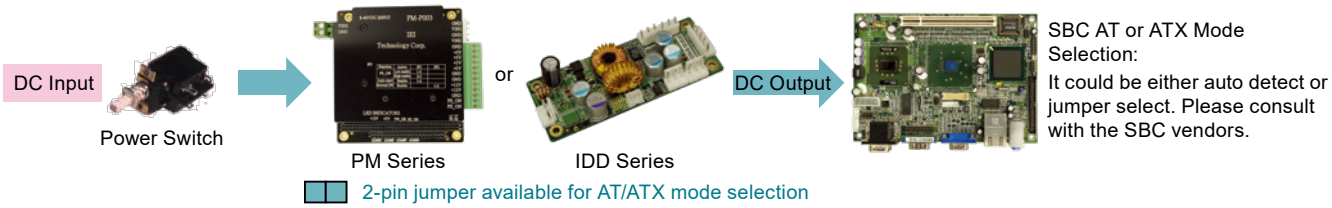
How to Configure the IDD & PM_P Series

AT Mode

1. Power supply without any control signal
2. Power is controlled directly by the power supply's on/off switch.

■ Installation

Step 1. Set the jumper on the power modules and SBC to AT mode (if available)



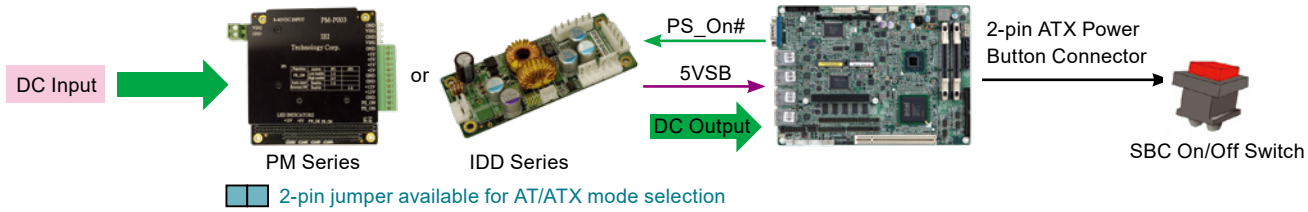
Step 2. Connect all input and output power cables **Step 3.** Wire/Isolate DC input by power switch **Step 4.** Power up by switch

ATX Mode (supports normal Windows® OS power down)

1. Required 5VSB (5V standby power) to SBC.
2. Power supply on/off control by “PS_On#” signal.
3. PS_On# is an active low signal that turns on all power rails.

■ Installation

Step 1. Set the jumper on the power modules and SBC to ATX mode (if available)



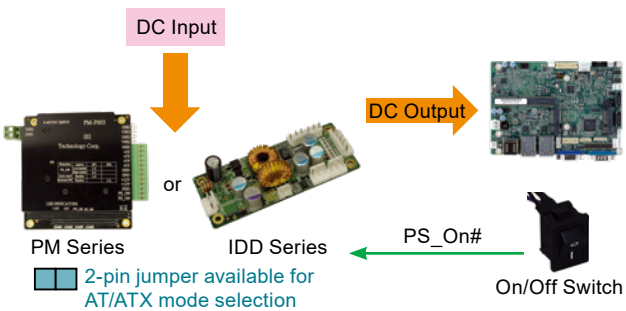
Step 2. Wire 5VSB and PS_ON# from power module to SBC **Step 3.** Wire all input, output power cables **Step 4.** Power up system by SBC on/off switch

Simulated AT Mode

1. The 5 V standby power is not provided to the SBC.
2. Power supply power is controlled by the "PS_On#" signal.
3. The power switch is connected to the power supply.

■ Installation

Step 1. Set the jumper on the power modules to ATX mode and set the jumper on the SBC to AT mode (if available)



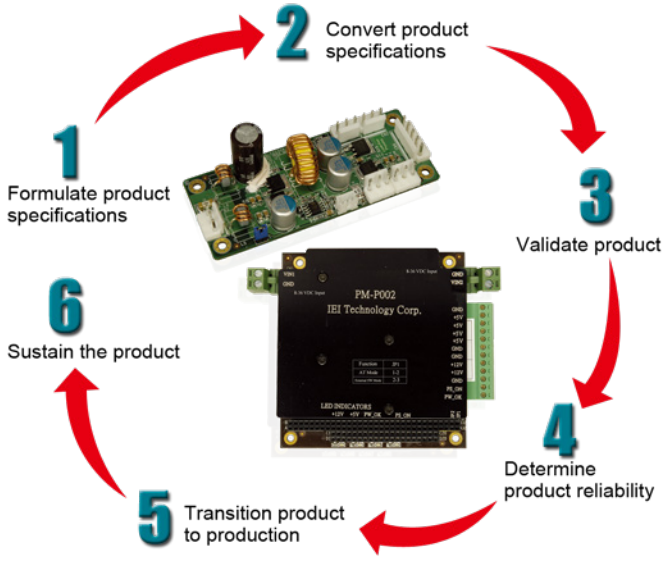
Step 2. Connect 5VSB & PS_ON# from the power module to the SBC.

Step 3. Connect all input and output power cables.

Step 4. Power up the system using the power switch connected to the SBC.

From Scratch to Sustain - Commitment

A partnership with IEI does not end at product shipment. We’re beside you with ongoing product support as your products evolve and change to meet emerging market requirements.



Product List

Model No.	Dimensions	Maximum Output Power	Input Voltage	Maximum Output Current						
				12V	5V	3.3V	-12V	5VSB	16V	20V
IDD-9364120A	45 mm x 160 mm	120 W	9 ~ 36 V	4 A	10 A	8 A	0.3 A	2 A	-	-
IDD-936160	25 mm x 82 mm	60 W	9 ~ 36 V	5 A	-	-	-	-	-	-
IDD-936260A	40 mm x 100 mm	60 W	9 ~ 36 V	3 A	10 A	-	-	0.5 A	-	-

Naming Conventions:

IDD xx - 630 4 120 A

- ATX On/Off Support
- Output Wattage
- Output Voltage Number
- Input Voltage Range
- Extra Features
- Industry DC to DC Converter

Dedicated Engineering Team - Professional

Our dedicated team offers application-specific integrated solutions and will design a customized product that will put you out in front of the competition.
Our solutions include standard/non-standard voltages, isolated/non-isolated, any form factor, power sequencing, battery chargers, electromechanical interference protection, thermal management, remote on/off and I/O interface.

Advanced Test Equipment – Precision & Reliability

Timing/Noise Analyzer Chroma 6011

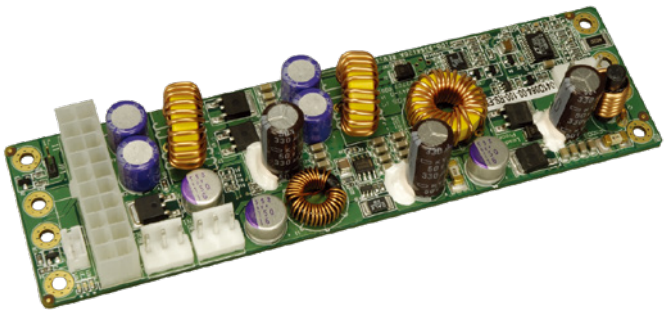
Electronic Load Chroma 6312 Series

Power Analyzer Chroma 6632

IDD-9364120A

120 W DC/DC Converter Module

120W

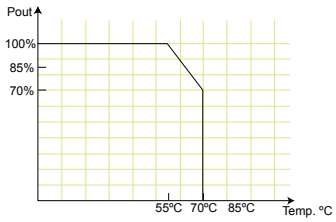


Features

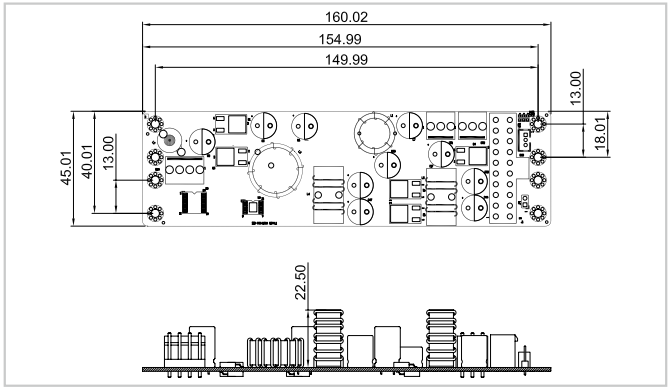
1. Wide input range: 9-36 VDC
2. AT or ATX mode on/off
3. Output voltage protection
4. Up to 90% efficiency
5. RoHS compliant
6. Compact size

Specifications

- Output (max.): 12 V@4 A, 5 V@10 A, 3.3 V@8 A, -12 V@0.3 A & 5VSB@2 A
- Max. total output: 120 W
- Input: 9 VDC to 36 VDC
- Performance characteristics
  - Noise & ripple: <240 mV
  - Line regulation: <50 mV
  - Load regulation: <100 mV
  - Efficiency: Up to 90%
- Dimensions (mm): 45 x 160
- Weight (NW): 104 g
- Operating temperature: -20°C ~ 70°C
- Storage temperature: -25°C ~ 75°C



Dimensions *(Unit: mm)*



Packing Information

1 x IDD-9364120A
1 x QIG

Ordering Information

Part No.	Description
IDD-9364120A-R11	120 W DC/DC 9~36 V input, 12 V, 5 V, 3.3 V, -12 V & 5VSB output
CB-3PSATA-RS	10 cm cable for SATA power
CB-3PIDE-RS	10 cm cable for IDE HDD power
CB-NOLP4-RS	20 cm cable for terminal block DC input
32102-021500-200-RS	30 cm 20-pin ATX to 20-pin ATX cable

Pin Assignments

Input Power Connector

CN4	Pin 1	Pin 2	Pin 3	Pin 4
	VIN	VIN	GND	GND

Output Power Connector

CN1, CN2	Pin 1	Pin 2	Pin 3
	+5 V	GND	+12 V
J1	Standard 2-pin ATX		

ATX Mode Connector

CN3	Pin 1	Pin 2	Pin 3
	5VSB	GND	PS_ON

Wire Harness Selection Guide

DC Input (CN4)

Option 1.
PN: CB-NOLP4-RS
Cable for terminal block

I/O Power (CN1 & CN2)

Option 1.
PN: CB-3PSATA-RS
Cable for SATA

SBC Main Power (J1)

Option 1.
PN: 32102-021500-200-RS
20-pin ATX to 20-pin ATX cable

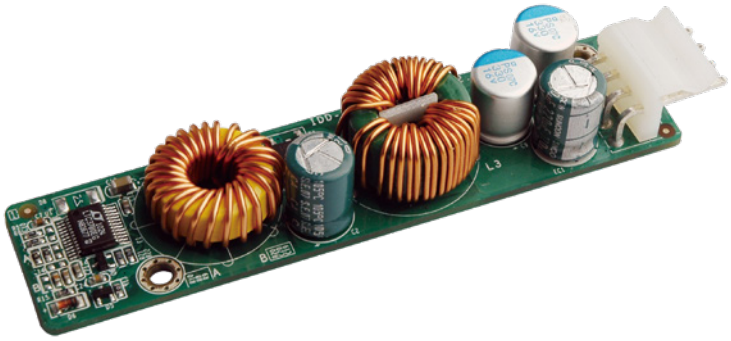
Option 2.
PN: CB-3PIDE-RS
Cable for IDE HDD or any STD 4-pin I/O devices

IDD-936160

60 W DC/DC Converter Module

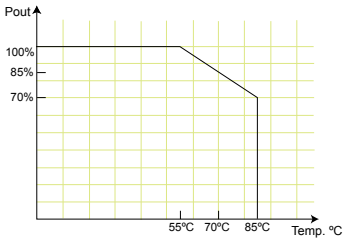
60W

IDD-936160 60W DC/DC Converter Module is a high performance buck-boost switching regulator power module. The constant frequency current mode architecture allows a phaselockable frequency of up to 400 kHz. With a wide 9V to 36V input and 12V output and seamless transfers between operating modes, the IDD-936160 is ideal for embedded systems with limited space.



Specifications

- Output (max.): 12 V@5 A
- Max. total output: 60 W
- Input: 9 VDC to 36 VDC
- Performance characteristics
  Noise & ripple: <300 mV
  Line regulation: <300 mV
  Load regulation: <85 mV
  Efficiency up to 95%
- Dimensions (mm): 82 x 25
- Weight (NW): 28 g
- Operating temperature: -40°C ~ 85°C



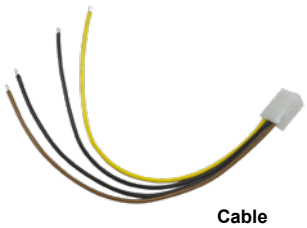
Features

1. Wide input range: 9-36 VDC
2. 12 VDC output up to 5 Amp
3. Compact size
4. Efficiency up to 95%
5. RoHS compliant

Pin Assignments

Input/Output Connector

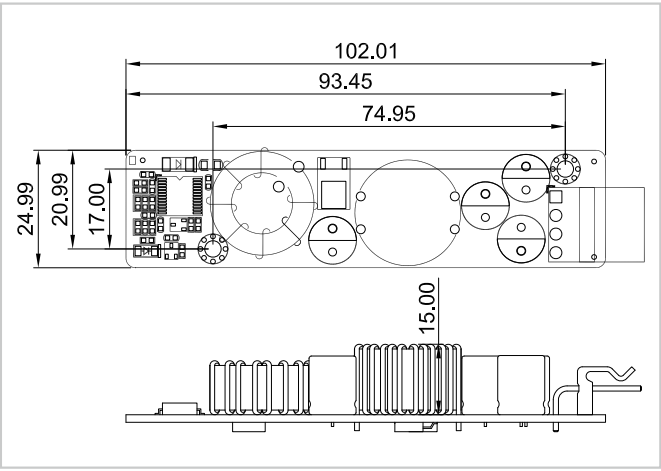
VOUT1	Pin1	Pin2	Pin3
	+12 V Output	GND	Vin



Cable

P/N: 32102-015700-100-RS

Dimensions *(Unit: mm)*



Packing Information

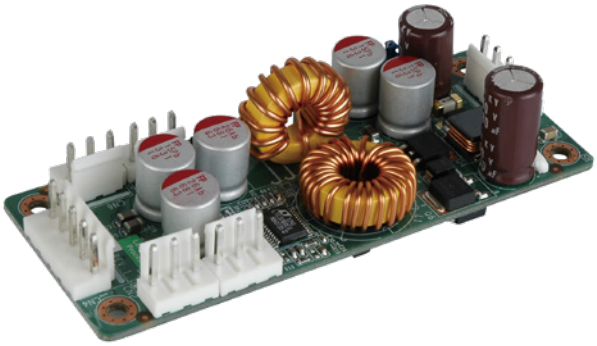
1 x IDD-936160	1 x QIG
1 x 300 mm wire cable (P/N: 32102-015700-100-RS)	

Ordering Information

Part No.	Description
IDD-936160-R20	60 W DC/DC 9~36 V input, 12 V output

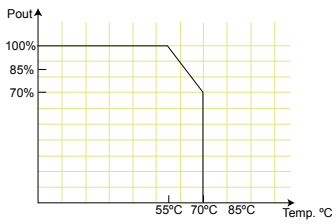
IDD-936260A

60 W DC/DC Converter Module



Specifications

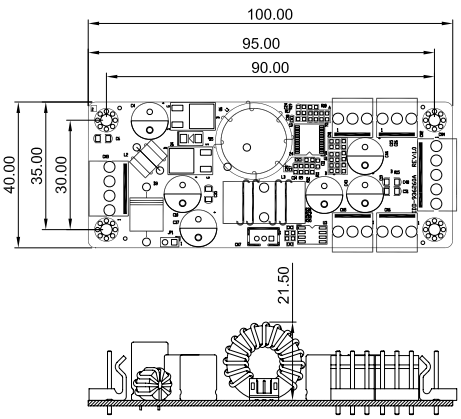
- Output (max.): 12 V@3 A, 5 V@10 A & 5VSB@0.5 A
- Max. total output: 60 W
- Input: 9 VDC to 36 VDC
- Performance characteristics
  Noise & ripple: <240 mV
  Line regulation: <50 mV
  Load regulation: <100 mV
  Efficiency: Up to 90%
- Dimensions (mm): 40 x 100
- Weight (NW): 58 g
- Operating temperature: -20°C ~ 70°C



Features

1. Wide input range: 9-36 VDC
2. AT or ATX mode on/off
3. Up to 90% efficiency
4. RoHS compliant
5. Compact size

Dimensions *(Unit: mm)*



■ Pin Assignments

Input Power Connector

CN3	Pin 1	Pin 2	Pin 3	Pin 4
	VIN	VIN	GND	GND

Output Power Connector

CN4	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
	+5 V	+5 V	GND	GND	+12 V

CN1 CN2 CN5 CN6	Pin 1	Pin 2	Pin 3
	+5 V	GND	+12 V

ATX Mode Connector

CN7	Pin 1	Pin 2	Pin 3
	5VSB	GND	PS_ON

Packing Information

1 x IDD-936260A
1 x QIG

Ordering Information

Part No.	Description
IDD-936260A-R11	60 W DC/DC 9~36 V input, 12 V, 5 V & 5VSB output
CB-3PSATA-RS	10 cm cable for SATA power
CB-3PIDE-RS	10 cm cable for IDE HDD power
CB-NOLP4-RS	20 cm cable for terminal block DC input

■ Wire Harness Selection Guide

DC Input (CN3)

Option 1.
PN: CB-NOLP4-RS
Cable for terminal block

I/O Power (CN1, CN2, CN5 & CN6)

Option 1.
PN: CB-3PSATA-RS
Cable for SATA

Option 2.
PN: CB-3PIDE-RS
Cable for IDE HDD or any STD 4 pins I/O devices