

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



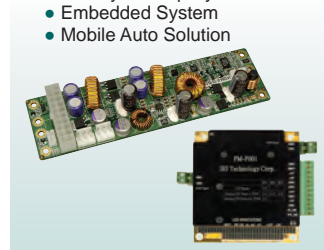
■ Adapter

- LCD Monitor
- AFL Series
- Embedded System

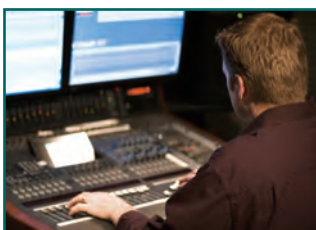


■ DC to DC Module

- Battery Backup System
- Embedded System
- Mobile Auto Solution

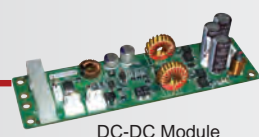


AC-DC Adapter



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

Current



DC-DC Module



AC-DC Adapter



AC

Wide Temperature

0°C ~ 70°C

Item	Model	Watt	AC/DC
1U	ACE-717CX	170W	24 DC

Medical

Item	Model	Watt	AC/DC
PS/2	ACE-4840APM	400W	AC
	ACE-828M	280W	AC
Open Frame	ACE-713APM	130W	AC
	ACE-706AM	60W	AC

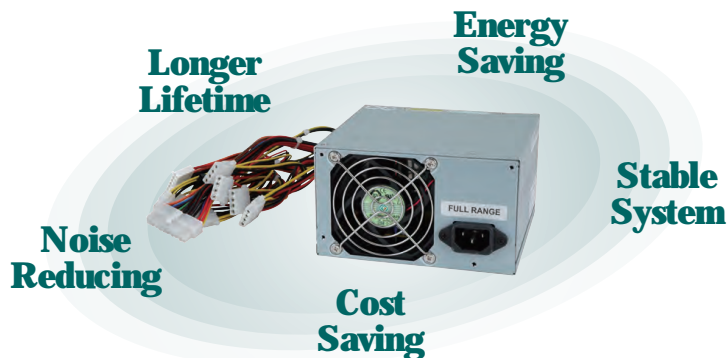
-20°C ~ 70°C

Item	Model	Watt	AC/DC
PS/2	ACE-A160A	600W	AC
	ACE-A140A	400W	AC
	ACE-A130B	300W	AC
	ACE-932A	300W	AC
	ACE-828A	280W	AC
	ACE-828M	280W	AC
1U	ACE-932T	300W	48 DC
	ACE-A225A	250W	AC
	ACE-716A	150W	AC
	ACE-716AP	150W	AC
Open Frame	ACE-716C	150W	24 DC
	ACE-713APM	130W	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
20% (loading)	80%	82%	85%
50% (loading)	80%	85%	88%
100% (loading)	80%	82%	85%

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 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 Voltage	Output Current Range					Efficiency	Operating Temperature	Safety	Dimensions (mm)	
				+5 V	+12 V	-5 V	-12 V	+5 Vsb					
	Medical ACE-713APM	130W ATX PFC	85 ~ 264 VAC	10 A (0.2 A min.)	6 A		0.5 A	0.5 A	80%	-20°C ~ 70°C	CB UL TUV CCC CE	152.4 x 89 x 39	
	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	
	ACE-870A	70W AT -	85 ~ 264 VAC	7 A	2.5 A	0.3 A	0.3 A		70%	0°C ~ 50°C	UL	127 x 81 x 50	
	Medical ACE-706AM	60W AT -	90 ~ 264 VAC	3 A	3 A		0.3 A		82%	0°C ~ 70°C	CB UL TUV CCC CE	63.5 x 114.3 x 32.4	
DC Input													
	ACE-890C	86W AT -	24 VDC (18 ~ 36 VDC)	10 A	2.5 A		0.5 A		70%	0°C ~ 50°C	UL CSA TUV CE	152.4 x 89 x 39	

Open Frame AC Input ATX Type

ACE-713APM

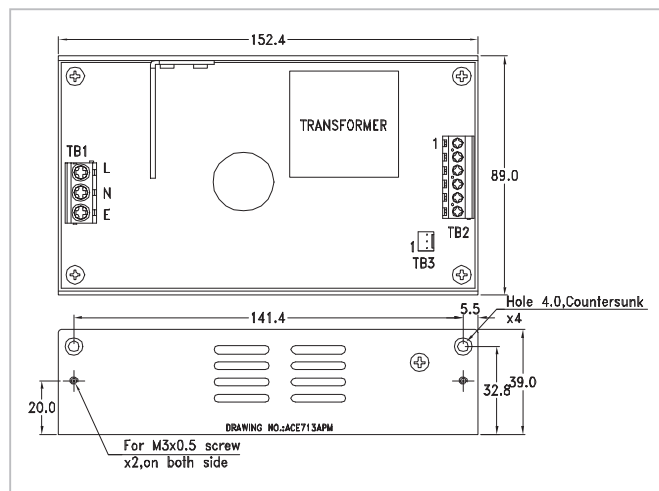
130 W Medical Type ATX Power Supply with PFC



Medical PFC



Dimensions (Unit: mm)



Input Type	85 ~ 264 VAC Full Range					
Input Frequency	47 Hz ~ 63 Hz					
Input Current	2A (RMS)@115VAC, 1A (RMS)@230VAC					
Inrush Current	30A max. for 115VAC, 60A max. for 230VAC					
Output Voltage	+3.3V	+5V	+12V	-5V	-12V	+5Vsb
		10A (0.2A min.)	6A		0.5A	0.5A
Efficiency	80%					
Temperature	Operating: -20°C ~ 70°C (50°C ~ 70°C derating curve) Storage: -40°C ~ 75°C					
MTBF (hrs)	143,000					
Output Connector	5VSB & PS_ON cable					
Dimensions (mm)	152.4 x 89 x 39					

Ordering Information

Part No.	Description
ACE-713APM-RS	130W AC-DC ATX Power Supply with PFC, meets medical standards

Open Frame AC Input AT Type

ACE-890A

86 W AC-DC Open Frame AT Power Supply

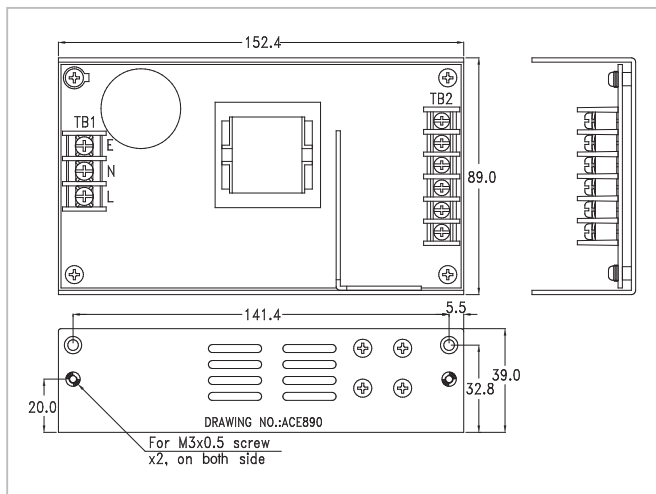


Input Type	85 ~ 264 VAC Full Range				
Input Frequency	47 Hz ~ 63 Hz				
Input Current	2A (RMS)@115VAC, 1A (RMS)@230VAC				
Inrush Current	25A max. for 115VAC, 50A max. for 230VAC				
Output Voltage	+5 V	+12 V	-5 V	-12 V	+24 V
ACE-890A	10 A	2.5 A		0.5 A	
Efficiency	70%				
Temperature	0°C ~ 50°C (Operating),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

Ordering Information

Part No.	Description
ACE-890A-RS	86W AC-DC Open Frame AT Power Supply

Dimensions (Unit: mm)



ACE-870A

70 W AC-DC Open Frame AT Power Supply

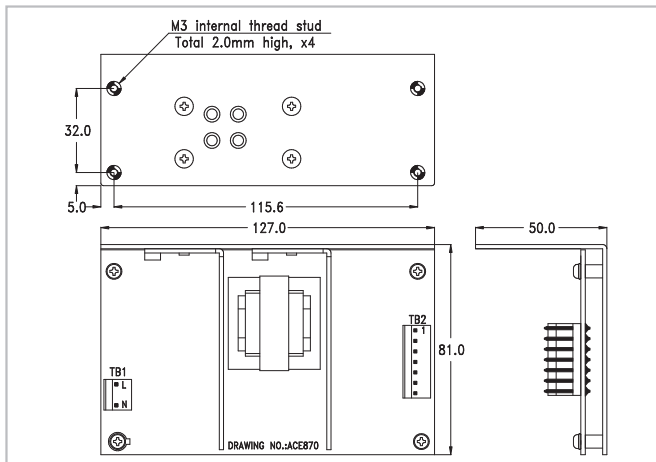


Input Type	85 ~ 264VAC Full Range				
Input Frequency	47 Hz ~ 63 Hz				
Input Current	1.5A (RMS)@115VAC, 0.8A (RMS)@230VAC				
Inrush Current	25A max. for 115VAC, 50A max. for 230VAC				
Output Voltage	+5V	+12V	-5V	-12V	+24V
	7A	2.5A	0.3A	0.3A	
Efficiency	70%				
Temperature	0°C ~ 50°C (Operating), -20°C ~ 85°C (Storage)				
MTBF (hrs)	296,000				
Output Connector	Optional cable				
Dimensions (mm)	127 x 81 x 50				

Ordering Information

Part No.	Description
ACE-870A-RS	70W AC-DC Open Frame AT Power Supply

Dimensions (Unit: mm)



Option 1

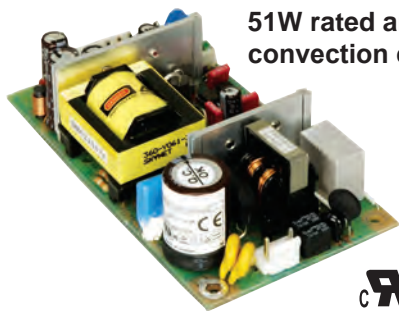


AT P8P9 Backplane Solution

PN: CB-870P8P9-RS
30 cm DC cable AT power to P8P9, HDD and SATA connectors

ACE-706AM

60 W AC-DC Open Frame Medical AT Power Supply



51W rated and 80W peak under convection cooling environment

Medical

CB CE



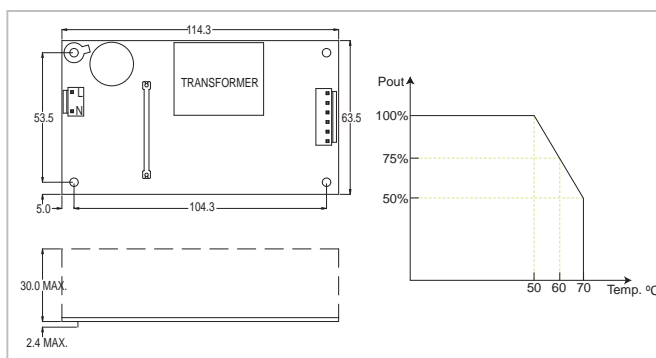
IDE device connector



SATA device connector

Input Type	90 ~ 264 VAC Full Range			
Input Frequency	47 Hz ~ 63 Hz			
Input Current	2 A (RMS)@115V, 1 A (RMS)@230V			
Inrush Current	30 A max. for 115VAC, 60 A max. for 230VAC			
Output Voltage	Voltage	Min. load	Max. load	Ripple & Noise
	+5 V	0 A	4.5 A	1%
	+12 V	0 A	4 A	1%
	-12 V	0 A	0.3 A	1%
Efficiency	82%			
Temperature	Operating: 0°C ~ 70°C, Storage: -40°C ~ 85°C			
MTBF (hrs)	100,000			
Output Connector	Optional cable			
Dimensions	63.5 x 114.3 x 32.4 (mm), 2.5 x 4.5 x 1.28 (inch)			

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ACE-706AM-RS	60W AC-DC Open Frame Medical AT Power Supply, RoHS

Open Frame DC Input AT Type

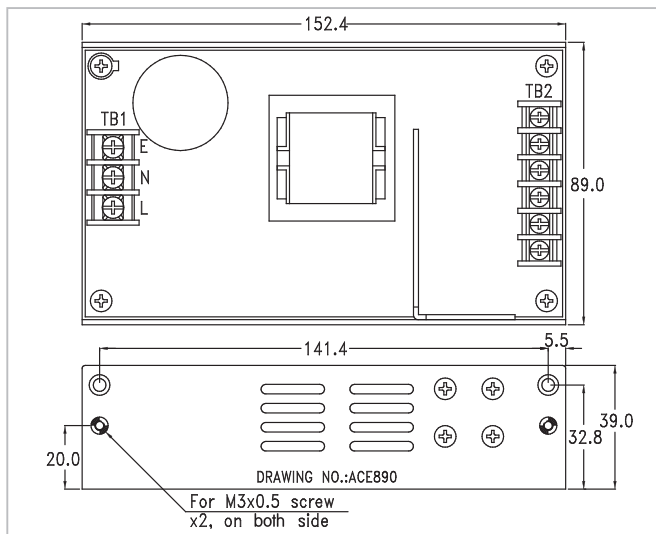
ACE-890C

DC Input Open Frame AT Power Supply



Input Type	18 ~ 36 VDC				
Output Voltage	+5 V	+12 V	-5 V	-12 V	+24 V
	10 A	2.5 A		0.5 A	
Efficiency	70%				
Temperature	0°C ~ 50°C (Operating), -20°C ~ 85°C (Storage)				
MTBF (hrs)	251,000 (ACE-890C), 265,000 (ACE-890P)				
Output Connector	Optional cable				
Dimensions (mm)	152.4 x 89 x 39				

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ACE-890C-RS	86W 24V DC Input Open Frame AT Power Supply

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 ATX/ ATX PFC	Input Range Voltage	Output Current Range							Efficiency	ErP	Operating Temperature	Safety	Dimensions (mm)
				+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb	+24 V					
	ACE-A630B	300W ATX -	90 ~ 265 VAC	16 A (0.5 A min.)	18 A (0.5 A min.)	15 A (0.5 A min.)		0.5 A	3 A		 82%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A627A	270W ATX PFC	90 ~ 264 VAC	16 A (0.5 A min.)	18 A (0.5 A min.)	V1: 16 A (1A) V2: 10A (1A)		0.8 A	2.5 A		 80%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81 x 40
	ACE-A225A	250W ATX PFC	90 ~ 264 VAC	14 A (0.3 A)	16 A (0.3 A)	V1: 16 A (0.5 A) V2: 16 A (0.5 A)	0.3 A	0.5 A	3 A		 82%	V	-5°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	190 x 100 x 40
	ACE-A622B	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		 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A622A	220W ATX PFC	90 ~ 264 VAC	14 A (0.5 A min.)	16 A (0.5 A min.)	V1: 16 A (1A) V2: 10 A (1A)		0.8 A	2.5 A		 80%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81 x 40
	ACE-A618B	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		 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5
	ACE-A618A	180W ATX PFC	90 ~ 264 VAC	14 A (0.3 A min.)	16 A (0.3 A min.)	14 A (1.5 A min.)		0.5 A	2 A		68%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81 x 40
	ACE-A615B	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		 85%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81.5 x 40.5

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 Voltage	Output Current Range						Efficiency	ErP	Operating Temperature	Safety	Dimensions (mm)	
				+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb						+24 V
	ACE-A615A	150W ATX PFC	90 ~ 264 VAC	10 A (0.3 A min.)	13 A (0.3 A min.)	10 A (1A min.)		0.5 A	2 A		68%	V	0°C ~ 50°C	CB/UL/ TUV/ CCC/ CE/FCC	150 x 81 x 40
	ACE-916AP	150W AT PFC	90 ~ 264 VAC		16 A (1 A min.)	6 A (0.5 A min.)		0.3 A			68%		0°C ~ 35°C	CB/UL/ TUV/ CCC/ NEMKO/ BSMI/ CE/FCC	150 x 81.5 x 40.5
	ACE-716A	150W AT -	85 ~ 135 VAC 180 ~ 265 VAC		18 A (1 A min.)	4 A	0.5 A	1 A			75%		-20°C ~ 70°C	UL	198 x 97 x 40.5
	ACE-716AP	150W AT PFC	85 ~ 265 VAC		18 A (1 A min.)	4 A	0.5 A	1 A			75%		-20°C ~ 70°C	UL TUV CE	198 x 97 x 40.5

1U DC Input

Products	Model No.	Watt AT/ ATX PFC	Input Range Voltage	Output Current Range						Efficiency	Operating Temperature	Safety	Dimensions (mm)		
				+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb					+24V	
	ACE-717CX	170W ATX -	24 VDC (19 ~ 32 VDC)	6 A	8 A (1 A min.)	8 A (1 A min.)		0.5 A	1 A		75%		0°C ~ 70°C	CB UL TUV CCC CE	198 x 97 x 39
	ACE-4520C	200W ATX -	24 VDC (18 ~ 36 VDC)	12 A	12 A (1 A min.)	15.4 A (0.5 A min.)		0.5 A	2 A		78%		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-A630B

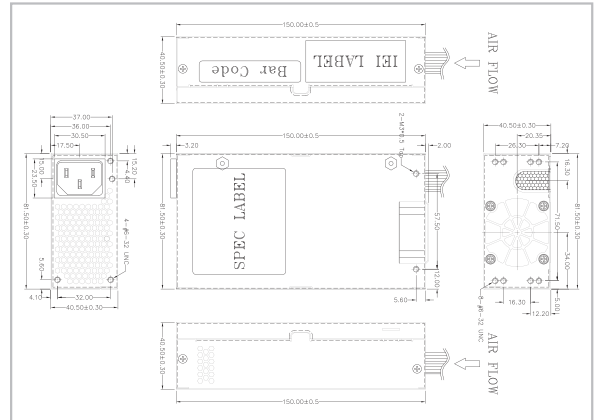
1U Flex ATX 300 W Power Supply



Specifications

Input Type	90~264VAC Full Range				
Output Voltage	+3.3 V 16 A (0.5 A min.)	+5 V 18 A (0.5 A min.)	+12 V 15 A (0.5 A min.)	-12 V 0.5 A	+5 Vsb 3 A
Efficiency	82%				
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, 1x FDD, 2 x HDD, 2 xSATA				
Dimensions (mm)	150 x 81.5 x 40.5				

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ACE-A630B-RS-R10	1U Flex ATX 300W Power Supply, 90~264 VAC, ErP, CCL, RoHS

ACE-A627A

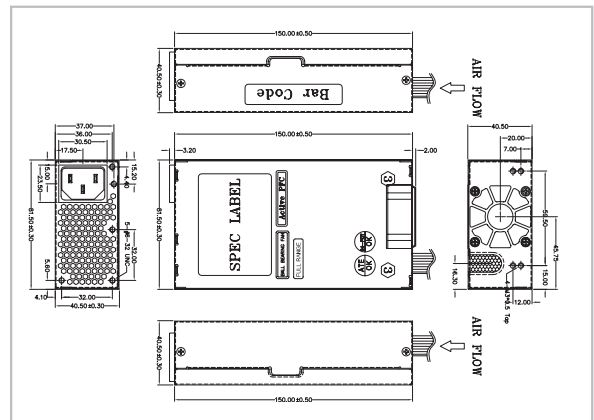
270 W 1U Type ATX Power Supply



Specifications

Input Type	90~264 VAC Full Range					
Output Voltage	+3.3 V 16 A (0.5 A min.)	+5 V 18 A (0.5 A min.)	+12 V 16 A (1 A min.)	+12 V 2 10 A (1 A min.)	-12 V 0.8 A (0 A min.)	+5 Vsb 2.5 A (0 A min.)
Efficiency	80%					
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C					
MTBF (hrs)	100,000					
Output Connector	20-pin ATX, 4-pin 12V, FDD and three HDD					
Dimensions (mm)	150 x 81.5 x 40.5					

Dimensions (Unit: mm)

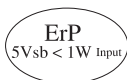


Ordering Information

Part No.	Description
ACE-A627A-RS-R11	270W AC-DC 1U flex ATX Power Supply, with PFC/ ErP, meets 80 PLUS

ACE-A225A

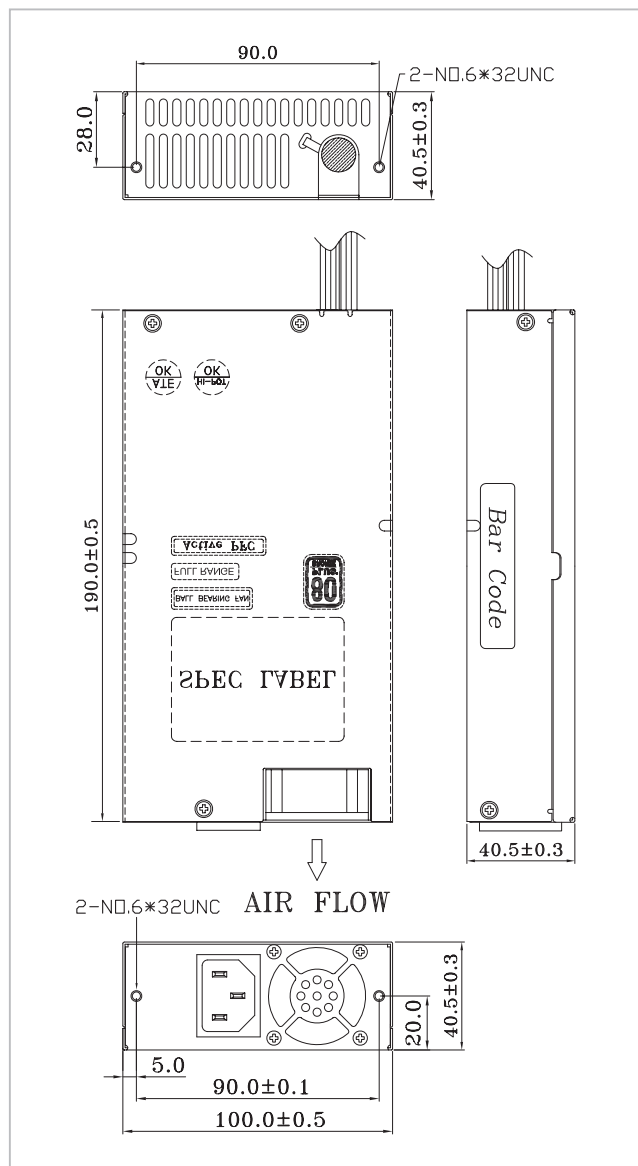
1U 250 W ATX Power Supply with ErP



Specifications

Input	Voltage	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	4A (RMS)@115VAC, 2A (RMS)@230VAC		
	Inrush Current	50A max for 115VAC 100A max for 230VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3V	0.3 A	14 A	50mV
	+5V	0.3 A	16 A	50mV
	+12V1	0.5 A	16 A	120mV
	+12V2	0.5 A	16 A	120mV
	-12V	0 A	0.5 A	120mV
	+5VSB	0 A	3 A	50mV
	-5V	0 A	0.3 A	100mV
The +3.3V and +5V total output shall not exceed 110 watts.				
Total output for this power supply is 250 watts.				
Over Voltage Protection	+3.3V:	3.5V-4.8V		
	+5V:	5.5V-7V		
	+12V1 ~ +12V2:	13.4V-16V		
Short Circuit Protection	+3.3V, +5V, +12V shutdown and latch off			
General Specifications	Watt	250W		
	PFC	Active		
	Hold-up Time	17 ms min.		
	Efficiency	85%		
	MTBF	100,000 hours		
	Temperature	Operating: -5°C ~ 50°C Storage: -20°C ~ 80°C		
	Dimensions (mm)	100 x 190 x 40		
	Output Connector	20+4-pin ATX, 4-pin 12V, 4 x HDD, 2 x SATA, 1 x FDD		

Dimensions (Unit: mm)



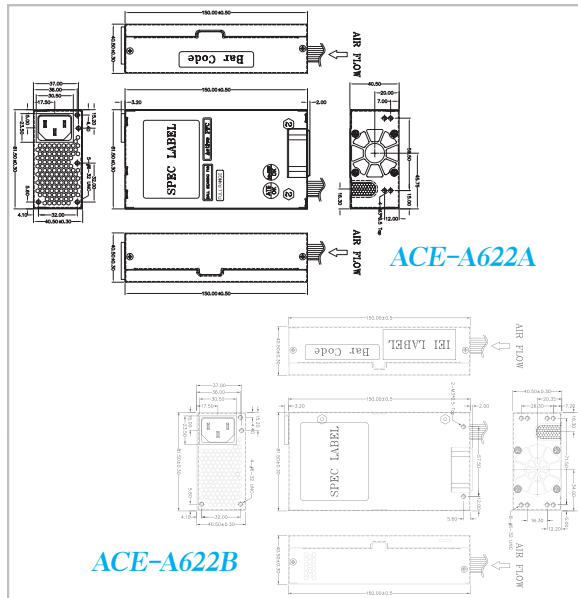
Ordering Information

Part No.	Description
ACE-A225A-R11	250W AC-DC 1U ATX Power Supply with ErP, meets 80 PLUS (Bronze)

ACE-A622A/B 220 W 1U Type ATX Power Supply



Dimensions (Unit: mm)



Specifications

Input Type	90~264 VAC Full Range						
Output Voltage	ACE-A622A	+3.3 V 14 A (0.5 A min.)	+5 V 16 A (0.5 A min.)	+12 V 16 A (1 A min.)	+12 V 2 10 A (1 A min.)	-12 V 0.8 A (0 A min.)	+5 Vsb 2.5 A (0 A min.)
	ACE-A622B	10 A (0.1 A min.)	14 A (0.2 A min.)	14 A (0.6 A min.)		0.3 A	2.5 A
Efficiency	ACE-A622A: 80% / ACE-A622B: 85%						
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C						
MTBF (hrs)	100,000						
Output Connector	ACE-A622A	20-pin ATX, 4-pin 12V, 3 x HDD, 1 x FDD					
	ACE-A622B	20+4-pin ATX, 4-pin 12V CPU, 1 x FDD, 2 x HDD, 2 xSATA					
Dimensions (mm)	150 x 81.5 x 40.5						

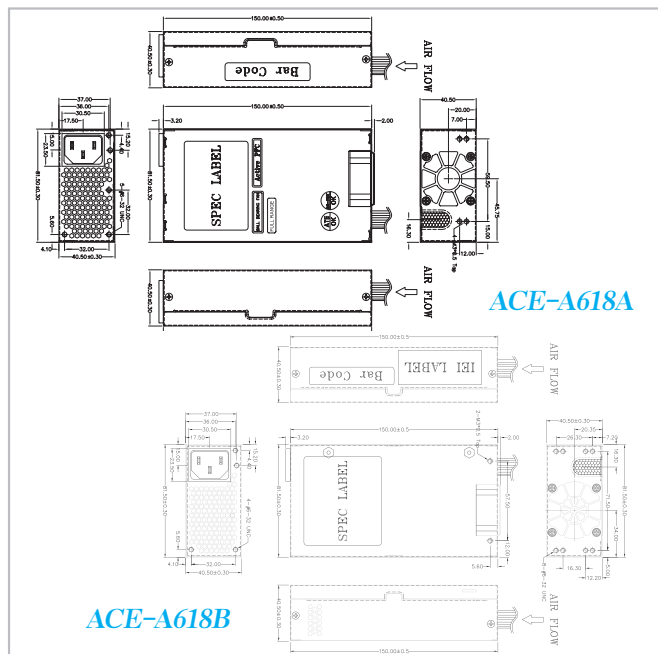
Ordering Information

Part No.	Description
ACE-A622A-RS-R11	220W AC-DC 1U Flex ATX Power Supply, with PFC/ErP, meets 80 PLUS
ACE-A622B-RS-R10	1U Flex ATX 220W Power Supply, 90~264VAC, ErP, CCL, RoHS

ACE-A618A/B 180 W 1U Type ATX Power Supply



Dimensions (Unit: mm)



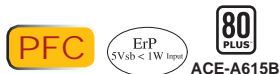
Specifications

Input Type	90~264 VAC Full Range					
Output Voltage	ACE-A618A	+3.3 V 14 A (0.3 A min.)	+5 V 16 A (0.3 A min.)	+12 V 14 A (1.5 A min.)	-12 V 0.5 A (0 A min.)	+5 Vsb 2.0 A (0 A min.)
	ACE-A618B	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	ACE-A618A: 68% / ACE-A618B: 85%					
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C					
MTBF (hrs)	100,000					
Output Connector	ACE-A618A	20-pin ATX, 4-pin 12V, 3 x HDD, 1 x FDD				
	ACE-A618B	20+4-pin ATX, 4-pin 12V CPU, 1 x FDD, 2 x HDD, 2 xSATA				
Dimensions (mm)	150 x 81.5 x 40.5					

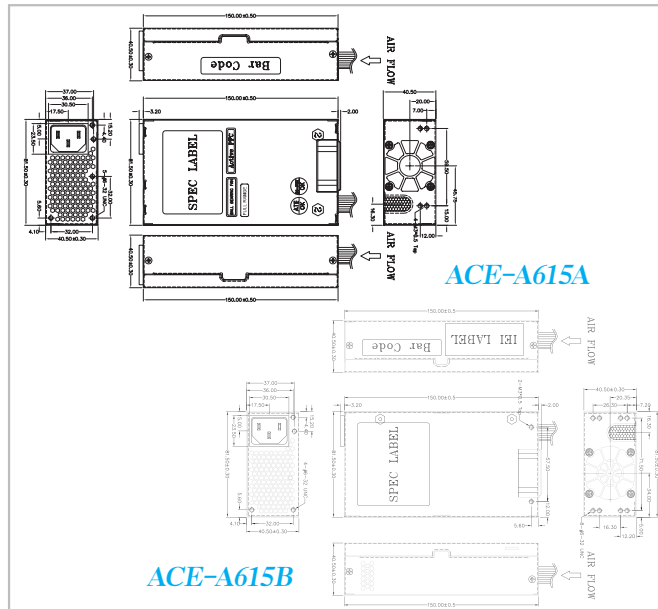
Ordering Information

Part No.	Description
ACE-A618A-RS-R11	180W AC-DC 1U Flex ATX Power Supply, with PFC/ErP
ACE-A618B-RS-R10	1U Flex ATX 180W Power Supply, 90~264VAC, ErP, CCL, RoHS

ACE-A615A/B 150 W 1U Type ATX Power Supply



Dimensions (Unit: mm)



Specifications

Input Type	90~264 VAC Full Range					
Output Voltage		+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
	ACE-A615A	10 A (0.3 A min.)	13 A (0.3 A min.)	10 A (1 A min.)	0.5 A (0 A min.)	2.0 A (0 A min.)
	ACE-A615B	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	ACE-A615A: 68% / ACE-A615B: 85%					
Temperature	Operating: 0°C ~ 50°C, Storage: -20°C ~ 80°C					
MTBF (hrs)	100,000					
Output Connector	ACE-A615A	20-pin ATX, 4-pin 12V CPU, FDD, 3 x HDD				
	ACE-A615B	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

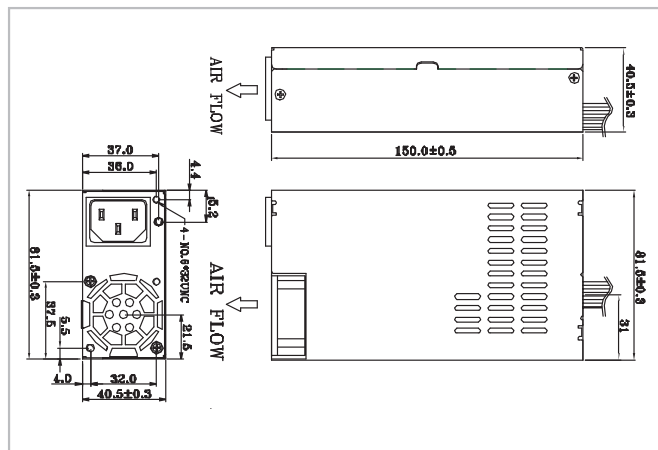
Part No.	Description
ACE-A615A-RS-R11	150W AC-DC 1U Flex ATX Power Supply, with PFC/ErP
ACE-A615B-RS-R10	1U Flex ATX 150W Power Supply, 90~264VAC, ErP, CCL, RoHS

1U AC Input AT Type

ACE-916AP 150 W 1U Type AT Power Supply



Dimensions (Unit: mm)



Specifications

Input Type	90 ~ 264 VAC Full Range				
Output Voltage	+5V	+12V	-5V	-12V	+24V
	16 A (1 A min.)	6 A (0.5 A min.)		0.3 A	
Efficiency	68%				
Temperature	0°C ~ 50°C (Operating), -20°C ~ 80°C (Storage)				
MTBF (hrs)	100,000				
Output Connector	P8P9, FDD, 3 x HDD				
Dimensions (mm)	150 x 81.5 x 40.5				

Ordering Information

Part No.	Description
ACE-916AP-RS	150W AC-DC AT Power Supply, with PFC

ACE-716A/AP

150 W 1U Type AT Power Supply



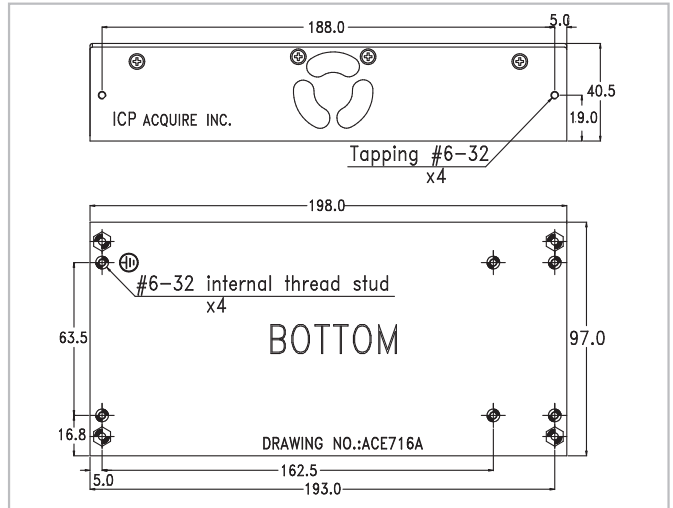
Specifications

Input Type	85 ~ 135 VAC, 180 ~ 265 VAC Auto Range (ACE-716A) 85 ~ 265 VAC Full Range (ACE-716AP)			
Output Voltage	+5V 18 A (1 A min.)	+12V 4 A	-5V 0.5 A	-12V 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			

Ordering Information

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

Dimensions (Unit: mm)



1U DC Input ATX Type

ACE-717CX

1U 24V DC Input ATX Power Supply



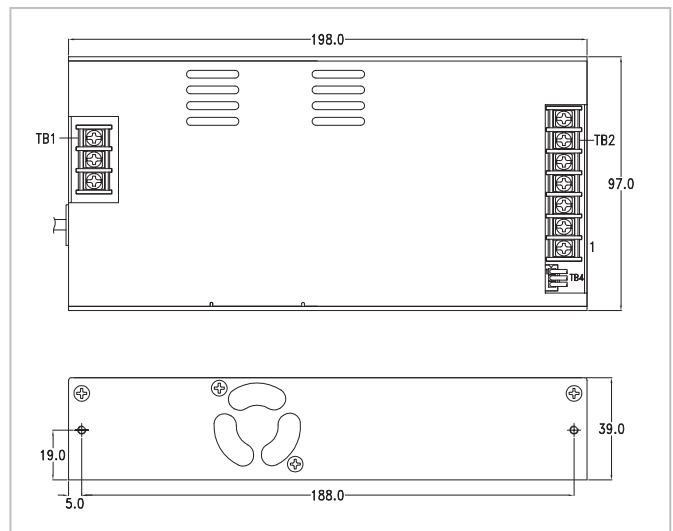
Specifications

Input Type	19 ~ -32 VDC					
Output Voltage	+3.3V 6 A	+5V 8 A (1 A min.)	+12V 8 A (1 A min.)	-5V 0.5 A	-12V 0.5 A	+5Vsb 1 A
Efficiency	75%					
Temperature	Operating: 0°C ~ 70°C (can be started up at -20°C) Storage: -40°C ~ 75°C					
MTBF (hrs)	100,000					
Output Connector	5VSB & PS_ON cable					
Dimensions (mm)	198 x 97 x 39					

Ordering Information

Part No.	Description
ACE-717CX-RS	170W 24V DC input ATX Power Supply

Dimensions (Unit: mm)



ACE-4520C

200 W 24V DC input 1U ATX Power Supply



Specifications

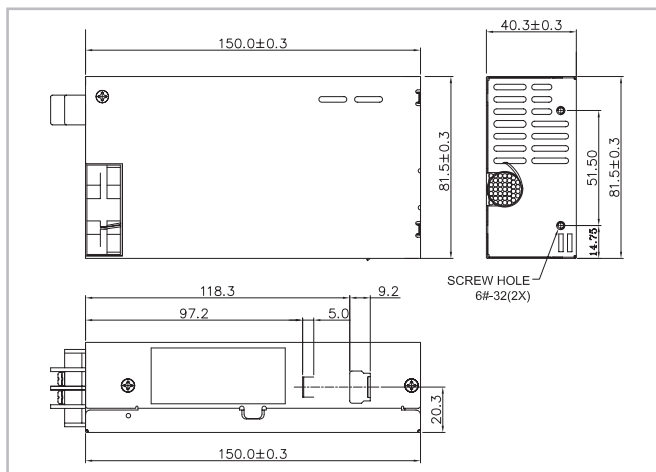
Input	Voltage	18 ~ 36 VDC input		
	Input Current	15 A (RMS) @ -24 VDC		
	Inrush Current	100 A max. for -24 VDC		
Output	Voltage	Min. Load	Max. Load	Ripple & Noise
	+5 V	1 A	12 A	50 mV P-P
	+12 V	0.5 A	15.4 A	120 mV P-P
	-12 V	0 A	0.5 A	120 mV P-P
	+3.3 V	0 A	12 A	50 mV P-P
	+5 Vsb	0 A	2 A	50 mV P-P
	+3.3V, +5V, +12V total current not exceed 184W			
Overvoltage Protection	+5 V output: 5.7 V ~ 6.5 V			
	+12 V output: 13.1 V ~ 14.5 V			
	+3.3 V output: 3.7 V ~ 4.1 V			
Over Circuit Protection	+5 V output: 13.2 V ~ 18 V			
	+12 V output: 17.6 V ~ 24 V			
	+3.3 V output: 13.2 V ~ 18 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	78%		
	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		

High power capacity 200W in 1U size!!
Meets ATX revision 2.0 with 20+4-pin ATX power and SATA

Features

1. High efficiency
2. Low ripple & noise
3. Output overvoltage protection
4. Short circuit protection on all output
5. 100% burn-in under high ambient temperature (50°C)
6. Vacuum-impregnated transformer
7. MTBF: 100K hours at 25°C
8. 100% hi-pot tested
9. Line input fuse protection

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ACE-4520C-RS	200W 24 V DC Input 1U ATX Power Supply

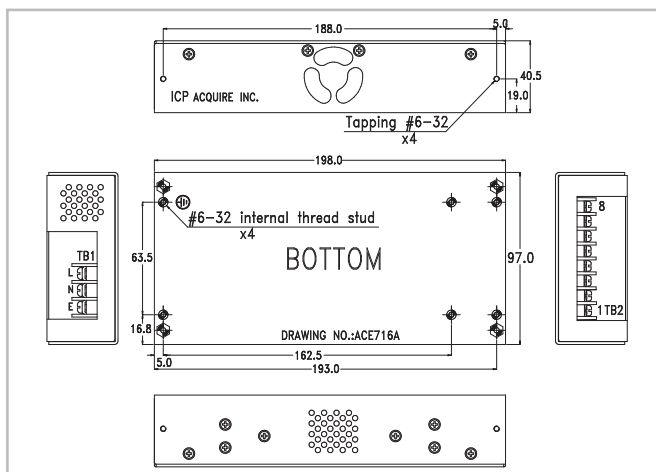
ACE-716C

150 W 24V DC Input AT Power Supply



Input Type	19 ~ 30 VDC				
Output Voltage	+5 V	+12 V	-5 V	-12 V	+24 V
	18 A (2 A min.)	4 A	0.5 A	1 A	
Efficiency	70%				
Temperature	Operating: -20°C ~ 70°C (50°C ~ 70°C derating curve) Storage: -20°C ~ 85°C				
MTBF (hrs)	210,000				
Output Connector	Optional cable				
Dimensions (mm)	198 x 97 x 40.5				

Dimensions (Unit: mm)



Output terminal block connectors

Pin 1, 2	Pin 3, 4	Pin 5	Pin 6	Pin 7	Pin 8
5 V	GND	-5 V	-12 V	GND	+12 V

Ordering Information

Part No.	Description
ACE-716C-RS	150 W 24 V DC Input AT 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 Voltage	Output Current Range						Efficiency	ErP	Operating Temperature	Safety
				+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb				
	ACE-A160A	600W ATX PFC	90~264 VAC	25 A (1.5 A)	25 A (1 A)	V1: 16 A (1 A) V2: 16 A (1 A) V3: 16 A (1 A) V4: 16 A (0.5 A)	0.5 A	4 A	 85%	v	-5°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-A140A	400W ATX PFC	90 ~ 264 VAC	21 A (0.1 A)	20 A (0.2 A)	V1: 16 A (0.1 A) V2: 16 A (0.5 A)	0.3 A	0.5 A	3 A	 85%	v	-5°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	ACE-A130B	300W ATX PFC	90 ~ 264 VAC	19 A (0.3 A)	16 A (0.5 A)	V1: 17 A (0.5 A) V2: 17 A (0.5 A)	0.2 A	0.3 A	3 A (0.1 A)	 85%	v	-5°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	ACE-828A	280W ATX -	90 ~ 130 VAC 180 ~ 260 VAC	8 A	25 A (2 A min.)	10 A (0.1 A min.)	0.5 A	0.5 A	0.72 A	65%		-20°C ~ 70°C	CSA / TUV / CE
	Medical ACE-828M	280W ATX -	90 ~ 130 VAC 180 ~ 260 VAC	8 A	25 A (2 A min.)	10 A (0.1 A min.)	0.5 A	0.5 A	0.72 A	65%		-20°C ~ 70°C	UL / TUV / CE
	ACE-T140A	400W AT PFC	95 ~ 264 VAC		42 A (2 A min.)	15 A (1 A min.)	0.3 A	0.8 A		75%		0°C ~ 50°C	CB / UL / TUV CCC / CE / FCC
	ACE-932A	300W AT -	85 ~130 VAC 180 ~ 265 VAC		33 A (3 A min.)	8 A (0.1 A min.)	0.5 A	3 A		68%		-20°C ~ 70°C	UL / CSA
	ACE-925A	200W AT -	85 ~ 265 VAC		22 A (1 A min.)	7 A (0.1 A min.)	0.5 A	0.7 A		68%		0°C ~ 50°C	UL
	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
DC Input													
	ACE-828C	250W ATX -	24 VDC (18 ~ 32 VDC)	8 A	25 A (2 A min.)	7 A (0.1 A min.)	0.5 A	1 A	0.72 A	65%		0°C ~ 50°C	CB / CSA TUV / CCC CE

ACE-4840APM

400 W PS/2 Medical Type ATX Power Supply



Medical



New Version 20+4 Pins Power Supply



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



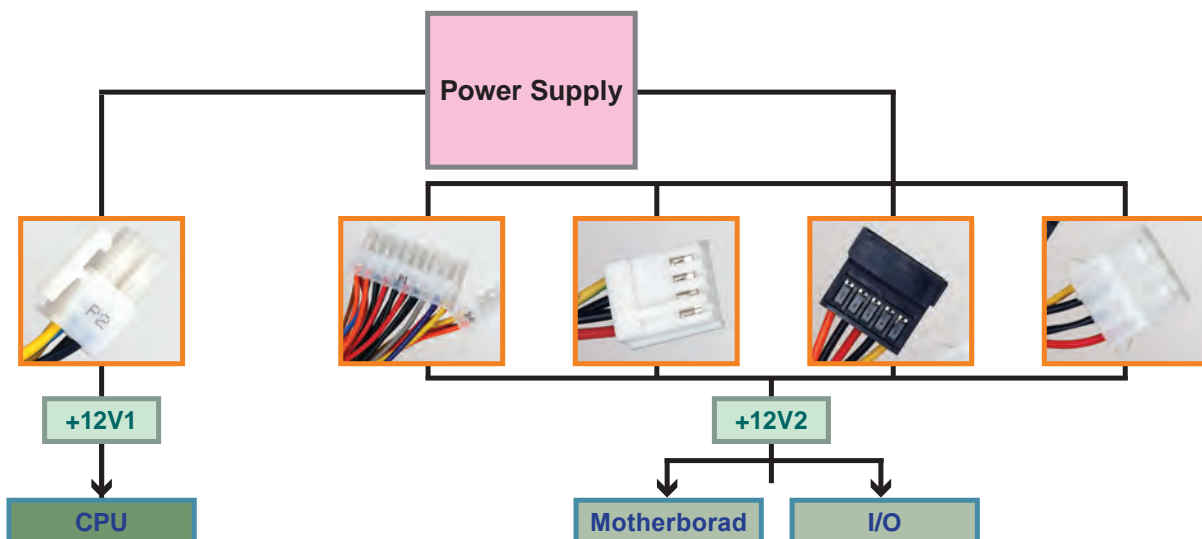
Specifications

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



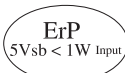
ACE-A140A

400 W PS/2 ATX Power Supply with ErP



Specifications

Input	Voltage	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6A (RMS)@115VAC, 3A (RMS)@230VAC		
	Inrush Current	65A max. for 115VAC 147A max. for 230VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3V	0.1 A	21 A	50mV
	+5V	0.2 A	20 A	50mV
	+12V1	0.1 A	16 A	120mV
	+12V2	0.5 A	16 A	120mV
	-12V	0 A	0.5 A	120mV
	-5V	0 A	0.3 A	50mV
	+5VSB	0 A	3 A	50mV
The +3.3V and +5V total output shall not exceed 130 watts. Total output for this power supply is 400 watts.				
Over Voltage Protection	+3.3V: 3.5V-4.5V			
	+5V: 5.5V-6.82V +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	17 ms Min.		
	Efficiency	85%		
	MTBF	100000 hours		
	Temperature	Operating: -5°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, 2 x FDD, 1 x Extra +5V (P10)		



Ordering Information

Part No.	Description
ACE-A140A-R11	400W AC-DC PS/2 ATX Power Supply with ErP, meets 80 PLUS (Bronze)

Dimensions (Unit: mm)

REF. ID.	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1 24	1	+3.3VDC	ORANGE	18	P20 17 14502K11D+ P4 14502K11D or EQUIV.	500±15mm
	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	+12V2	YELLOW	18		
	11	+12V2	YELLOW	18		
	12	+3.3VDC	ORANGE	18		
	13	+3.3VDC	ORANGE	18		
	14	+3.3Vsense	BROWN	22		
	15	-12VDC	BLUE	18		
	16	COM	BLACK	18		
	17	PS-ON	GREEN	22		
	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	COM	BLACK	18	MOLEX 90331 - 2040 or EQUIV.	500±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+3.3VDC	ORANGE	18		
P3	1	COM	BLACK	18	MOLEX 39-01- 2040 or EQUIV.	500±15mm
	2	COM	BLACK	18		
	3	+12V1	Yel/Black	18		
	4	+12V1	Yel/Black	18		
PA	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	400±15mm
	2	COM	BLACK	18		
	4	+5V	RED	18		
PB PC PD	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	200±10mm
	2	COM	BLACK	18		
	4	+5V	RED	18		
PE	1	+12V2	YELLOW	20	AMP 1-480424-0 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PF	1	+12V2	YELLOW	20	AMP 1-480424-0 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PG	1	+5V	RED	22	AMP 171822-4 or EQUIV.	200±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V2	YELLOW	22		
PH	1	+12V1	Yel/Black	20	AMP 1-480424-0 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PI	1	+12V1	Yel/Black	20	AMP 1-480424-0 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PJ	1	+12V1	Yel/Black	20	AMP 171822-4 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+12V1	Yel/Black	22		
PK	1	+3.3VDC	ORANGE	20	MOLEX SD-87926 -0311 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V1	Yel/Black	20		
PL	1	+3.3VDC	ORANGE	20	MOLEX SD-87582 +001 or EQUIV.	155±10mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V1	Yel/Black	20		

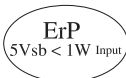
ACE-A140A-S

400 W PS/2 ATX Power Supply with ErP



Specifications

Input	Voltage	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6A (RMS)@115VAC, 3A (RMS)@230VAC		
	Inrush Current	65A max. for 115VAC 147A max. for 230VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3V	0.1 A	21 A	50mV
	+5V	0.2 A	20 A	50mV
	+12V1	0.1 A	16 A	120mV
	+12V2	0.5 A	16 A	120mV
	-12V	0 A	0.5 A	120mV
	-5V	0 A	0.3 A	50mV
	+5VSB	0 A	3 A	50mV
The +3.3V and +5V total output shall not exceed 130 watts.				
Total output for this power supply is 400 watts.				
Over Voltage Protection	+3.3V: 3.5V-4.5V			
	+5V: 5.5V-6.82V +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	17 ms Min.		
	Efficiency	85%		
	MTBF	100000 hours		
	Temperature	Operating: -5°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, 2 x FDD, 1 x Extra +5V (P10)		



Ordering Information

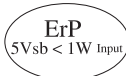
Part No.	Description
ACE-A140A-S-R11	400W PS/2 ATX Power Supply with ErP & on/off switch, meets 80 PLUS (Bronze)

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±15mm
	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-ON	GRAY	22		
	9	+5Vsb	PURPLE	18		
	10	+12V2	YELLOW	18		
	11	+12V2	YELLOW	18		
	12	+3.3VDC	ORANGE	18		
	13	+3.3VDC	ORANGE	18		
	14	+3.3Vsense	BROWN	22		
	15	-12VDC	BLUE	18		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	18		
	18	COM	BLACK	18		
	19	COM	BLACK	18		
	20	-5VDC	WHITE	22		
	21	+5VDC	RED	18		
	22	+5VDC	RED	18		
	23	+5VDC	RED	18		
	24	COM	BLACK	18		
P2	1	COM	BLACK	18	MOLEX 39-01-2040 or EQUIV.	430±15mm
	2	COM	BLACK	18		
	3	+12V1	Yel/Black	18		
	4	+12V1	Yel/Black	18		
PA	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	400±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PB	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	210±10mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PC	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	350±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PD	1	+5V	RED	22	AMP 171822-4 or EQUIV.	150±10mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+12V2	YELLOW	18		
PE	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	230±15mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PF	1	+12V2	YELLOW	18	AMP 1-480424-0 or EQUIV.	150±10mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
PH	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		
PI	5	+12V1	Yel/Black	18	MOLEX SD-67582-001 or EQUIV.	155±10mm
	1	+3.3VDC	ORANGE	18		
	2	COM	BLACK	18		
	3	+5V	RED	18		
	4	COM	BLACK	18		

ACE-A130B

300 W PS/2 ATX Power Supply with ErP



Specifications

Input	Voltage	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6A (RMS)@115VAC, 3A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC, 160A max. for 230VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3V	0.3 A	19 A	50mV
	+5V	0.5 A	16 A	50mV
	+12V1	0.5 A	17 A	120mV
	+12V2	0.5 A	17 A	120mV
	-12V	0A	0.3 A	120mV
	+5VSB	0.1 A	3 A	50mV
	-5V	0 A	0.2 A	100mV
Total combined output of +3.3V and +5V is ≤105W				
Total output for this power supply is 300 watts				
Over Voltage Protection	+3.3V: 3.7V-4.8V			
	+5V: 5.7V-7.0V +12V1 and +12V2: 13.3V-16V			
Short Circuit Protection	+3.3V, +5V, +12V shutdown and latch off			
General Specifications	Watt	300W		
	PFC	Active		
	Hold-up Time	13 ms min.		
	Efficiency	85%		
	MTBF	100,000 hours		
	Temperature	Operating: -5°C ~ 50°C Storage: -40°C ~ 70°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Connector	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 6 x HDD/CDROM, 1 x FDD, 1 x Extra +5V (P10), 2 x SATA		

Ordering Information

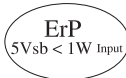
Part No.	Description
ACE-A130B-R10	300W AC-DC PS/2 ATX Power Supply with ErP/PFC, meets 80 PLUS (Bronze)

Dimensions (Unit: mm)

REF. ID.	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	CABLE LENGTH
P1	1	+3.3VDC	ORANGE	20	WST P20-P4 I42002K11D+ I42002K11D 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-OK	GRAY	22		
	9	+5Vsb	PURPLE	20		
	10	+12V2	YELLOW	20		
	11	+12V2	YELLOW	20		
	12	+3.3VDC	ORANGE	20		
	13	+3.3VDC	ORANGE	20		
	14	+3.3VDC	BROWN	22		
	15	-12VDC	BLUE	22		
	16	COM	BLACK	20		
	17	PS-ON	GREEN	22		
	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	COM	BLACK	20	MOLEX 90331-0010 or EQUIV.	500±15mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+3.3VDC	ORANGE	20		
P3	1	COM	BLACK	20	MOLEX 39-01-2040 or EQUIV.	500±15mm
	2	COM	BLACK	20		
	3	+12V1	YEL/BLACK	20		
	4	+12V1	YEL/BLACK	20		
PA	1	+3.3VDC	ORANGE	20	MOLEX SD-67926 -0011 or EQUIV.	400±15mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
	5	+12V1	YEL/BLACK	20		
PB	1	+3.3VDC	ORANGE	20	MOLEX SD-67582 -001 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	+5V	RED	20		
	4	COM	BLACK	20		
PC	1	+12V2	YELLOW	20	AMP 1-480424-0 or EQUIV.	400±15mm
	2	COM	BLACK	20		
PG	3	COM	BLACK	20	AMP 1-480424-0 or EQUIV.	200±10mm
	4	+5V	RED	20		
PD	1	+12V2	YELLOW	20	AMP 171822-4 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+5V	RED	20		
PJ	1	+5V	RED	20	AMP 171822-4 or EQUIV.	200±10mm
	2	COM	BLACK	20		
	3	COM	BLACK	20		
	4	+12V2	YELLOW	20		

ACE-A130B-S

300 W PS/2 ATX Power Supply with ErP



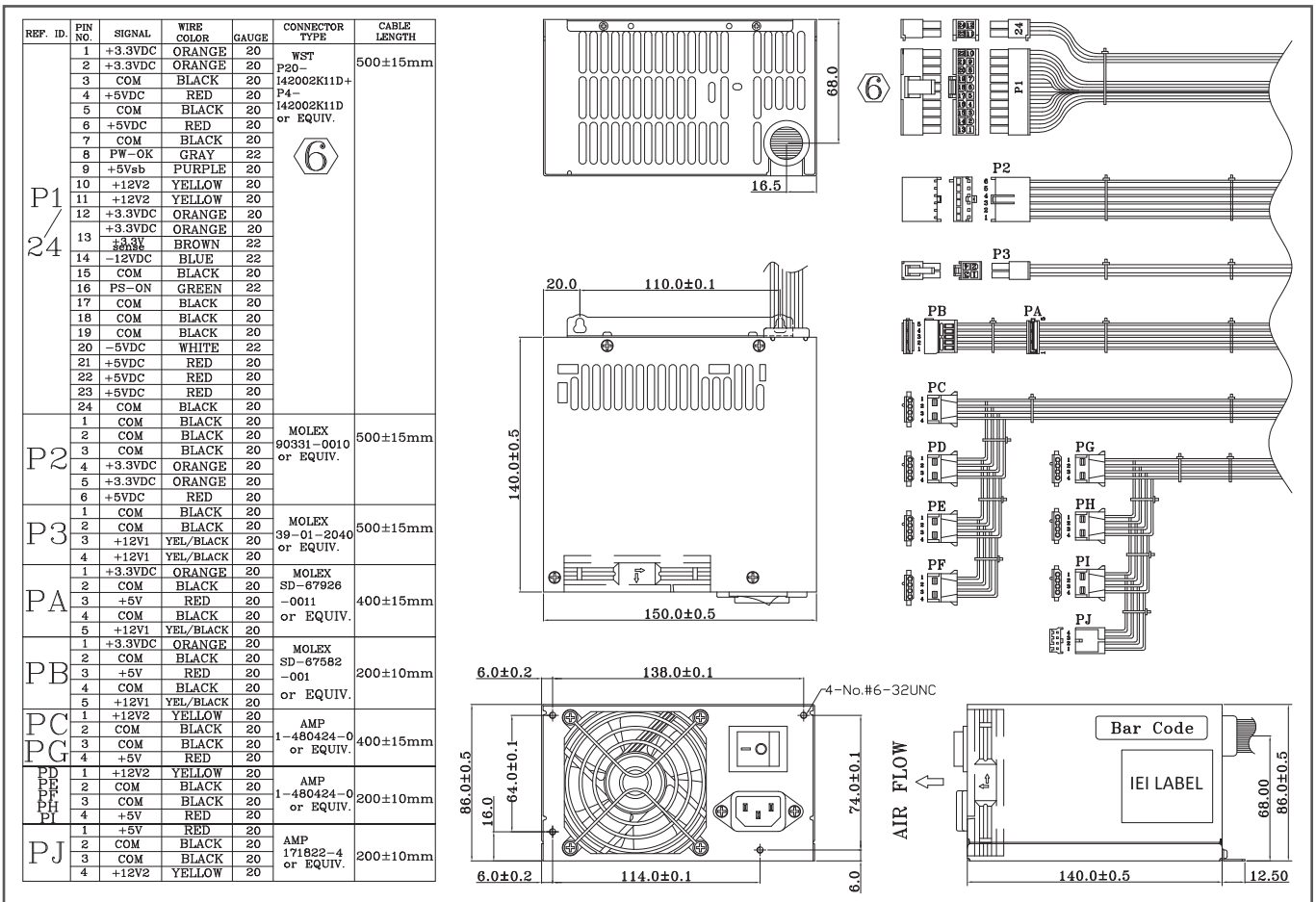
Specifications

Input	Voltage	90~264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	6A (RMS)@115VAC, 3A (RMS)@230VAC		
	Inrush Current	80A max. for 115VAC, 160A max. for 230VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+3.3V	0.3 A	19 A	50mV
	+5V	0.5 A	16 A	50mV
	+12V1	0.5 A	17 A	120mV
	+12V2	0.5 A	17 A	120mV
	-12V	0A	0.3 A	120mV
	+5VSB	0.1 A	3 A	50mV
	-5V	0 A	0.2 A	100mV
Total combined output of +3.3V and +5V is ≤105W				
Total output for this power supply is 300 watts				
Over Voltage Protection	+3.3V: 3.7V-4.8V			
	+5V: 5.7V-7.0V			
	+12V1 and +12V2: 13.3V-16V			
Short Circuit Protection	+3.3V, +5V, +12V shutdown and latch off			
General Specifications	Watt	300W		
	PFC	Active		
	Hold-up Time	13 ms min.		
	Efficiency	85%		
	MTBF	100,000 hours		
	Temperature	Operating: -5°C ~ 50°C Storage: -40°C ~ 70°C		
	Dimensions (mm)	140 x 150 x 86		
	Output Connector	1 x 20+4-PIN ATX, 1 x 4-pin 12V CPU, 6 x HDD/CDROM, 1 x FDD, 1 x Extra +5V (P10), 2 x SATA		

Ordering Information

Part No.	Description
ACE-A130B-S-R10	300W AC-DC PS/2 ATX Power Supply with ErP/PFC & on/off switch, meets 80 PLUS (Bronze)

Dimensions (Unit: mm)



ACE-828A

280 W Type ATX Power Supply



Ordering Information

Part No.	Description
ACE-828A-RS	280W AC-DC PS/2 ATX Power Supply

Specifications

Input Type	90 ~ 130 VAC, 180 ~ 260 VAC Auto Range					
Output Voltage	+3.3V	+5V	+12V	-5V	-12V	+5Vsb
	8A	25A (2A min.)	10A (0.1A min.)	0.5A	0.5A	0.72A
Efficiency	65%					
Temperature	Operating: -20°C ~ 70°C (40°C ~ 70°C derating curve) Storage: -40°C ~ 75°C					
MTBF (hrs)	110,000					
Output Connector	1 x 20-pin ATX, 5 x HDD/CDROM, 2 x FDD					

ACE-828M

280 W PS/2 Type ATX Power Supply, Meets Medical Standard



Medical



Ordering Information

Part No.	Description
ACE-828M-RS	280W AC-DC PS/2 ATX Power Supply, meets medical standard

Specifications

Input Type	90 ~ 130 VAC, 180 ~ 260 VAC Auto Range					
Output Voltage	+3.3V	+5V	+12V	-5V	-12V	+5Vsb
	8A	25A (2A min.)	10A (0.1A min.)	0.5A	0.5A	0.72A
Efficiency	65%					
Temperature	Operating: -20°C ~ 70°C (40°C ~ 70°C derating curve) Storage: -40°C ~ 75°C					
MTBF (hrs)	170,000					
Output Connector	1 x 20-pin ATX, 5 x HDD/CDROM, 2 x FDD					

PS/2 AC Input AT Type

ACE-932A

300 W PS/2 Type AT Power Supply



Ordering Information

Part No.	Description
ACE-932A-RS	300 W AC-DC PS/2 AT Power Supply

Specifications

Input Type	85 ~ 130 VAC, 180 ~ 265 VAC Auto Range					
Output Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb
		33A (3 A min.)	8A (0.2 A min.)	0.5 A	3 A	
Efficiency	68%					
Temperature	Operating: 0°C ~ 50°C (50°C ~ 70°C derating curve) Storage: -40°C ~ 75°C					
MTBF (hrs)	120,000					
Output Connector	1 x P8+P9, 1 x Extra +5V (P10), 4 x HDD/CDROM, 2 x FDD					

ACE-935AL

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



Ordering Information

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

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					

ACE-925A

200 W PS/2 Type AT Power Supply



Ordering Information

Part No.	Description
ACE-925A-RS	200 W AC-DC PS/2 AT Power Supply

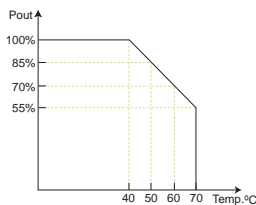
Specifications

Input Type	85 ~ 265 VAC Full Range					
Output Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb
		22 A (1A min.)	7 A (0.1A min.)	0.5 A	0.7 A	
Efficiency	68%					
Temperature	0°C ~ 50°C (Operating), -40°C ~ 75°C (Storage)					
MTBF (hrs)	130,000					
Output Connector	1 x P8+P9, 5 x HDD/CDROM, 2 x FDD					

PS/2 DC Input ATX Type

ACE-828C

250 W PS/2 24 V DC Input ATX Type



Ordering Information

Part No.	Description
ACE-828C-RS	250 W 24V DC Input PS/2 Type ATX Power Supply

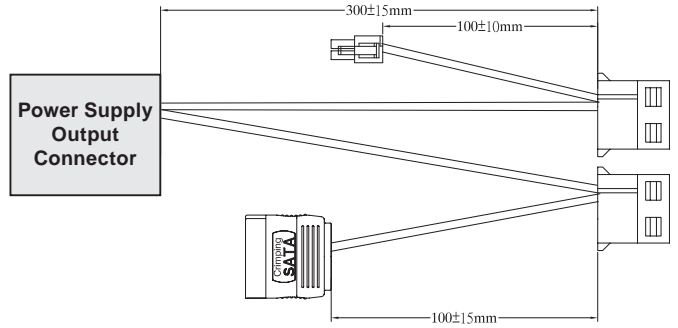
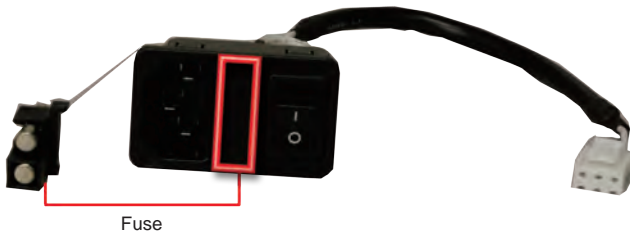
Specifications

Input Type	18 ~ 32 VDC					
Input Current	20 A (RMS)@24VDC			Inrush Current		
				5A Max for 24VDC		
Output Voltage	+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb
	8 A	25 A (2A min.)	7 A (0.1 min.)	0.5 A	1 A	0.72 A
Ripple & Noise	+5 V, +3.3 V output are less than 50mV +12 V, -5 V, -12 V, +5 Vsb output are less than 100mV					
Overvoltage Protection	+5 V: 5.7 V ~ 7.0 V					
Short Circuit Protection	Yes			Overload Protection		Yes
Efficiency	65%					
Temperature	-20°C ~ 70°C (Operating), -40°C ~ 75°C (Storage)					
MTBF (hrs)	120,000					
Power Good Signal	Turn on delay time: 100 ms to 500 ms					
Output Connector	1 x P8+P9, 1 x Extra +5V (P10), 4 x HDD/CDROM, 2 x FDD					

Optional Power Supply Cables

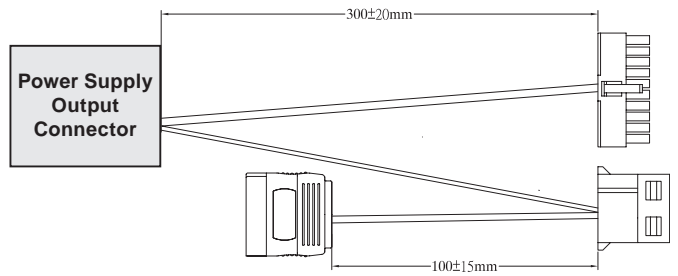
■ AC Input Solution

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



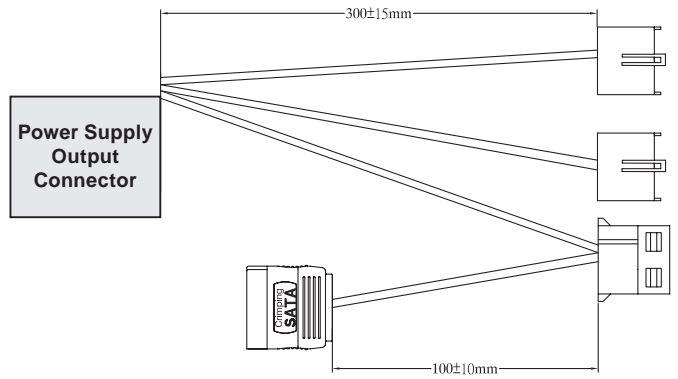
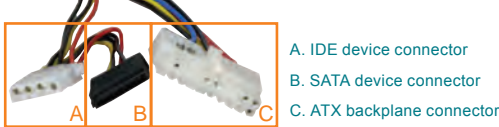
■ Embedded Solution

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



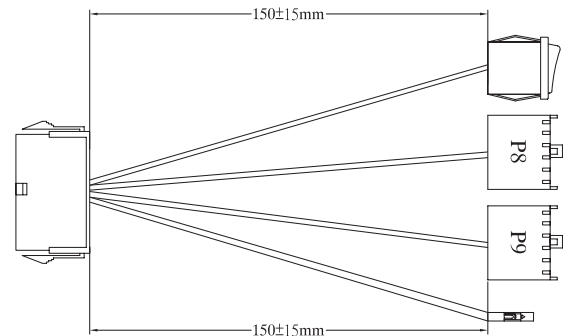
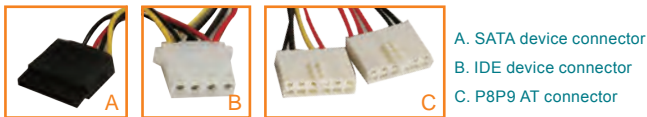
■ ATX Backplane Solution

30 cm cable with IDE, ATX and SATA device connectors



■ AT P8P9 Backplane Solution

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



■ AT Backplane with ATX Power Supply Solution

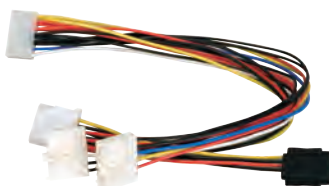
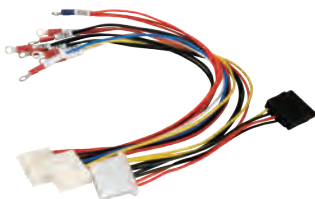
15 cm cable with ATX, P8P9 and 5VSB connectors, and on/off switch



CB-716P8P9



CB-870P8P9

CB-890P8P9



Redundant Type Selection Guide

AC Input

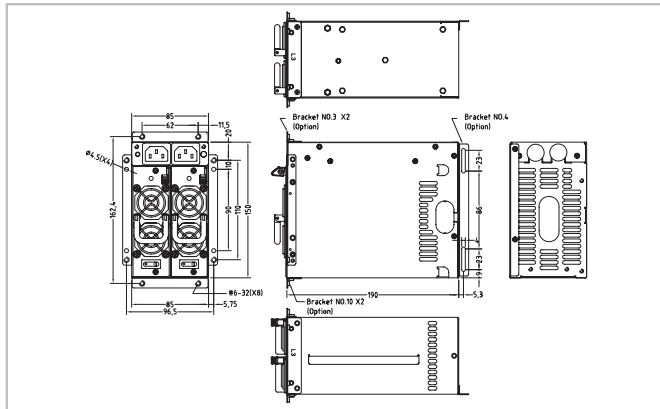
Product	Model No.	Watt ATX/ATX PFC	Input Range Voltage	Output Current Range								Efficiency	Operating Temperature	Safety	Dimensions (mm)
				+3.3 V	+5 V	+12 V	-5 V	-12 V	+5 Vsb	24V					
	ACE-R4140AP	400W ATX PFC	90 ~ 264 VAC	25 A (2 A min.)	25 A (2 A min.)	30 A (2.5 A min.)		0.8 A (0.1 A min.)	2 A (0.1 A min.)		65%	0°C ~ 40°C	UL, TUV, CCC, BSMI, CE, FCC	150 x 85 x 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	185 x 150 x 86	

ACE-R4140AP

400 W ATX Mini Redundant Power Supply



Dimensions (Unit: mm)



Specifications

Input	Voltage	90 ~ 264 VAC Full Range		
	Frequency	47 Hz ~ 63 Hz		
	Input Current	8 A (RMS)@ 100 VAC, 4 A (RMS)@ 240 VAC		
	Inrush Current	34.4A Max for 100 VAC, 68A Max for 264VAC		
Output	Voltage	Min. load	Max. load	Ripple & Noise
	+5 V	2 A	25 A	50 mV P-P
	+12 V	2.5 A	30 A	120 mV P-P
	-12 V	0.1 A	0.8 A	120 mV P-P
	+3.3 V	2 A	25 A	50 mV P-P
	+5 Vsb	0.1 A	2 A	50 mV P-P
	+5 V, +12 V total current not exceed 150 W +3.3 V, +5 V, +12V total current not exceed 440 W			
General Specification	Hold up Time	17 ms min.		
	Efficiency	65% min		
	MTBF	100,000 hours on max. load at +25°C		
	Temperature	Operating: 0°C ~ 50°C, Storage: -40°C ~ 70°C		
	Dimensions	150 x 85 x 190 (mm)		
	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		

Ordering Information

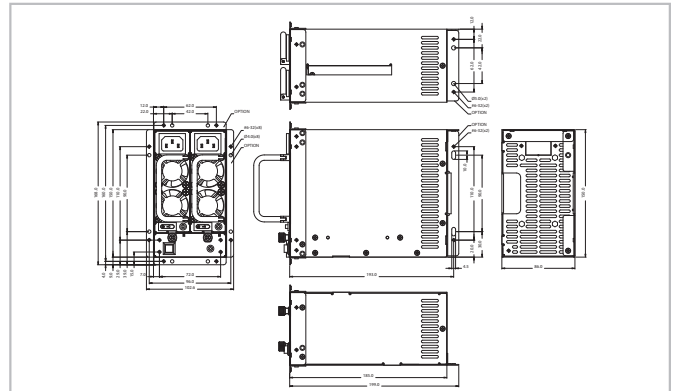
Part No.	Description
ACE-R4140AP-RS	400W Mini Redundant ATX Power Supply, with PFC
ACE-R4140AP1-RS	400W AC-DC ATX Redundant Module, for ACE-R4140AP, with PFC

ACE-R4130AP

300 W ATX Mini Redundant Power Supply



Dimensions (Unit: mm)



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: 0°C ~ 50°C, Storage: -20°C ~ 80°C		
	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			

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 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

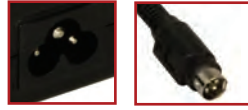
* For detailed specs, please refer to official certification

AC Input

Product	Model No.	Watt	Input Range	Output Current Range			Plug Type	Efficiency	Operating Temperature	Safety	Dimensions (mm)
			Voltage	+5V	+12 V	+19 V					
	FSP120-ABBN2	120W	90~264 VAC			6.32 A		91.57%	0°C ~ 40°C	UL/TUV CCC/CE/ GS/PSE/KC/ BSMI	75.6 x 15.3 x 25.4
	FSP096-AHAN2	96W	90~264 VAC		8 A			89%	0°C ~ 40°C	UL/TUV/ CCC/CE/GS/ PSE	75.6 x 15.3 x 25.4
	FSP090-DIEBN2	90W	90~264 VAC			4.74 A		87%	0°C ~ 40°C	UL/TUV/CCC/ CE/GS/PSE/ KC/BSMI/ RCM/EAC/ PSB	51 x 129 x 30.9
	FSP065-REBN2	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
	Medical 63040-010060-020	60W	90~264 VAC		5V			85%	0°C ~ 60°C	CB/UL/ TUV/CCC/ BSMI/CE/ FCC	147 x 75 x 49
	FSP060-DIBAN2	60W	90 ~ 264 VAC		5V			88.57%	0°C ~ 40°C	UL/TUV/CCC/ GS PSE/PSB/ RCM/EAC/ CE/Nrcan/KC/ BSMI	62 x 110 x 31.5
	FSP036-RBBN2	36W	90 ~ 264 VAC		3 A			86%	0°C ~ 40°C	UL/TUV/CCC/ GS CE/BSMI/ PSE/RCM	37.8 x 89.8 x 27

FSP120-ABBN2

120 W AC/DC Adapter



Plug Type: Power mini-DIN (4P)

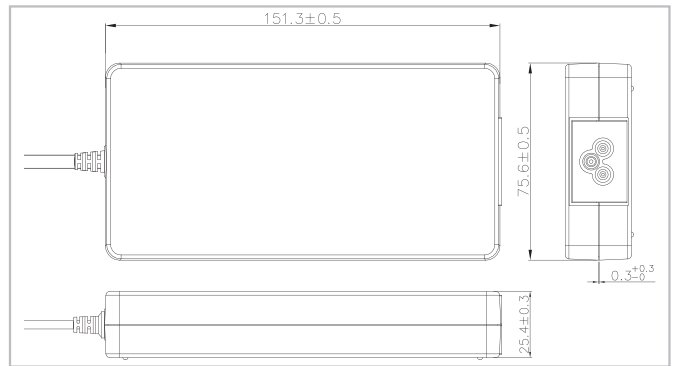


****Meet ErP**

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 19 V
- Output Current: 6.32 A
- Output Watts: 120 W
- Efficiency: 91.57%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63000-FSP120AAB-RS	19 V 120W power adapter, 90~264 VAC input, ErP, PSE

FSP096-AHAN2

96 W AC/DC Adapter



Plug Type: øin 2.5 mm / øout 5.5 mm

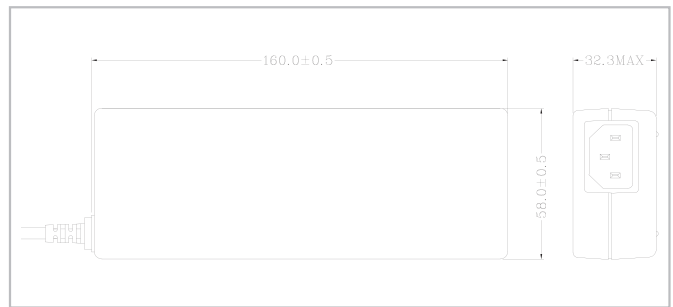


****Meet ErP & PSE**

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 12 V
- Output Current: 8 A
- Output Watts: 96 W
- Efficiency: 89%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 80°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010096-100-RS	12V 96W power adapter with DIN 4-pin/lock 90~264 VAC input, ErP, PSE

FSP090-DIEBN2

87 W AC/DC Adapter



Plug Type: Power mini-DIN (4P)

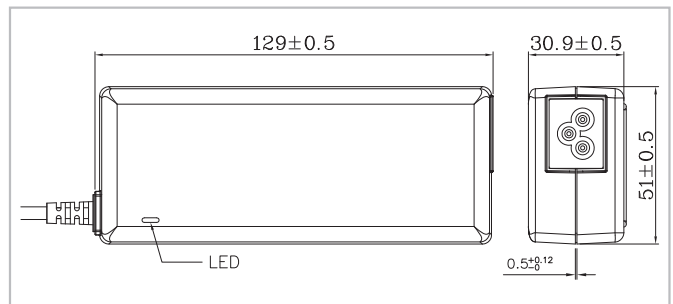


****Meet ErP & PSE**

Specifications

- Input Voltage Range: 90-264 VAC
- Input Frequency: 47-63 Hz
- Output Voltage: 19 V
- Output Current: 4.74 A
- Output Watts: 87 W
- Efficiency: 86%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -30°C ~ 60°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010090-101-RS	19V 90W power adapter with DIN 4-pin/lock 90~264 VAC input, ErP

FSP065-REBN2

65 W AC/DC Adapter



Plug Type: ϕ in 2.1 mm / ϕ out 5.5 mm

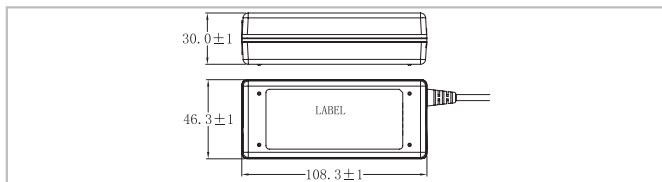
****Meet ErP & PSE**



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: 89.54%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 75°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010065-010-RS	19V 65W power adapter with Φ 2.1/ Φ 5.5/lock 90~264 VAC input, ErP, PSE

63040-010060-020

60 W AC/DC Adapter



Plug Type: ϕ in 2.5 mm / ϕ out 5.5 mm

Medical

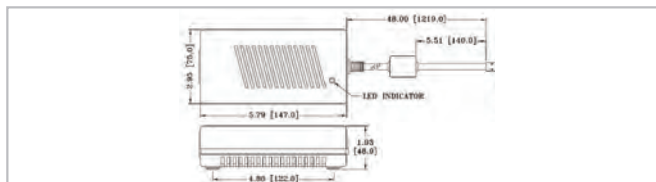
****Meet ErP**



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 ~ 60°C
- Storage Temperature: -40°C ~ 85°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010060-020-RS	12V 60W medical power adapter with Φ 2.5/ Φ 5.5 90~264 VAC input, ErP

FSP060-DIBAN2

60 W AC/DC Adapter



Plug Type: ϕ in 2.5 mm / ϕ out 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: 88.9%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 65°C

Dimensions (Unit: mm)

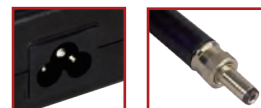


Ordering Information

Part No.	Description
63040-010060-120-RS	12 V 60W power adapter with lock screw 90~264 VAC input, ErP, PSE
63040-010060-130-RS	12V 60W power adapter with none lock 90~264 VAC input, ErP, PSE

FSP036-RBBN2

36 W AC/DC Adapter



Plug Type: ϕ in 2.5 mm / ϕ out 5.5 mm

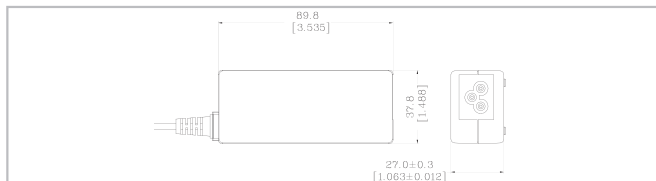
****Meet ErP & PSE**



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: 86%
- Operating Temperature: 0°C ~ 40°C
- Storage Temperature: -20°C ~ 70°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
63040-010036-121-RS	12V 36W Power adapter with lock screw, 90~264VAC input, ErP, PSE
63040-010036-111-RS	12V 36W Power adapter without lock, 90~264VAC input, ErP, PSE

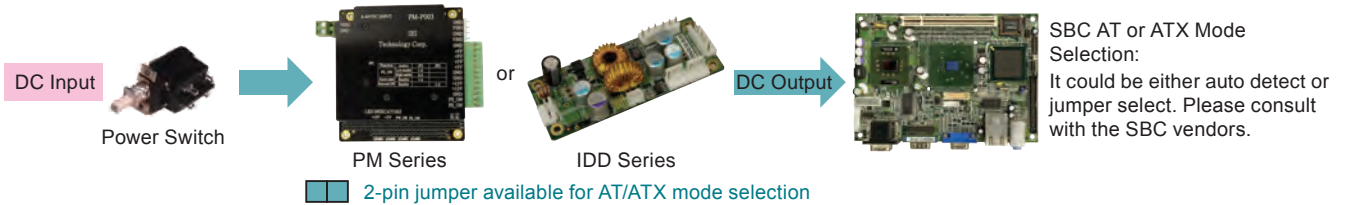
How to Configure the IDD & PM_P Series

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)



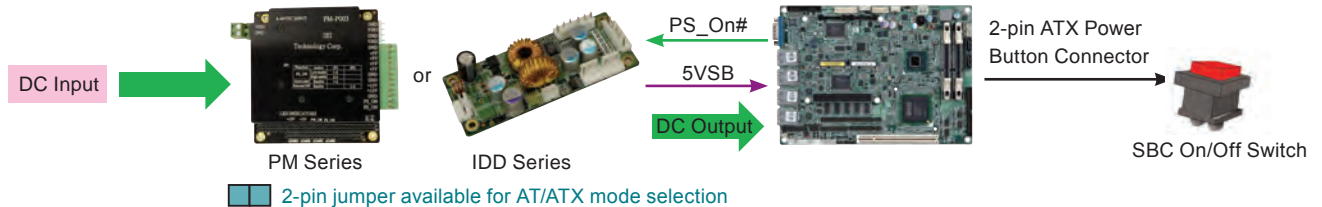
Step 2. Connect all input and output power cables **Step 3.** Wire/Isolate DC input by power switch **Step 4.** Power up by switch

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)



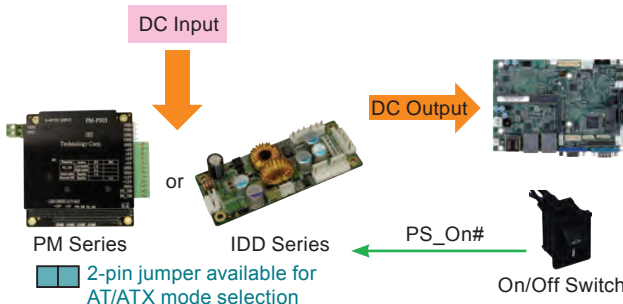
Step 2. Wire 5VSB and PS_ON# from power module to SBC **Step 3.** Wire all input, output power cables **Step 4.** Power up system by SBC on/off switch

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)



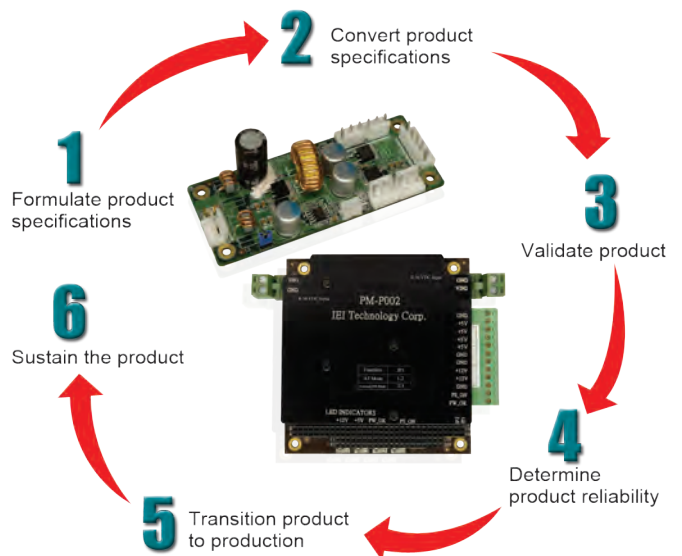
Step 2. Connect 5VSB & PS_ON# from the power module to the SBC.

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.

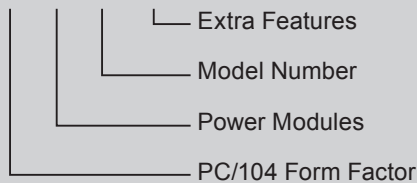


Product List

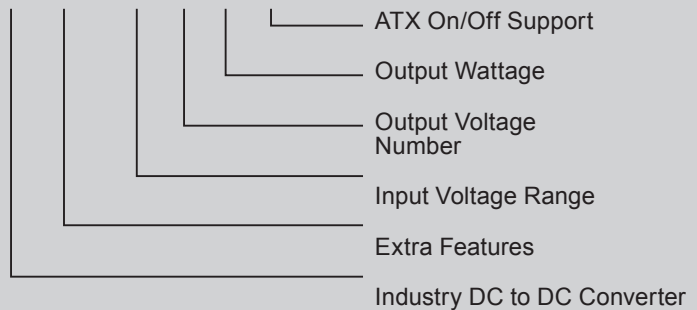
Model No.	Dimensions	Maximum Output Power	Input Voltage	Maximum Output Current						
				12V	5V	3.3V	-12V	5VSB	16V	20V
IDDV-6304140A	45 mm x 160 mm	140 W	6 ~ 30 V	4 A	10 A	10 A	0.15 A	1.5 A	-	-
IDD-9364120A	45 mm x 160 mm	120 W	9 ~ 36 V	4 A	10 A	8 A	0.3 A	2 A	-	-
IDD-241100	40 mm x 100 mm	100 W	24 V	8.3 A	-	-	-	-	-	-
IDD-936160	25 mm x 82 mm	60 W	9 ~ 36 V	5 A	-	-	-	-	-	-
PM-P006UPS	3.775" x 3.55"	65 W	6 ~ 36 V	4 A	10 A	8 A	-	1 A	-	-
IDD-930160-KIT	42 mm x 103 mm x 31 mm	60 W	9 ~ 30 V	5 A	-	-	-	-	-	-
IDD-936260A	40 mm x 100 mm	60 W	9 ~ 36 V	3 A	10 A	-	-	0.5 A	-	-
IDD-12250A	40 mm x 100 mm	50 W + 60 W	12 V	5 A	10 A	-	-	0.5 A	-	-

Naming Conventions:

PM-P xxx yy



IDD xx - 630 4 120 A



Output Power Calculation

P (Wattage) = V (Voltage) x I (Current)
 P_t = Total Output Power
 I_1 = Current of Output Voltage1
 I_n = Current of Output Voltagen
 V_1 = Output Voltage1
 V_n = Output Voltagen
 $P_t = V_1 \times I_1 + V_2 \times I_2 + \dots + V_n \times I_n$

P_t must be less than max. output power and individual output current must not exceed max. output current.

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



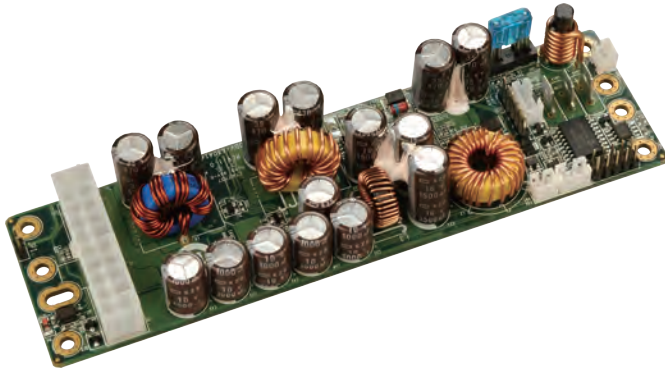
Electronic Load Chroma 6312 Series



Power Analyzer Chroma 6632

IDDV-6304140A

140 W DC/DC Smart ATX Converter Module for Vehicle



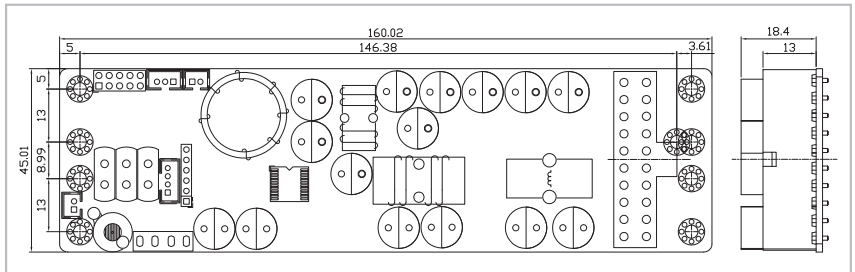
Dedicated ATX power for car PC and battery powered applications

Designed to provide power and to control power on/off switch of a motherboard based on the ignition status.

Features

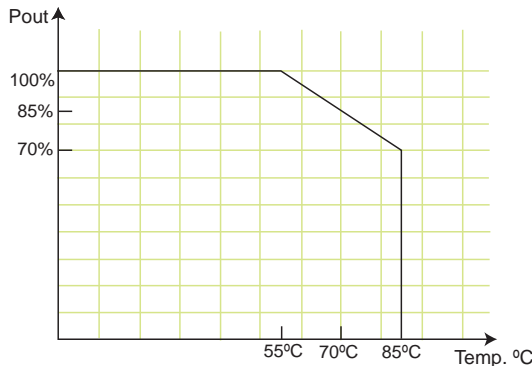
1. Wide input range: 6-30 VDC
2. Smart system on/off control
3. Six selectable power on/off timing modes
4. Load down protection
5. Over voltage protection
6. Short circuit protection
7. Over current protection
8. Battery voltage monitor
9. Amplifier on-delay control
10. RoHS compliant
11. Compact size
12. Infrared remote off (optional)

Dimensions (Unit: mm)



Specifications

- Output (max.): 5 V@10 A, 3.3 V@10 A, 12 V@4 A, -12 V@0.15 A & 5VSB@1.5 A
- Max. total output: 140 W
- Input: 6 VDC to 30 VDC
Min. input operating voltage: 5.7 V
Max. input operating voltage: 30 V
- Deep-discharge shut down voltage: 10.6 V
- Startup voltage: 8 V
- Efficiency: up to 90%
- Dimensions (mm): 45 x 160
- Weight (NW): 118 g
- Operating temperature: -20°C ~ 85°C
- Storage temperature: -25°C ~ 90°C



Pin Assignments

Input Power Connector

CN15	Batt (+)
CN16	ACC ON
CN17	Batt (-)

Output Power Connector

J1	Standard 20-pin ATX
----	---------------------

Packing Information

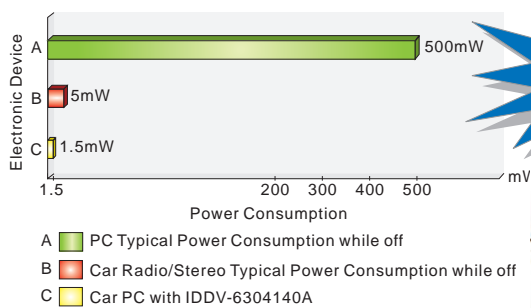
- 1 x IDD V-6304140A
- 1 x QIG
- 1 x Wire cable for PWR/SW and MB/SW (P/N: 32100-153400-RS)
- 1 x Wire cable for LED/AMP (P/N: 32100-153500-RS)

Ordering Information

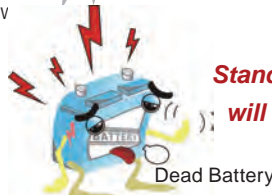
Part No.	Description
IDDV-6304140A-R10	140 W DC/DC 6-30 VDC input, vehicle converter module

PCs Still Consume Power While Off

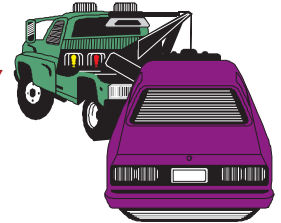
A typical PC consumes 500mW of power when the system is powered off. The current computer market trend demands more and more standby power.



333 Times



Standard ATX Power Supply will Drain the Car Battery!



How the IDDV-6304140A works to keep your battery alive

Step1. Ignition=Off

The IDDV-6304140A cuts off all the power rails including 5VSB. The internal μ P power consumption keeps less than 1.5mW.

Step2. Ignition=On (ACC On)

The IDDV-6304140A waits for 10 seconds then turns on the 5VSB rail.

Auto On (jumper selectable) - After 1 second, the μ P sends an "ON" signal to the motherboard via the two wires connected to the motherboard's on/off pins.

Manual On (jumper selectable) - Nothing happens until the power button on the IDDV-6304140A is pushed.

Step3. Ignition=On

During driving: acts like a regular PC, turns on/off anytime by pushing the on/off button.

Step4. Ignition=Soft Off

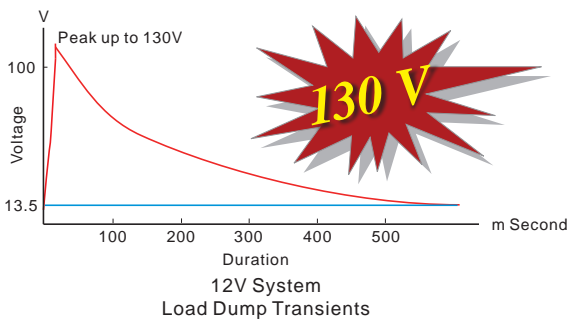
The IDDV-6304140A waits for "10~40" seconds (jumper selectable), and then μ P sends a signal to turn off the motherboard. The computer should turn off gracefully during the shutdown procedure. During this period, normal power will be available for the system to perform normal shutdown.

Step5. Ignition=Hard Off

5VSB is still available for 0 seconds, 45 seconds, 1 hour, or never (jumper selectable) before being cut off by μ P. At this stage, the system will keep minimum power consumption so that the system won't drain the car battery.

12V Battery Vehicle Load Dump Transients

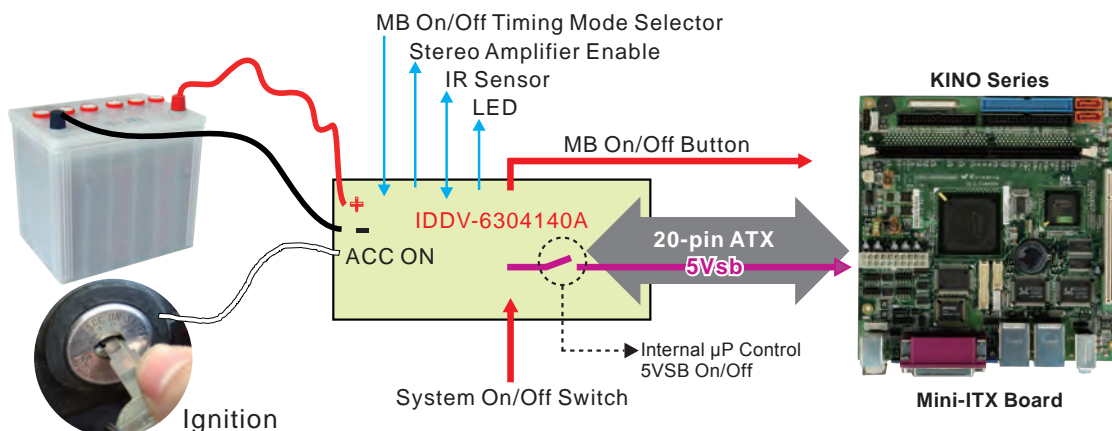
'Load dump' transients occur when a battery are disconnected from the charging system during charge. The alternator, with a finite response time of 40ms to 400ms, generates power with nowhere to go. This damages electronic devices.



Load dump transients typically reach peak voltages of 130 volts in 12 volt systems with relatively slow rise times.

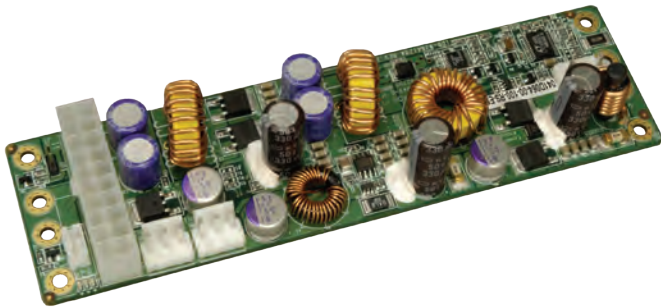
EMI sprays and RFI sparking is everywhere. Electrical transients run zapping embedded electronic components. The electronic components located in a vehicle must withstand 600V transients and "load dump" situations.

IDDV-6304140A Wiring Diagram



IDD-9364120A

120 W DC/DC Converter Module

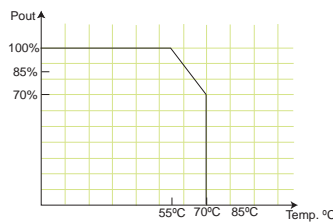


Features

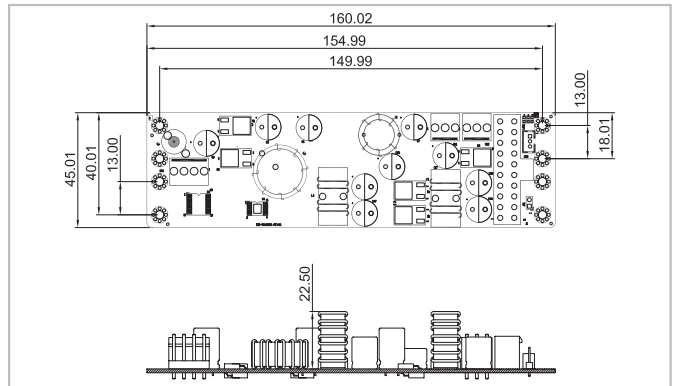
1. Wide input range: 9-36 VDC
2. AT or ATX mode on/off
3. Output voltage protection
4. Up to 90% efficiency
5. RoHS compliant
6. Compact size

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)



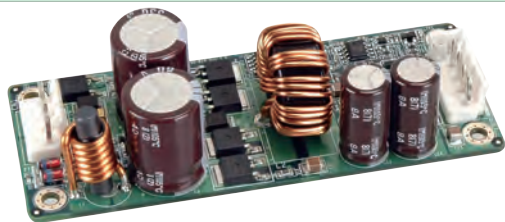
- Option 1.**
PN: 32102-021500-200-RS
 20-pin ATX to 20-pin ATX cable



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

IDD-241100

100 W DC/DC Converter Module

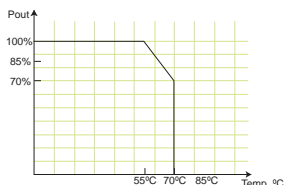


Features

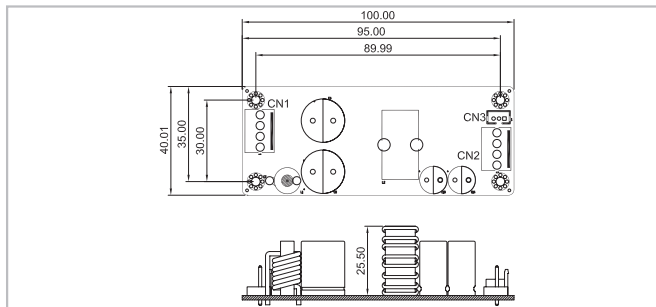
1. 100W total power
2. AT mode on/off
3. Up to 90% efficiency
4. RoHS compliant
5. Compact size

Specifications

- Output (max.): 12 V@8.33 A
- Max. total output: 100 W
- Input: 24 VDC
- Performance characteristics
Noise & ripple: <240 mV
Load regulation: <240 mV
Efficiency: Up to 90%
- Dimensions (mm): 40 x 100
- Weight (NW): 60 g
- Operating temperature: -20°C ~ 70°C



Dimensions (Unit: mm)



Packing Information

1 x IDD-241100 1 x QIG

Ordering Information

Part No.	Description
IDD-241100-R10	100 W DC/DC 24 V input, 12 V output with 100W total power
CB-NOLP4-RS	20 cm cable for terminal block DC input

Pin Assignments

Input Power Connector

CN1	Pin 1	Pin 2	Pin 3	Pin 4
	VIN	VIN	GND	GND

Output Power Connector

CN2	Pin 1	Pin 2	Pin 3	Pin 4
	+12 V	+12V	GND	GND

Power on/off, LED Connector

CN3	Pin 1	Pin 2	Pin 3
	SHDN# (Shut down output power function, short Pin1 & Pin2)	GND	LEDA (Disable LED function, short Pin2 & Pin3)

Wire Harness Selection Guide

DC Input (CN1)



PN: CB-NOLP4-RS
Cable for terminal block

IDD-936160

60 W DC/DC Converter Module



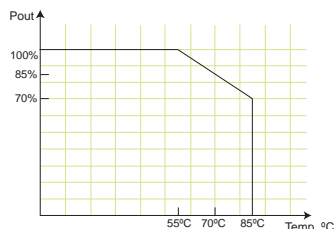
IDD-936160 60W DC/DC Converter Module is a high performance buck-boost switching regulator power module. The constant frequency current mode architecture allows a phaselockable frequency of up to 400 kHz. With a wide 9V to 36V input and 12V output and seamless transfers between operating modes, the IDD-936160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

Features

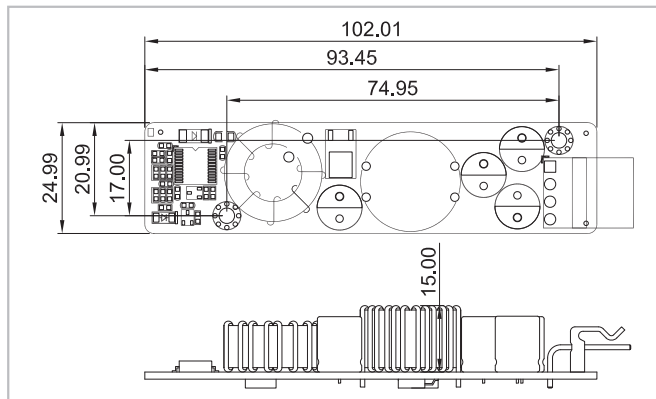
1. Wide input range: 9-36 VDC
2. 12 VDC output up to 5 Amp
3. Compact size
4. Efficiency up to 95%
5. RoHS compliant

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



Dimensions (Unit: mm)



Pin Assignments

Input/Output Connector

VOUT1	Pin1	Pin2	Pin3
	+12 V Output	GND	Vin



P/N: 32102-015700-100-RS

Packing Information

1 x IDD-936160 1 x QIG

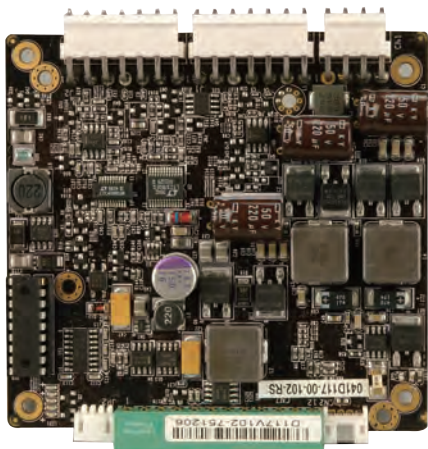
1 x 300 mm wire cable (P/N: 32102-015700-100-RS)

Ordering Information

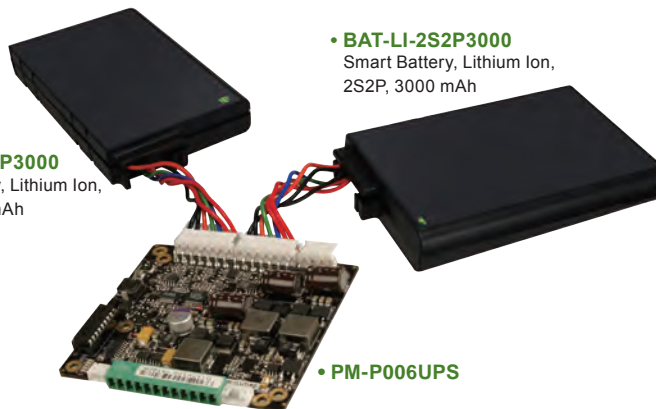
Part No.	Description
IDD-936160-R20	60 W DC/DC 9~36 V input, 12 V output

PM-P006UPS

65 W DC/DC Converter Module, with UPS



• **BAT-LI-2S2P3000**
Smart Battery, Lithium Ion,
2S2P, 3000 mAh



• **BAT-LI-2S2P3000**
Smart Battery, Lithium Ion,
2S2P, 3000 mAh

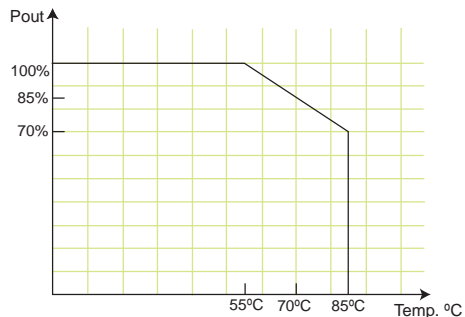
• **PM-P006UPS**

Features

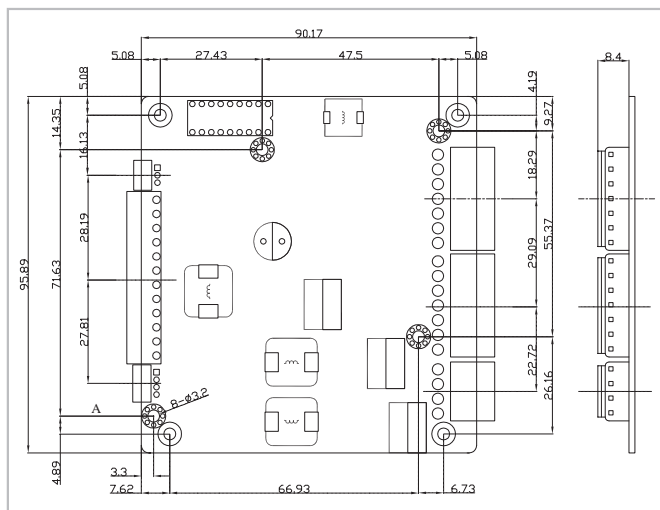
1. Load down protection
2. Over voltage protection
3. Short circuit protection
4. Over current protection
5. Smart battery charger for lithium ion
6. I/O interface: SMBus/I²C & RS-232
7. Support up to two battery packs
8. AT/ATX modes
9. Utility program: pull data out through RS-232 to a system

Specifications

- Output (max.): 12 V@4 A, 5 V@10 A, 3.3 V@8 A, 5VSB@1 A, & -12 V @0.1 A
- Max. total output: 65 W
- Input: 6 VDC to 36 VDC
- Battery charge voltage: 12 V ~ 36 V
- Efficiency: up to 90%
- Dimensions (mm): 90 x 96
- Weight (NW): 178 g
- Operating temperature: -20°C ~ 85°C (without smart battery)
Operating temperature: -10°C ~ 60°C (with smart battery)
- Storage temperature: -35°C ~ 95°C



Dimensions (Unit: mm)



Packing Information

- 1 x PM-P006UPS
- 1 x QIG
- 1 x Utility CD
- 1 x DB-9 pin connector cable (32100-157200-RS)

Applications



Battery backup system



Portable equipment



Power sensitive equipment

Ordering Information

Part No.	Description
PM-P006UPS-R10	65 W ATX DC/DC 6-36 VDC input, 12 V, 5 V, 3.3 V, -12 V and 5VSB PC/104 power module with UPS
BAT-LI-2S2P3000-R10	Smart Battery, lithium ion, 2S2P, 3000 mAh
CB-NOLP4-RS	20 cm cable for terminal block DC input

■ High Energy Density, Light Weight and Compact DC/DC UPS & Power Module

- Protects your precious equipment from damage
- Reduces the risk of losing your valuable data

An uninterruptible power supply provides emergency backup power when the main power is lost.

Benefits:

- Provides power for a certain amount of time after a power failure has occurred
- Provides stable power to equipment during line sags and spikes
- Absorbs power surges and transients
- Smooths out noisy power sources

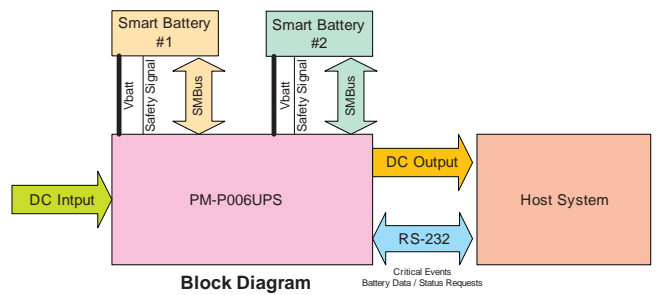
The utility software displays the following information:

- Current power source
- Battery status
- Charging status
- Remaining battery percentage

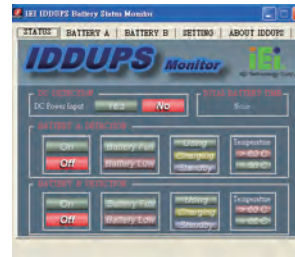


Battery Capacity Status

■ Level 2 Smart Battery Charger & Power Modules



Block Diagram



Battery Monitoring Utility



Battery Monitoring Connection Cable (PN: 32100-157200-RS)

■ Battery Pack (P/N: BAT-LI-2S2P3000)



Battery Type	Lithium Ion			
Pout (W)	100	80	60	40
Time (min.)	8	14	18	27
Dimensions (mm)	148 x 89 x 20			
Capacity	3000 mAh			

■ Pin Assignments

Input Power Connector

CN1	Pin 1	Pin 2	Pin 3	Pin 4
	VIN	VIN	Gnd	Gnd

I/O Interface RS-232 Connector

JP2	Pin 1	Pin 2	Pin 3
	Gnd	TX	RX

Output Power Connector

CN7	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
	N12V	Gnd	12 V	Gnd	3 V	3 V	Gnd	5 V	5 V	Gnd	5 VSB	Gnd

ATX Mode Connector

CN2	Pin 1	Pin 2	Pin 3	Pin 4
	PWROK	5 VSB	Gnd	PS_ON

Battery Connector

J1, J2	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
	BAT+	BAT+	Clock	Data	Temp	Gnd	Gnd

■ Wire Harness Selection Guide

DC Input



Option 1.

PN: CB-NOLP4-RS

Cable for terminal block

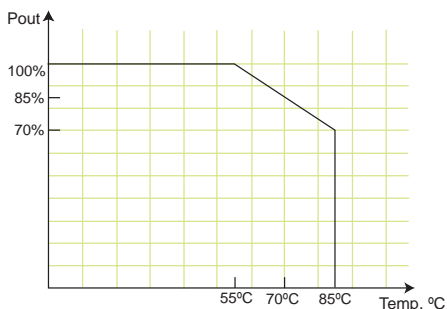
IDD-930160-KIT

60 W DC/DC Converter Module for AFOLUX Panel PC and Monitor

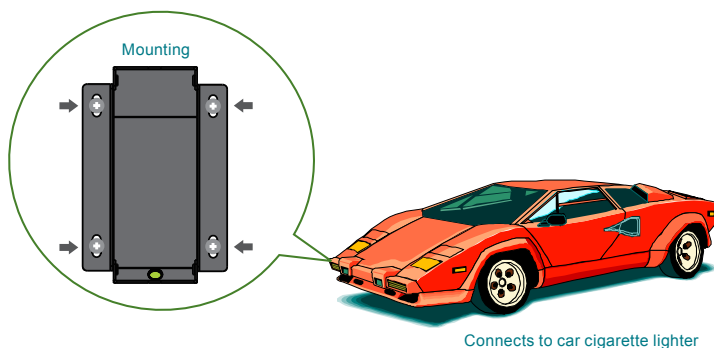


Specifications

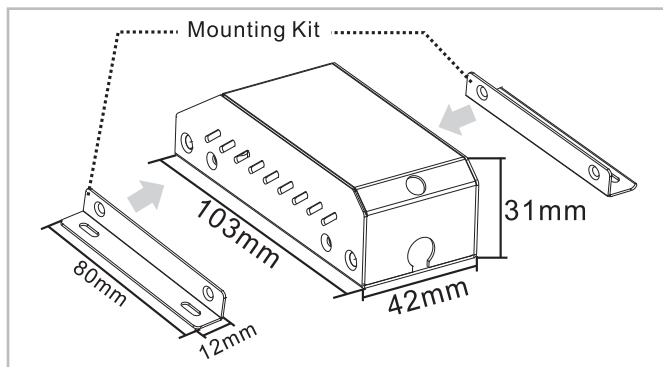
- Input voltage: 9-30 VDC
- Input current: Max. 8.2 A at 9 VDC
- Output: 12 V@5 A
- Max. total output: 60W
- Performance characteristics:
 - Noise and ripple: <120 mV
 - Line regulation: <2.5%
 - Load regulation: <2.5%
- Transient toggle rate: 250 Hz (50% duty ratio)
- Transient current step:
 - From 0% to 50% and 50% to 100% of max. current
- Efficiency: typ. 95% (Vin=12 V, 80% of full load)
- Dimensions (mm): 42 x 103 x 31
- Mounting kit: 12 mm x 80 mm
- Cable length: 180 cm
- Operating temperature: -10°C ~ 55°C
- Load down protection



Typical Applications



Dimensions (Unit: mm)



Packing Information

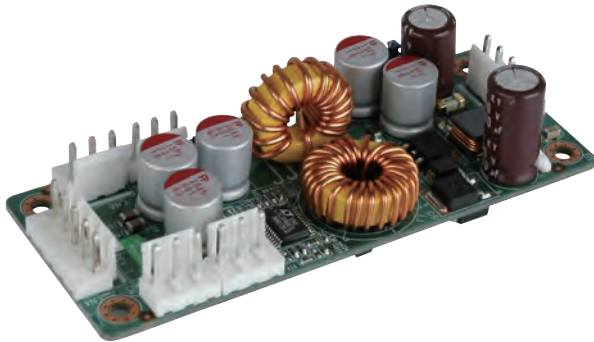
- 1 x IDD-930160-KIT-R20
- 1 x Mounting kit
- 1 x Screw kit
- 1 x Anti-slip strip
- 1 x Utility CD

Ordering Information

Part No.	Description
IDD-930160-KIT-R20	60 W DC/DC 9-30 VDC input vehicle power adapter

IDD-936260A

60 W DC/DC Converter Module

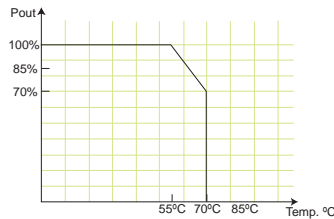


Features

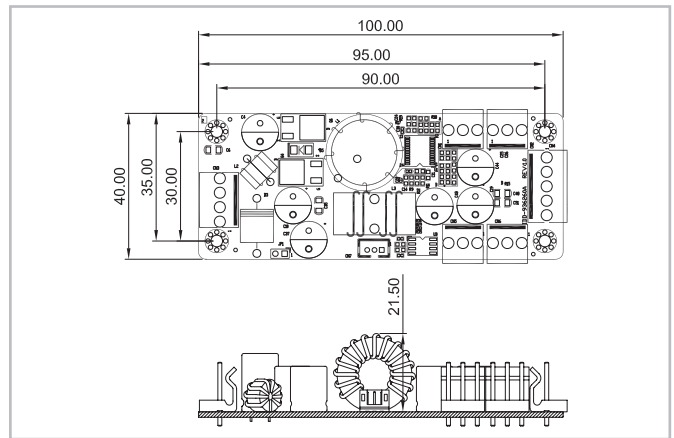
1. Wide input range: 9-36 VDC
2. AT or ATX mode on/off
3. Up to 90% efficiency
4. RoHS compliant
5. Compact size

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



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

IDD-12250A

50 W+60 W DC/DC Converter Module

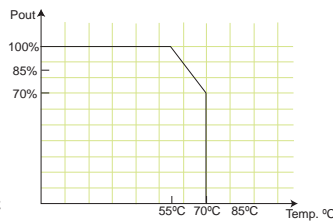


Features

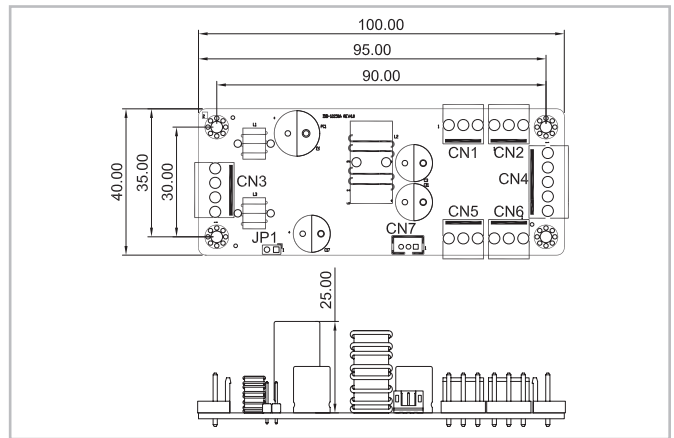
1. 50 W + 60 W (12 V pass thru), total power 110 W
2. AT or ATX mode on/off
3. Up to 90% efficiency
4. RoHS compliant
5. Compact size

Specifications

- Output (max.): 12 V@5 A (pass thru), 5 V@10 A & 5VSB@0.5 A
Max. total output: 50 W plus 60 W (12 V pass through)
- Input: 12 VDC
- Performance characteristics
Noise & ripple: <25 mV
Load regulation: <120 mV
Efficiency: Up to 90%
- Dimensions (mm): 40 x 100
- Weight (NW): 46 g
- Operating temperature: 0°C ~ 70°C



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	+12V

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

ATX Mode Connector

CN7	Pin 1	Pin 2	Pin 3
	5VSB	GND	PS_ON

Packing Information

1 x IDD-12250A

1 x QIG

Ordering Information

Part No.	Description
IDD-12250A-R11	50 W+60 W DC/DC 12 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

CPU Cooler *High performance thermal solutions*

Choosing the wrong CPU cooler for a system can lead to serious overheating, resulting in system shutdown and potential damage to CPUs.

For industrial applications, the following CPU coolers fit the needs of various operating environments, where different levels of cooling are required.


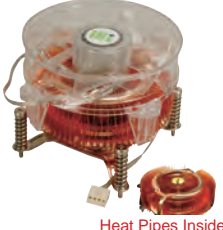


IEI Special Desktop Core™ CPU Cooler					
					
Where Used	For spacial models: SPCIE-C2260, PCIE-Q870, PCIE-H810, WSB-H810, KINO-AQ870				
Model Name	CF-1150SA-R10	CF-1150SB-R11	CF-1150SC-R20	CF-1150SE-R11	CF-1150SF-R10
Description	IEI customized cooler for LGA1150 Intel® CPU, RoHS		IEI customized cooler for LGA1150 Intel® CPU, 1U chassis compatible, RoHS	IEI customized cooler for LGA1150 Intel® CPU, RoHS	IEI customized cooler for LGA1150 Intel® CPU, RoHS
CPU Solution	Intel® Core™ i7/i5	Intel® Core™ i7/i5	Intel® Core™ i7/i5	Intel® Core™ i7/i5	Intel® Core™ i7/i5
Socket Solution	LGA1150/LGA1151	LGA1150/LGA1151	LGA1150/LGA1151	LGA1150/LGA1151	LGA1150/LGA1151
Dimensions (mm)	83 x 83 x 57	96 x 82 x 60	105 x 80 x 23.7	107 x 61 x 60	107 x 70 x 35
Material	Al	Al	Cu	Cu	Al
Bearing Type	Ball And sleeve	Two-ball	Two-ball	Two-ball	Two-ball
Capability (Watt)	95 W	65 W	65 W	95 W	54 W
Fan Speed (RPM)	4200	3500	5500	4200	4500
Noise Level (dBA)	40	41	55	36	39
Life Expectancy (hrs)	40,000	50,000	50,000	50,000	50,000
Weight	330 g	286 g	406 g	812 g	220 g

Intel® Standard Desktop Core™ CPU Cooler					
					
	LGA115X (LGA1150/LGA1151/LGA1155/LGA1156)				
Model Name	CF-115XA-R10	CF-115XE-R10	CF-115XF-R10	CF-1156C-R20	CF-1156D-R20
Description	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible	High performance LGA1155/LGA1156 CPU cooler, RoHS	High performance LGA1155/LGA1156 CPU cooler, RoHS	Low power LGA1155/LGA1156 cooler kit, RoHS	
CPU Solution	Intel® Core™ i5/i3	Intel® Xeon®/Core™ i7/i5/i3	Intel® Xeon®/Core™ i7/i5/i3	Intel® Core™ i5/i3	Intel® Core™ i7/i5/i3
Socket Solution	LGA115X (LGA1150/LGA1151/LGA1155/LGA1156)				
Dimensions (mm)	89 x 92.6 x 27.4	91 x 91 x 84	90 x 90 x 69.3	90 x 90 x 33	90 x 90 x 33
Material	Cu	Al	Al	Al	Cu+Al
Bearing Type	Two-ball	Ball and Sleeve	Two Ball	Two-ball	Two-ball
Capability (Watt)	73 W	95 W	95 W	45 W	65 W
Fan Speed (RPM)	5500	4200	4200	3600	3600
Noise Level (dBA)	51	40	48	40	40
Life Expectancy (hrs)	50,000	40,000	50,000	70,000	70,000
Weight	422 g	301 g	432	198 g	240 g

CPU Cooler *High performance thermal solutions*

Choosing the wrong CPU cooler for a system can lead to serious overheating, resulting in system shutdown and potential damage to CPUs.

For industrial applications, the following CPU coolers fit the needs of various operating environments, where different levels of cooling are required.

	Desktop Core™ CPU Cooler		Desktop CPU Cooler	
		 Heat Pipes Inside		
	LGA1355/1356/2011		LGA775 Cooler	
Model Name	CF-2011B-RS	CF-775A-RS	CF-775B-RS-R11	CF-520-RS-R11
Description	High performance LGA1355/1356/2011 cooler kit	High performance LGA 775 CPU cooler, with two copper pipes, RoHS	High performance 1U LGA 775 CPU cooler, with 7010 fan, RoHS	High performance LGA 775 CPU cooler, RoHS
CPU Solution	Intel® Xeon® E5-2600	Intel® Core™2 Quad	Intel® Core™2 Duo	Intel® Core™2 Duo
Socket Solution	LGA2011	LGA 775	LGA 775	LGA 775
Dimensions (mm)	89 x 88 x 45.1	92 x 92 x 73	80.5 x 81 x 28.2	115 x 115 x 67
Material		Cu-Al	Cu	Aluminum alloy
Bearing Type	Ball and sleeve	Rifle	Two-ball	Two-ball
Capability (Watt)	130W	130 W	90 W	115 W
Fan Speed (RPM)	4500	3600	4250	4500
Noise Level (dBA)	42	36.6–39.6	40	47.5–51.5
Life Expectancy (hrs)	40000	40,000	50,000	70,000
Weight	50g	492 g	600 g	635 g

	Desktop CPU Cooler	CPU Cooler	Mobile Core™ i7 CPU Cooler		Mobile CPU Cooler
					
	Pentium® 3 Cooler	Blower	PGA989		Pentium® M Cooler
Model Name	CF-370A-RS	BF-02-RS	CF-989A-RS-R12	CF-989B-RS-R11	CF-479B-RS
Description	High performance slim type Socket 370 CPU cooler, RoHS	Bracket cooling fan, RoHS	High performance Socket-G (PGA989) smart fan CPU cooler, RoHS	High performance Socket-G (PGA989) CPU cooler, aluminum, RoHS	High performance Socket 479, M and P Intel® Pentium® M CPU cooler, RoHS
CPU Solution	Intel® Pentium® 3	Bracket cooling fan	Intel® Core™ i7/i5/i3	Intel® Core™ i7/i5/i3	Intel® Pentium® M, Core™2 Duo (Mobile)
Socket Solution	Socket 370		PGA989	PGA989	Socket 479
Dimensions (mm)	50 x 52 x 20	112 x 90 x 21	60 x 60 x 27.5	60 x 60 x 27.5	50 x 50 x 16
Material	Cu-Al	Plastic	Cu	Al	Al
Bearing Type	Two-ball	One-ball	Two-ball	Two-ball	Two-ball
Capability (Watt)	40 W		55 W	50 W	50 W
Fan Speed (RPM)	5500	2800	4800	4800	5500
Noise Level (dBA)	32.1	28	40	40	30.1
Life Expectancy (hrs)	40,000	45,000	50,000	50,000	50,000
Weight	62 g	107.5 g	255 g	26 g	19 g

Industrial SATADOM Series

■ The world's smallest high-speed SATADOM

The revolutionary form factor of SATADOM has been widely adopted by industrial and embedded system makers across the globe. With in-house designed SATA 6Gb/s controller, the SATADOM provides you not only the fastest read/write speed but also stable data transfer. Moreover, to address customer's challenging requirements, we have released a series of the smallest SATADOM which fits various kinds of compact systems. Here, we recommend five models by different heights. For the low-profile 1U system use, you can choose SL 3SE, SH 3SE, and SH 3ME.

■ SATA 6Gb/s Solutions

Powerful Performance

SATA 6Gb/s devices have 191% higher performance than SATA 3Gb/s devices.

Less Power Consumption






The advanced idle mode helps to save up to 35% of energy when system stays in idle, therefore the battery runtime increases and the system requests less power consumption than SATA 3Gb/s.

Greater Reliability

The in-house designed SATA 6Gb/s controller offers an excellent signal quality during data transfer, enhancing the system compatibility and stability.

Easier Use

Along with upgrading to SATA 6Gb/s, the one-touch activation mode of iSMART 3.2 can save hours of setup and maintenance time.

Model Name	IFM-3010V	IFM-3320M	IFM-3010L	IFM-3010H	IFM-3020-HM	
Picture						
Key Features	<ol style="list-style-type: none"> Vertical version Anti-vibration mechanical design 	<ol style="list-style-type: none"> Vertical version Writing protection Anti-vibration mechanical design 	<ol style="list-style-type: none"> SATA 6Gb/s interface iSMART disk health monitoring Intelligent error recovery system Excellent data transfer speed Zero mechanical interference Anti-vibration mechanical design 	<ol style="list-style-type: none"> Horizontal version Only exposes 12mm height on the motherboard after installation 	<ol style="list-style-type: none"> Low profile horizontal design High IOPS 	
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	
Flash Type	SLC	MLC	SLC	SLC	MLC	
Capacity (GB)	1GB-32GB	8GB-128GB	1GB-32GB	1GB-32GB	8GB-128GB	
Sequential R/W	300/130	355/135	300/130	300/130	200/75	
Max. Power Consumption	0.65W (5V x 130mA)	1W (5V x 200mA)	0.65A (5V x 130mA)	0.65W (5V x 130mA)	1.8W (5V x 370mA)	
Thermal Sensor	Wide temperature model only	Wide temperature model only	Wide temperature model only	Wide temperature model only	Wide temperature model only	
ATA Security	Yes	Yes	Yes	Yes	Yes	
S.M.A.R.T	Yes	Yes	Yes	Yes	Yes	
Dimensions (mm)	20.9 x 39.5 x 7.9	25.3 x 41.5 x 6.8	32.5 x 29.5 x 8.0	18.1 x 30.5 x 12	18.0 x 30.3 x 12.5	
Environment	Vibration: 20G @ 7-2000Hz, Shock: 1500G @ 0.5ms, Storage Temperature: -55°C ~ +95°C, MTBF: >3 million hours					
P/N	Standard (0°C~+70°C)	IFM-3010IS-1GB IFM-3010IS-2GB IFM-3010IS-4GB IFM-3010IS-8GB IFM-3010IS-16GB IFM-3010IS-32GB	IFM-3320IM-8GB-R21 IFM-3320IM-16GB-R21 IFM-3320IM-32GB-R21 IFM-3320IM-64GB-R21 IFM-3320IM-128GB-R21	IFM-3010IL-1GB IFM-3010IL-2GB IFM-3010IL-4GB IFM-3010IL-8GB IFM-3010IL-16GB IFM-3010IL-32GB	IFM-3010IPS-1GB IFM-3010IPS-2GB IFM-3010IPS-4GB IFM-3010IPS-8GB IFM-3010IPS-16GB IFM-3010IPS-32GB	IFM-3020IPSM-8GB-R21 IFM-3020IPSM-16GB-R21 IFM-3020IPSM-32GB-R21 IFM-3020IPSM-64GB-R21 IFM-3020IPSM-128GB-R21
	Wide Temperature (-40°C~+85°C)	IFM-3010WS-1GB IFM-3010WS-2GB IFM-3010WS-4GB IFM-3010WS-8GB IFM-3010WS-16GB IFM-3010WS-32GB	IFM-3320WM-8GB-R21 IFM-3320WM-16GB-R21 IFM-3320WM-32GB-R21 IFM-3320WM-64GB-R21 IFM-3320WM-128GB-R21	IFM-3010WL-1GB IFM-3010WL-2GB IFM-3010WL-4GB IFM-3010WL-8GB IFM-3010WL-16GB IFM-3010WL-32GB	IFM-3010WPS-1GB IFM-3010WPS-2GB IFM-3010WPS-4GB IFM-3010WPS-8GB IFM-3010WPS-16GB IFM-3010WPS-32GB	IFM-3020WPSM-8GB-R21 IFM-3020WPSM-16GB-R21 IFM-3020WPSM-32GB-R21 IFM-3020WPSM-64GB-R21 IFM-3020WPSM-128GB-R21

Industrial SSD Series

Breakthrough Technology of IFD-2530ISM & IFD-2530ISMD

With the release of the brand-new designed firmware algorithm, IFD-2530ISM and IFD-2530ISMD offer outstanding read and write performance and extended lifespan, and are compliant with the JEDEC 219 specifications. In addition, with the iData Guard Technology, IFD-2530ISM and IFD-2530ISMD support data integrity in the event of abnormal power failure. The wide operating temperature ranges from -40 °C to 85 °C.



Features of IFD-2530ISM & IFD-2530ISMD

IFD-2530ISM and IFD-2530ISMS provide a wide range demand of capacity. IFD-2530ISMD even supports large capacity up to 2TB.

	IFD-2530ISM	IFD-2530ISMD
DRAM-less Design	•	
Price	•	
Random Transfer Performance	• R: 31,000 IOPS/W: 40,000 IOPS (128GB)	• R: 70,000 IOPS/W: 64,000 IOPS (128GB)
Easy to Design in Small Form Factors	•	
Low Power Consumption	•	•
TRIM	•	•

Model Name	2.5" SATA 6Gb/s IFD-2520IS	2.5" SATA 6Gb/s IFD-2530ISMD	2.5" SATA 6Gb/s IFD-2530AM
Picture			
Key Features	<ol style="list-style-type: none"> Intelligent error recovery system Excellent data transfer speed Enhanced power cycling management 	<ol style="list-style-type: none"> EverGreen L² architecture 7mm height mechanical design Excellent random performance 	<ol style="list-style-type: none"> 7mm height mechanical design Low power consumption Budget-friendly MLC-based solution
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Flash Type	SLC	MLC	MLC
Capacity (GB)	8GB-128GB	8GB-1TB	8GB-256GB
Sequential R/W	510/340	520/450	430/190
Max. Power Consumption	2.2W (5V x 450mA)	5W (5V x 1A)	1.7W (5V x 335 mA)
Thermal Sensor	Wide temperature model only	Wide temperature model only	Wide temperature model only
ATA Security	Yes	Yes	Yes
S.M.A.R.T	Yes	Yes	Yes
Dimensions (mm)	69.8 x 100.1 x 9.3	70.0 x 100.0 x 6.8	69.8 x 100.1 x 7.0
Environment	Vibration: 20G@7-2000Hz, Shock: 1500G@0.5ms, Storage Temperature: -55°C ~ +95°C, MTBF: >3 million hours		
P/N	Standard (0°C~+70°C)	IFD-2530ISMD-8GB-R20 IFD-2530ISMD-16GB-R20 IFD-2530ISMD-32GB-R20 IFD-2530ISMD-64GB-R20 IFD-2530ISMD-128GB-R20 IFD-2530ISMD-256GB-R20 IFD-2530ISMD-512GB-R20 IFD-2530ISMD-1TB-R20	IFD-2530AM-8GB-R20 IFD-2530AM-16GB-R20 IFD-2530AM-32GB-R20 IFD-2530AM-64GB-R20 IFD-2530AM-128GB-R20 IFD-2530AM-256GB-R20
	Wide Temperature (-40°C~+85°C)	IFD-2520WT-8GB IFD-2520WT-16GB IFD-2520WT-32GB IFD-2520WT-64GB IFD-2520WT-128GB	IFD-2530WTMD-8GB-R20 IFD-2530WTMD-16GB-R20 IFD-2530WTMD-32GB-R20 IFD-2530WTMD-64GB-R20 IFD-2530WTMD-128GB-R20 IFD-2530WTMD-256GB-R20 IFD-2530WTMD-512GB-R20 IFD-2530WTMD-1TB-R20

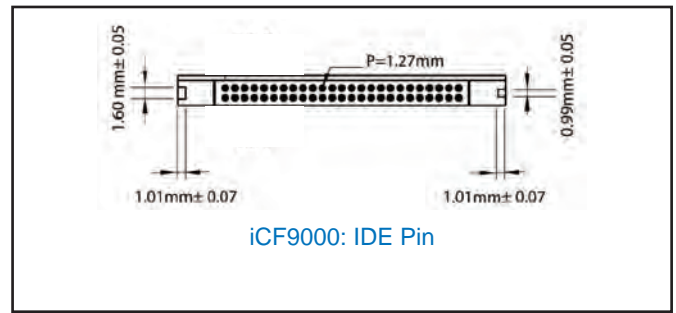
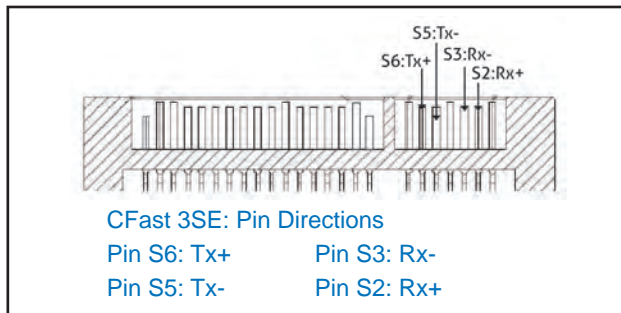
Industrial CFast & CF Card Series

■ Similar size, different read and write speeds

With a similar size, CFast is mainly different from CF card in its interface, connector, and most importantly, faster read and write speeds. CFast, with SATA 6Gb/s interface and 7-pin plus 17-pin connector, offers data transfer rates of sequential reads up to 470 MB/sec and of sequential writes up to 250 MB/sec. CF card, with PATA interface and 50-pin CF connector, offers data transfer rates of sequential reads up to 100 MB/sec and of sequential writes up to 95 MB/sec.

■ ATA security for CF card

The optional ATA Security Mode feature set is a password system that restricts access to user data stored on a device. The purpose is to prevent unauthorized access or a virus.



Model Name	ICT-2000 AS	ICT-2000 AM	ICF-9000	ICF-2000	ICF-1000		
Picture							
Capacity	2GB-64GB	8GB-128GB	4GB-32GB	512MB-8GB	128MB-8GB	128MB-16GB	
Sequential R/W (Max.)	285/260 MB/sec	310/240 MB/sec	110/100 MB/sec	40/30 MB/sec	40/28 MB/sec	30/15 MB/sec	
Flash Type	SLC	MLC	SLC	SLC	SLC	SLC	
IDE Transfer Mode	Yes	Yes	PIO mode 0-6 MwDMA mode 0-4 UltraDMA mode 0-7	PIO mode 0-4 MwDMA mode 0-4 UltraDMA mode 0-4	PIO mode 0-4 MwDMA mode 0-4 UltraDMA mode 0-4	PIO mode 0-6 MwDMA mode 0-4 UltraDMA mode 0-4	
Operating Temp.	0°C~+70°C (Standard)/-40°C~+85°C (Industrial)						
Storage Temp.	-40°C~+100°C		-55°C~+95°C			-40°C~+100°C	
Vibration/Shock (7/2000Hz)/(0.5ms)	Vibration: 15 (G), 10-2000 (Hz) Shock: 1,500 G, 0.5 ms		1500G/0.5ms			1500G/0.5ms	
DC Power Input	Supply voltage: 3.3V		ICF: +3.3V~+5V single power supply operation			Supply voltage: 3.3V & 5V	
Power Consumption (Max.)	390mA	525mA	0.75W (5V x 125mA@210mA)			95 mA	
Dimensions (mm)	42.8 x 36.4 x 3.6		42.8 x 36.4 x 3.3			42.8 x 36.4 x 3.3	
ATA Security	Yes	Yes	Yes	Yes	Yes	Yes	
S.M.A.R.T	Yes	Yes	Yes	Yes	Yes	No	
P/N	STD (0°C~+70°C)	ICT-2000IA-2GB ICT-2000IA-4GB ICT-2000IA-8GB ICT-2000IA-16GB ICT-2000IA-32GB ICT-2000IA-64GB	ICT-2000IAM-8GB ICT-2000IAM-16GB ICT-2000IAM-32GB ICT-2000IAM-64GB ICT-2000IAM-128GB	ICF-9000CD-4GB ICF-9000CD-8GB ICF-9000CD-16GB ICF-9000CD-32GB	ICF-2000IPD-512MB ICF-2000IPD-1GB ICF-2000IPD-2GB ICF-2000IPD-4GB ICF-2000IPD-8GB	ICF-1000IPD-1GB-R20 ICF-1000IPD-2GB-R20 ICF-1000IPD-4GB-R20 ICF-1000IPD-8GB-R20	ICF-1000IA-128MB-R20 ICF-1000IA-256MB-R20 ICF-1000IA-512MB-R20 ICF-1000IA-1GB-R20 ICF-1000IA-2GB-R20 ICF-1000IA-4GB-R20 ICF-1000IA-8GB-R20
	WT (-40°C~+85°C)	ICT-2000WA-2GB ICT-2000WA-4GB ICT-2000WA-8GB ICT-2000WA-16GB ICT-2000WA-32GB ICT-2000WA-64GB	ICT-2000WAM-8GB ICT-2000WAM-16GB ICT-2000WAM-32GB ICT-2000WAM-64GB ICT-2000WAM-128GB	ICF-9000WD-4GB ICF-9000WD-8GB ICF-9000WD-16GB ICF-9000WD-32GB	ICF-2000WPD-512MB ICF-2000WPD-1GB ICF-2000WPD-2GB ICF-2000WPD-4GB ICF-2000WPD-8GB	ICF-1000WPD-1GB-R20 ICF-1000WPD-2GB-R20 ICF-1000WPD-4GB-R20 ICF-1000WPD-8GB-R20	ICF-1000WA-128MB-R20 ICF-1000WA-256MB-R20 ICF-1000WA-512MB-R20 ICF-1000WA-1GB-R20 ICF-1000WA-2GB-R20 ICF-1000WA-4GB-R20 ICF-1000WA-8GB-R20

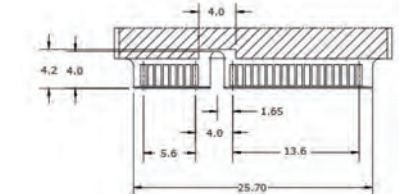
Industrial Mini PCIe DOM & mSATA Series

■ Co-layout design of Mini PCIe DOM and mSATA

For manufacturers or system integrators, the exciting benefit is they can have a circuit board with co-layout design of Mini PCIe DOM and mSATA. This feature allows users to enjoy wider applications by installing optional Mini PCIe DOM or mSATA in the same placement site.

■ Mini PCIe DOM: For conventional main board, better performance than CF card

We have realized IPC customers need a steady supply for their design-in cases by using Mini PCIe DOM or CF card as boot drive or storage. However, Mini PCIe DOM obviously has better performance in read/write over 4 times than CF card. Boasting its easy use in plug-and-play and driverless (Windows XP and above) capabilities, the Mini PCIe DOM is no doubt the best choice for the conventional motherboard. In the following table, we recommend one cost-effective MLC model and one reliable SLC model.



mini PCIe DOM 1ME: Pin Directions

Pin33: PETp0

Pin31: PETn0

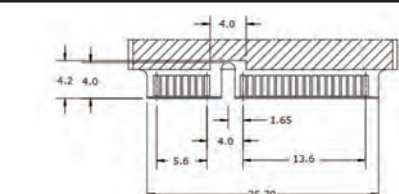
Pin23: PERn0

Pin25: PERp0

■ mSATA: For space-limited main board, up to read/write speed of 470/220 MB/sec

Nowadays, more and more compact gadgets are designed to satisfy eager users. Smaller than a business card, the mSATA has become the must-have storage to deliver instant data transfer.

In the following table, we recommend five models categorized by the flash type and size.



mSATA 3SE: Pin Directions

Pin33: Rx+

Pin31: Rx-

Pin23: Tx+

Pin25: Tx-

Model Name	IPE-5300IM/WM	IPE-5320IM/WM	IPE-5320AM/AWM	IPE-5200IP/WP	IPE-5210IPM/WPM	
Picture						
Key Features	1. Excellent data transfer speed 2. High quality SLC-based solution	1. Excellent data transfer speed and IOPS 2. Budget- friendly MLC-based solution	1. Excellent data transfer speed and IOPS 2. Budget- friendly MLC-based solution	1. PCI Express interface 2. Driverless 3. Multi OS supported	1. PCI Express interface 2. Driverless 3. Multi OS supported	
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	PCI Express Gen 1 x1	PCI Express Gen 1 x1	
Flash Type	SLC	MLC	MLC	SLC	MLC	
Capacity (GB)	2GB-32GB	8GB-512GB	8GB-256GB	4GB-64GB	8GB-256GB	
Sequential R/W	470/250	340/200	430/170	170/120	130/100	
Max.Power Consumption	1.2 W (3.3V x 360 mA)	1.3W (3.3V x 390 mA)	1.3W (3.3V x 390 mA)	1.2W (3.3V x 370mA)	1.2W (3.3V x 370mA)	
Thermal Sensor	Wide temperature model only	Wide temperature model only	Wide temperature model only	Wide temperature model only	Wide temperature model only	
ATA Security	Yes	Yes	Yes	Yes	Yes	
S.M.A.R.T	Yes	Yes	Yes	Yes	Yes	
Dimensions (mm)	29.8 x 50.8 x 4.4	29.8 x 50.8 x 4.4	29.8 x 50.8 x 4.4	30 x 50.95 x 4.4	30 x 50.95 x 4.4	
Environment	Vibration: 20G@7~2000Hz, Shock: 1500G@0.5ms, Storage Temperature: -55°C ~ +95°C, MTBF: >3 million hours					
P/N	Standard (0°C~+70°C)	IPE-5300IM-1GB IPE-5300IM-2GB IPE-5300IM-4GB IPE-5300IM-8GB IPE-5300IM-16GB IPE-5300IM-32GB	IPE-5320IM-8GB-R21 IPE-5320IM-16GB-R21 IPE-5320IM-32GB-R21 IPE-5320IM-64GB-R21 IPE-5320IM-128GB-R21 IPE-5320IM-256GB-R21 IPE-5320IM-512GB-R21	IPE-5320AM-8GB-R20 IPE-5320AM-16GB-R20 IPE-5320AM-32GB-R20 IPE-5320AM-64GB-R20 IPE-5320AM-128GB-R20 IPE-5320AM-256GB-R20	IPE-5200IP-4G-R21 IPE-5200IP-8G-R21 IPE-5200IP-16G-R21 IPE-5200IP-32G-R21 IPE-5200IP-64G-R21	IPE-5210IPM-8GB-R10 IPE-5210IPM-16GB-R10 IPE-5210IPM-32GB-R10 IPE-5210IPM-64GB-R10 IPE-5210IPM-128GB-R10 IPE-5210IPM-256GB-R10
	Wide Temperature (-40°C~+85°C)	IPE-5300WM-1GB IPE-5300WM-2GB IPE-5300WM-4GB IPE-5300WM-8GB IPE-5300WM-16GB IPE-5300WM-32GB	IPE-5320WM-8GB-R21 IPE-5320WM-16GB-R21 IPE-5320WM-32GB-R21 IPE-5320WM-64GB-R21 IPE-5320WM-128GB-R21 IPE-5320WM-256GB-R21 IPE-5320WM-512GB-R21	IPE-5320AWM-8GB-R20 IPE-5320AWM-16GB-R20 IPE-5320AWM-32GB-R20 IPE-5320AWM-64GB-R20 IPE-5320AWM-128GB-R20 IPE-5320AWM-256GB-R20	WPE-5200WP-4G-R21 WPE-5200WP-8G-R21 WPE-5200WP-16G-R21 WPE-5200WP-32G-R21 WPE-5200WP-64G-R21	IPE-5210WPM-8GB-R10 IPE-5210WPM-16GB-R10 IPE-5210WPM-32GB-R10 IPE-5210WPM-64GB-R10 IPE-5210WPM-128GB-R10 IPE-5210WPM-256GB-R10

M.2-SATA (NGFF)

M.2-SATA (NGFF) stands for Next Generation Form Factor, which is comprised of several interfaces, and interconnects with the corresponding systems basing on the 67-pin edge card connectors. The Innodisk M.2-SATA (NGFF) offers wide range of capacities in several standard form factors to fulfill different applications, including type 2242, type 2260, type 2280, and 22110.

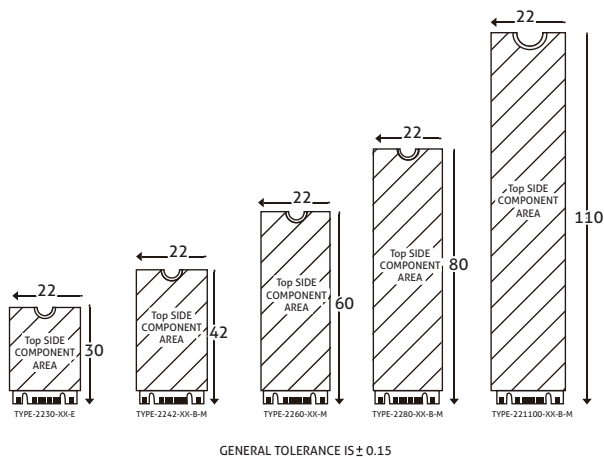
■ Features

- Adopted SATA 6Gb/s interface, complaint with M.2 (NGFF) type 2242 and 2280
- Excellent data transfer speed in small form factor
- iCell technology for data protection
- Supports iSMART disk health monitoring

■ Benefits

- The small form factor of M.2 (S42) saves about 40% of PCB dimension, comparing to the Mini PCIe form factor
- Innodisk's exclusive iData Guard ensures reliable data transfer in the event of an abnormal power failure
- Fully compliant with industrial standard
- Suitable for ultra-thin or compact system

■ M.2 form factor used on SSD



- Key A version is intended to support Wi-Fi+BT+NFC and/or WiGig Combo solution
- Key B is intended to support WWAN+GNSS, SSD and other add-in solutions
- Key E is intended to support Wi-Fi+BT+NFC or GNSS solution
- Key M is intended for SSD devices only

Model Name	IM2SE-2242
Picture	
Key Features	1. Type 2242-D1-B-M 2. High IOPS with DRAM-less design 3. Budget-friendly MLC-based solution
Interface	SATA 6Gb/s
Flash Type	MLC
Capacity (GB)	16GB-256GB
Sequential R/W	500/80
Max. Power Consumption	1.09W (3.3V x 330 mA)
Thermal Sensor	Standard: Yes, Wide Temperature: Yes
ATA Security	Yes
S.M.A.R.T	Yes
Dimensions (mm)	22 x .42 x 3.2
Environment	Vibration: 20G@7~2000Hz, Shock: 1500G@0.5ms, Storage Temperature: -55°C ~ +95°C, MTBF: >3 million hours
P/N	Standard (0°C~+70°C)
	Wide Temperature (-40°C~+85°C)

Intel® 2.5" SSD Solution



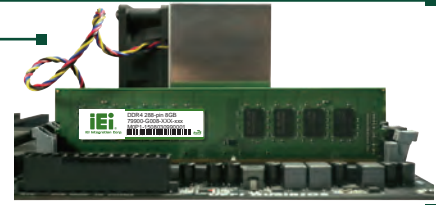
Key Features	1. 7mm height mechanical design 2. Low power consumption	Max. Power Consumption	165mw(5V*33mA)
Interface	SATA 6Gb/s	Thermal Sensor	0° C-70° C
Flash Type	MLC	ATA Security	Yes
Capacity (GB)	60GB-480GB	S.M.A.R.T	Yes
Sequential R/W	540/490	Dimensions (mm)	70 x 100 x 7
Environment	Vibration: 2.17 G@5-700 Hz, Shock: 1500G@0.5ms, Storage Temperature: 0° C-70° C, MTBF: ≥1.2 million hours		

Ensuring the Best System Performance

IEI provide complete product line of industrial

Features

- Refresh → TREFI=7.8ms from -40°C~+85°C
- 30μ" Gold Finger
- Stern Test of Parameter
- High Reliability



DDR4 DIMM

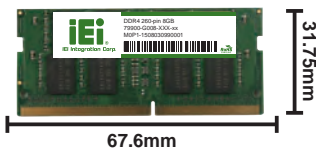
Features

- Low Power
- Thermal Sensor Design Ready
- Major on Third
- 100% System Level Test

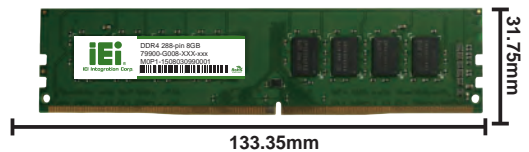
DDR4 DIMM

Module Speed	DIMM	SO-DIMM	CAS Latency
2133 MHz	288-pin	260-pin	CL13

SO-DIMM



Long-DIMM



Ordering Information



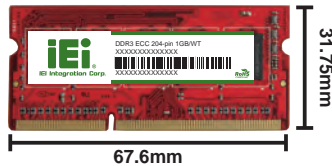
Description
DDR4 2400 4GB SO-DIMM CL17 512M*8
DDR4 2400 8GB SO-DIMM CL17 512M*8
DDR4 2400 8GB SO-DIMM CL17 1G*8
DDR4 2400 16GB SO-DIMM CL17 1G*8
DDR4 2666 4GB SO-DIMM CL17 512M*8
DDR4 2666 8GB SO-DIMM CL17 512M*8
DDR4 2666 8GB SO-DIMM CL17 1G*8
DDR4 2666 16GB SO-DIMM CL17 1G*8

Description
DDR4 2400 4GB Long-DIMM CL17 512M*8
DDR4 2400 8GB Long-DIMM CL17 512M*8
DDR4 2400 8GB Long-DIMM CL17 1G*8
DDR4 2400 16GB Long-DIMM CL17 1G*8
DDR4 2666 4GB Long-DIMM CL17 512M*8
DDR4 2666 8GB Long-DIMM CL17 512M*8
DDR4 2666 8GB Long-DIMM CL17 512M*8
DDR4 2666 16GB Long-DIMM CL17 1G*8

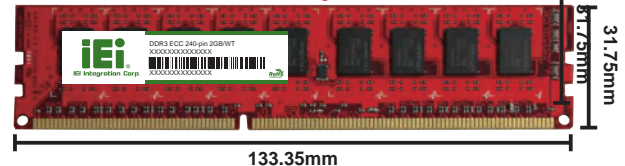
DDR3 W/T & Commercial ECC Thermal Sensor Solution

Module Speed	1600 MHz
DIMM	240-pin
SO-DIMM	204-pin
CAS Latency	CL11

DDR3 ECC SO-DIMM



DDR3 ECC Long-DIMM



Ordering Information

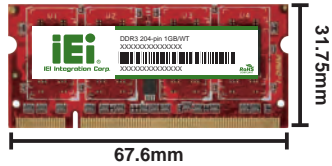
Description
DDR3 1600 1GB ECC SO-DIMM CL11 128M*8
DDR3 1600 2GB ECC SO-DIMM CL11 256M*8
DDR3 1600 4GB ECC SO-DIMM CL11 256M*8
DDR3 1600 8GB ECC SO-DIMM CL11 256M*8

Description
DDR3 1600 2GB DIMM CL11 256M*8
DDR3 1600 4GB DIMM CL11 256M*8
DDR3 1600 8GB DIMM CL11 256M*8
DDR3 1600 16GB DIMM CL11 256M*8

DDR3 W/T Solution

Module Speed	1600 MHz
DIMM	240-pin
SO-DIMM	204-pin
CAS Latency	CL11

DDR3 SO-DIMM



DDR3 Long-DIMM



Ordering Information

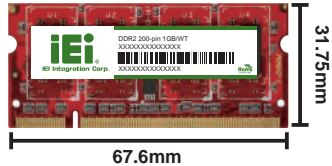
Description
DDR3 1600 1GB SO-DIMM, ProMOS, 128M*8
DDR3 1600 2GB SO-DIMM, ProMOS, 128M*8
DDR3 1600 2GB SO-DIMM, Micron, 256M*8
DDR3 1600 4GB SO-DIMM, Micron, 256M*8
DDR3 1600 4GB SO-DIMM, ProMOS, 512M*8
DDR3 1600 8GB SO-DIMM, ProMOS, 512M*8

Description
DDR3 1600 2GB DIMM, ProMOS, 128M*8
DDR3 1600 2GB DIMM, Micron, 256M*8
DDR3 1600 4GB DIMM, Micron, 256M*8
DDR3 1600 4GB DIMM, ProMOS, 512M*8
DDR3 1600 8GB DIMM, ProMOS, 512M*8

DDR2 W/T Solution

Module Speed	800 MHz
DIMM	240-pin
SO-DIMM	200-pin
CAS Latency	CL6

DDR2 SO-DIMM



DDR2 DIMM (Low Profile)



Ordering Information

Description
DDR2 667 1GB SO-DIMM, ProMOS, 128M*8
DDR2 800 1GB SO-DIMM, ProMOS, 128M*8
DDR2 800 2GB SO-DIMM, ProMOS, 128M*8

Description
DDR2 800 1GB DIMM, ProMOS, 128M*8
DDR2 800 2GB DIMM, ProMOS, 128M*8
DDR400 1GB SO-DIMM, ProMOS, 64M*8

Lifespan Evaluation of Flash Products From Endurance to iSMART

■ Endurance of different flash types - SLC and MLC

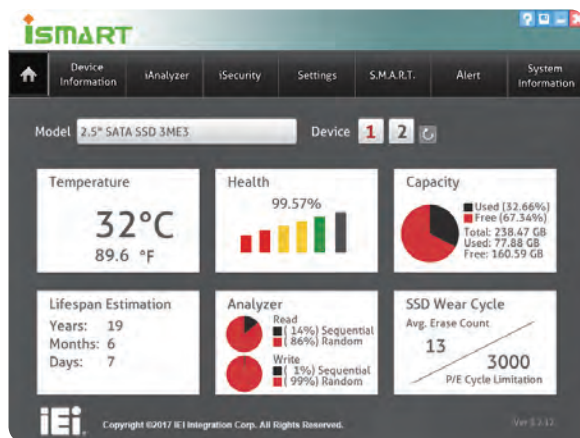
SLC is more reliable and has longer endurance than MLC.

MLC is cost-saving alternative to SLC to replace the traditional HDD.

■ iSMART, the proprietary disk health monitoring tool, provides easy access, in-depth information for embedded applications

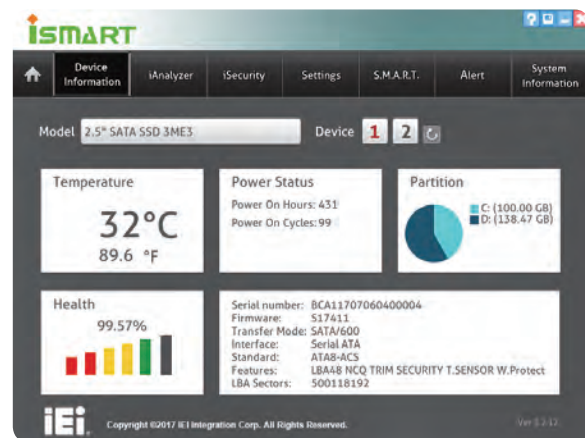
iSMART can monitor all our flash products in a system. It provides clear and easy to understand warnings, numbers, charts and graphics to enable system integrators and users to check storage device health, performance, temperature, free space, and status at a glance. Also, it can alert users with the remaining service lifetime of Innodisk drives, so that they can replace a device in plenty of time to avoid any potential issues.

Besides providing critical disk information, iSMART also offers convenience through e-mail alerts and one-touch feature. Additionally, iSMART provides dynamic power management, advancing green design goals for lower power consumption, such as with a 35% of power saving in idle mode.



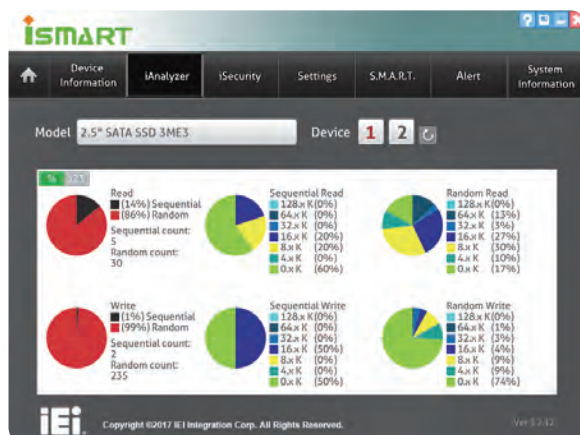
Dashboard

The Dashboard's home tab aims to provide a summary or quick snapshot of each installed disks in the system. This page offers accurate data information regarding Temperature, Health, Capacity, Lifespan, iAnalyzer, and Notifications.



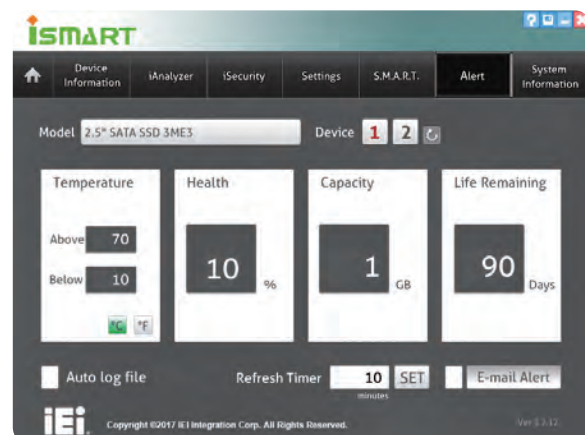
Device Information

The Device Information page provides additional functions, such as Power Status, Partitions, and detailed information of the device such as Serial Number, Firmware Version, Interface, and Features. To learn more about SMART information, go to SMART values and refer to the SMART tab.



iAnalyzer

When activated, the iAnalyzer tab displays the read/write behaviors of the SSD in real time. This allows the user to understand their application usage of the SSD. Sequential and Random I/Os are easily broken down into percentages making them easy to read.










Alert

The Alert tab helps the user set trigger points with Temperature, Health percentage, Remaining Capacity or Life Remaining. If these trigger points exceed their boundaries, the iSMART utility can send a warning and email to the user notifying them that something may fail.

Drive Cage *Standard 3.5" Device in 5.25" Drive Bay Solutions*

Following the traditional industrial system needs for stability, durability and toughness for storage drive operating condition, IEI provides various kinds of standard 3.5" device in 5.25" removable drive bay and modules for different demands.

	SATA / IDE / SSD Solution		SATA Solution	
				
Model Name	XWC-410030507220-RS	XWC-410030507230-RS	RD-03A-R20	RHD-302SATA-R20
Dimensions (L x W x H) (mm)	150 x 146 x 42	150 x 146 x 42	186 x 146 x 42	202 x 146 x 86
Material	Aluminum	Aluminum	Aluminum alloy	Aluminum alloy
Interface	SATA / IDE / SSD	SATA / IDE / SSD	SATA III / SAS 2.0	SATA III / SAS 2.0
Data Transfer Rate			SAS 2.0 / SATA III 6Gbps	SAS 2.0 / SATA III 6Gbps
Drive Bay Space	One 5.25" drive bay	One 5.25" drive bay	1 x 5.25" Device Bay for 1 x 2.5" or 3.5" Hard Drive	2 x 5.25" Device Bay for 3 x 2.5" or 3.5" Hard Drive
HDD Type	Internal 3.5" device bay	Internal 3.5" device bay	2.5" or 3.5" Hard Drive	2.5" or 3.5" Hard Drive
Cooling Fan			8CM	8 cm
Hot Swap	No	No	Yes	Yes
Keylock	No	No	No	No
Signal Out	No	No	SATA III 7-Pin	SATA III 7-Pin
Color	Black	White	Black	Black
Gross Weight	0.2 kg	0.2 kg	0.85kg	1.3kg

	SATA Solution				
					
Model Name	RHD-102SATA-R20	RHD-102DW-R20	RHD-101SATA-R20	RHD-104SATA-R20	RHF-21-SATA-R10
Dimensions (L x W x H) (mm)	140 x 101.6 x 25	153 x 146 x 42	140 x 101.6 x 25	149.6 x 146 x 42.1	151.5 x 102 x 25.7
Material	Aluminum & SPCC	Aluminum	Aluminum & SPCC	Full Metal	SECC
Interface	SATA 7 + 15 Pin	SATA	SATA 7 + 15 Pin	SATA III	SATA
Data Transfer Rate	up to 6Gb/Sec	up to 6Gb/Sec	Up to 6Gb/Sec	SATA III 6Gbps	No
Drive Bay Space	One 3.5" drive bay	One 5.25" drive bay	One 3.5" drive bay	1 x 5.25" Device Bay for 4 x 2.5" Hard Drive	Internal 3.5" drive bay
HDD Type	2.5" SATA/SAS 2 x HDD/SSD	2.5" SATA 2 x HDD/SSD	2.5" SATA/SAS 1 x HDD/SSD	2.5" Hard Drive	2.5" SATA HDD
Cooling Fan	No	Yes	No	4CM	No
Hot Swap	Yes	Yes	Yes	Yes	Yes
Keylock	Yes	Yes	Yes	Yes	Yes
Signal Out	SATA 7 Pin	SATA 7 Pin	SATA 7 Pin	SATA III 7-Pin	1 x Female connector 1 x SATA LED signal connector 1 x Power LED connector 1 x Key on/off connector 1 x Power/SATA LED connector 1 x Male connector
Color	Black	Black	Black	Black	Black
Gross Weight	0.304 Kg	0.534 Kg	0.236 Kg	0.56kg	0.3 kg

FCD-301



Pin 1	Pin 2	Pin 3	Pin 4
+5V	Data-	Data+	GND

3.5" compact drive bay
with USB port

- The most suitable USB cable for IEI's CPU boards
- Support standard 3.5" drive bay, 4-pin female connector to CPU boards' pin header, length: 60cm
- RoHS compliant
- Pin definition

Ordering Information

Part No.	Description
FCD-301[C]-RS	3.5" compact drive bay with USB port, RoHS Color Code: B=Black, W=White

AS-35A / AS-25A / AS-25C



AS-35A

AS-25A

Anti-vibration Drive Kit



AS-25C

- Resistant to shocks and vibrations from all directions
- Support 2.5" HDD into 3.5" drive bay (AS-25A/ 25C)
Support 3.5" HDD into 5.25" drive bay (AS-35A)
- Meets the following standards:
 - » MIL-SLD-810F 514.5C-1 standard
 - » 5-20Hz, 1G peak to peak
 - » 60-200Hz, 3G peak to peak
- RoHS compliant

Ordering Information

Part No.	Description
AS-35A-RS	3.5" drive anti-vibration kit, RoHS
AS-25A-RS	2.5" drive anti-vibration kit, RoHS
AS-25C-RS	Enhanced 2.5" drive anti-vibration kit, RoHS

Industrial Keyboard Series

MK-KTP5A









Model Name	MK-KTP5AW-RS-R11		
Key Number	105-key	Color	White
Mouse	Touchpad	Waterproof	NA
Connector	2 x PS/2 for KB/MS	Dimensions (mm)	485 (D) x 380 (W) x 44 (H)


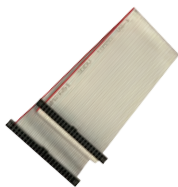
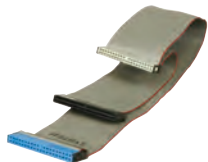
Ordering Information

Part No.	Description
MK-KTP5AW-RS-R11	1U rackmount keyboard/touchpad drawer, RoHS

Cables and Connectors *FDD / HDD Cable*



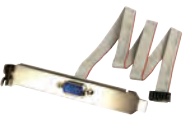


	SATA HDD Cable		
			
Model Name	32801-000703-400-RS	32102-000100-100-RS	32000-080700-RS
Cable Type	SATA HDD cable	SATA power cable	SATA + Power cable
Connector	SATA 7-pin	4-pin + 2 x SATA 15-pin	SATA 7-pin + 4-pin
Connector Type	Lockable	SATA power connector	
Length	50 cm	15 cm	SATA cable 20 cm Power cable 10 cm






	SATA HDD Cable	IDE HDD Cable	
			
Model Name	32801-000201-300-RS	32801-000100-300-RS	CB-HD32-RS
Cable Type	SATA + Power cable	SATA + Power cable	IDE HDD flat cable
Connector	SATA 7-pin + 2-pin wafer (P=2 mm)	SATA 7-pin + 4-pin wafer (P=2.54 mm)	40p-44p
Connector Type	2-pin PH 2.0	4-pin PH 2.54 mm	2.54mm-2.0mm
Length	SATA cable 15 cm Power cable 15 cm	SATA cable 20 cm Power cable 20 cm	IDE cable: 39 cm Power cable: 20 cm






	IDE HDD Cable		
			
Model Name	32200-000009-RS	32221-001000-101-RS	32225-002000-200-RS
Cable Type	IDE HDD flat cable	IDE HDD flat cable	ATA-66 HDD flat cable
Connector	44p-44p	44p-44p	40p-40p-40p
Connector Type	2.0mm -2.0mm	2.0mm -2.0mm	2.54mm
Length	40 cm	25 cm	30 cm + 15 cm





Part numbers listed in the product catalog are for reference purposes. IEI reserves the right to implement substitution parts when the function is not affected.

Cables and Connectors *Paralle / Serial Cable*

	Serial cable				
					
Model Name	45002-008103-RS	19800-000300-100-RS	19800-010900-200-RS	19800-000051-RS	19800-003600-100-RS
Cable Type	Serial port	Serial port cable	Serial port cable	Serial port cable	Serial port cable
Board Side	N/A	10-pin (2x5) connector (2.0 mm)	10-pin (2x5) connector (2.54 mm)	2 x 10-pin (2x5) connector (2.54 mm)	2 x 10-pin (2x5) connector (2.54mm)
Board Side Pitch	2.54 mm	2.0 mm	2.54 mm	2.54 mm	2.54 mm
Device Side	2 x DE9M	DE9M	DE9M	2 x DE9M	2 x DE9M
Bracket	Yes	Yes	Yes	Yes	Yes
Length	9 cm	30 cm	50 cm	23 cm	40 cm





	Serial cable				
					
Model Name	19800-000112-RS	32205-000702-100-RS	32200-000049-RS	32205-001203-200-RS	32205-002000-100-RS
Cable Type	Serial port cable	Serial port cable	Serial port cable	Serial port cable	Serial port cable
Board Side	2 x 10-pin (2x5) connector (2.0 mm)	10-pin (2x5) connector (2.54 mm)	10-pin (2x5) connector (2.0 mm)	40-pin (2x20) connector (2.54 mm)	40-pin (2x20) connector (2.0 mm)
Board Side Pitch	2.0 mm	2.54 mm	2.0 mm	2.54 mm	2.0 mm
Device Side	2 x DE9M	DE9M	DE9M	4 x DE9M	4 x DE9M
Bracket	Yes	No	No	No	No
Length	30 cm	23 cm	20 cm	40/40/40/40 cm	30 cm





	Serial cable				
					
Model Name	32200-025401-RS	32205-002500-100-RS	19800-004400-200-RS	19800-004300-100-RS	32200-026500-RS
Cable Type	Serial port cable	RS-422/485 cable	RS-232 & RS-422/485 cable	RS-232 & RS-422/485 cable	RS-232 & RS-422/485 cable
Board Side	40-pin (2x20) connector (2.0 mm)	16-pin (2x8) connector (2.54 mm)	14-pin (2x7) connector (2.54 mm)	14-pin (2x7) connector (2.0 mm)	14-pin (2x7) connector (2.0 mm)
Board Side Pitch	2.0 mm	2.54 mm	2.54 mm	2.0 mm	2.0 mm
Device Side	4 x DE9M	4 x DE9M	2 x DE9M	2 x DE9M	2 x DE9M
Bracket	No	No	Yes	Yes	No
Length	30 cm	12 cm	25.5 cm	25 cm	29 cm





	Serial cable	Paralle cable		
				
Model Name	32205-003800-300-RS	19800-000049-RS	19800-003500-100-RS	32200-015100-RS
Cable Type	RS-422/485 cable	Parallel port cable	Parallel and serial port cable	Parallel port cable
Board Side	4-pin (1x4) connector (2.0 mm)	26-pin (2x13) connector (2.54 mm)	26-pin (2x13) connector (2.0 mm) 10-pin (2x5) connector (2.0 mm)	26-pin (2x13) connector (2.0 mm)
Board Side Pitch	2.0 mm	2.54 mm	2.0 mm	2.0 mm
Device Side	DE9M	DB25F	DB25F + DE9M	DB25F
Bracket	No	Yes	Yes	No
Length	20 cm	24 cm	24 cm	28 cm



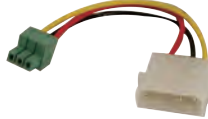
Part numbers listed in the product catalog are for reference purposes. IEI reserves the right to implement substitution parts when the function is not affected.

Cables and Connectors *USB / Keyboard / Mouse / Power Cable*

	USB cable			
				
Model Name	32001-010800-100-RS	32001-006404-100-RS	19800-000100-200-RS	19800-003100-300-RS
Cable type	USB cable	USB cable	USB cable	USB cable
Board side	2 x 4-pin connector (2.54 mm)	2 x 4-pin connector (2.0 mm)	2 x 8-pin (2x4) connector (2.54 mm)	2 x 4-pin (1x4) connector (2.54 mm)
Board side pitch	2.54 mm	2.00 mm	2.54 mm	2.54 mm
Device side	2 x USB	2 x USB	4 x USB	2 x USB
Bracket	No	No	Yes	Yes
Length	20 cm	22 cm	30 cm	30 cm




	USB cable			
				
Model Name	CB-USB02A-RS	32000-044300-RS	32000-073400-RS	32001-008600-200-RS
Cable type	USB cable	USB cable	USB cable	USB cable
Board side	1 x 8-pin (2x4) connector (2.0 mm)	1 x 8-pin (2x4) connector (2.54 mm)	2 x 5-pin connector (2.0 mm) for WAFER-8523, WAFER-945GSE3 only	1 x 8-pin (2x4) connector (2.0 mm)
Board side pitch	2.0 mm	2.54 mm	2.0 mm	2.0 mm
Device side	2 x USB	2 x USB	2 x USB	2 x USB
Bracket	Yes	No	No	No
Length	30 cm	21 cm	40 cm	21 cm

	Keyboard / Mouse cable			
				
Model Name	19800-000066-RS	19800-000075-RS	32006-000300-100-RS	32000-023800-RS
Cable type	Keyboard and mouse cable	Y-Cable	Y-Cable	Y-Cable
Board side	2 x 5-pin (1x5) connector (2.54 mm)	1 x 6-pin (1x6) connector (2.0 mm)	1 x male PS/2	1 x 6-pin (1x6) connector (2.0 mm)
Board side pitch	2.54 mm	2.0 mm		2.0 mm
Device side	2 x Female PS/2	2 x Female PS/2	2 x Female PS/2	2 x Female PS/2
Bracket	Yes	Yes	No	No
Length	30 cm	22 cm	12 cm (KB) + 14 (MS)	13 cm

	Power cable		
			
Model Name	32100-087100-RS	32102-022100-100-RS	32100-130300-RS
Cable type	12V power cable	ATX function cable	Power cable for PC/104 CPU module
Board side	1 x 4-pin (2x2) connector	1 x 20-pin ATX power connector	1 x 4-pin (1x4) molex
Device side	2 x 4-pin (1x4) molex	1 x 4-pin (1x4) molex 1 x 3-pin PS_ON connector	3-pin 3.5 mm terminal block
Bracket	No	No	No
Length	13 cm	30 cm	10 cm

Part numbers listed in the product catalog are for reference purposes. IEI reserves the right to implement substitution parts when the function is not affected.

Cables and Connectors *Audio / LAN / VGA / Adapter Cable*

	Audio cable			LAN cable
				
Model Name	19800-000111-RS	32007-002600-100-RS	32000-028800-RS	32013-001700-100-RS
Cable type	Audio cable	Audio cable	Audio cable	LAN cable
Board side	10-pin (2x5) connector (2.0 mm)	10-pin (2x5) connector (2.0 mm)	12-pin (2x6) connector (2.54 mm)	10-pin (2x5) connector (2.0 mm)
Board side pitch	2.0 mm	2.0 mm	2.54 mm	2.0 mm
Device side	3 x Audio jacks	3 x Audio jacks	4 x Audio jacks	1 x RJ-45
Bracket	Yes	No	No	No
Length	30 cm	30 cm	25 cm	31 cm


	VGA cable	Battery Holder cable	Bracket
			
Model Name	32003-000800-100-RS	32000-033804-RS	45002-0081C0-00-RS
Cable type	VGA cable	VGA cable	COM port bracket
Board side	10-pin (2x5) connector (2.54 mm)	10-pin (2x5) connector (2.0 mm)	-
Board side pitch	2.54 mm	2.0 mm	-
Device side	1 x DB15F	1 x DB15F	-
Bracket	No	No	Yes
Length	30 cm	30 cm	-

Part numbers listed in the product catalog are for reference purposes. IEI reserves the right to implement substitution parts when the function is not affected.

Rackmount Slide *Optional Chassis Accessories*

	SLIDE		
			
Model Name	SLIDE-18	SLIDE-24	EXTENDER-6
Specification	18" rackmount slide	24" rackmount slide	6" extender
Description	For rackmount chassis w/ depth up to 500	For rackmount chassis w/ depth up to 600	For 18" or 24" slider

DIN Rail Kit

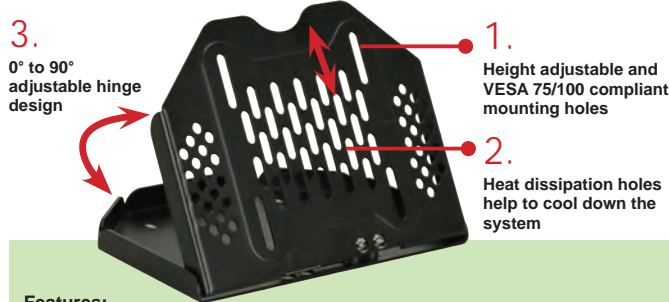
	KIT		
			
Model Name	DK-75-R10	DK-100-R10	DK-84MB
Specification	850 mm (W) x 75mm (D)	110 mm (W) x 100 mm (D)	168 mm (W) x 96 mm (D)
Description	VESA 75 to DIN-rail kit	VESA 100 to DIN-rail kit	DIN mount kit for ECW-281 series, black, RoHS

V-STAND

VESA Multi-Mounting Stand

IEI patented multi-mounting V-Stand allows wall, ceiling, desk, rear and side mounting to meet diverse applications. Its 0° to 90° adjustable hinge design provides optimal viewing in various environment, such as kitchen, room or shelf.

VESA	Model
75 mm x 75 mm	VSTAND-A07-R11
75 mm x 75 mm/100 mm x 100 mm	VSTAND-A10-R11
	VSTAND-A12-R11



- Features:**
- 0° to 90° adjustable hinge design allows comfortable viewing
 - Standard VESA 75/100 compliant
 - Heat dissipation holes
 - Compact size, easy to use in any places

Space saving and easy installation

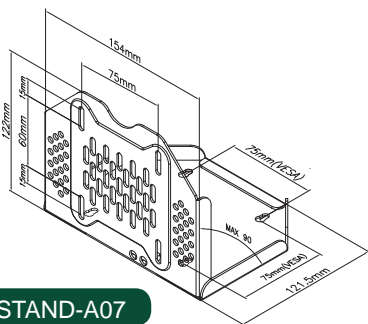


1: Tighten the screws in the rear of the system's VESA mounting holes

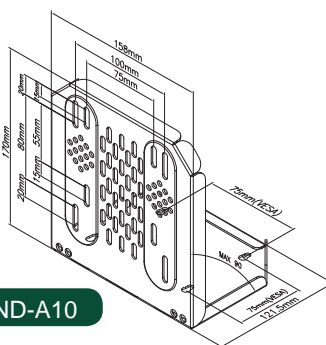
2: Select the position to mount the stand kit

3: Power up the system to operate

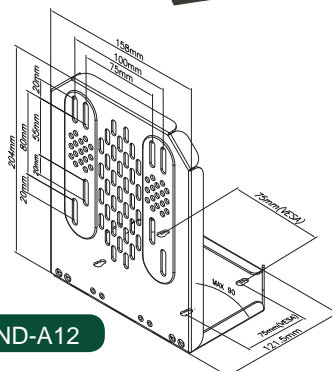
Compact size provides mobility



VSTAND-A07



VSTAND-A10



VSTAND-A12

Ordering Information

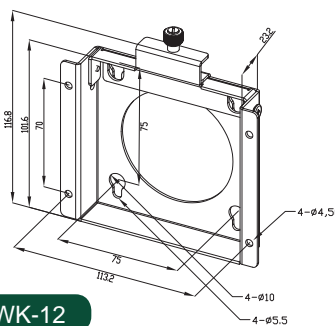
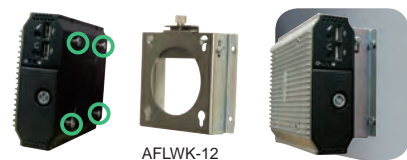
Part No.	Description
VSTAND-A07-R11	LCD monitor / PPC stand V type, for AFL series, VESA 75, 0-90 degree adjustable hinge, support up to 2.5 kg, RoHS
VSTAND-A10-R11	LCD monitor / PPC stand V type, for AFL series, VESA 75/100, 0-90 degree adjustable hinge, support up to 3 kg, RoHS
VSTAND-A12-R11	LCD monitor / PPC stand V type, for AFL series, VESA 75/100, 0-90 degree adjustable hinge, support up to 3.5 kg, RoHS

Wall Mounting

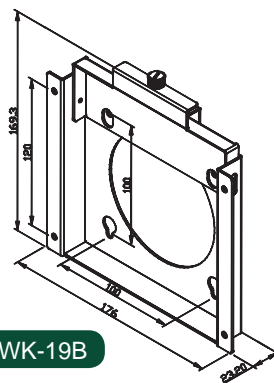
VESA 75/100 Wall Mounting

Secure the panel by fastening the retention screw of the bracket.

VESA	Model
75 mm x 75 mm	AFLWK-12
100 mm x 100 mm	AFLWK-19
	AFLWK-19B



AFLWK-12



AFLWK-19B

Ordering Information

Part No.	Description
AFLWK-12	5.6"-12" VESA 75 PPC/monitor wall mount kit with retention screw, silver color, RoHS
AFLWK-19B	15"-19" VESA 100 PPC/monitor wall mount kit with retention screw, silver color, RoHS