



Zalman 460W ATX12V V2.2 / EPS12V V2.91 SLI Ready CrossFire Ready Power Supply

Special Price

\$29.99 was
\$85.95

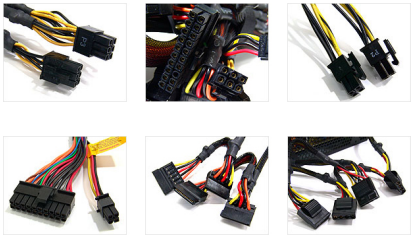
Product Images



Short Description

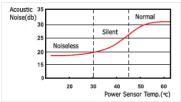
Product Details:

All Zalman Tech products are ultra-quiet in order to achieve enhanced computing environment.
This product is an ultra-quiet ATX12V Ver2 power supply supporting the latest Dual-Core 64 bit Intel Pentium D & AMD Athlon64 X2 CPU-equipped systems.



► CNPS (Computer Noise Prevention System) with Auto Control Cooling Fan

Noise has been greatly reduced with the implementation of the heat-sensor circuitry, which is in control of the cooling fan's speed (rpm) in relation to the temperature, inside the power supply.
The graph below shows the CNPS characteristics of our product.
■ CNPS (Computer Noise Prevention System) refers to a system that reduces a conventional computer's noise (30dB or more) to an inaudible level (20dB or less). In order to create a true noise-free computer, Zalman's other noise-free products should be used together with this product.
[\[Noise Level \(dB\) Changes in relations to Power Supply's Internal Temperature\]](#)



The graph above shows that the ZM460B-APS in "noiseless" or "silent" mode can operate when the power supply's internal temperature is kept below 45°C. This information is in compliance with the 2 Revision of ISO7779, an international standard for noise level measurement. Results may vary for different system configuration and/or the test environment.

► Improved Power Factor & Reduced Harmonics through Active PFC

By implementing Active PFC, the power factor (PF) was improved from 75% (Passive PFC up to 96% (230VAC, Full load), while harmful harmonic frequencies were reduced below regulatory requirements.

► High Efficiency Design

The efficiency of this product exceeds 80% (230VAC, Full Load) with the use of high switching frequency and low power-loss circuitry.

► ATX20+4 Pin Main Connector

ATX20+4 Pin main connector broadens motherboard compatibility.

► ATX12V CPU (4-Pin) & EPS12V CPU (8-Pin) Connectors

Use two ATX12V 2x2(4-pin) connectors together to form an EPS12V CPU connector(8-pin).

► Dual PCI Express VGA Power Connectors (6-Pin)

Two PCI-Express VGA power connectors are provided to support high-end graphic cards (Nvidia SLI & ATI Cross-Fire). (It may not support certain graphic cards depending on their specifications.)

► NMB-MAT 120mm Fan

Fan's noise level can be kept constant compared to other products even if used for a long duration by employing the 2-Ball Bearing 120mm fan of NMB-Matsushita known for their great endurance and excellent reliability.

► Dual +12VDC Output

Two +12VDC rails of combined output up to 34A(Only ZM460B-APS) provide more stable power to high-end systems.

► EZ Grip Connectors for ODD & HDD

EZ Grip Connectors for ODD & HDD for easy connecting and disconnecting of the plugs.

► Use of gold-plated terminals

Minimized power loss with reduced contact resistance by gold-plating the terminals of all connectors.

► Sleeved Cables

All power cables are sleeved for easy cable management and improved air circulation inside the computer case.

► WEEE & RoHS

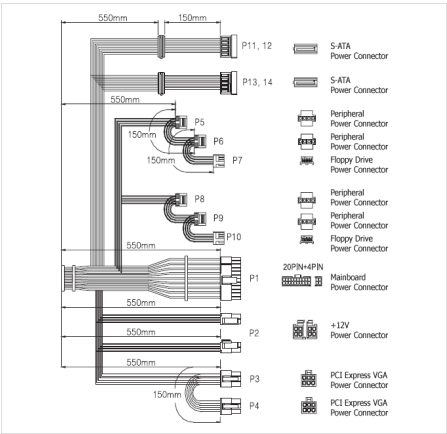
Complies with WEEE & RoHS environmental directives of the European Union.
- WEEE (Waste Electrical and Electronic Equipment)
- RoHS (Restriction of Hazardous Substances)

► International Safety and EMC Certifications

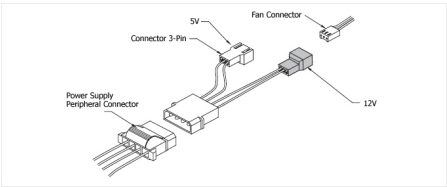


Output Power Cable Specifications

[Cable Types and Functions]



[Dual-Connector (2M-DC1) Components]



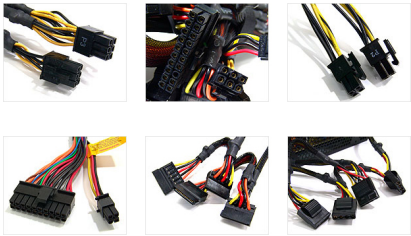
Electrical & Physical Characteristics

AC Input Range	Voltage	100VAC ~ 240VAC ±10%		DC Output			
	Frequency	47Hz~63Hz		Output V.	Output Load Rating		
AC Input Current (Rated)	115VAC	7.5A			Imin	Imax	Ipeak
	230VAC	3.5A		+3.3V	0.3A	30A	152W
PFC Type		Active PFC		+5V	0.5A	30A	
Power Factor	96% Min. @ 230VAC, Full Load			+12V1	1.0A	16A 20A	408W 460W
Inrush Current Limit (0 Cold start at 25°C)	115VAC	80A		+12V2	1.0A	18A 22A	
	230VAC	120A		-12V	0.0A	0.8A	
Efficiency	80% Min. @ 230VAC, Full Load			+5VSB	0.0A	2.5A 3.5A	
DC Output Voltage Regulations	Output V.	Regulation Range		Protection Features			
	+3.3V	±5% +3.14V~+3.47V		Over Voltage Protection(OVP)			
	+5V	±5% +4.75V~+5.25V		At Full Load	Over Current Protection(OCP)		
	+12V1	±5% +11.4V~+12.6V			Short Circuit Protection(SCP)		
	+12V2	±5% +11.4V~+12.6V		Over Temperature Protection(OTP)			
	-12V	±10% -10.8V~-13.0V		Under Voltage Protection(UVP)			
DC Output Ripple & Noise	+5VSB	±5% +4.75V~+5.25V		Ambient Temperature			
	Output V.	Specification		Operation	0°C ~ +50°C		
	+3.3V	50mV		Storage	-20°C ~ +80°C		
	+5V	50mV		Ambient Humidity			
	+12V1	120mV		Operation	5%RH ~ 95%RH		
	+12V2	120mV		Storage	5%RH ~ 95%RH		
	-12V	120mV		Dimensions			
	+5VSB	50mV		140(L) x 150(W) x 86(H) mm			

Description

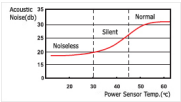
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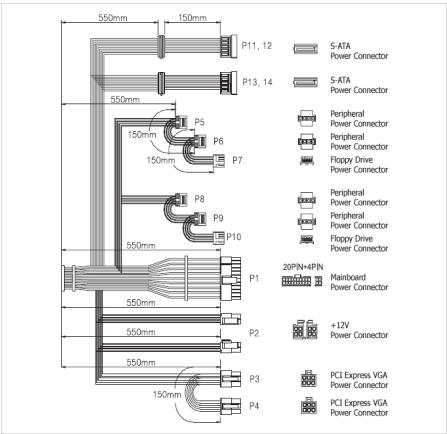
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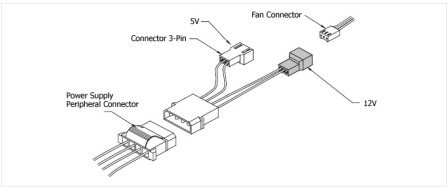


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AC Input Current (Rated)	115VAC	7.5A				Imin	Imax	Ipeak	
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PFC Type	Active PFC				+5V	0.5A	30A	152W	
Power Factor	96% Min. @ 230VAC, Full Load				+12V1	1.0A	16A	20A	
Inrush Current Limit (Cold start at 25°C)	115VAC	80A			+12V2	1.0A	18A	22A	
	230VAC	120A			-12V	0.0A	0.8A		
Efficiency	80% Min. @ 230VAC, Full Load				+5VSB	0.0A	2.5A	3.5A	
Output V.		Regulation Range		Protection Features					
		+3.3V	±5% +3.14V~+3.47V		Over Voltage Protection(OVP)				
		+5V	±5% +4.75V~+5.25V		Over Current Protection(OCP)				
DC Output Voltage Regulations	+12V1	±5% +11.4V~+12.6V		At Full Load	Short Circuit Protection(SCP)				
	+12V2	±5% +11.4V~+12.6V			Over Temperature Protection(OTP)				
		-12V	±10% -10.8V~-13.0V		Under Voltage Protection(UVP)				
		+5VSB	±5% +4.75V~+5.25V		Ambient Temperature				
Output V.		Specification		Operation		0°C ~ +50°C			
		+3.3V	50mV	Storage		-20°C ~ +80°C			
		+5V	50mV			Ambient Humidity			
DC Output Ripple & Noise	+12V1	120mV	At Full Load	Operation	5%RH ~ 95%RH				
	+12V2	120mV		Storage	5%RH ~ 95%RH				
	-12V	120mV		Dimensions					
	+5VSB	50mV		140(L) x 150(W) x 86(H) mm					

Features

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PFC Type	Active PFC			+5V	0.5A	30A					
Power Factor	96% Min. @ 230VAC, Full Load			+12V1	1.0A	16A	20A	408W			
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DC Output Ripple & Noise	Output V.	Specification		At Full Load	Operation		0°C ~ +50°C				
	+3.3V	50mV			Storage		-20°C ~ +80°C				
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Additional Information

Brand	Zalman
SKU	ZM460B-APS-D
Weight	9.0000
Color	Black
PSU Type	ATX
PSU Style	Non-Modular
PSU Wattage	460W
PSU Efficiency	Not Rated
Special Price	\$29.99

