

User's Manual

ZM500-RS



※ To ensure a safe and easy installation, please read the safety precautions above and the following notes.

<http://www.zalman.com>

1. Warnings and Safety Precautions



Neglecting the following may cause serious injury or death.

- ▶ Opening the cover of the product while the power cord is plugged into an outlet may cause electrocution or critical damage to the product.
- ▶ Handling the power cord with wet hands may cause electrocution.
- ▶ Inserting fingers or metallic objects into the cooling fan may cause injury or electrocution.



Neglecting the following may cause minor injuries, degrade product conditions or cause malfunction.

- ▶ Operating the product in an extremely cold or hot environment can degrade product performance and lifespan.
- ▶ Liquids that enter the product may cause malfunction.
- ▶ Operation in a humid or non-ventilated environment may reduce product lifespan.
- ▶ Plugging the main power connector P1 into the motherboard while the product is connected to the AC power source may cause damage to the motherboard.
- ▶ Make sure that the connectors are connected to their designated locations, and that the connectors are not oriented in the wrong direction when connecting the DC output connectors.
- ▶ Please use gloves to prevent injuries during installation.
- ▶ Product designs and specifications may be revised without prior notification to improve quality and performance.

Disclaimer) Zalman Tech Co., Ltd. is not responsible for any damages due to external causes, including but not limited to, improper use, problems with electrical power, accident, neglect, alteration, repair, improper installation, or improper testing.

2. Components



① One (1) Power Supply



② Five (5) Cable Ties



③ Four (4) Fixing Bolts



④ One (1) AC Power Cable



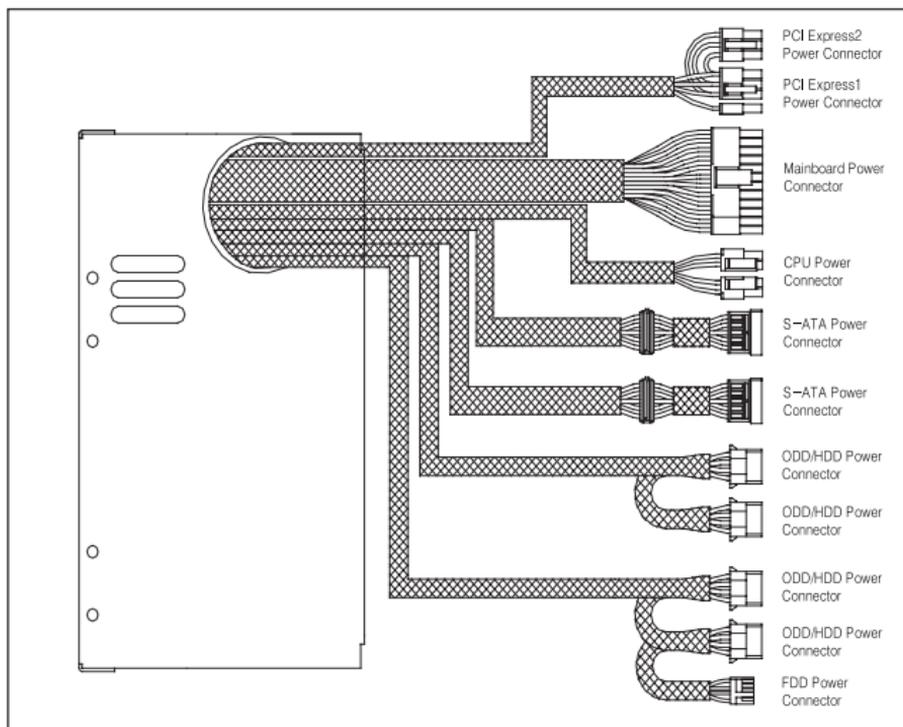
⑤ One (1) User's Manual

3. Specifications

1) Electrical & Physical Characteristics

AC Input Range	Voltage	100VAC ~ 240VAC $\pm 10\%$		ZM500-RS				Combined Power
	Frequency	50Hz ~ 60Hz		Vout	Output Load Rating			
AC Input Range (Rated)	115VAC	8A			+3.3V	1A	24A	30A
	230VAC	4A		+5V				
PFC Type	Active PFC			+12V1	1A	18A	22A	
Power Factor	99% Maximum			+12V2	1A	18A	22A	
Inrush Current Limit (@ Cold start at 25°C)	115VAC	80A	80A	-12V	0.0A	0.5A	21W	
	230VAC	60A	60A	+5VSB	0.02A	3A	3.5A	
Efficiency	87% Max. @230VAC, Full & Typical load			Protection				
DC Output Voltage Regulations	Vout	Regulation Range		At Full Load	Over-Voltage Protection (OVP)			
	+3.3VDC	$\pm 5\%$	+3.14V ~ +3.47V		Over-Current Protection (OCP)			
	+5VDC	$\pm 5\%$	+4.75V ~ +5.25V		Under-Voltage Protection (UVP)			
	+12V1DC	$\pm 5\%$	+11.4V ~ +12.6V		Short-Circuit Protection (SCP)			
	+12V2DC	$\pm 5\%$	+11.4V ~ +12.6V		Over-Temperature Protection (OTP)			
	-12VDC	$\pm 10\%$	-10.8V ~ -13.0V		Ambient Humidity			
DC Output Ripple & Noise	Vout	Specification		At Full Load	Operation	5 %RH ~ 95 %RH		
	+3.3VDC	100mV			Stored	5 %RH ~ 95 %RH		
	+5VDC	100mV			Ambient Temperature			
	+12V1DC	200mV			Operation	10°C ~ +40°C		
	+12V2DC	200mV		Stored	-20°C ~ +80°C			
	-12VDC	200mV		Dimensions				
	+5VSB	100mV		150mm (W) * 145mm (L) * 86mm (H)				

2) Output Power Cable Specifications



4. Certifications and Environmental Standards



5. Product Warranty

Warranty - If this product has any defects, then Zalman guarantees that it can be exchanged within three years from the time of purchase (must have proof of purchase/receipt).

- ※ Product exchange is made with the reseller where the product was purchased. For further inquiries, contact Zalman Headquarters at www.zalman.com or via e-mail to a representative.

There will be no exchanges in the following cases :

- A) Violation of the Safety Precautions and the Notes on Installation in this manual.
- B) Human fatality and/or property damage due to events of natural causes.
- C) External case damage, electrical problems, and damage to components caused by careless mishandling.

For Inquiries

< Zalman Tech Co., Ltd. >
 Homepage : www.zalman.com
 E-mail : zalman@zalman.co.kr

< Zalman USA Inc. >
 Homepage : www.zalmanusa.com
 E-mail : support@zalmanusa.com