

Users Manual



TX-Series



Dual Forward Switching Power Supply

※ To ensure safe and easy installation, please read the following precautions

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1. Warnings and Safety Precautions



Warning

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.



Caution

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.
- ▶ Exposure to liquids 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



Power Supply



Four Screw



Five Cable Ties



AC Power Cord



User's Manual

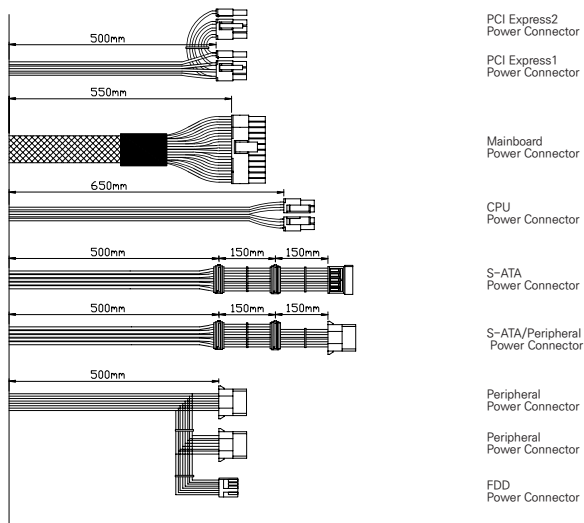
3. Specifications

1) ZM500-TX Electrical & Physical Specifications

AC Input Range	Voltage	200-240VAC ±10%		Vout	Output Load Rating			Combined Power	
	Frequency	50 ~ 60Hz ±3			I _{min}	I _{max}	I _{peak}		
AC Input Current	Voltage	200-240VAC		+3.3V	0.1A	18A		120W	500W
	Current	4A		+5V	0.2A	15A			
PFC Type	Active PFC			+12V	0.1A	40A	44A	480W	
Power Factor Correction	Max 97%			-12V	0.0A	0.3A		3.6W	
Inrush Current Limit (@ Cold Start at 25°C)	115VAC	-		+5VSB	0.0A	2.5A	3.5A	12.5W	
	230VAC	Max 100A		Ambient Temperature					
Efficiency	Max 86% @230VAC, Typical load			Operation	0 ~ +40°C				
				Storage	-20 ~ +70°C				
DC Output Voltage Regulation	Vout	Regulation Range		Ambient Humidity					
	+3.3VDC	±5%	+3.14 ~ +3.47V	Operation	5% ~ 95% RH				
	+5VDC	±5%	+4.75 ~ +5.25V	Storage	5% ~ 95% RH				
	+12VDC	±5%	+11.4 ~ +12.6V	Dimensions					
	-12VDC	±10%	-10.8 ~ -13.0V	157(L)*150(W)*86(H)mm					
	+5VSB	±5%	+4.75 ~ +5.25V	Weight					
			2.1kg						
DC Output Ripple & Noise	Vout	Standard Range		Protection Functions					
	+3.3VDC	50mV		Over-Voltage Protection (OVP)					
	+5VDC	50mV		Under Voltage Protection (UVP)					
	+12VDC	120mV		Over-Current Protection (OCP)					
	-12VDC	120mV		Short-Circuit Protection (SCP)					
	+5VSB	50mV		Over-Power Protection (OPP)					

2) ZM500-TX Cable Specifications

Chassis



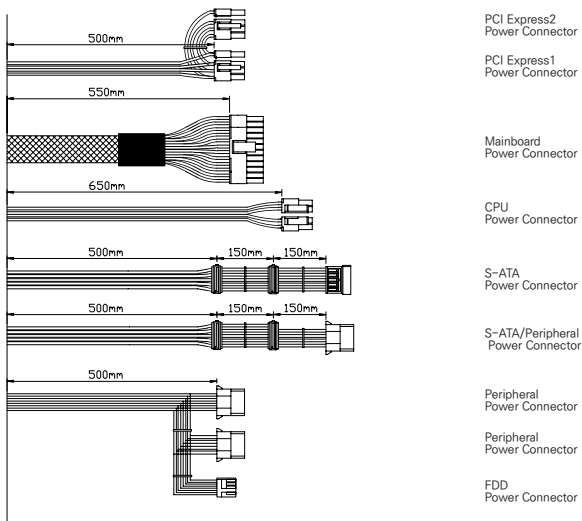
3. Specifications

1) ZM600-TX Electrical & Physical Specifications

AC Input Range	Voltage	200-240VAC ±10%		Vout	Output Load Rating			Combined Power	
	Frequency	50 ~ 60Hz ±3			I _{min}	I _{max}	I _{peak}		
AC Input Current	Voltage	200-240VAC		+3.3V	0.1A	20A		130W	600W
	Current	8A		+5V	0.2A	20A			
PFC Type	Active PFC			+12V	0.1A	48A	53A	576W	
Power Factor Correction	Max 98%			-12V	0.0A	0.3A		3.6W	
Inrush Current Limit (@ Cold Start at 25°C)	115VAC	-		+5VSB	0.0A	2.5A	3.5A	12.5W	
	230VAC	Max 100A		Ambient Temperature					
Efficiency	Max 86% @230VAC, Typical load			Operation	0 ~ +40°C				
				Storage	-20 ~ +70°C				
DC Output Voltage Regulation	Vout	Regulation Range		Ambient Humidity					
	+3.3VDC	±5%	+3.14 ~ +3.47V	Operation	5% ~ 95% RH				
	+5VDC	±5%	+4.75 ~ +5.25V	Storage	5% ~ 95% RH				
	+12VDC	±5%	+11.4 ~ +12.6V	Dimensions	157(L)*150(W)*86(H)mm				
	-12VDC	±10%	-10.8 ~ -13.0V	Weight	2.1kg				
	+5VSB	±5%	+4.75 ~ +5.25V	Protection Functions					
DC Output Ripple & Noise	Vout	Standard Range		Over-Voltage Protection (OVP)					
	+3.3VDC	50mV		Under Voltage Protection (UVP)					
	+5VDC	50mV		Over-Current Protection (OCP)					
	+12VDC	120mV		Short-Circuit Protection (SCP)					
	-12VDC	120mV		Over-Power Protection (OPP)					
+5VSB	50mV								

2) ZM600-TX Cable Specifications

Chassis



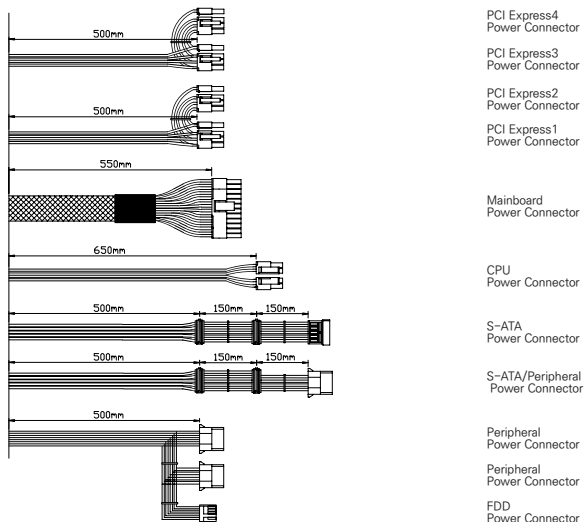
3. Specifications

1) ZM700-TX Electrical & Physical Specifications

AC Input Range	Voltage	200-240VAC ±10%		Vout	Output Load Rating			Combined Power	
	Frequency	50 ~ 60Hz ±3			I _{min}	I _{max}	I _{peak}		
AC Input Current	Voltage	200-240VAC		+3.3V	0.1A	20A		140W	700W
	Current	8A		+5V	0.2A	20A			
PFC Type	Active PFC			+12V	0.1A	58A	62A	696W	
Power Factor Correction	Max 98%			-12V	0.0A	0.3A		3.6W	
Inrush Current Limit (@ Cold Start at 25°C)	115VAC	-		+5VSB	0.0A	2.5A	3.5A	12.5W	
	230VAC	Max 100A		Ambient Temperature					
Efficiency	Max 87% @230VAC, Typical load			Operation	0 ~ +40°C				
				Storage	-20 ~ +70°C				
DC Output Voltage Regulation	Vout	Regulation Range		Ambient Humidity					
	+3.3VDC	±5%	+3.14 ~ +3.47V	Operation	5% ~ 95% RH				
	+5VDC	±5%	+4.75 ~ +5.25V	Storage	5% ~ 95% RH				
	+12VDC	±5%	+11.4 ~ +12.6V	Dimensions	157(L)*150(W)*86(H)mm				
	-12VDC	±10%	-10.8 ~ -13.0V	Weight	2.2kg				
	+5VSB	±5%	+4.75 ~ +5.25V	Protection Functions					
DC Output Ripple & Noise	Vout	Standard Range		Over-Voltage Protection (OVP)					
	+3.3VDC	50mV		Under Voltage Protection (UVP)					
	+5VDC	50mV		Over-Current Protection (OCP)					
	+12VDC	120mV		Short-Circuit Protection (SCP)					
	-12VDC	120mV		Over-Power Protection (OPP)					
+5VSB	50mV								

2) ZM700-TX Cable Specifications

Chassis



4. Certifications

