

Rosewill[®]

P

PERFORMANCE

POWER SUPPLY

PERFORMANCE Series

USER Manual

RP500-2
RP500-2-S
RP550-2
RP550-2-S

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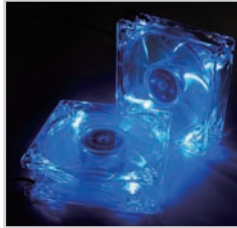
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Features Descriptions

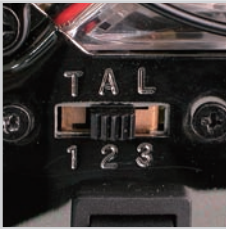
- ATX12V v2.01 Dual 12V Rails



- Silent 2 Ball-bearing cooling Fan



- Fan Speed Control Switch
(High, Low, Auto)



- 20+4 pin Main Connector



- 1 x PCI-Express Connector



- Mirror Black Finish



Specification

1. AC Input

RP500-2, RP500-2-S

AC Input Voltage : 115V(100-120V) / 230V(200-240V)

AC Input Frequency : 47 - 63 HZ

AC input Current : 10.0A(RMS) for 115VAC Input, 60Hz
5.5A(RMS) for 230VAC Input, 50Hz

RP550-2, RP550-2-S

AC Input Voltage : 115V(100-120V) / 230V(200-240V)

AC Input Frequency : 47 - 63 HZ

AC input Current : 12A(RMS) for 115VAC Input, 60Hz
6A(RMS) for 230VAC Input, 50Hz

2. DC Output

2.1 Voltage & Current

RP500-2, RP500-2-S

DC OUTPUT	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
MIN.Current	0.5A	0.5A	1.0A	1.0A	0.0A	0.0A
MAX.Current	30A	45A	18A	16A	1.0A	2.5A
Combined Power	275W		380W(31A)		12.0W	12.5W
	475.5W					
Total Power	500W					
Regulation	±5%	±5%	±5%	±5%	±10%	±5%
Cross Reg.	±5%	±5%	+8%, -5%	+8%, -5%	±10%	±5%
Line Reg.	±1%	±1%	±1%	±1%	±2%	±1%
Noise & Ripple (mV)	75	75	120	120	150	75

RP550-2, RP550-2-S

DC OUTPUT	+3.3V	+5V	+12V1	+12V2	-12V	+5VSB
MIN.Current	0.5A	0.5A	1.0A	1.0A	0.0A	0.0A
MAX.Current	30A	50A	18A	18A	1.0A	2.5A
Combined Power	300W		420W(35A)		12.0W	12.5W
	525.5W					
Total Power	550W					
Regulation	±5%	±5%	±5%	±5%	±10%	±5%
Cross Reg.	±5%	±5%	+8%, -5%	+8%, -5%	±10%	±5%
Line Reg.	±1%	±1%	±1%	±1%	±2%	±1%
Noise & Ripple (mV)	75	75	150	150	150	75

2.2 Efficiency

The power supply is a minimum of 72% efficient under typical load. The “Energy Star” efficiency of the power supply is a minimum of 50% when the AC input power is 60W.

2.3 Remote ON/OFF control

The power supply DC outputs (with the exception of +5 VSB which is always available) are enabled with an active-low, TTL-compatible signal (“PS-ON”). When PS-ON is pulled to TTL low, the DC outputs are enabled. When PS-ON is pulled to TTL high or open-circuited, the DC outputs are disabled. PS-ON may be active by either electronic means or a mechanical switch.

2.4 Overshoot at TURN-ON/TURN-OFF

The output voltage overshoot upon the application or removal of the input voltage is less than 10%.

2.5 Hold-up Time

The power supply will maintain output regulation despite a loss of a minimum of 16 ms while under full load. Test to be performed at nominal input voltage.

2.6 Power Good Signal

A “power good” signal is asserted by the supply to indicate that the +5VDC output is within regulation limits.

Power Good Signal Characteristics

Signal Type	Open collector TTL compatible
Logic level low	<0.8V while sinking 5mA
Logic level high	>2.4V while sourcing 500uA
High state impedance	1K (from output to common)
POK delay	100-500ms
Power fall warning time	1ms minimum

3. Protection**3.1 Over Voltage Protection**

The power supply prods latch-mode over-voltage protection as defined below:

Nominal output voltage	Trigger voltage
+12V	13.4-15.6V
+5V	5.74-7.0V
+3.3V	3.76-4.3V

3.2 Short Circuit Protection

A short circuit on any DC output will cause the power to latch. The power supply will withstand a continuous short circuit to the output without damage or overcurrent to the unit. The +5VSB can be shorted indefinitely and will recover automatically when the short is removed.

3.3 No Load Operation

No hazardous conditions or damage to the supply will occur with all of the DC output connectors disconnected from the load.

3.4 Over Power Protection(OPP)

The power supply shall go shutdown when the total output load is over 110-160% of rating.

3.5 Over Current Protection

Overload currents applied to +12V1&+12V2 will cause the output to trip before reaching or exceeding 240 VA. For testing purposes, the overload currents should be ramped at a minimum rate of 10 A/s starting from full load.

4. Physical Environment**4.1 Operating Conditions**

The power supply shall be capable of continuous operation and meet all electrical specification without need for adjustment when subjected to the following environmental conditions:

	Temp. vs Load Condition	Humidity
Operation	0~30°C@Full Load	10%~90%RH
	30°C-40°C@90% Rated Load	
	40°C-50°C@80% Rated Load	
Storage	-20°C~80°C	5%~90%RH

* No degradation of the power supply shall occur during shipping or storage at the specified condition.

4.2 Shocks & Vibration

The power supply will withstand the following imposed conditions without experiencing non-recoverable failure or deviation from specified output characteristics.

Storage -40G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes. Operating -10G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes. Vibration Operation-Sine wave excited, 0.25G maximum acceleration, 10-250 Hz, swept at one octave/minute. Fifteen-minute dwell at all frequencies at which the device under test experience excursions two times larger than non-resonant excursions.

5. Regulatory Compliance

5.1 Safety Requirement

- CSA
- UL
- TUV
- FCC CLASS B

5.2 Dielectric Strength

Primary to Secondary: 1500 VAC for 1~3 seconds.
Primary to Frame Ground: 1500 VAC for 1~3 seconds.

5.3 Insulation Resistance

Primary to Secondary: 20 Meg. ohm Minimum.
Primary to Frame Ground: 20 Meg. ohm Minimum.

5.4 Ground Leakage Current

The power supply ground leakage current shall be less than 3.5mA.

5.5 Ground Continuity

The power supply grounding continuity shall be less than $100\text{m}\Omega$ when the test current is at 25A.

5.6 Reliability

The power supply have a minimum predicted MTBF(MIL-STD-217E) of 100,000 hours of conditions operation at 25°C, maximum-output load, and nominal AC input voltage.

Connectors

- 20+4 pin Main Connector x 1



- 4 pin ATX +12V Connector x 1



- 8 pin EPS +12V Connector x 1



- 6 pin PCI-Express Connector x 1



- 4 pin Peripheral Connector X 8



- 5 pin SATA Connector x 2



- 4 pin Floppy Connector x 2



Installation

1. Installing Power Supply

Affix the power supply to the case with screws.



2. 20+4 pin Main Connector

NOTE : 1. Confirm 20 pin or 24 pin main connector your motherboard needs before the installation.

2. 4 pin here is used for switching between 20 & 24 pin only.

20 pin



Take the 20 pin connector.



Plug the 20 pin connector onto the motherboard.

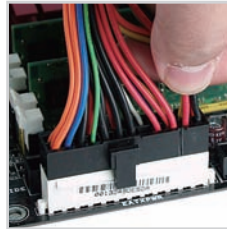
24 pin



Take the 24 pin connector



Plug the 20 pin part onto the motherboard



Plug the 4 pin part onto the motherboard

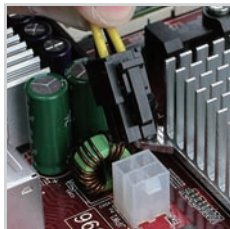
NOTE : You can also hold 20 pin and 4 pin connectors together then plug them into the 24 pin socket

3. 4 pin ATX +12V or 8 pin EPS +12V Connector

NOTE :

1. The 4 pin ATX +12V connector or 8 pin EPS +12V connector is used for motherboard.
2. Confirm 4 pin ATX +12V or 8 pin EPS +12V connector your motherboard needs before the installation.

4 pin ATX +12V connector



8 pin EPS +12V connector



4. 6 pin PCI-Express Connector.

The 6 pin PCI-Express connector used for video card only.



5. 4 pin Peripheral Connector

The 4 pin Peripheral connector used for HDD, Optical Drive and other devices needing it.



NOTE : Confirm if your video card needing the 6 pin PCI-Express connector or not before the installation. Not every video card needs it.

6. 4 pin Floppy Connector

The 4 pin Floppy connector used for Floppy disk or Zip drives.



7. 5 pin SATA Connector

5 pin SATA connector used for SATA HDD and Optical Drive.



8. Before starting your system

- Select the proper voltage setting.
(US = 115V)



- Attach the power cord to the power supply



- Connect the power cord to a power source.



- Confirm the power supply is on



ON



OFF

- Select the Fan Speed setting.



1=T= Fastest Speed (Great cooling but noisy)

2=A= Auto Control (Recommended)

3=L= Slowest Speed (Silent but bad cooling, **NOT** recommended)

NOTE : Slowest Fan Speed may make the power supply & your system **UN-stable**.

Information

Thank you for purchasing a High-Quality Rosewill Product.

Please register your product at : **www.rosewill.com** for complete warranty information and future support for your product.If you have any question while using our products, please feel free to contact us at **feedback@rosewill.com**

Support Phone Number: 800-575-9885

Support Email: techsupport@rosewill.com

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