

LIBERTY ECO Series Power Supply

Your satisfaction, Our priority.

LIBERTY **ECO**
Powering a Greener Tomorrow



400W/500W/620W

FEATURES

80PLUS ready!

80-86% efficiency @ 20-100% load. Compliant with 80 PLUS[®] efficiency requirements.

FUTURE ready!

12Pin modular design for possibly upcoming new CPU's and graphics 10 and/or 12Pin connectors.

24/7 @ 40°C ready!

Non-Stop industrial class performance at 40°C/104°F ambient.

DXX ready!

For PCI Express 2.0 / DXX next generation graphic cards with 6+2P (8P) PCI-E connectors.

GAMING ready!

ATX12V v2.3 support for latest Intel[®] Core 2 Duo™/Quad™/Extreme™/ i7™, and AMD[®] Athlon™ 64X2/X4 & Phenom™X3/X4 and SLI™ or CrossFireX™.

ATX12V v2.3 ready!

Compliant with the newest standard for desktop power supplies.

EMC ready!

Full-scale electromagnetic filtering protects your system against radiation interferences.(CE EMC EN61204 compliance)

AirGuard

Patented air-inlet with optimal aero-dynamical design reducing noisy air turbulences.

SpeedGuard

Advanced fuzzy logic 12cm fan speed control for optimal cooling and minimum noise. (Patented)

SafeGuard

Industry-leading septuple protection circuitry with world's first dual UVP(AC & DC), OCP, OVP, OPP, OTP & SCP protects your system.

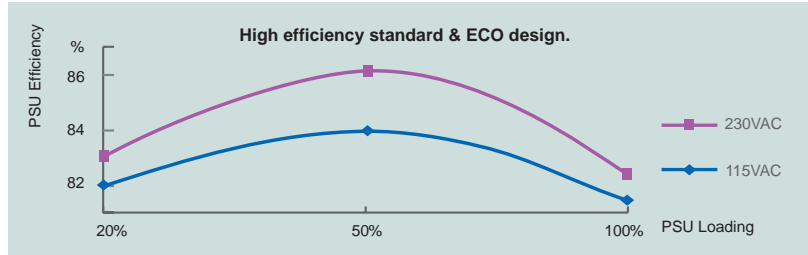
WORLD ready!

100-240VAC in with automatic adjustment and active PFC for global usage.

Japanese Main Capacitor

Highest components standards for maximum durability and stability.





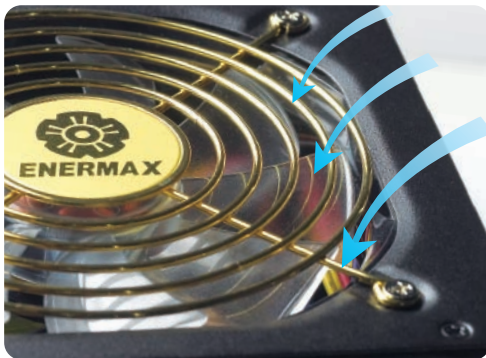
	Gaming system @300W load		Annual KWh*2	Annual KWh wasted	Annual Money wasted*3	Annual CO ₂ wasted*4
	Efficiency*1	AC Draw(W)				
LIBERTY ECO 620W	86%	348.8	1273	-	-	-
other ~77% 600W	77%	389.6	1422	149	\$21 / €32.7	92.3kg

*1 Based on 230VAC input power.
 *2 Annual KWh is estimated based on 10 hours a day, 365 days a year runtime. Formula: AC Draw(w) x 10(hr) x 365(days)/1000
 *3 1KWh = \$0.1415(California) / €0.22(Germany). Fare might vary by countries and regional providers.
 *4 Calculation based on 1 KWh=0.62kg CO₂. Figures might vary by countries.

AirGuard



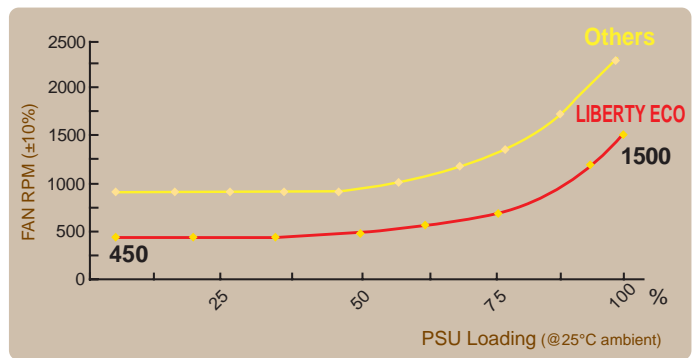
Air-inlet with optimal aero-dynamical design reducing noisy air turbulences. (Patented)



SpeedGuard



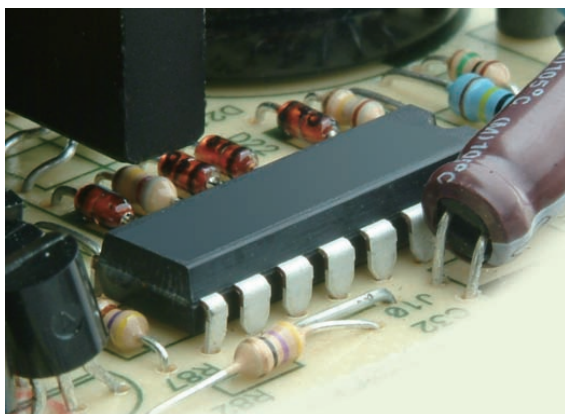
Advanced fuzzy logic control for optimal cooling and minimum noise. (Patented)



SafeGuard



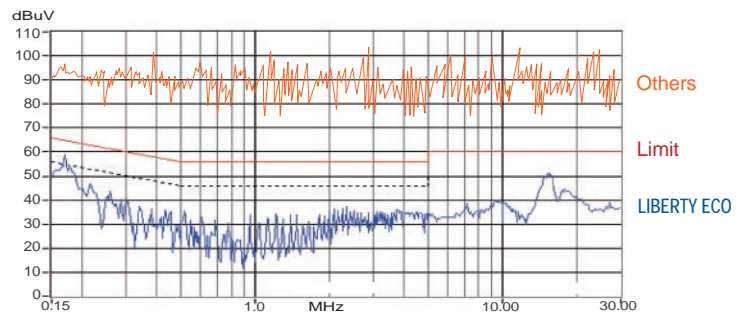
Industry-leading septuple protection circuitry. (AC UVP, DC UVP, OCP, OVP, OPP, OTP & SCP)



EMC ready!



Complete EMI filtering protecting against radiation/conduction interferences. (CE EMC EN61204)



* PSU tested without chassis sheltering.

GAMING ready!



	MODEL	CPU	CORE	GRAPHICS	DRIVES
	400W	DUAL	QUAD	DUAL	10
	500W	DUAL	QUAD	DUAL	10
620W	DUAL	QUAD	QUAD	13	

* Actual maximum support might vary by power consumption of connected components and is limited to DC output specifications.

DXX ready!



FUTURE ready!

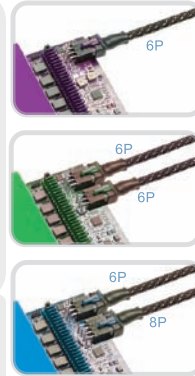


We are **DXX** ready

are You?

PCI EXPRESS® 6+2P(8P)

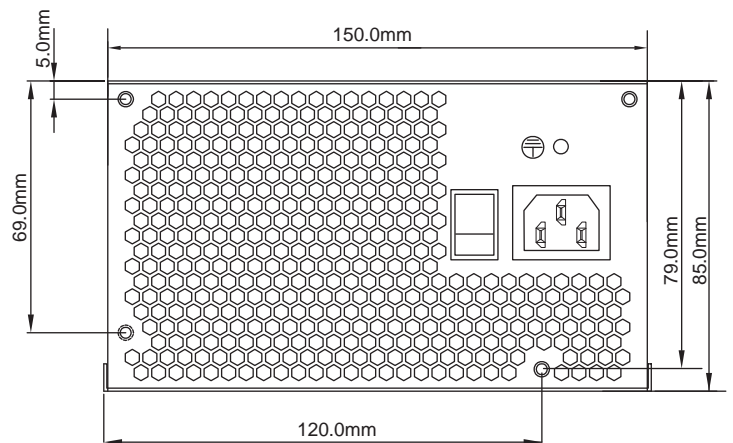
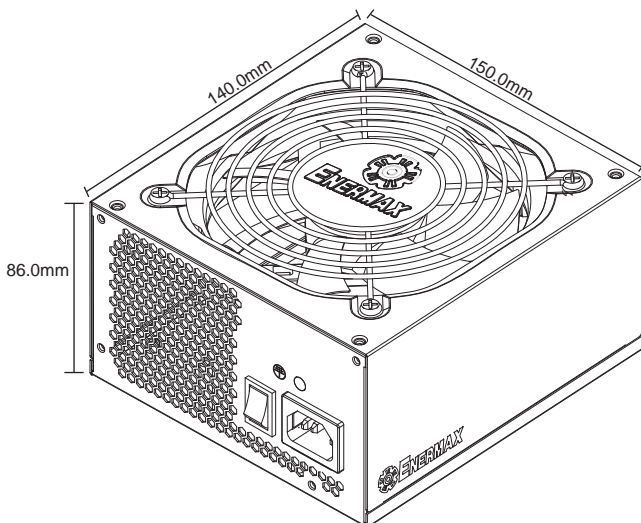
PCI Express 2.0 was announced on January 15th by the PCI-SIG, an industry group of currently more than 850 companies like AMD, Broadcom, HP, IBM, Intel, LSI Logic, Microsoft and nVIDIA. It defines the standards for the next generation of motherboards and graphic cards, commonly dubbed as DirectX 10 capable. This new architecture effectively boosts their performance and utilization compared to their DirectX 9 / PCI Express 1.0 predecessor enormously and requires a new 8P power connector.



12P socket design for possibly upcoming 10P & 12P connector generations.

8P		today,
10P		tomorrow,
12P		and beyond.

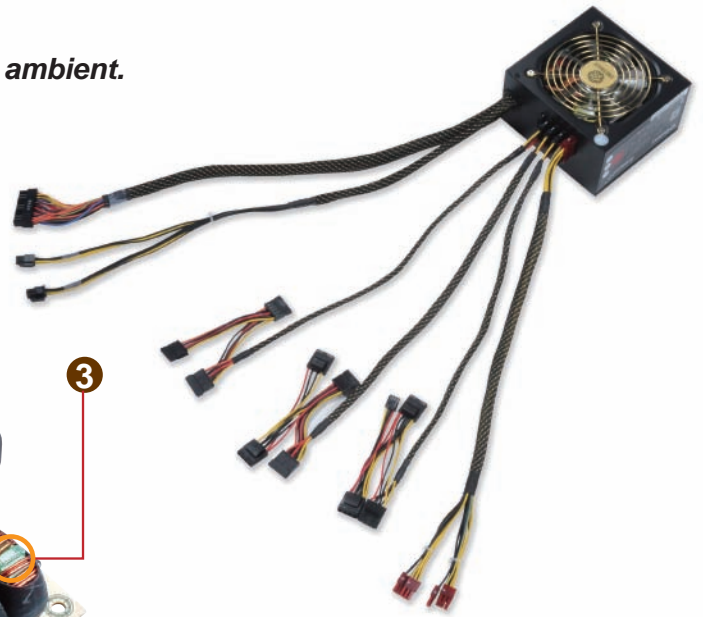
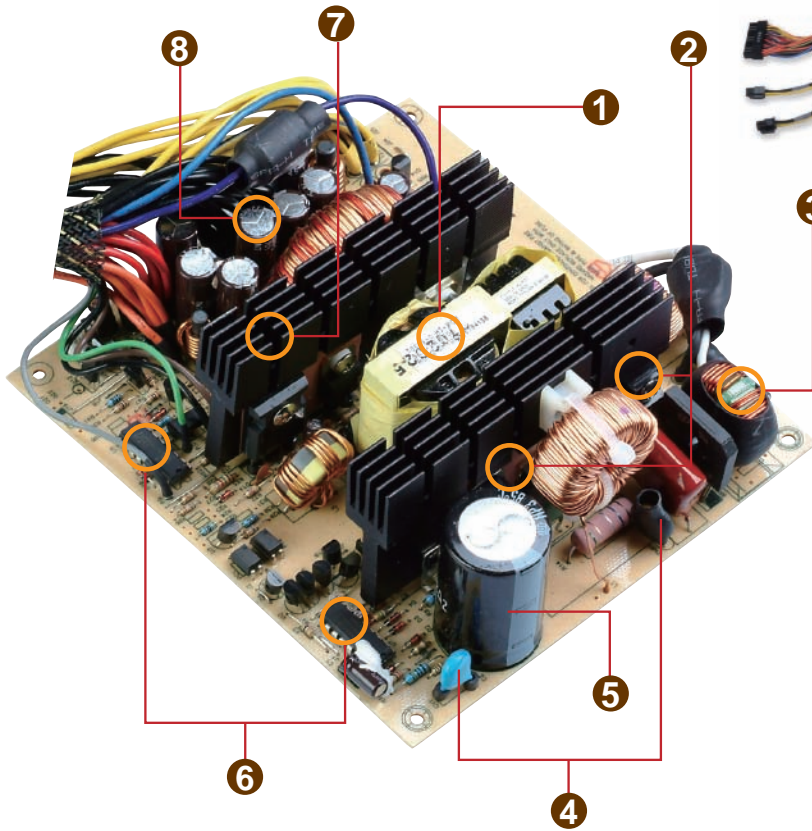
DIMENSIONS



* 1x12cm two-ball bearing fan



Non-Stop industrial class performance at 40°C/104°F ambient.



400W/500W model illustrated

-
- 1 115% output transformer**
Ensure maximum output quality @ 40°C/104°F extreme environment.

 - 2 Symmetric Double Forward topology**
For high efficiency performance.

 - 3 Enhance EMI filtering**
Protect nearby appliance against EMI interference.

 - 4 Dual surge protection**
To protect PSU and system against lightning and inrush current strokes.

 - 5 Japanese heavy-duty main capacitor**
For reliable power output.

 - 6 SafeGuard + PWM combo control IC**
For best safety.

 - 7 Dual anodized aluminum heatsink with array splitting**
For rapid heat dissipation.

 - 8 105°C secondary capacitors**
For best durability.
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SPECIFICATIONS



Model Name	ELT400AWT-ECO	ELT500AWT-ECO	ELT620AWT-ECO			
AC Input Rating						
Input Voltage	100-240VAC, 50-60Hz, Active PFC. (Max. operation range: 90-265VAC)					
Input Current	6.7-3A	7.5-3.5A	9.5-4A			
DC Output Rating						
+3.3V	0.1-20A	120W	0.1-24A	130W	0.1-24A	140W
+5V	0.1-20A		0.1-24A		0.1-24A	
+12V1	0.1-22A	384W (32A)	0.1-24A	456W (38A)	0.1-30A	576W (48A)
+12V2	0.5-22A		0.5-24A		0.5-30A	
-12V	0-0.6A	7.2W	0-0.6A	7.2W	0-0.6A	7.2W
+5Vsb	0-3A	15W	0-3A	15W	0-3A	15W
Total Power	400W		500W		620W	
Peak Power	440W		550W		680W	

CABLES & CONNECTORS



Cables	Native Cables			Modular Cables			
	Mainboard	+12V CPU	6+2P(8P) PCI-E	EMC011 3 X SATA	EMC013 3 X 4P Molex + 1 X FDD	EMC014 2 X 6+2P(8P) PCI-E 2.0	EMC016 2 X 4P Molex + 2 X SATA
Models							
ELT620AWT-ECO	 24P	 4+4P (8P)	 X2	X 2	X 1	X 1	X 1
ELT500AWT-ECO	 24P	 4+4P (8P)	0	X 1	X 1	X 1	X 1
ELT400AWT-ECO	 24P	 4+4P (8P)	0	X 1	X 1	X 1	X 1

CERTIFICATIONS & STANDARDS



Safety		
EMC		