

P/N: TP-1500M W/Active PFC

Toughpower 1500W



❖ Features

- Compliance with Intel ATX 12V 2.3 & SSI EPS 12V 2.91 standards.
- 24 / 7 @ 40°C: Guaranteed to deliver 1500W continuous power.
- 80 PLUS Silver certified – with 87-91% efficiency @ 20-100% load under real world load conditions.
- Double-forward switching circuitry offers low power loss and high reliability.
- Robust and dedicated quad +12V rails(30A for 12V1 & 12V2, 50A for 12V3 & 12V4) design provides superior performance under all types of system loading.
- High quality Japanese capacitors: ensure superb performance and reliability.
- 105°C Solid state capacitors: great stability at higher operating temperatures, frequencies and currents.
- Universal AC input 100V~240V automatically scans and detects the correct voltage.
- Multi-GPU ready: 8 x PCI-E connectors support up to 4-way ATI CrossFireX™ 及 Nvidia SLI™.
- Designed to support latest Intel/AMD multi -core CPUs.
- Active PFC with PF value 0.99 - less harmonic pollution, greater efficiency.
- Ultra-silent operation with intelligent 13.5cm cooling fan speed control.
- Dimension: 150mm(W)x86mm(H)x180mm(L).
- High reliability: MTBF>120,000 hours.
- Built in industrial-grade protections: over current, over voltage, under voltage, over power, over temperature and Short-Circuit protections.
- Safety / EMI : UL/CUL, CE, FCC, CB+Baurt mark, GOST and BSMI certified.

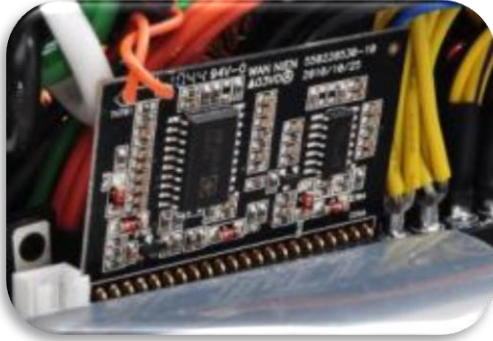
Toughpower 1500W

❖ Technology Features



High Quality Japanese Capacitor

Japanese capacitors provide uncompromised performance and reliability.



Industrial Grade Protection

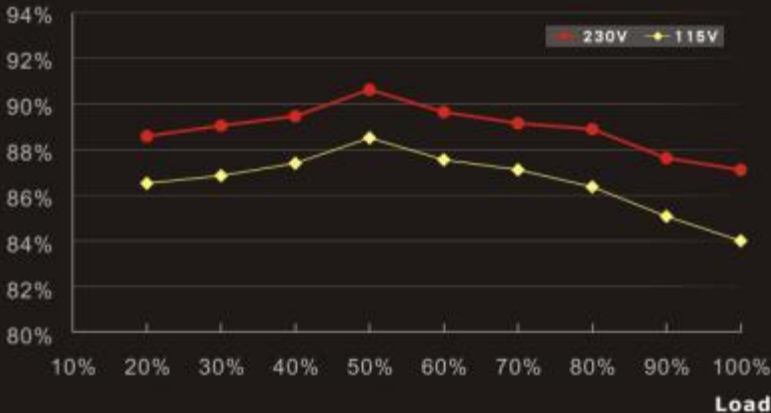
Built in industrial-grade protections: Over Current, Over Voltage, Under Voltage, Over Power, Over Temperature and Short-Circuit Protections.



Ultra Quiet 13.5cm Fan

Toughpower 1500W adopt 13.5cm cooling fan with intelligent RPM control guarantees cool performance and silent operation.

Efficiency



High Efficiency Circuit Design

Maximum efficiency up to 91% under wide load range.

Toughpower 1500W



Modular Cable Management
Cable management design improves internal airflow and reduce clutter.

12V Rail Distribution

24 PIN Main Connector	12V1
Peripheral & Floppy Connector	12V1
S-ATA Connector	12V1
4+4PIN +12V CPU Connector	12V2
8 PIN +12V CPU Connector	12V2
Two 6+2pin Straight PCI-E Connectors	12V3
Two 6+2pin Straight PCI-E Connectors	12V3
6+2pin Modular PCI-E Connector	12V4
6+2pin Modular PCI-E Connector	12V4
6+2pin Modular PCI-E Connector	12V4
6+2pin Modular PCI-E Connector	12V4

12V Rails Distribution

•Hybrid SLI / CrossFire X & Intel C6 State mode support :



ZERO LOAD	
+3.3V	0A
+5V	
+12V	
-12V	
+5VSB	



For best compatibility For C6 state CPU & Hybrid GPU mode

■C6 State CPU Mode

CPU load range from Max. to only 1W.

■Nvidia® & ATI/AMD multi graphic cards configuration

Hybrid mode will cause graphic cards load range from Max. to only 1W.

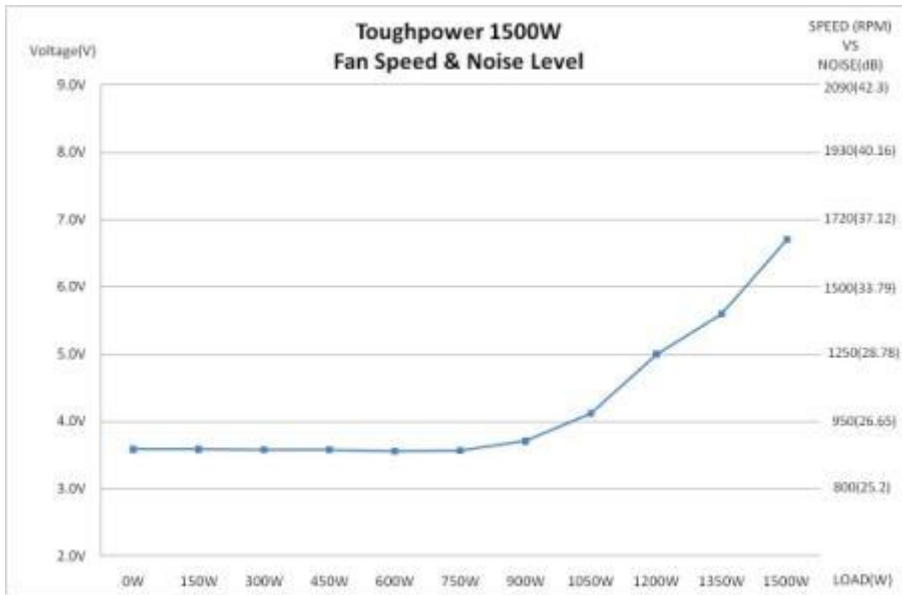
Toughpower 1500W series are able to maintain an ultra tight DC regulation to support the C6 state CPU mode and the hybrid graphic card power saving mode by its ZERO LOAD (0W) Design.

•Packaging:



Toughpower 1500W

•Fan Speed & Noise Level



❖ ECO Design

•80 Plus Silver Certified



New Toughpower Series saves energy through its high energy efficiency of up to 91% and is 80 PLUS® Silver certified.

•Supports Energy Star 5.0* energy standard:

New Toughpower Series is suitable for use in Energy Star-compatible computers.

•Supports Intel Deep Power Down C6 Status:

New Toughpower Series helps your PC system operate more power efficiently.

•Corresponds to the EU directives on WEEE and RoHS:








Thermaltake considers its full impact on the environment during manufacturing and maintains green facilities to ensure Toughpower meets WEEE & RoHS requirements.

Toughpower 1500W

❖ Output Specification

P/N	AC INPUT	Input Voltage: 100V - 240V~ Input Current: 18A - 9A Frequency: 60Hz - 50Hz							
TP-1500M	DC OUTPUT	+3.3V	+5V	+12V1	+12V2	+12V3	+12V4	-12V	+5Vsb
	Max Output Current	40A	40A	30A	30A	50A	50A	0.5A	6.0A
	Max Output Power	280W		1320W				6.0W	30W
	Continuous Power	1500W							

❖ Connectors Specification

P/N	Model	Cable						
		 Main Power Connector (24Pin)	 EPS 12V (8Pin)	 ATX 12V (4+4Pin)	 PCI-E (6+2Pin)	 SATA (5Pin)	 Peripheral (4Pin)	 PATA to FDD
TP-1500M	Toughpower 1500W	1	1	1	8	12	8	1

Model	Connector Type	Connectors & Cable length
1500W	24pin	1 x 24pin Main connector (600mm)
	EPS 12V 8pin	1 x EPS 12V 8pin connector (600mm)
	ATX 12V 4+4pin	1 x ATX 12V 4+4pin connector (600mm)
	PCI-E 6+2pin & PCI-E 6+2pin	2 x PCI-E 6+2pin & PCI-E 6+2pin connectors (550mm + 150mm) 2 x PCI-E 6+2pin & PCI-E 6+2pin connectors (550mm + 150mm)
	PCI-E 6+2pin	1 x PCI-E 6+2pin connector (550mm) 1 x PCI-E 6+2pin connector (550mm) 1 x PCI-E 6+2pin connector (550mm) 1 x PCI-E 6+2pin connector (550mm)
	Molex	4 x Peripheral connectors (550mm + 150mm + 150mm + 150mm) 4 x Peripheral connectors (550mm + 150mm + 150mm + 150mm)
	SATA	4 x S-ATA connectors (550mm + 150mm + 150mm + 150mm) 4 x S-ATA connectors (550mm + 150mm + 150mm + 150mm) 4 x S-ATA connectors (550mm + 150mm + 150mm + 150mm)
	PATA to FDD adapter	1 x PATA to FDD adapter (100mm)

Toughpower 1500W

GENERAL INFO	
P/N	TP-1500M
Model	TP-1500AH5CES
Type	Intel ATX 12V 2.3 & EPS 12V 2.92
Max. Output Capacity	1500W
Peak Output Capacity	1600W
Color	Black
Dimension (H/W/D)	86mm x 150mm x 220mm
PFC	Active PFC
Power Good Signal	100-500 msec
Hold-up Time	16msec (minimum) @ full load at 115Vac/ 230Vac input.
AC INPUT	
Input Current	18A – 9A
Input Frequency Range	50 Hz - 60 Hz
Input Voltage	100 Vac- 240 Vac
ENVIRONMENTAL	
Operating Temperature	+0°C to +40°C
Operating Humidity	10% to 85%,non-condensing
Storage Temperature	-40 °C to +70 °C
Storage Humidity	5% to 90%, non-condensing
Cooling System	135mm Fan: 2400 R.P.M. ± 10%
MISCELLANEOUS	
Efficiency	87%-91% efficiency @ 20-100% load
MTBF	100,000 hrs minimum
Safety Approval	UL/CUL, CE, FCC, CB+Baurt mark, GOST and BSMI
PCI-E CONNECTOR	
PCI-E 6+2pin	8

Toughpower 1500W

❖ Total Protection

Voltage Source	Over Current Protection	Over Voltage Protection
	Protection Point	Protection Point
+3.3V	1000W/ 1200W: 30A~50A 1500W: 45A~65A	3.76V~4.5V
+5V	1000W/ 1200W: 30A~50A 1500W: 45A~65A	5.74V~7.0V
+12V	1000W: +12V1: 60A~90A 1200W: +12V1: 70A~100A 1500W: +12V1, +12V2: 35A~55A	13.4V~16.6V
	1000W: +12V2: 80A~110A 1200W: +12V2: 80A~120A 1500W: +12V3, +12V4: 56A~80A	
Short Circuit Protection: Activated when any DC rails short circuited.		
Under Voltage Protection: when +12V,+5V & +3.3V outputs under 85% of it's maximum value.		