

P/N: TP-1000M W/Active PFC

Toughpower 1000W



❖ Features

- Compliance with Intel ATX 12V 2.3 & SSI EPS 12V 2.91 standards.
- 24 / 7 @ 40°C: Guaranteed to deliver 1000W 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.
- Unparalleled DC to DC converters for 3.3V and 5V outputs to reach high efficiency.
- Robust and dedicated dual +12V rails(50A for 12V1 & 70A for 12V2) design provides superior performance under all types of system loading.
- High quality 105°C 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 1000W

❖ Technology Features



High Quality 105°C Japanese Electrolytic Capacitor

105°C Japanese main capacitor provides uncompromised performance and reliability.



Industrial Grade Protection

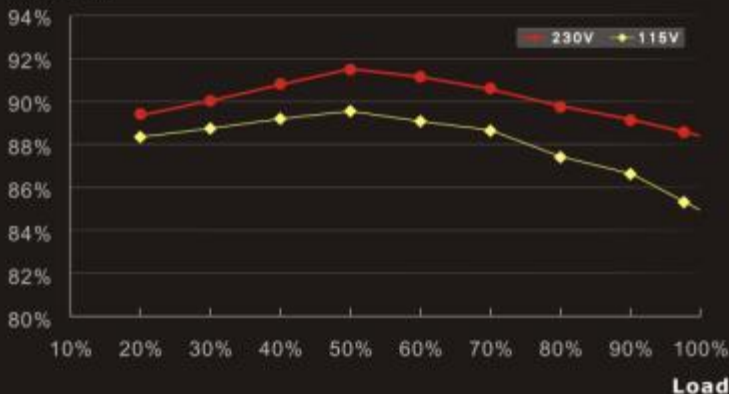
Built in industrial-grade protections: Over Current, Over Voltage, Under Voltage, Over Power, Over Temperature and Short-Circuit Protections.



Ultra Quiet 13.5cm Fan

New Toughpower series 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 1000W



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

12V Rail Distribution

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

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

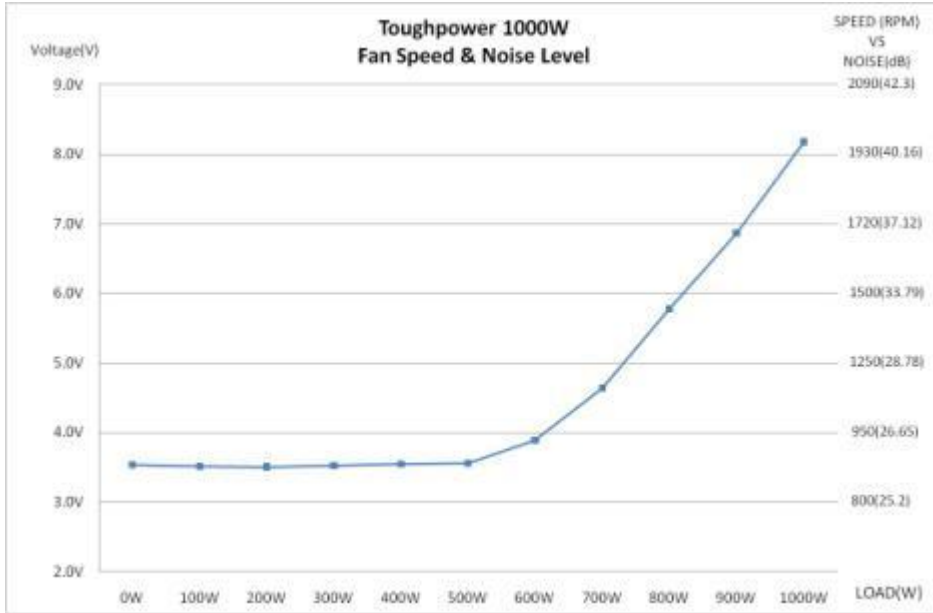
Hybrid mode will cause graphic cards load range from Max. to only 1W.

Toughpower 1000W 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 1000W

•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.

•ErP Ready

New Toughpower Series fulfils the EU guideline for ErP (Energy-related Products) that are scheduled to apply starting in 2010.

•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 1000W

❖ Output Specification

P/N	AC INPUT	Input Voltage: 100V - 240V~ Input Current: 12A - 6A Frequency: 60Hz - 50Hz					
TP-1000M	DC OUTPUT	+3.3V	+5V	+12V1	+12V2	-12V	+5Vsb
	Max Output Current	25A	25A	50A	70A	0.3A	3.5A
	Max Output Power	150W		996W		3.6W	17.5W
	Continuous Power	1000W					

❖ 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-1000M	Toughpower 1000W	1	1	1	8	12	8	1

Model	Connector Type	Connectors & Cable length
1000W	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 1000W

GENERAL INFO	
P/N	TP-1000M
Model	TP-1000AH5CES
Type	Intel ATX 12V 2.3 & EPS 12V 2.92
Max. Output Capacity	1000W
Peak Output Capacity	1100W
Color	Black
Dimension (H/W/D)	86mm x 150mm x 180mm
PFC	Active PFC
Power Good Signal	100-500 msec
Hold-up Time	16msec (minimum) @ 75% load at 115Vac/ 230Vac input.
AC INPUT	
Input Current	12A – 6A
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 90%,non-condensing
Storage Temperature	-20 °C to +60 °C
Storage Humidity	5% to 95%, 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 1000W

❖ 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.		