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TOUGHPower SERIES
POWER SUPPLY

Toughpower XT Series



Toughpower XT 850W

DATASHEET



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TOUGHPower SERIES
POWER SUPPLY

Toughpower XT Series



Support
PCIe 12V-2X6

ATX 3.1 Compatible

All - Flat
Black Cables

DC to DC and LLC
Design

Smart Zero Fan

Features

- Compatible with Intel ATX 3.1 specification and designed with native PCIe Gen 5.1 12+4pin connector.
- 80 PLUS Gold Certified up to 90% efficiency.
- 850W continuous output at 40°C/104°F operating environment.
- Smart Zero Fan: minimizes undesired noise.
- Fully modular low-profile flat black cables.
- Ultra Quiet 120mm hydraulic bearing fan delivers excellent airflow.
- High amperage single +12V rail design.
- DC-DC and LLC design for more precise electrical output.
- Intel C6/C7 states & ErP ready.
- Built-in industry grade protections: OCP, OVP, UVP, OPP, OTP, SCP
- Dimension: 150mm(W)x86mm(H)x140mm(D).
- 5 years warranty.

5 YEAR
Warranty



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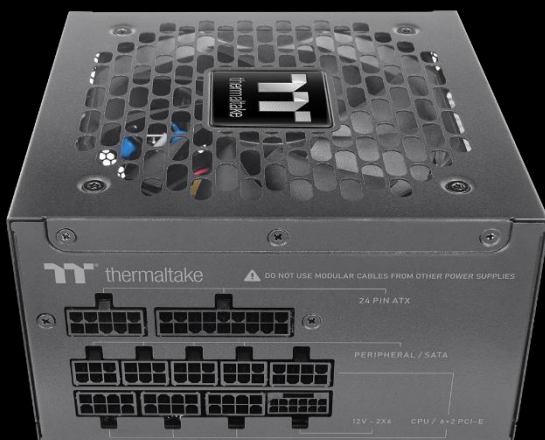
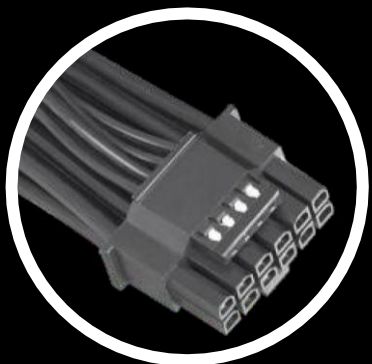
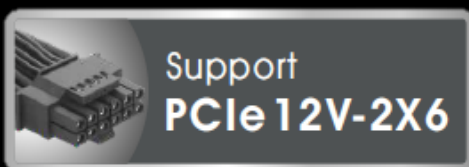
Highlighted Features

Fully Compatible With ATX 3.1 Specifications

Meets all the needs of a computer system, providing powerful and stable power.

- Supports 200% power excursion
- Reaches 60% low load efficiency
- Complies with required power supply timing standards
- Designed with native 12+4pin 12V-2X6, and bundled with a PCIe Gen 5 cable

ATX 3.1 Compatible





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Highlighted Features



Ultra Quiet Smart Zero Fan

Adjusts the fan speed and minimizes undesired noise.

Fully Modular, Low-Profile Flat Black Cables

Makes cable management easier, reduces clutter and increases airflow inside the chassis.

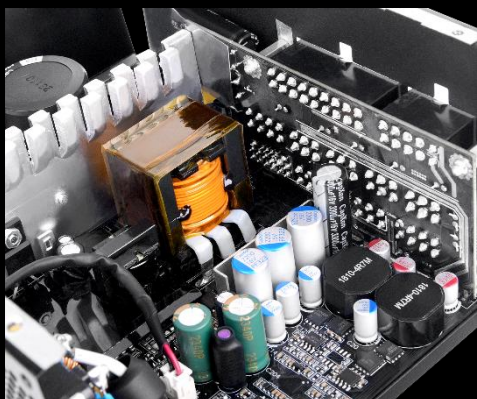


High Amperage Single +12V Rail Design

Powerful single +12V rail and DC to DC design for the best compatibility.

High-Class DC to DC and LLC Circuit Design

Provides stable operation and enhanced voltage regulation.



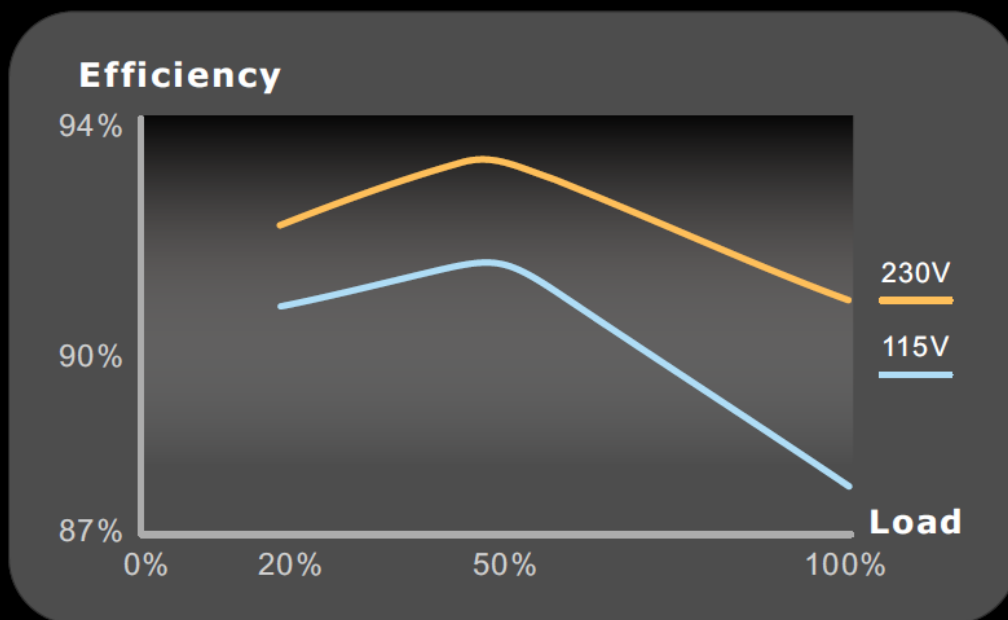


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Toughpower XT Series

Eco Design



80 PLUS® Gold Certified Efficiency

Delivers top end efficiency under real world load conditions.

Supports Energy Star 5.0* energy standard

Toughpower XT series is suitable for use in Energy Star-compatible computers.

Supports Intel Deep Power Down C6 Status

Helps your PC system operate more power efficiently.

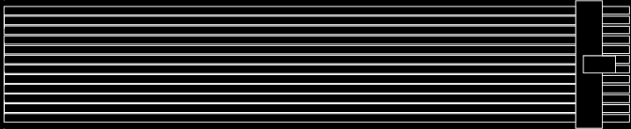
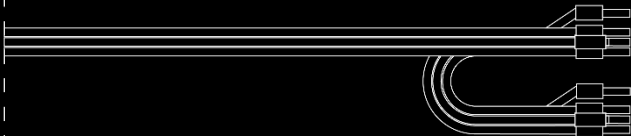
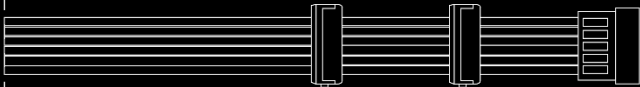
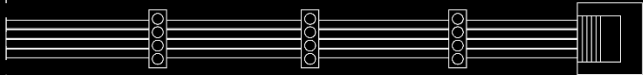
Corresponds to the EU directives on WEEE and RoHS

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





Connector and Cable Specification

Connector Type	Connector Quantity		Cable Quantity	Cable Length
Main Power (20+4Pin)	X 1		X 1	550mm
ATX 12V (4+4Pin)	X 2		X 2	700mm
PCIe (6+2Pin)	X 4		X 2	600mm+150mm
PCIe (12+4Pin) 600W	X 1		X 1	600mm
SATA (5Pin)	X 6		X 2	450mm+150mm +150mm
Peripheral (4Pin)	X 4		X 1	450mm+150mm +150mm+150mm



Specification

AC Input	Input Voltage: 100-240V~				
	Input Current: 10A Max.				
	Frequency: 50Hz-60Hz				
DC Output	+3.3V	+5V	+12V	-12V	+5VSB
Max Output Current	20A	20A	70.8A	0.3A	3A
Max Output Power	100W		849.6W	3.6W	15W
Total Power	850W				

GENERAL INFO	
P/N	PS-TPX-0850FNFAG*-1
Model	TPD-850AH2FXG-3
Dimension	150mm(W)x86mm(H)x140mm(D)
PFC	Active PFC
Power Good Signal	100-250 msec
Hold-Up Time	> 17msec at 80% load
Cooling System	12cm Hydraulic bearing fan
Protection	OVP/UVP/OCP/OPP/OTP/SCP
ENVIRONMENT	
Operating Temperature	0°C to + 40°C
Operating Humidity	5% to 85%,non-condensing
Storage Temperature	-40°C to + 70°C
Storage Humidity	5% to 95%, non-condensing
MISCELLANEOUS	
Efficiency	Meet 80 PLUS® Gold at 115Vac input.
MTBF	100,000 hrs minimum
Safety Approval	CE/UKCA/ICES/TUV/LVD/RCM/CB/FCC/cTUVus/BSMI/CCC/BIS/S-MARK
PCIe CONNECTOR	
PCIe 6+2pin	4
PCIe 12+4pin (600W)	1

Total Protection

Protections	Voltage Source		
	+3.3V	+5V	+12V
Over Voltage Protection	3.76~4.3V	5.74~7.0V	13.4~15.6V
Under Voltage Protection	2.0~2.83V	3.15~4.47V	8.1~10.5V
Over Current Protection	24~55A	24~55A	80~130A
Over Power Protection	Protection at 110%~170% over peak load.		
Over Temperature Protection	Protection temperature is 50°C~65°C		
Short Circuit Protection	Short circuit placed on +5V,+12V,+3.3V,-12Vwill latch off. +5VSB will auto-recovery.		