PCIe Gen 5 Ready
16-PIN Connector

80 PLUS GOLD

TOUGHPOWER GF3 850W

DATASHEET
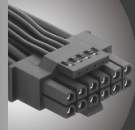
PCIe Gen 5 Ready
16-PIN Connector

ATX 3.0 Compatible

Smart Zero Fan

100% Japanese Capacitors

10 YEAR Warranty

80 PLUS GOLD

Features

- PCIe Gen 5 ready, designed with native PCIe 12+4pin modular interface.
- Compatible with Intel ATX 3.0 specification.
- 80 PLUS Gold Certified up to 90% efficiency.
- 135mm fluid bearing fan.
- 100% Premium quality 105°C Japanese capacitors.
- < 30mV low ripple noise design.
- Extremely strict voltage regulation < ±2%.
- >17ms hold-up time.
- Fully modular low-profile flat black cables.
- Smart Zero Fan: Minimizes undesired noise.
- High amperage single +12V rail design.
- DC-DC design for more precise electrical output.
- Intel C6/C7 states & ErP ready.
- Built-in industry grade protections: OCP, OVP, UVP, OPP, SCP, OTP.
- Dimensions: 150mm(W)x86mm(H)x160mm(D).
- Safety approvals: CE/UKCA/cTUVus/TÜV/FCC/IC/BSMI/EAC/CB/CCC certifications.

Highlighted Features
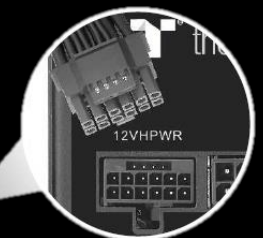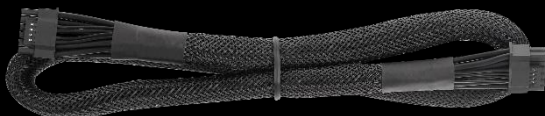
ATX 3.0 Compatible

Fully Compatible With ATX 3.0 Specifications
Meets all the needs of a computer system, providing powerful and stable power.

- Supports 200% power excursion

- Reaches 70% low load efficiency

- Complies with required power supply

  timing standards

PCIe Gen 5 Ready
16-PIN Connector

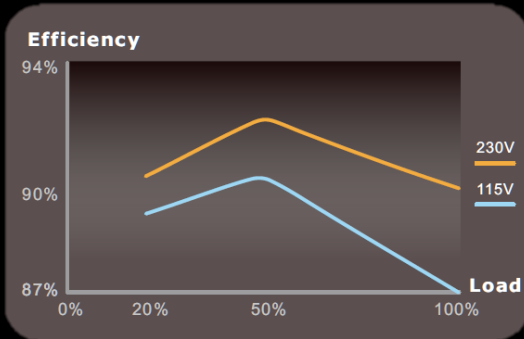Designed with native 12+4pin 12VHPWR, and bundled with a PCIe Gen 5 cable
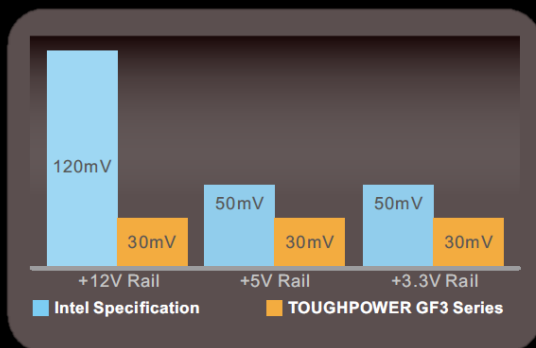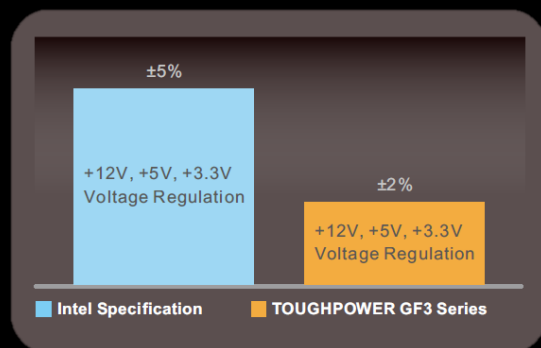
Highlighted Features

80 PLUS Gold Certified Efficiency
Delivers top end efficiency under real world load conditions.
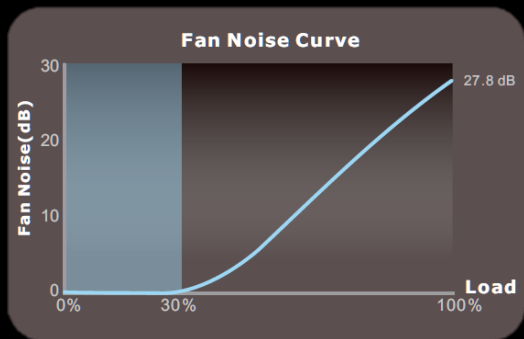
Ultra Quiet Smart Zero Fan
Minimize undesired noise.

< 30mV Low Ripple Noise Design
Top-end build quality with low ripple noise.

Extremely Strict Voltage Regulation < ±2%
Provides steady clean power through exceptional voltage stability.

Highlighted Features
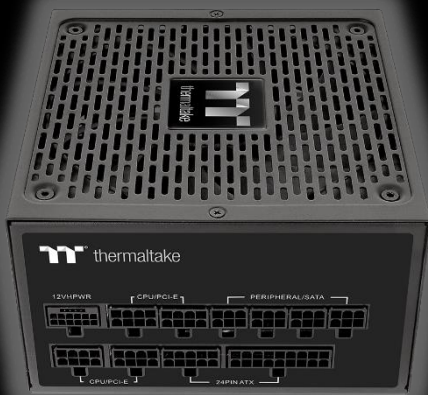
Fully Modular, Low-Profile Flat Black Cables

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

100% High Quality Japanese 105˚C/221˚F Capacitors.

Improves the durability and offers the highest stability and reliability.

High Amperage Single +12V Rail & DC to DC Design

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

Eco Design
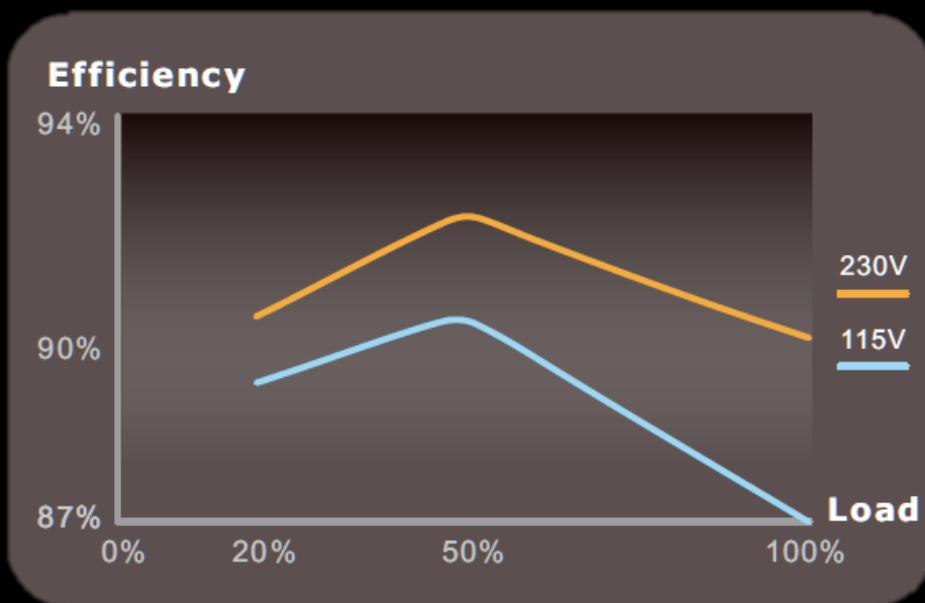
80 PLUS®Gold Certified Efficiency
Delivers top end efficiency under real world load conditions.

Supports Energy Star 5.0* energy standard
Toughpower GF3 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
Thermaltake considers its full impact on the environment during manufacturing and maintains green facilities to ensure Toughpower GF3 series meets WEEE & RoHS requirements.

TOUGHPOWER GF3 850W

Output Specification

P/N: PS-TPD-0850FNFAGx-4

AC Input	Input Voltage: 100V - 240V~ Input Current: 10.0A / 5.0A Frequency: 50/60Hz				
DC Output	+3.3V	+5V	+12V	-12V	+5VSB
Max Output Current	22.0A	22.0A	70.8A	0.3A	3.0A
Max Output Power	120W		849.6W	3.6W	15W
Total Power	850W				

Connector Specification

Connector / Wattage	Main Power Connector (24Pin)	ATX 12V (8/4+4Pin)	SATA (5Pin)	PCIe (6+2Pin)	PCIe (12+4Pin)	Peripheral (4Pin)	FDD Adapter
850W	1	2	12	4	1	4	1

Wattage	Connector Type	Connector Quantity & Cable Length
850W	Main Power (24Pin)	1 x 24Pin Main connector (600mm)
	ATX 12V (8/4+4Pin)	1 x ATX 12V 8Pin connector (700mm) 1 x ATX 12V 4+4Pin connectors (700mm)
	PCIe (6+2Pin)	2 x PCIe 6+2Pin connectors (500mm + 150mm) 2 x PCIe 6+2Pin connectors (500mm + 150mm)
	PCIe (12+4Pin)	1 x PCIe 12+4Pin connectors (500mm)
	SATA	4 x SATA connectors (500mm + 150mm + 150mm + 150mm) 4 x SATA connectors (500mm + 150mm + 150mm + 150mm) 4 x SATA connectors (500mm + 150mm + 150mm + 150mm)
	Peripheral	4 x Peripheral connectors (500mm + 150mm + 150mm + 150mm)
	Floppy Adapter	1 x Peripheral to floppy adapter cable (100mm)

GENERAL INFO	
P/N	PS-TPD-0850FNFAGx-4
Model	TPD-0850AH3FCG
Max. Output Capacity	850W
Color	Black
Dimension (W/H/D)	150mm(W) x 86mm(H) x 160mm(D)
Weigh (Main Body)	1.69 KG
PFC	Active PFC
Power Good Signal	100-150 msec
Hold-Up Time	> 17msec at 100% of full load
AC INPUT	
Input Current	10.0A / 5.0A
Input Frequency Range	50/60 Hz
Input Voltage	100V – 240V~
ENVIRONMENTAL	
Operating Temperature	0°C to + 40°C
Operating Humidity	20% to 90%,non-condensing
Storage Temperature	-20°C to + 70°C
Storage Humidity	5% to 95%, non-condensing
Cooling System	13.5cm fluid bearing fan
MISCELLANEOUS	
Efficiency	Meet 80 PLUS®Gold at 115Vac input.
MTBF	100,000 hrs minimum
Safety Approval	CE/UKCA/cTUVus/TÜV/FCC/IC/BSMI/EAC/CB/CCC
PCIe CONNECTOR	
PCIe 6+2Pin	4
PCIe 12+4Pin	1

Total Protection

Protections	Voltage Source		
	+3.3V	+5V	+12V
Over Voltage Protection	3.76V~4.5V	5.74V~7.0V	13.4V~15.6V
Under Voltage Protection	2.83V	4.47V	9.80V
Over Current Protection	180% max.	180% max.	150% max.
Over Power Protection	Protect at 110%~150% over peak load.		
Over Temperature Protection	Protection temperature is 50℃ to 70℃ at 115V and full load.		
Short Circuit Protection	Activated when any DC rails short circuited.		