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**TOUGHPower SERIES**  
POWER SUPPLY

**Smart BM3 Series**



# SMART BM3 650W

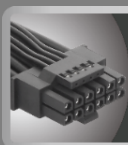
## DATASHEET



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# TOUGHPower SERIES POWER SUPPLY

## Smart BM3 Series



PCIe Gen 5 Ready  
16-PIN Connector



**ATX 3.0** Compatible

**Smart Zero Fan**

**Japanese**  
Main Capacitor

**5 YEAR**  
Warranty

### Features

- Fully compatible with Intel ATX 3.0 specification.
- PCIe Gen 5 ready, designed with native PCIe 12+4pin modular interface.
- 80 PLUS® Bronze certified up to 85% efficiency.
- Modular low-profile flat black cables.
- High quality Japanese 105°C/221°F main capacitor.
- Smart Zero Fan: Minimizes undesired noise.
- 650W continuous output at 40°C/104°F operating environment.
- 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.
- Compact Sizing: 150mm(W)x86mm(H)x140mm(D).
- 5 years warranty.



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## Smart BM3 Series

### Highlighted Features

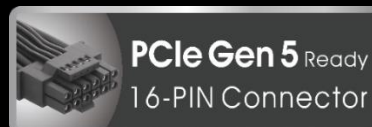
#### Fully Compatible With ATX 3.0 Specifications

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

- Supports 200% power excursion
- Reaches 60% low load efficiency
- Complies with required power supply timing standards
- Designed with native 12+4pin 12VHPWR connector.

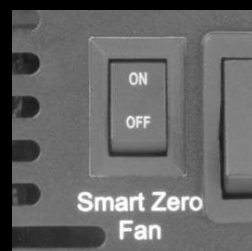


**ATX 3.0** Compatible



#### Ultra Quiet Smart Zero Fan

The Smart Zero Fan will not spin until the load exceeds 20% of the power supply, minimizing undesired noise.



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

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

#### High Quality Japanese 105°C/221°F Main Capacitors

Improves the durability and offers the highest stability and reliability.

#### Low-Profile Flat Black Cables

Makes cable management easier.



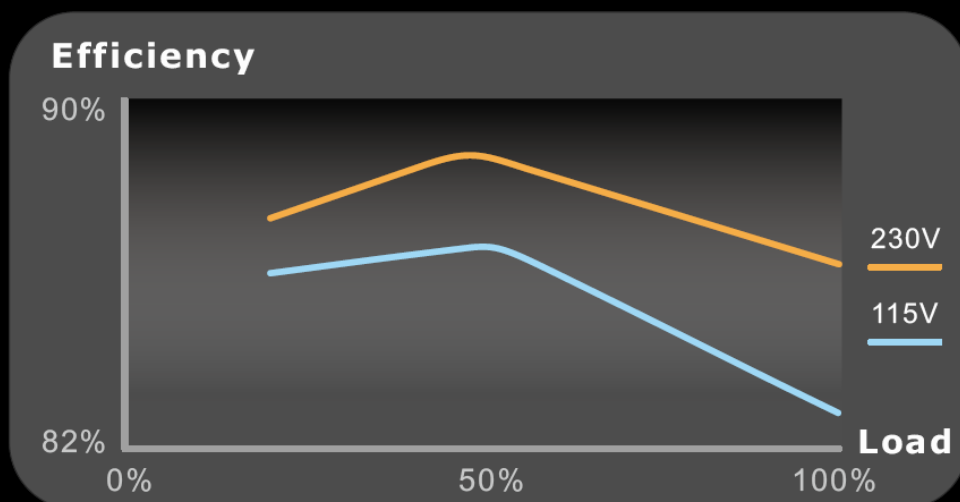


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## Smart BM3 Series

### Eco Design



### 80 PLUS® Bronze Certified Efficiency

Delivers top end efficiency under real world load conditions.



### Supports Energy Star 5.0\* energy standard

Smart BM3 series is suitable for use in Energy Star-compatible computers.

### Supports Intel Deep Power Down C6/C7 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 Smart BM3 series meets WEEE & RoHS requirements.



**Specification**

AC Input	Input Voltage: 100-240V~				
	Input Current: 15A-6A				
	Frequency: 50Hz/60Hz				
DC Output	+3.3V	+5V	+12V	-12V	+5VSB
Max Output Current	18A	18A	54.2A	0.3A	3A
Max Output Power	110W		650W	3.6W	15W
Total Power	650W				

**GENERAL INFO**

P/N	PS-SPD-0650MNFABx-3
Model	SPD-650AH2CLB
Max. Output Capacity	650W
Dimension	150mm(W)x86mm(H)x140mm(D)
PFC	Active PFC
Power Good Signal	100-150 msec
Hold-Up Time	> 17msec
Cooling System	12cm FDB Fan
Smart Zero Fan	Fan will not spin until the load exceeds 20%
Weigh (Main Body)	1.6 KG

**ENVIRONMENT**

Operating Temperature	5°C to + 45°C
Operating Humidity	20% to 85%,non-condensing
Storage Temperature	-40°C to + 55°C
Storage Humidity	10% to 95%, non-condensing

**MISCELLANEOUS**

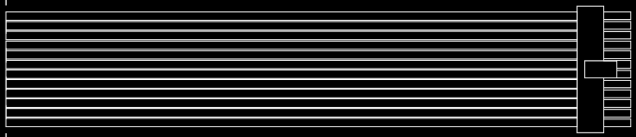
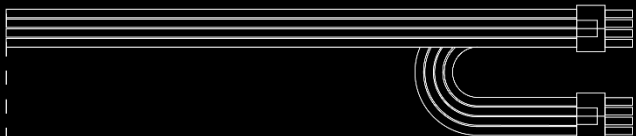
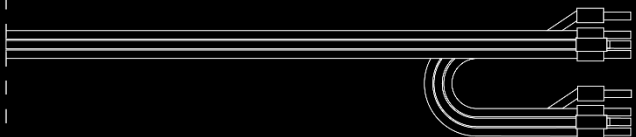

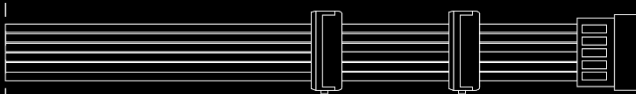
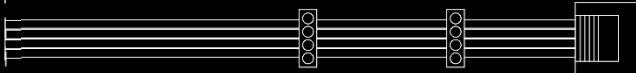
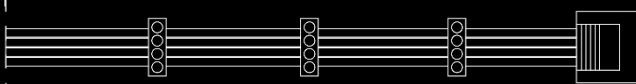
Efficiency	Meet 80 PLUS® Bronze at 115Vac input.
MTBF	100,000 hrs minimum
Safety Approval	CE/UKCA/LVD/UKCA/FCC/ICES/TUV/CB/cTUVus/BSMI/CCC
Protection	OCP/OVP/UVp/OPP/OTP/SCP

**PCIe CONNECTOR**

PCIe 6+2pin	4
PCIe 12+4pin (300W)	1



**Connector and Cable Specification**

Connector Type	Connector Quantity		Cable Quantity	Cable Length
Main Power (24Pin)	X 1		X 1	600mm
ATX 12V (4+4Pin)	X 2		X 1	650mm+150mm
PCIe (6+2Pin)	X 4		X 2	500mm+150mm
PCIe (12+4Pin) 300W	X 1		X 1	600mm
SATA (5Pin)	X 3		X 1	500mm+150mm +150mm
Peripheral (4Pin)	X 7		X 1	500mm+150mm +150mm
			X 1	500mm+150mm +150mm+150mm



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### 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	2.0~2.6V	3.3~3.9V	8.5~9.7V
Over Current Protection	25~40A	25~40A	92~108A
Over Power Protection	Protection at 160%~200% over peak load.		
Over Temperature Protection	Protection temperature is 45°C~55°C		
Short Circuit Protection	Short circuit placed on +5V,+12V,+3.3V,-12V will latch off. +5VSB will auto-recovery.		