BBP® for MicroBlade™/SuperBlade®

Battery Backup Power Solution - Evolutionary Design to Replace UPS!

6U MicroBlade

*Up to **112 UP/28 DP** Nodes*

8U SuperBlade

*Up to **20 DP/10 MP** Nodes*

New!

BBP Module

Typical Runtime: 60 seconds

- Improves stability, redundancy, and ease of maintenance
- Increases overall data center power efficiency
- Frees UPS space to increase server density deployment
- Flexible configurations available for current Supermicro systems
- More cost-effective than expensive Data Center UPS

March 2017

Supermicro Battery Backup Power (BBP®) Modules

The Supermicro BBP® modules are designed for high availability and easy maintenance. They are entirely self-contained, hot-swappable units, charging and delivering power to the system through an internal connector. In the event of an AC power interruption, the BBP module reacts in real-time to take over and maintain the power load, providing time for failsafe switchover to an alternative power source or an orderly shutdown. Incorporating the latest rechargeable Lithium-Ion cell technology, the BBP modules feature I^2C / Smart Battery Monitoring through remote management that promotes long life and high durability. This Smart Battery Monitoring technology is ideally suited for environments with AC reliability issues or that requires backup power solutions. Supermicro servers configured with redundant BBPs provide maximum system protection for Enterprise and SMB deployments running mission-critical HPC, cloud computing, data center and storage applications.

Key Benefits

- Integrated design provides power redundancy, battery backup and system cooling from one hot-swappable module
- Increases data center power efficiency, decreases floor space and eliminates the need for discrete UPS
- Significantly more cost-effective than traditional UPS deployment, and easy to maintain and manage remotely
- Available in 1200W output power capacity for up to 4 BBP modules on a 6U MicroBlade or a 8U SuperBlade enclosure for extended runtime

PWS-1K20B-BR: 1200W BBP Module

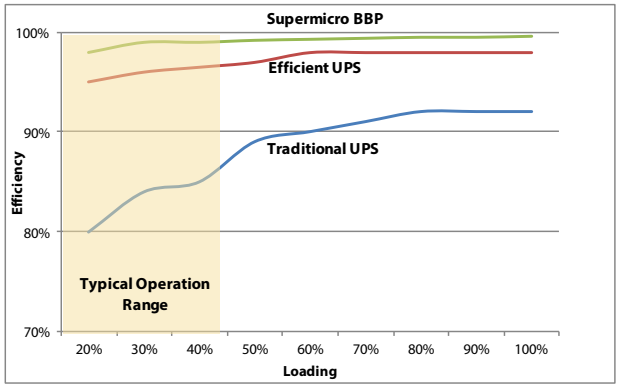
Space Optimization

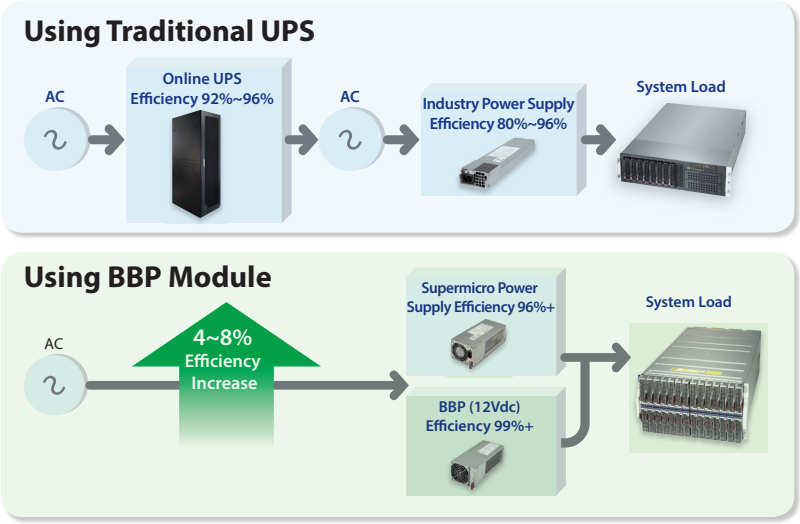
- Space savings is achieved by using servers with BBP® modules installed instead of connecting the servers to bulky external UPS systems.
- Additional savings can be realized by utilizing the space savings from eliminated or downsized UPS system to accommodate more rack-mounted servers.

Eliminates UPS
while maintaining system power redundancy

Power Efficiency

Supermicro server solutions that incorporate BBP® modules offer greater power efficiency by replacing external 92% - 96% efficient UPS systems with an inline solution that offers 99% efficiency. In addition, BBPs maintain system availability, reduce installation space, facility costs and administrative burden. Supermicro BBP® can allow systems to shut down gracefully or provide necessary power until AC power is resumed by the electric generator during the event of a power failure, without installing extra UPS systems.





Specifications

Model	PWS-1K20B-BR
Total Output Power	1200W
Input	11.2 to 12.9 V_{DC}
Output	12V, 12V_{SB}
Form Factor	MicroBlade™
Dimension (L x W x H)	245.5 x106.5 x 84 (mm)
Battery Cell Capacity	68 Whr
Redundant	N+1 / N+N
I_2C Remote Monitoring	FRU/Smart battery I_2C
+12V output	100 A
12V_{SB} output	2.5 A
Efficiency	Online mode battery power consumption less than 5W
Discharge Duration	1200 W for 35seconds
Cell Chemistry	Lithium Ion
Cooling	Internal 80 x 80mm cooling fan
Operating Temperature	5 °C - 50 °C

Runtime

Under typical conditions, below is the Estimated Runtime of the current BBP® modules. Runtime can be extended by adding additional BBP® modules to a system.

Power Load	Number of BBP Modules Installed	Discharge Duration
1000W	4	180 seconds
2000W	4	120 seconds
3000W	4	60 seconds
4000W	4	35 seconds
4800W	4	35 seconds

Compatibility

Enclosures	Max Number of BBP Modules Supported
8U SuperBlade	4
6U MicroBlade	4
4U SuperBlade	2
3U MicroBlade	2

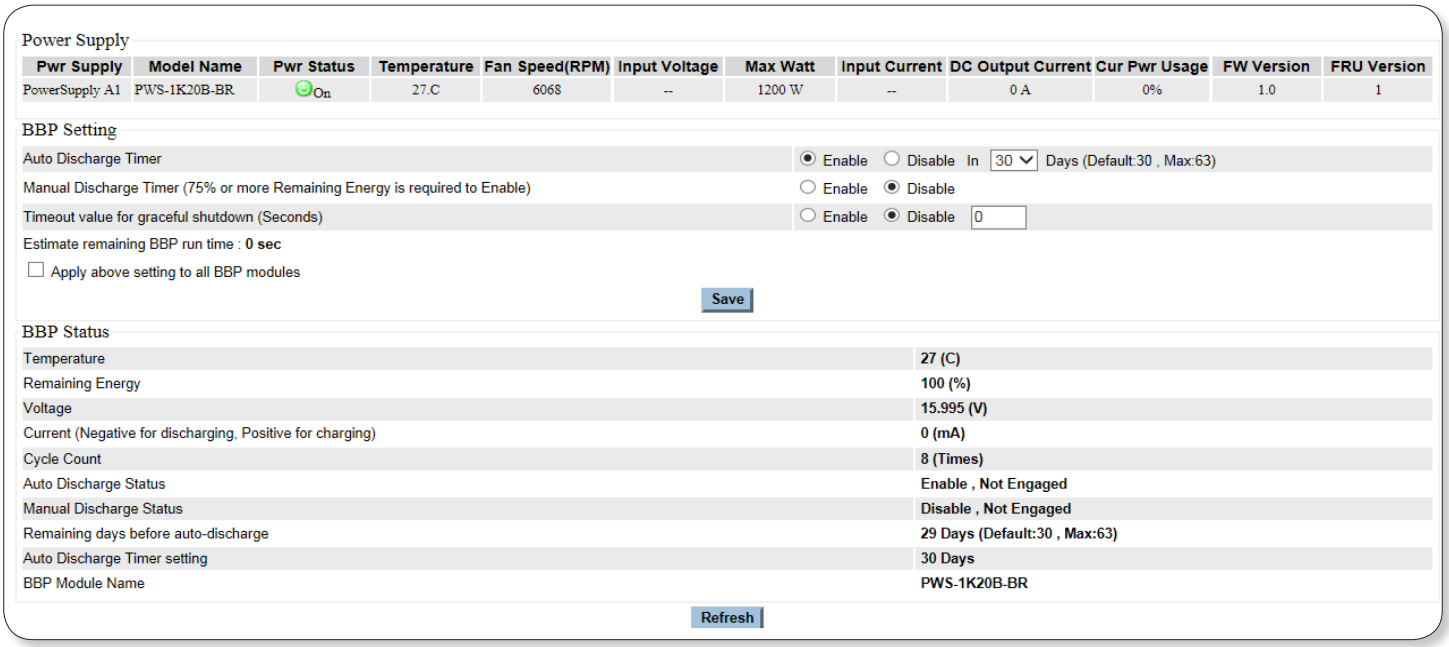
Management

Advanced System Management

- IPMI Command line interface and web GUI are both available for remote monitoring and control of the BBP.
- Manual or Auto Discharge maintenance options are available.

Flexible System Control and Power Down Options

- Performs graceful shutdown during a power failure
- Allows a specific power on time to facilitate data backup or to allow the power generator to resume power.



Power Supply

Pwr Supply	Model Name	Pwr Status	Temperature	Fan Speed(RPM)	Input Voltage	Max Watt	Input Current	DC Output Current	Cur Pwr Usage	FW Version	FRU Version
PowerSupply A1	PWS-1K20B-BR	On	27.C	6068	--	1200 W	--	0 A	0%	1.0	1

BBP Setting

Auto Discharge Timer	Enable / Disable In 30 Days (Default:30 , Max:63)
Manual Discharge Timer (75% or more Remaining Energy is required to Enable)	Enable / Disable
Timeout value for graceful shutdown (Seconds)	Enable / Disable 0

Estimate remaining BBP run time : **0 sec**

Apply above setting to all BBP modules

Save

BBP Status

Temperature	27 (C)
Remaining Energy	100 (%)
Voltage	15.995 (V)
Current (Negative for discharging, Positive for charging)	0 (mA)
Cycle Count	8 (Times)
Auto Discharge Status	Enable , Not Engaged
Manual Discharge Status	Disable , Not Engaged
Remaining days before auto-discharge	29 Days (Default:30 , Max:63)
Auto Discharge Timer setting	30 Days
BBP Module Name	PWS-1K20B-BR

Refresh

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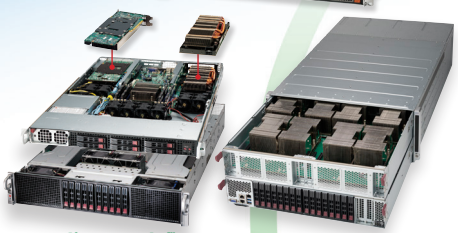

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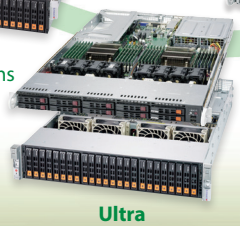
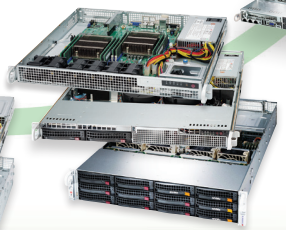


Ultra
Enterprise Class Computing



Datacenter Optimized
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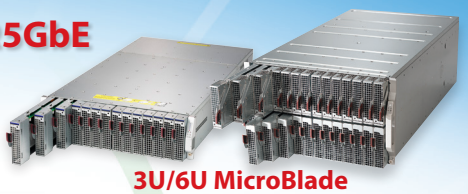
47°C Ambient Server Solutions



3U/6U MicroBlade
0.05/0.1/0.2U MicroBlade Servers in 3U/6U

8U SuperBlade®
Up to 20 DP/10 MP Nodes

TwinPro™
New Generation Twin System
4 DP Nodes in 2U,
2 DP Nodes in 1U

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