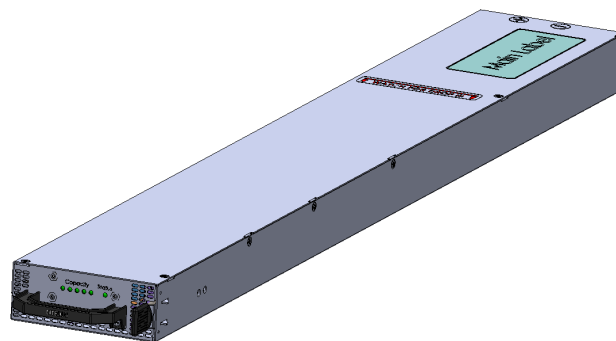


The Battery Backup Unit (BBU) is a rack-mounted backup power solution for servers, datacenters, and other critical-power environments. The BBU is both a battery pack and a power module that includes 1.75kW discharge capacity and a constant-current charger for its batteries. If AC power is lost the BBU can supply 12V full-power backup to the rack bus bar.

## Key Features

- 1.75kW Power Output (145.8A maximum) for System Backup
- Modular High Performance Li-Battery Pack Inside (Replaceable)
- Conditioning and Monitoring Support for Batteries
- Hot-Swappable
- Plugs into 1 OU Battery Backup Shelf
- PMBus 1.2 Communication Support
- Active Current Sharing to Optimize Battery Life



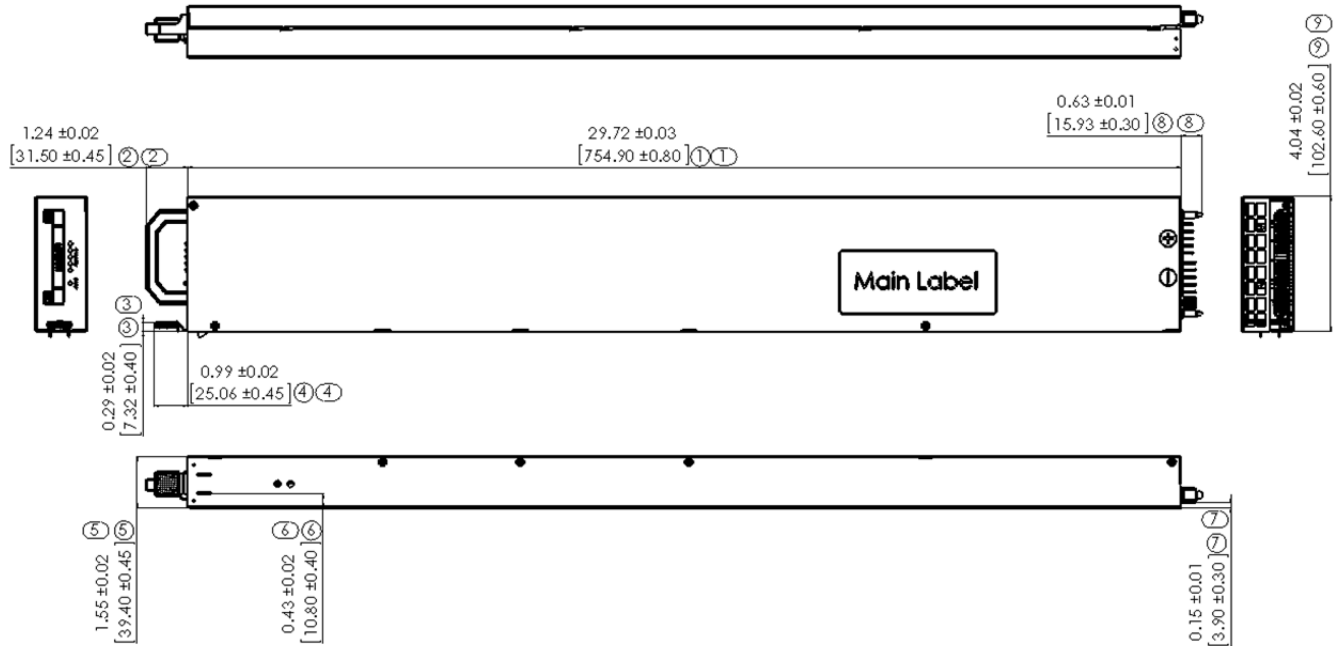
## Specifications

Electrical	
Output Power (maximum)	1.75kW
Output Current (maximum)	145.8A
Input Voltage	12.5VDC (+0.25VDC, -0.5VDC)
Input Current (maximum)	10A at 12.5VDC (at battery charge condition)
Output Voltage	12.25VDC (+0.475VDC, -0.65VDC)
Current Sharing Ability	Current balance error less than 5%
Communications	PMBus 1.2 via linking connector
EMI	Class A with minimum 4dB of margin
Physical	
Dimensions (H x W x D)	1.5" x 4.0" x 30.3" (39.4 mm x 103 mm x 770 mm)
Weight (empty)	10.25 lbs (4.65 kg)
Form Factor	1 OU
Environment	
Temperature	Operating: 10°C – 45°C, Storage: -20°C – 70°C
Humidity	5% – 95% relative (non-condensing)
Altitude	Operating: 0 m – 1524 m (5000 ft), Storage: 0 m – 5000 m (16404 ft)
Acoustic	30dB at 1 m
General	
Approvals	UL60950-1, UL1973 (planned, approvals pending)
Warranty	2 Years @ 35C

Lite-On Power System Solutions USA  
 3001 Summit Avenue, Suite 400, Plano, TX 75074  
 +1 (469) 331-9838  
[www.liteon-pss.com](http://www.liteon-pss.com)  
 email: pss.sales@liteon.com

Lite-On Power System Solutions Taiwan  
 No. 90, Chien 1 Rd., Chung Ho Dist, New Taipei City 23585  
 +886 -2-2226181 ext 5026  
[www.liteon-pss.com](http://www.liteon-pss.com)  
 email: pss.sales@liteon.com

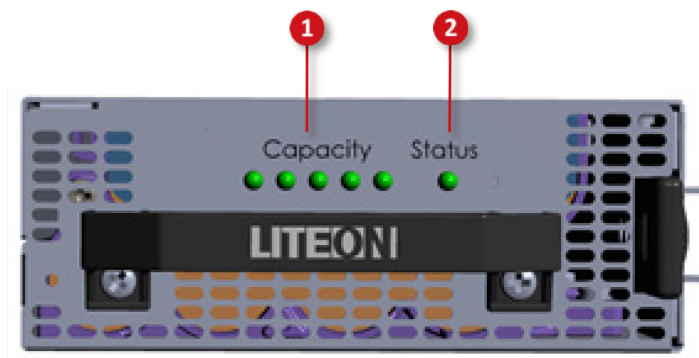
#### Mechanical



Lite-On Power System Solutions USA  
3001 Summit Avenue, Suite 400, Plano, TX 75074  
+1 (469) 331-9838  
[www.liteon-pss.com](http://www.liteon-pss.com)  
email: [pss.sales@liteon.com](mailto:pss.sales@liteon.com)

Lite-On Power System Solutions Taiwan  
No. 90, Chien 1 Rd., Chung Ho Dist, New Taipei City 23585  
+886 -2-2226181 ext 5026  
[www.liteon-pss.com](http://www.liteon-pss.com)  
email: [pss.sales@liteon.com](mailto:pss.sales@liteon.com)

### Front Panel



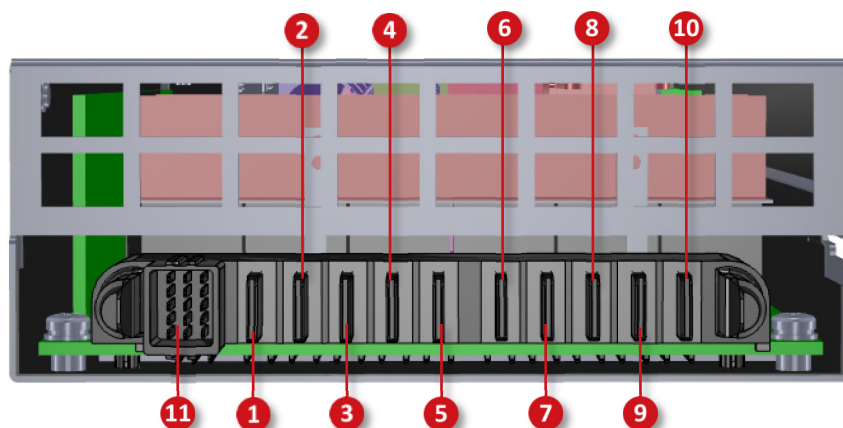
<b>1</b>	BBU Capacity Status LEDs	Five green status LEDs, LED 0 (left LED) to LED 4 (right LED), indicate battery capacity. Refer to the Capacity Status LED tables below for more details.	
<b>2</b>	BBU Status LED	Red	<ul style="list-style-type: none"> <li>Module Failure</li> <li>BBU has entered protection mode</li> </ul>
		Green	<ul style="list-style-type: none"> <li>Solid: BBU has input power and is charging</li> <li>Blink: BBU has lost input power and is discharging (supplying 12.25V to bus)</li> </ul>

The five green capacity status LEDs in the front of the BBU indicate the battery capacity as described in the tables below.

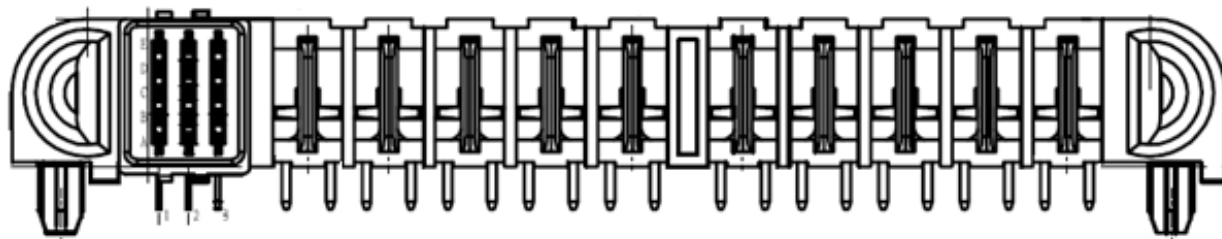
Capacity Status LEDs (Charge mode)					
	LED 0	LED 1	LED 2	LED 3	LED 4
0% – 20%	Blink	Off	Off	Off	Off
21% – 40%	Solid	Blink	Off	Off	Off
41% – 60%	Solid	Solid	Blink	Off	Off
61% – 80%	Solid	Solid	Solid	Blink	Off
81% – 99%	Solid	Solid	Solid	Solid	Blink
100%	Solid	Solid	Solid	Solid	Solid

Capacity Status LEDs (Discharge mode)					
	LED 0	LED 1	LED 2	LED 3	LED 4
0% – 20%	Off	Off	Off	Off	Off
21% – 40%	Solid	Off	Off	Off	Off
41% – 60%	Solid	Solid	Off	Off	Off
61% – 80%	Solid	Solid	Solid	Off	Off
81% – 94%	Solid	Solid	Solid	Solid	Off
95% – 100%	Solid	Solid	Solid	Solid	Solid

### Rear Panel



Power Pin (1-10)											Signal Pin (11)					
6	7	8	9	10	1	2	3	4	5		1		2		3	
+12V					RTN					A	BBS - SCL		BBS - PRESENT		BBS - PS - KILL	
										B	BBS - SDA		BBS - SGND		BBU - A2	
										C			BBS - CURRENT - SHARE		BBU - A3	
										D	BBS - AC - GOOD (BBS-DISCHARGE)		BBU - A0			
										E	BBU-A4		BBU - A1			

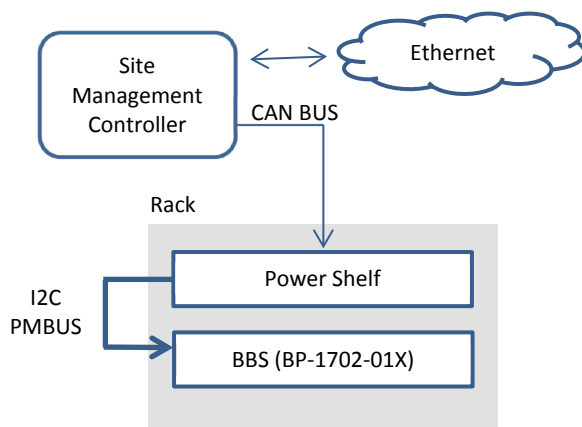


Pin	Pin Define	PS I/O	Status		Description
A1	BBS - SCL	Input	0V/3.3V	L/H	I2C Clock Pin (Bit rates up to 100KHz)
A2	BBS - PRESENT	Output	0V/3.3V	L/H	Present pin for system (Short to GND at BBU side)
A3	BBS - PS - KILL	Input	0V/3.3V	L/H	Present pin for BBU (Short to GND at BBS side)
B1	BBS - SDA	I/O	0V/3.3V	L/H	I2C Data pin (Bit rates up to 100KHz)
B2	BBS - SGND		0V	L	BBU signal GND pin
B3	BBU - A2	Input	0V/3.3V	L/H	Address define pin
C2	BBS-CURRENT - SHARE	BI	0V-6V		Active current sharing signal
C3	BBU - A3	Input	0V/3.3V	L/H	Address define pin
D1	Reserved				
D2	BBU - A0	Input	0V/3.3V	L/H	Address define pin
E1	BBU - A4	Input	0V/3.3V	L/H	Address define pin
E2	BBU - A1	Input	0V/3.3V	L/H	Address define pin

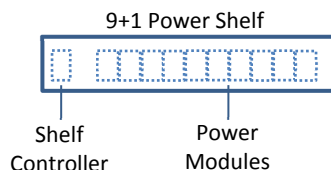
## Three Phase Power Shelf System Components

The system provides a comprehensive power management and battery backup capability based on existing building block with configuration flexibility to suit specific power, size, and run-time requirements. The table below provides additional information on the building block available to create a customized power solution. Please visit our website for more in-depth information or contact your local Lite-On PSS representative for support.

Component	Model Number	Description
Power Shelf	PF-2123-1L1M	22.5KW (9+1) 3U Power Shelf with ten power module slots and one Shelf Controller slot: <ul style="list-style-type: none"> <li>Power Module slots (10)</li> <li>Shelf Controller slot (1)</li> </ul>
Power Module	PS-2252-6Q-LF	2.5kW Hot-Swappable Power Module
Battery Backup System	BP-1702-01X	7kW 1U Battery Backup System (BBS) with 4 slots
Battery Backup Unit	BM-1172-01X	1.75kW Battery Backup Unit (BBU)
Shelf Controller	CM-12CP-010U	Power shelf management and control
Site Management Controller	CP-13EC-010U	Rack management and control
21" OCP Rack	KT-2141-121	21-inch Open Frame Rack



**System Block Diagram**





Innovative Power Management Solutions for Critical Infrastructure

Lite-On Power System Solutions USA  
3001 Summit Avenue, Suite 400, Plano, TX 75074  
+1 (469) 331-9838  
[www.liteon-pss.com](http://www.liteon-pss.com)  
email: [pss.sales@liteon.com](mailto:pss.sales@liteon.com)

Lite-On Power System Solutions Taiwan  
No. 90, Chien 1 Rd., Chung Ho Dist, New Taipei City 23585  
+886 -2-2226181 ext 5026  
[www.liteon-pss.com](http://www.liteon-pss.com)  
email: [pss.sales@liteon.com](mailto:pss.sales@liteon.com)