GREEN CUBES
THE POWER TO PERFORM

GUARDIAN

23” 2U NMC Guardian Battery Unit (GBU)

GBU-2U-23-48-175-N

Overview

The Guardian Battery Unit (GBU) is a 48V 23” rack-mountable Lithium-ion Battery Backup Unit (BBU) designed to be used in conjunction with the Aspiro and Guardian DC Power Systems. The GBU Series has been designed for data center and telecom applications as a replacement to Lead Acid batteries. The patented Energy Balance Technology (EBT) provides internal balancing among the BBU modules connected in parallel. The EBT ensures consistent voltage and current delivery from the entire system of connected modules, which maximizes run-time and power delivery. Remote management via the Modbus, over RS-485 or Ethernet via the Unipower GCC Controller with PowCom™ software provides immediate access to performance and alarm information. Lithium Nickel Manganese Cobalt (NMC) chemistry provides the best energy density and the smallest footprint in the industry.

Features

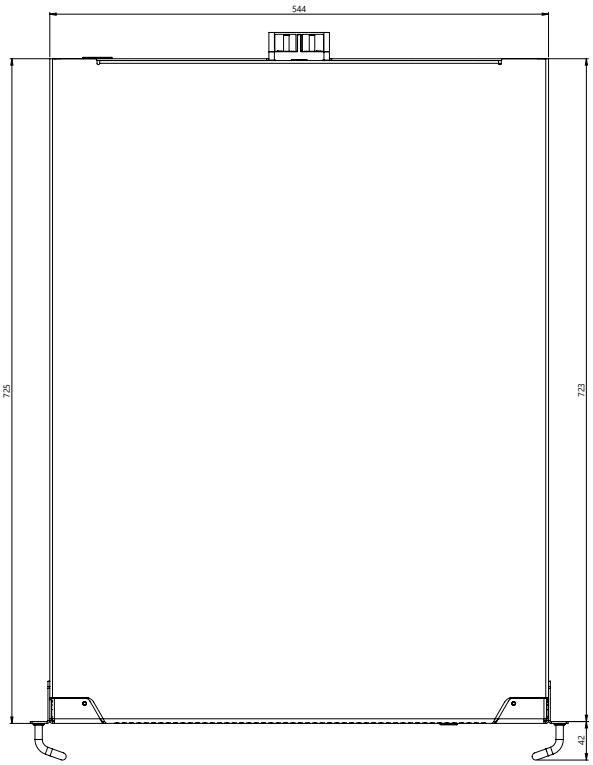
- 2 RU High variant with 175 AHrs of capacity
- 23-Inch Rack Mounting
- Current Capacity: 100 Amps
- Operating Voltage: 48VDC
- Scalable, connect multiple units in Parallel
- RS-485 Communication Ports

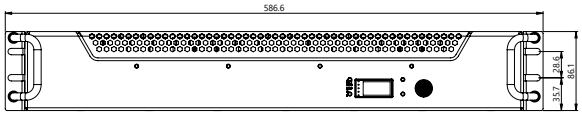
Advantages

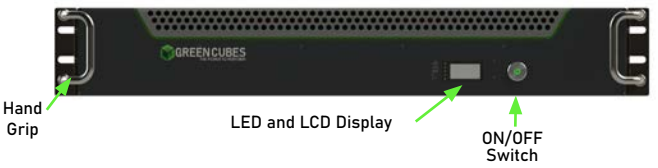
- Energy Balance Technology (EBT) – When more than one Guardian Battery Unit (GBU) is connected in parallel, internal balancing among the modules ensures consistent voltage and current delivery from the entire system of connected modules. The EBT function maximizes the run-time and power delivery for the entire system.
- Variable speed fan provides active thermal management.
- Lithium Nickel Manganese Cobalt (NMC) chemistry provides the best volumetric and gravimetric energy density compared to traditional lead acid and other Lithium-ion batteries such as LCO and LFP.
- Maximum energy available in 23” 2 RU format
- Long Cycle Life and Calendar Life
- No Maintenance
- Extremely Safe Integrated Battery Management System
- Wide Temperature Range
- Improved Discharge & Charge Efficiency
- Consistent Voltage and Current Delivery

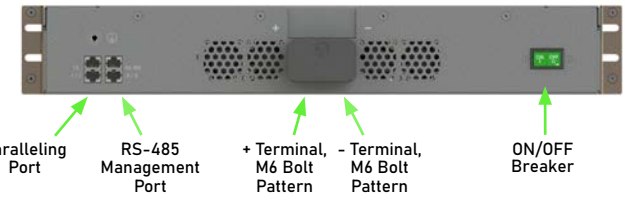
Guardian Battery Unit Specifications

Guardian Battery Unit (GBU) 2U	
Electrical Parameters	
Lithium-Ion Chemistry	Lithium Nickel Manganese Cobalt (NMC)
Nominal Voltage	46.8V
Voltage Range	42-54.6V
Nominal Capacity	175 Ah (8,190 Whrs)
Continuous Discharge Current	100 Amps
Pulse Discharge Current	115A for 300ms
Quiessentient Current Draw	1 mAmp
Maximum Charge Voltage	58V
Min/Max Charge Current Range	3 - 100 Amps
Cell Balancing	Passive, 300 mAmps
Maximum in Parallel Operation	Contact Green Cubes
Physical Parameters	
Terminals	Four threaded receptacles, M6 bolt pattern
Dimensions	21.4" X 29" X 3.4", 544mm X 737mm X 86mm
Weight	63kg (139 lbs)
Communications and Control	
Serial Communication	ModBus over RS-485
Environmental	
Operating Humidity	5% to 95% Non-condensing
Operating Temperature Range	-5°C to +45°C
Storage Temperature Range	-40°C to +60°C
Thermal Management	Variable Speed Fan
Airflow Direction	Front to Back
IP Rating	IP 20
Approvals and Safety	
Agency Approvals	UN 38.3, IEC 62619, UL 1973
Radiated and Conducted Emission	EN55032 / CISPR 22 Class A
Calendar Life @ 80% SOC	Up to 20 Years
Cycle Life @ 80% SOC	800 Cycles
Battery Modes	Battery modes - Ship and active
Shipping Classification	Class 9









ABOUT GREEN CUBES TECHNOLOGY

Green Cubes Technology harnesses over 30 years of industry experience to ensure we design, develop and deliver solutions for the most challenging energy needs. We offer battery technology innovation, application design and performance management to drive productivity, scalability and sustainability.

For more information, email **contact@greencubestech.com** or visit **greencubestech.com**

GREEN CUBES
THE POWER TO PERFORM