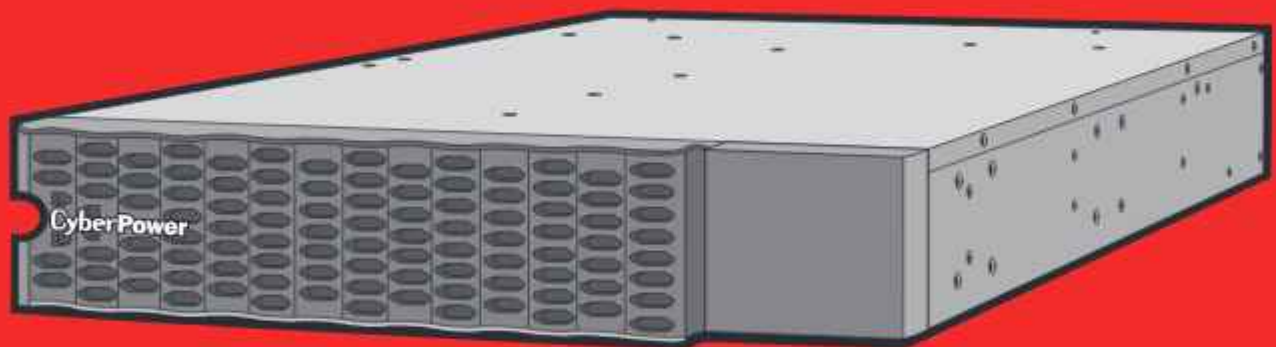# CyberPower®

SMART APP ONLINE UPS SYSTEM

INSTALLATION AND OPERATION MANUAL

BP192VL2U01

SAVE THESE INSTRUCTIONS
Please read this manual and follow the instructions for installation and operation.

SAFETY INSTRUCTIONS

PRODUCT SAFETY

CAUTION

To reduce the risk of fire, connect the EBM AC input to a branch circuit with 20 amperes maximum overcurrent protection in accordance with the National Electric Code, ANSI/NFPA 70.

A battery can present a risk of electric shock and high short circuit current. The following precaution should be observed when working on batteries:

Remove watches, rings or other metal objects.

Use tools with insulated handles.

Wear rubber gloves and boots.

Do not lay tools or metal parts on top of batteries.

Disconnect the AC power prior to connecting or disconnecting terminals.

Ensure the ground terminal is disconnected during installation and maintenance to reduce likelihood of shock. If battery is installed and grounded, disconnected the ground terminal before working on the UPS.

RISK OF ELECTRIC SHOCK

See Installation Instructions Before Connecting To The Supply. Do Not Disconnect Battery Connector Under Load.
Batteries replaceable by SERVICE PERSONNEL.

BATTERY

Do not dispose of batteries in fire as the battery may explode.
Do not open or mutilate the battery, released electrolyte is harmful to the skin and eyes.

TABLE OF CONTENTS

INTRODUCTION

UPS EXTENDED BATTERY MODULES

Extended Battery Modules (EBMs) from CyberPower (BP192VL2U01) increase battery runtimes during power outages. Each rack/tower convertible EBM uses 2U of rack space and can be installed in a tower form factor to match the UPS installation. The DC plug-and-play power connectors allow to daisy-chain additional EBMs to a UPS system. EBMs compatible with Smart App Online UPS systems also have a built-in battery charger, providing Fast Charge Technology to quickly restore the backup power supply. Every CyberPower EBM has a three-year warranty.

UNPACKING PROCEDURES

> ⚠ **Information, advice, help**

The Extended Battery Module is very heavy, please handle with care. Wear safety shoes and use a hydraulic equipment lift if one is available. At least two people are required for all handling operations, including unpacking, lifting, and installation in a rack system. Do not use the lifting straps to carry the unit around; they are provided to manually unpack the unit only.

USE LIFTING STRAPS TO REMOVE THE UNIT FROM THE BOX.
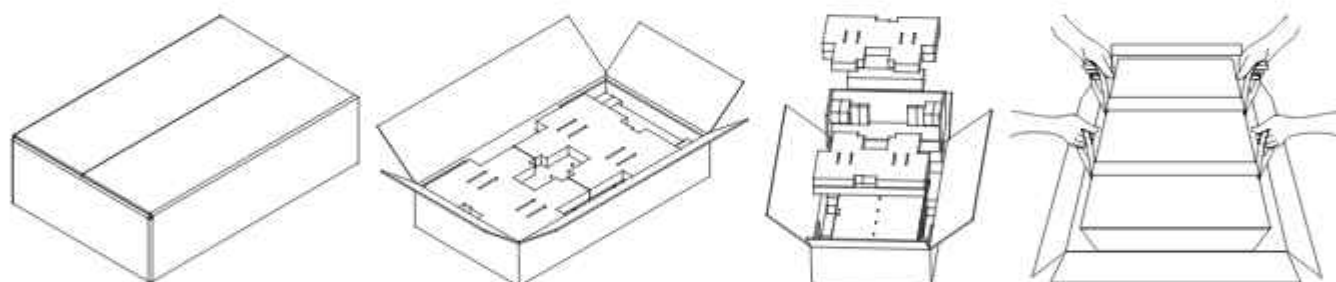
WHAT'S IN THE BOX
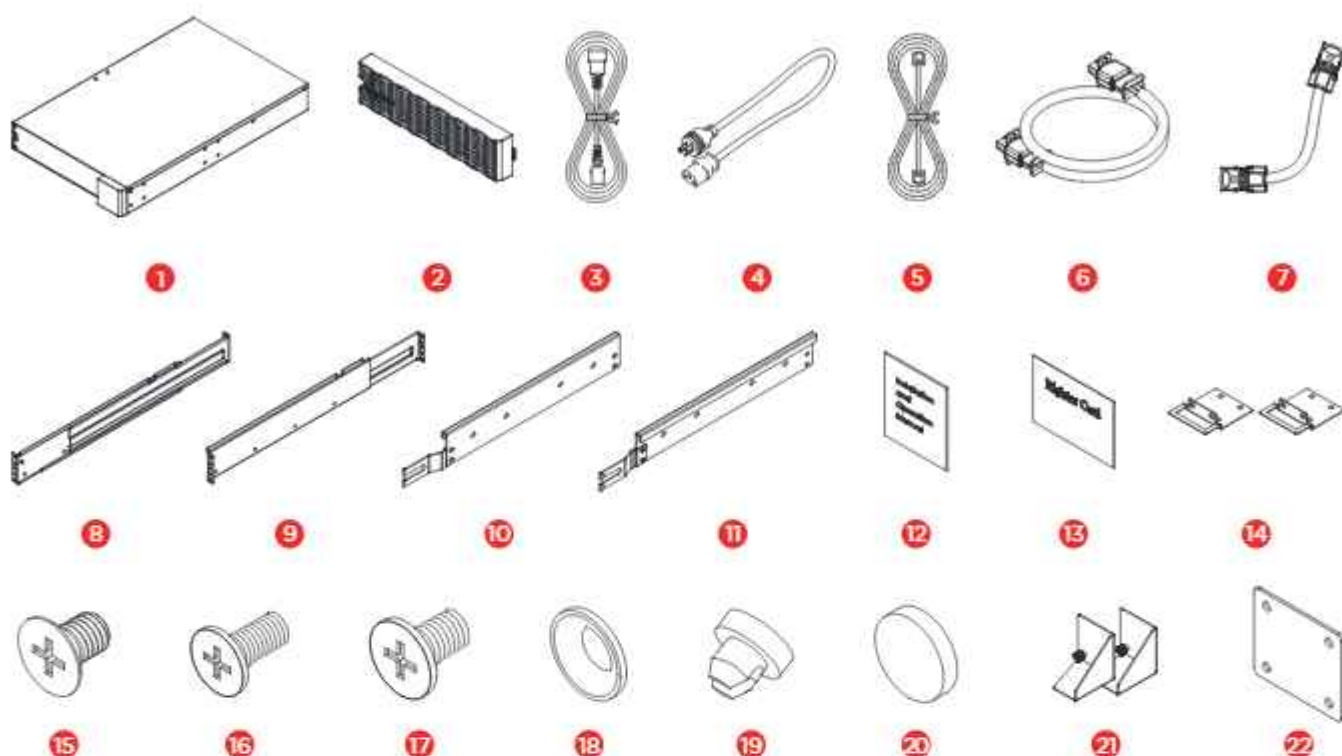

ITEM	CONTENT	QTY	ITEM	CONTENT	QTY
1	EBM	1	12	Installation and Operation Manual	1
2	Front panel	1	13	Registration warranty card	1
3	IEC320 C14 to IEC320 C13 power cord	1	14	Rackmount ears	2
4	NEMA L6-20P to IEC320 C13 power cord	1	15	Flat head screws M5X7L	8
5	BM Cable	1	16	Pan head screws M5X8L	12
6	BMP Cable	1	17	Pan head screws M5X6L	6
7	DC Power Core	1	18	Plastic washers	8
8	Rackmount left rail	1	19	Screw hole dust covers	18
9	Rackmount right rail	1	20	Rubber pads	12
10	Left hanging bracket	1	21	Stand	2
11	Right hanging bracket	1	22	Tie plate	1

EXTENDED BATTERY MODULE INSTALLATION

BATTERY MODULE
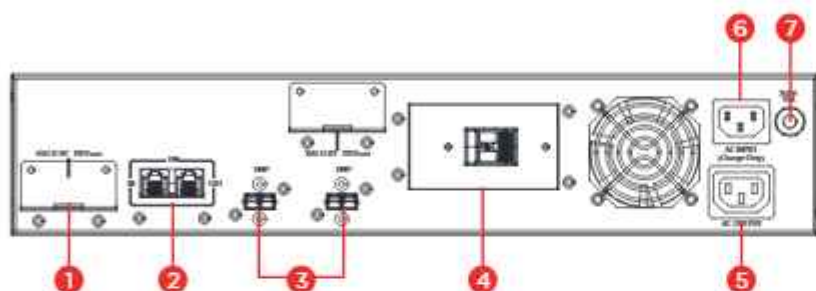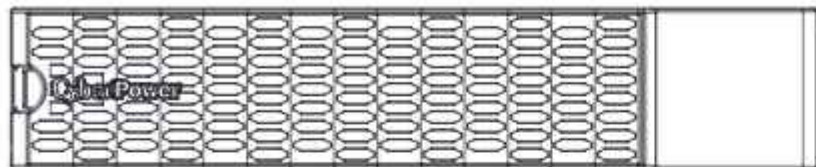
BP192VL2U01

1. BP192VL2U01 EBM DC Input Connector
Connect to the UPS or to the other Extended battery modules

2. BM Ports
Connection port for built-in battery management module on UPS and Extended Battery Module.

3. BMP Connectors
BMP connector for built-in battery management module on UPS and Extended Battery Module.

4. DC Breaker
Use the DC breaker to disconnect battery output.

5. AC Fast Charge outlet (IEC320 C13)
Use this outlet to connect to the Fast Charge AC input of a downstream EBM.

6. AC Fast Charge Input (IEC320 C14)
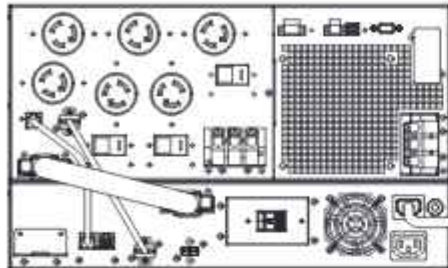Connect to a 208V, 20A, AC power source, or connect to the AC Fast Charge output from an upstream EBM.

7. AC Circuit Breaker
Provides overload and fault protection.

CONNECTION WITH UPS

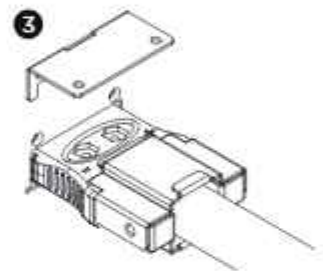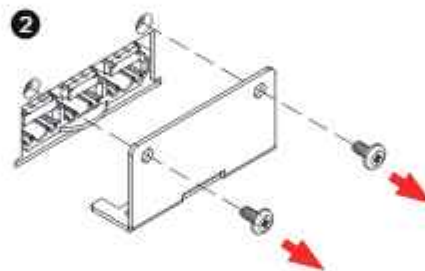Scenario #1: UPS with one Extended Battery Module (EBM)

Plug into a wall receptacle

Step 1: Turn off the DC breaker on the EBM.

Step 2: Loosen the two screws to remove the battery cable retention bracket of the UPS.

Step 3: Use the output cable of the EBM to connect the EBM to the UPS.
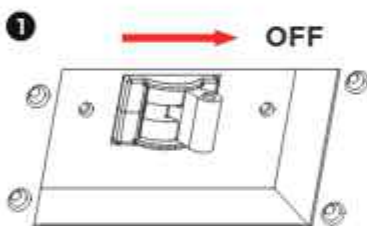
Step 4: Rotate the battery cable retention bracket and tighten the two screws to fix battery cable.

Step 5: Connect the BM/ENV port from UPS rear panel to BM port marked "IN" on the rear panel of the Extended Battery Module using the provided BM cable. Refer to illustration below.

Step 6: Connect the BMP connector from UPS rear panel to left side BMP connector on the rear panel of the Extended Battery Module using the provided BMP cable. Refer to illustration below.

Step 7: Use a NEMA L6-20P to IEC-320-C13 power cord to plug AC input inlet of the battery module into a wall receptacle.

Step 8: Turn on the DC breaker of the EBM.

CONNECTION WITH UPS CONT.

Scenario #2: UPS with multiple Extended Battery Modules (EBMs)

Plug into a wall receptacle

Step 1: Turn off the DC breaker on the EBM.

Step 2: Loosen the two screws to remove the battery cable retention bracket of the UPS.

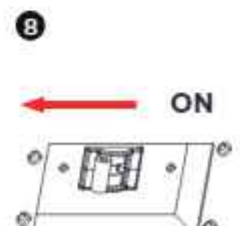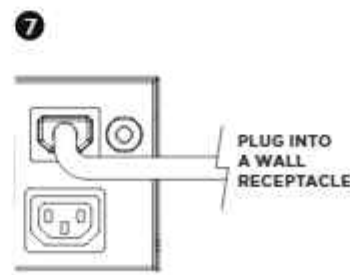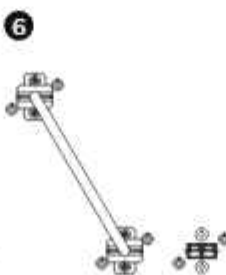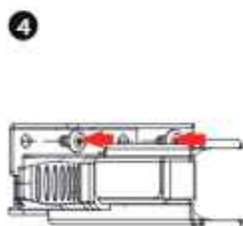**Step 3:** Use the output cable of the EBM to connect the EBM to the UPS.
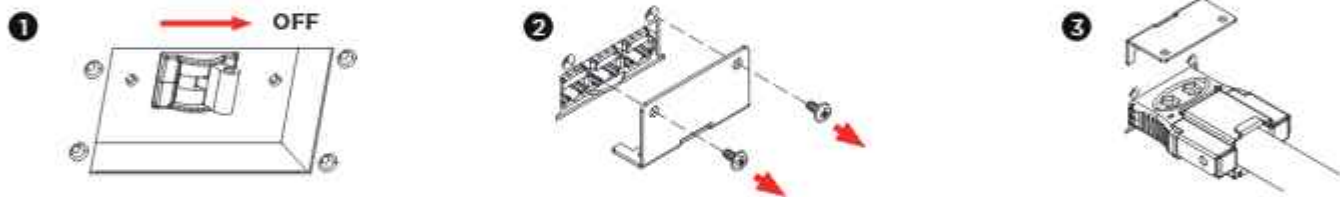
Step 4: Rotate the battery cable retention bracket and tighten the two screws to fix battery cable.

Step 5: Connect the BM/ENV port from UPS rear panel to BM port marked "IN" on the rear panel of the Extended Battery Module using the provided BM cable, and then connect another BM cable between BM port marked "OUT" and BM port marked "IN" of another Extended Battery Module. Refer to illustration below.

Step 6: Connect the BMP connector from UPS rear panel to left side BMP connector on the rear panel of the Extended Battery Module using the provided PMP cable, and then connect another BMP cable, between BMP connector and right side BMP connector of next Extended Battery Module.Refer to illustration below.

Step 7: Use a NEMA L6-20P to IEC-320-C13 power cord to plug AC input inlet of the battery module into a wall receptacle.
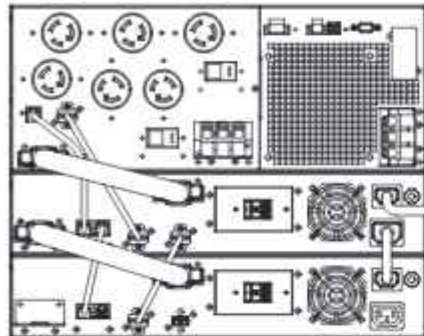
Step 8: Turn on the DC breaker of the EBM.

PLUG INTO A WALL RECEPTACLE

ON
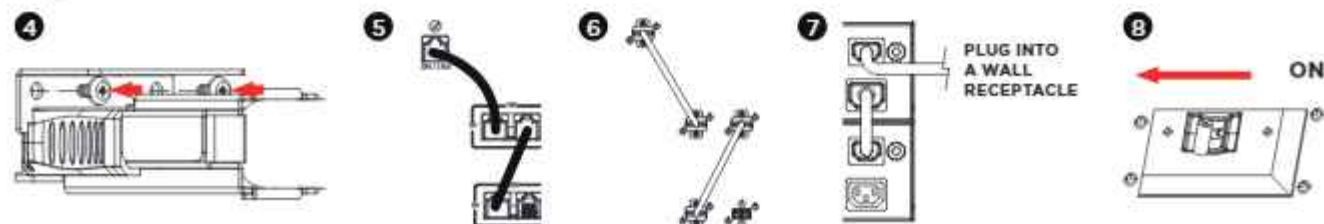
CONNECTION WITH UPS CONT.

Step 9: Turn on the DC breaker of the 2nd EBM.

Step 10: Set the EBM number to the respective setting to match the number of installed units. To do this via the LCD control panel, go to the Configuration Menu, then scroll to the EBM Number setting, select the appropriate number and Save the configuration. This operation can also be done via the RMCARD web UI or via PowerPanel® Business software. Please see their respective User Manual for instructions.

EXTENDED BATTERY MODULES CONFIGURATION

Extended Battery Modules can be configured by the user to display correct estimated battery runtimes.

1 . Select "Main Menu" and press the "ENTER" button to activate the "Main Menu".

2 . Press the "UP" and "DOWN" buttons to select the "SET UP" ICON.

3 . Press the "ENTER" button to enter the "SET UP" function.

4 . Press the "UP" and "DOWN" buttons to scroll to the "External Batt" option.

5 . Press the "ENTER" button to enter the "External Batt" option.

6 . Press the "UP" and "DOWN" buttons to select the "Auto" or "Manual" option.

7 . (a) Select "Auto" and press the "ENTER" buttons to activate the Auto detect function.
(b) Select "Manual" and press the "UP" and "Down" buttons to select the number of EBM installed then press the "ENTER" button to set.

8 . You may be prompted "Save Change?" to save the selection, if so press the "ENTER" button to save the setting.

9 . Press the "ESC" button to cancel or return to the previous SET UP menu.

SET UP ITEMS		AVAILABLE SETTINGS	DEFAULT SETTINGS
External Batt	Auto	If UPS has EQM function, the UPS will Auto detect the external batt number.	None
	Manual	= [0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] Sets the actual EBM (extended battery modules) number to get the correct estimated runtime.	0

HARDWARE INSTALLATION

CyberPower Extended Battery Module (EBM) can be installed in a rackmount or vertical/tower orientation. This versatility is especially important to growing organizations with changing needs that value having the option to position an EBM on the floor or in a rackmount system. Note that the included rack mounting hardware is only compatible with square hole racks. Please follow the instructions below for the respective mounting methods.

RACKMOUNT INSTALLATION FOR 4-POST RACK

⚠ **Caution: Important Instructions**

To prevent the risk of fire or electric shock, only use the supplied hardware to attach the mounting brackets.

Step 1: Remove the dust covers
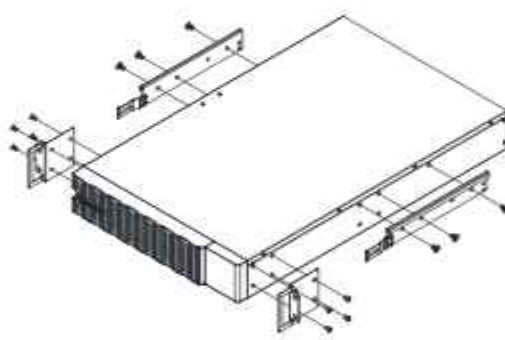Remove ten dust covers from the screw holes as shown below.

Step 2: Rackmount ear & hanging bracket installation
Attach two rackmount ears to the EBM using eight black M5X7L flat head screws and tighten two hanging brackets using six silver M5X6L pan head screws.
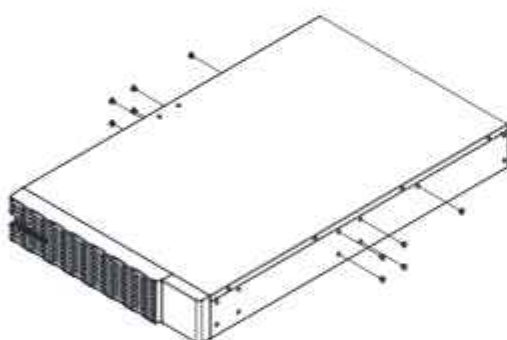
Step 3: Rackmount rail Installation
The mounting depth of the included rackmount rails can adjust from 20.5 in to 36 in (52 cm to 91.5 cm). Select the proper holes in the rack for positioning the EBM in the rack. The EBM takes up 2 rack units: rack hole positions 1 through 6.

Position the guide screws on the back of the rackmount rails into the rear rack square holes to temporarily support the rails in place.

Step 4: Adjust rackmount rails to fit your rack
Adjust the rail depth to match your rack depth. Attach each rackmount rail to your rack with two black M5X8L pan head screws and two plastic washers at the front of the rack (square holes 1 and 4 as shown below). Secure each rail to the rear of the rack with two black M5X8L pan head screws and two plastic washers

RACKMOUNT INSTALLATION FOR 4-POST RACK CONT.

❸ Rack mount ear

Rack mount rail

❹

position 4
position 1

❺

position 4
position 1
position 5
position 2

Step 5: Place and secure the EBM on the rails

Slide the hanging brackets on the EBM on to the rails mounted in the rack with the front of the unit facing toward you. Secure the EBM to your rack with four black M5X8L pan head screws at the front of the rack (square holes 2 and 5 as shown above).

NOTE: To slide the EBM out from the rack

The EBM will be secured by a safety locking mechanism midway of pulling it out of the rack. Use both hands to hold the EBM and press the safety locking tab to pull the EBM out.
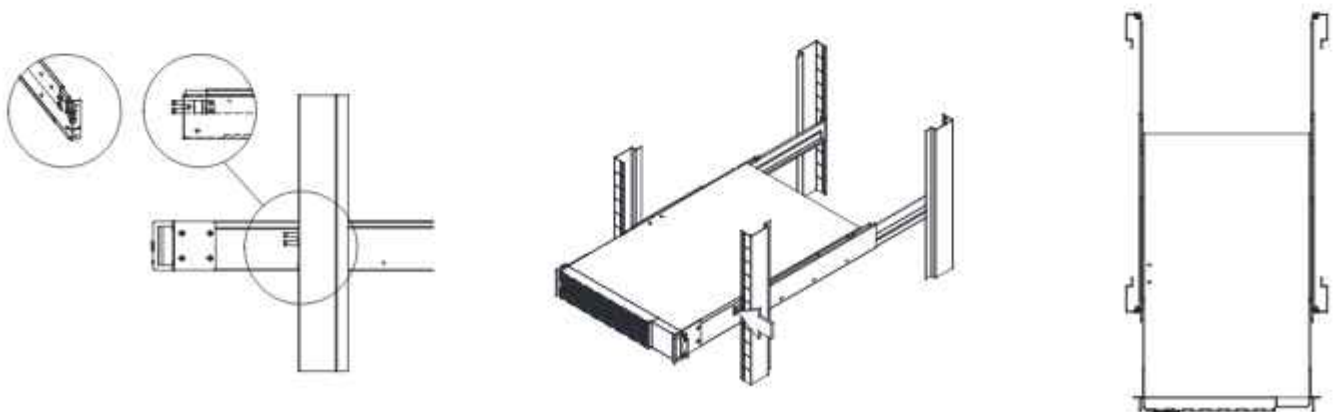
RACKMOUNT INSTALLATION FOR 2-POST RACK

> ⚠
>
> **CAUTION!** Due to the weight of this unit, it is strongly recommended to install it at the bottom of the rack.
>
> **CAUTION!** Prior to installing the unit, remove internal batteries to reduce the weight of the unit. Refer to the battery replacement section in this user manual for instructions.
>
> **CAUTION!** It is strongly recommend having 2-3 people assist during the installation process.
>
> **CAUTION!** It is strongly recommended that the 2 post rack be bolted to the floor prior to the installation of the EBM.
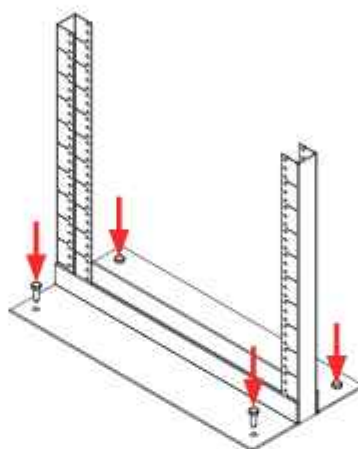
Step 1: Remove side dust covers
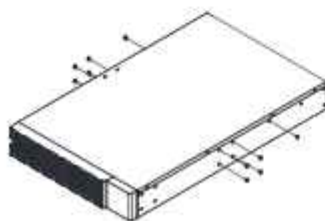Remove seven dust covers from screw holes as shown below.

Step 2: Rackmount ears installation
Attach the included rackmount ears to the center holes on the sides of the EBM using eight black M5X7L screws as shown below.
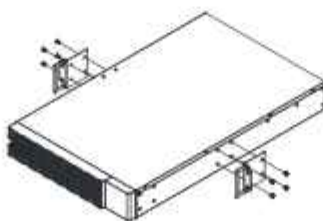
Step 3: Secure the EBM to the rack
Secure the EBM to your rack with four black M5X8L screws at the front of the rack (square holes 2 and 5 as shown below)
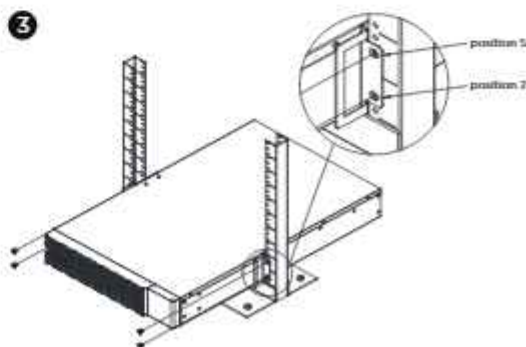
VERTICAL/TOWER INSTALLATION

Step 1: Adhere rubber pads

Adhere four circular rubber pads to the left hand side of the extended battery module. This will become the bottom side. Insert the dust covers into the open screw holes on bottom.

Step 2: Attach the base stands and attach the dust covers

Stand the EBM on its side with the rubber pads facing down. If installing the EBM together with a UPS, remove the four dust covers first and secure the tie plate between the UPS and the EBM using four silver M5X6L pan head screws. Adhere four circular rubber pads to each tower stand and screw on to the EBM and UPS for added stability a shown below. Insert the dust covers into the open screw holes on top.
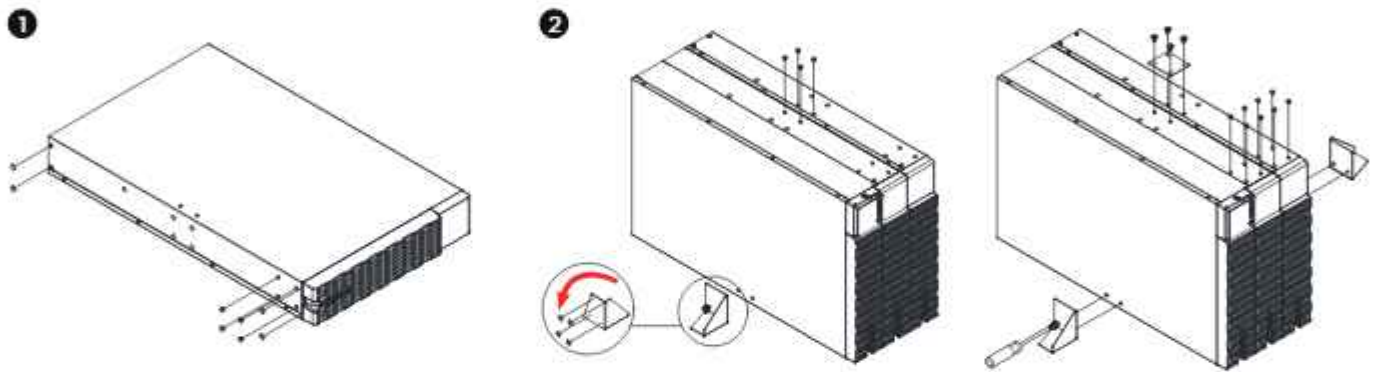
MAINTENANCE

Storage
To store your EBM for an extended period of time, cover and store it with the battery fully charged. Recharge the battery every three months to ensure battery life.

Battery Replacement
Please read and follow the Safety Instructions before servicing the battery. Battery replacement should be performed by trained personnel who are familiar with the procedures and safety precautions. Make a note of the Replacement Battery part number.

Safety Precautions

> ⚡ **Warning:** High voltage – Risk of Electric Shock

Only use replacement batteries that are certified by Cyber Power Systems. Use of incorrect battery type is an electrical hazard that could lead to explosion, fire, electric shock, or short circuit.

Batteries contain an electrical charge that can cause severe burns. Before servicing batteries, please remove any conductive materials such as jewelry, chains, wrist watches, and rings.

Do not open or mutilate the batteries. Electrolyte fluid is harmful to the skin/eyes and may be toxic.

To avoid electric shock, turn off and unplug the EBM from the wall receptacle before servicing the battery.

Only use tools with insulated handles. Do not lay tools or metal parts on top of the EBM or battery terminals.

Replacement Batteries
Please refer to the front side of the EBM for the model number of the correct replacement batteries. For battery procurement, go to www.CyberPowerSystems.com, or contact your local dealer.

When the UPS LCD displays Service Battery, use PowerPanel® Business software or log on to the RMCARD to perform a runtime calibration to verify battery capacity is sufficient and acceptable.

MAINTENANCE CONT.

Battery Disposal

> ⚠ 🗑 **Do Not Discard**

Batteries are considered hazardous waste and must be disposed of properly. Contact your local government for more information about proper disposal and recycling of batteries. Do not dispose of batteries in fire.

Cyber Power Systems encourages environmentally sound methods for disposal and recycling of its UPS products.

Please dispose and/or recycle your UPS and batteries in accordance with local regulations.
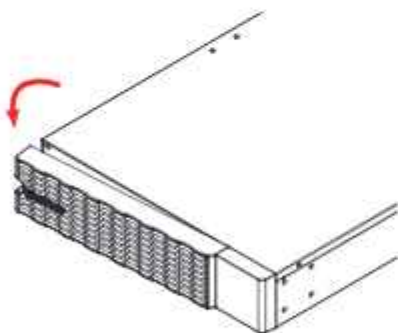
BATTERY REPLACEMENT CONT.
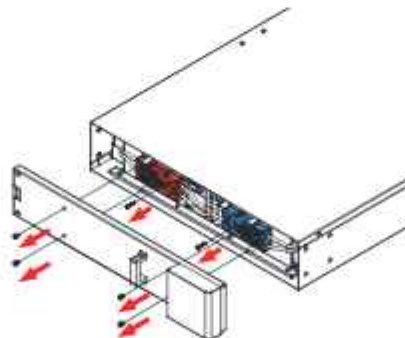
Step 1: Remove the front panel.

Step 2: Unscrew and open the battery access door. Loosen the two screws on the battery connectors.

Step 3: Disconnect the battery connector and then disconnect battery management module connector.
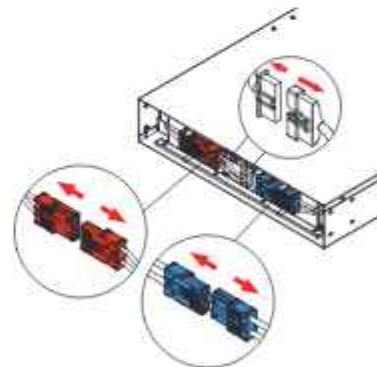
MAINTENANCE CONT.

BATTERY REPLACEMENT CONT.

Step 4: Unscrew the battery retention bracket and then open it

Step 5: Pull the battery trays out slowly and then put the new battery trays into the compartment.

Step 6 : Assemble battery retention cover. Connect battery management module connector and then connect the battery connector. Ensure that they are seated properly (connector will click into place). Tighten the battery access door.

Step 7: Install the front panels. Execute a battery test via the LCD control panel. To do this go to the Main Menu and select the Diagnostics Icon, then select Battery Test and Activate. After Battery test, go back to the Main Menu then select the Set UP icon, then select Batt Install Date to set the battery installation date. This operation can also be done via PowerPanel® Business or the RMCARD web interface. Please see their respective User Manuals for detailed instructions.
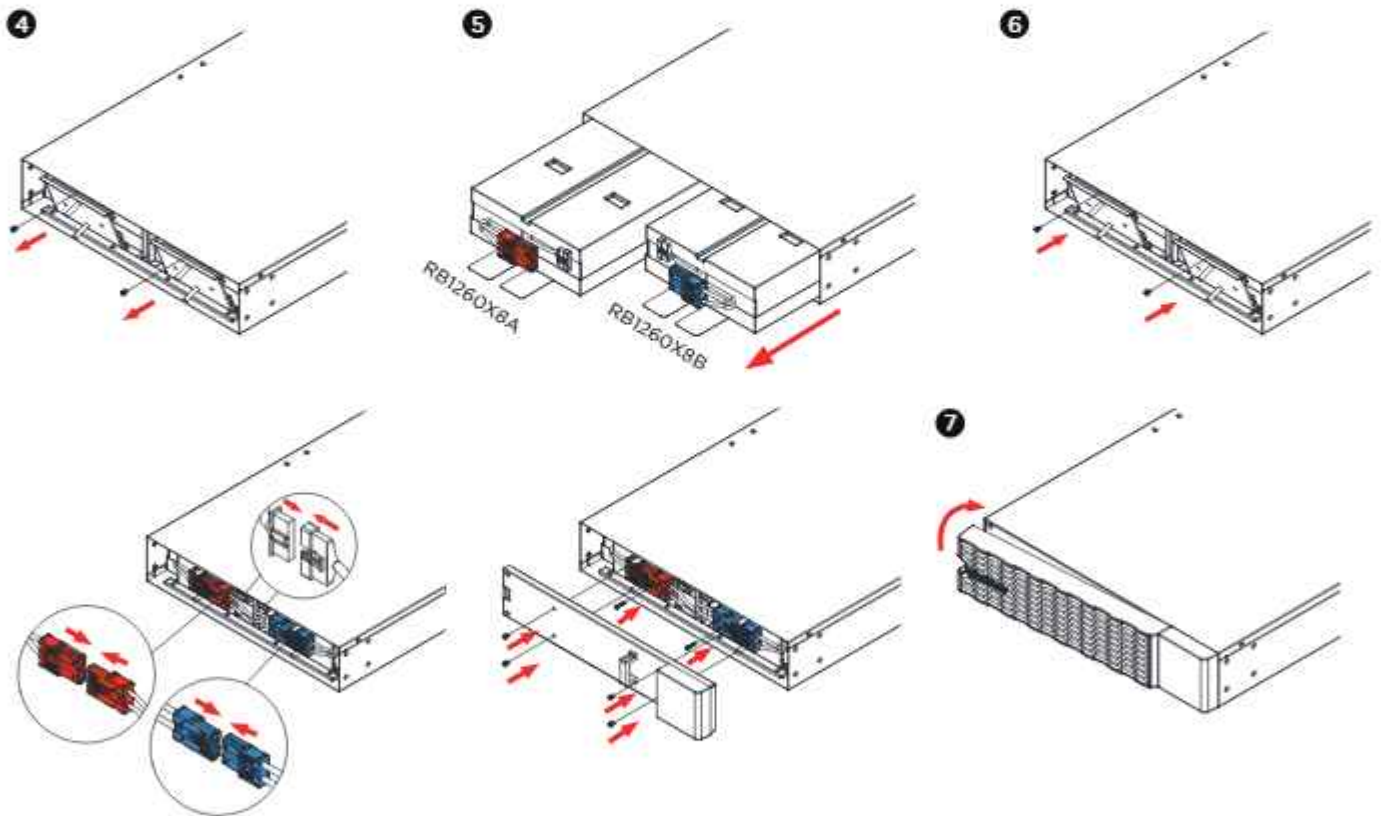
TECHNICAL SPECIFICATIONS

MODELS	BP192VL2U01
CONFIGURATION	
AC Input Voltage	200-240 V
DC Output Voltage	192 Vdc
DC Output Current	60 A
PHYSICAL	
Dimensions	L x W x H = 28.3 X 17.05 x 3.4 in (72 x 43.3 x 8.65 cm)
Net Weight	101.4 lb (46Kg)
BATTERY	
Specifications	(16) 12 V/5.7 Ah
Replacement Battery Cartridge	RB1260X8A (1) (Left) + RB1260X8B (1) (Right)
Recharge Time 0-90% (Typical)	4 hours
Hot-Swappable	Yes
Built-in Charger	Yes
ENVIRONMENT	
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Operating Relative Humidity	0 to 90% Non-Condensing
SAFETY	
Conformance Approvals	CE, UL1778, FCC part 15 Class A
RoHS	RoHS Compliant

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
WARNING		
BAT Disconnected	No battery power is being detected by the UPS.	Check the battery connector and the battery breaker.
Battery Failure	UPS has failed a Battery Test.	Check the battery connector and the battery breaker. Contact technical support to replace battery if under the warranty period..
Replace Battery	Battery will soon need to be replaced due to insufficient runtime.	Install new batteries, execute battery test, and reset the replace battery date.
Service Battery	The Battery Replacement Date has reached the recommended 3 year maintenance period.	Perform a runtime calibration to verify battery capacity is sufficient and acceptable. If batteries have been recently replaced, then reset the Battery Replacement Date using PowerPanel® Business software, RMCARD web interface or through the LCD control panel on the UPS (See LCD Configuration Settings).
FAULT		
Over Charge	Battery is overcharged.	Remove the battery connector and check charger voltage. Contact CyberPower for repair.
Charger Failure	Charger has failed.	

PRODUCT REGISTRATION

CyberPower requests that you complete and return the Warranty Registration Card enclosed with the Product or register the Product at its website (www.cyberpowersystems.com/registration) to establish that you are the Initial Customer of the Product, and therefore entitled coverage under the Limited Warranty and the Connected Equipment Guarantee. (Registration is not required for coverage, but note: if you do not register your purchase, you will be required to provide proof of purchase.)

CONFORMANCE APPROVAL

FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment of and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Compliance Statement

CAN ICES-003(B)/NMB-003(B)

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE

Please visit www.CyberPowerSystems.com for a copy of the Limited Warranty and Connected Equipment Guarantee.

Where Can I Get More Information?

The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded. CyberPower is the warrantor under this Limited Warranty. For further information please feel free to contact CyberPower at: Cyber Power Systems (USA), Inc. 4241 12th Ave E., STE 400, Shakopee, MN 55379; call us at (877) 297-6937; or submit a web ticket online at cyberpowersystems.com/support.

Cyber Power Systems (USA), Inc. encourages environmentally sound methods for disposal and recycling of its UPS products. Please dispose and/or recycle your UPS and batteries in accordance to the local regulations of your state.

WARNING: This product can expose you to chemicals including Bisphenol A (BPA) and Styrene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

CyberPower