

SMALLRIG VB99 SE

SMALLRIG VB99 SE Mini V Mount Battery Instruction Manual

Model: VB99 SE

1. INTRODUCTION

The SMALLRIG VB99 SE Mini V Mount Battery is a compact, high-capacity power solution designed for filmmakers, photographers, and content creators. With a 99Wh / 6800mAh capacity, it provides reliable power for various devices including cameras, camcorders, monitors, video lights, phones, tablets, and laptops. Its versatile interface and intelligent power management system ensure efficient and safe operation.

2. KEY FEATURES

- Bi-directional PD 65W Fast-Charging:** Supports PD 3.0 technology via a USB-C port, delivering up to 65W of power. Achieves a full charge in approximately 2.5 hours with a 65W (or higher) GaN charger.
- Multiple Interfaces:** Equipped with USB-C, USB-A, DC 5.5 x 2.1mm 8V, DC 5.5 x 2.5mm 12V, BP, and D-Tap ports for broad compatibility.
- Compact Size, High Capacity:** Measures 4.40 x 2.83 x 2.11 inches and weighs 20.99oz, offering 99Wh / 6800mAh capacity. Meets TSA requirements for carry-on baggage (<100Wh).
- Real-Time Power Monitoring:** Features a bright OLED screen displaying port status, voltage, power output, and remaining battery life.
- Advanced Safety & Reliability:** Integrated Intelligent Battery Management System (BMS) protects against short circuits, over-temperature, over-voltage, over-current, over-charge, and over-discharge. Certified by FCC, MSDS, UN38.3, IEC 62133, UL2054, and UL62368.
- Mounting Options:** Includes 1/4"-20 and 3/8"-16 threaded holes on the V-mount backplate for secure attachment to various rigs.

3. PRODUCT OVERVIEW

Wide Range of Interfaces

Adopts a parallel circuit, fast charging no slowing down. The output power will not be reduced when charging multiple devices at the same time (total no over 100W).



Figure 1: Wide Range of Interfaces. This image highlights the multiple input/output ports on the battery, including BP, 1/4"-20 threaded hole, 3/8"-16 threaded hole, D-TAP, DC x 2 (8V/12V), USB-C (65W IN/OUT), USB-A, silicone cover, and cover locking groove.

Lightning-Fast PD3.0 Charging

USB-C ports support PD3.0 fast charging standard providing exceptional performance with a maximum in / output of 65W

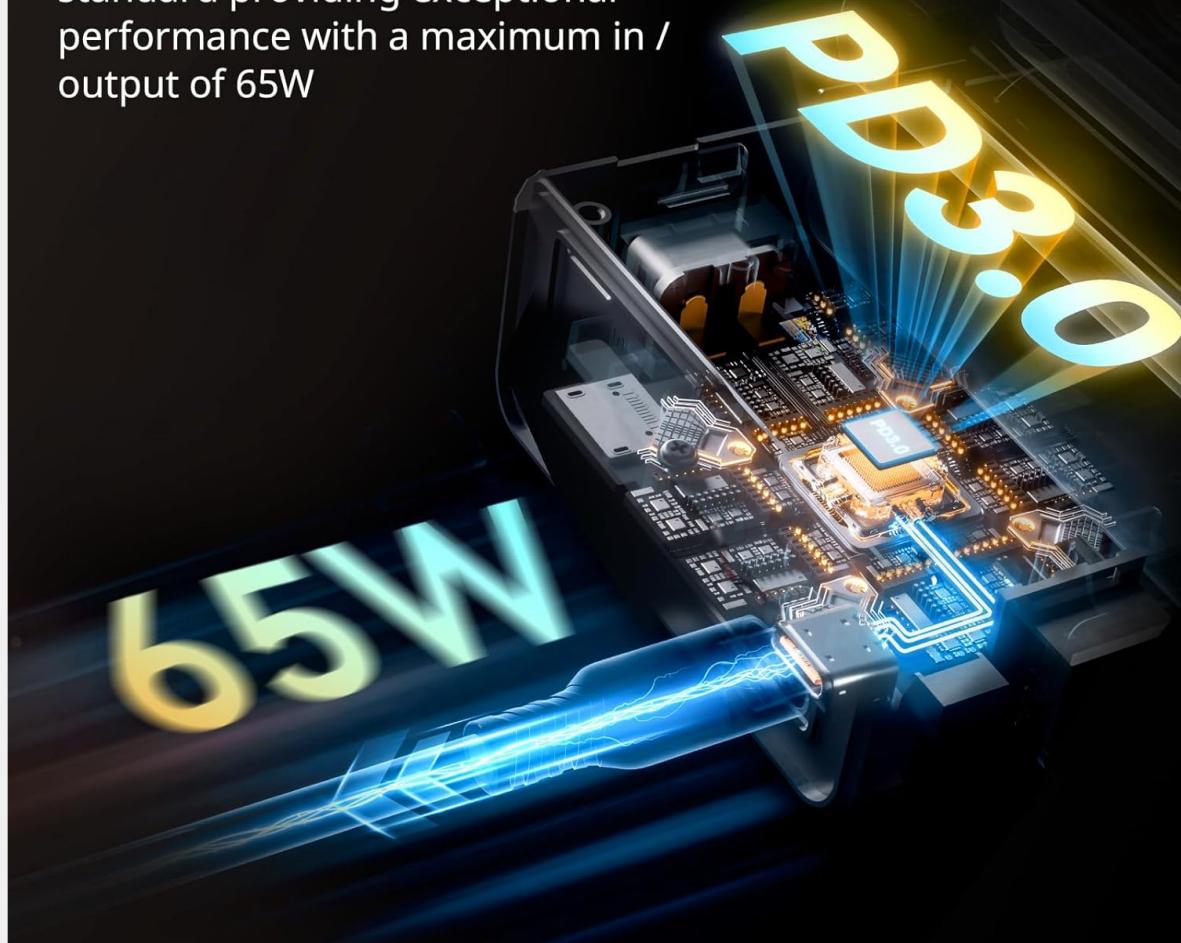


Figure 2: Lightning-Fast PD3.0 Charging. The USB-C port supports PD3.0 fast charging, providing exceptional performance with a maximum input/output of 65W.

Built-in Protections for Safe and Secure Operation

BMS Intelligent control system ensures voltage and current stability



Over-discharge Protection



Cell Protection



Short Circuit Protection



Overload Protection



Temperature Protection



Overcharge and Overcurrent protection



Figure 3: Built-in Protections for Safe and Secure Operation. The Intelligent Battery Management System (BMS) ensures voltage and current stability, safeguarding against various electrical issues.

Small Size, Large Capacity

Compact and mini size V mount battery, feel free to carry out,
say goodbye to bulky



99Wh
(6800mAh / 14.5V)



Length	Width	Height	Weight
4.40 in	2.83 in	2.11 in	20.99 oz

Figure 4: Small Size, Large Capacity. The battery's compact dimensions (4.40 x 2.83 x 2.11 inches) and light weight (20.99oz) make it highly portable, while still offering 99Wh / 6800mAh capacity.

OLED Digital Display

Features a bright, crystal clear OLED screen display, and you can keep track of the battery's working status at all times.



Figure 5: OLED Digital Display. The bright, clear OLED screen provides instant visibility into port status, voltage, power output, and remaining battery life.

High-Capacity Long-Life Battery

Built-in high-capacity lithium battery provides high-rate charge & discharge, excellent cycle performance, with powerful output



Figure 6: High-Capacity Long-Life Battery. This diagram illustrates the battery's ability to power various devices for extended periods, such as charging a Canon R5C for 7.3 hours or a MacBook 16 Pro once.

Versatile Applications



Figure 7: Versatile Applications. The battery is shown integrated into a camera setup, powering a monitor, and charging a laptop, demonstrating its adaptability for different professional and personal uses.

Package List

VB99 SE mini V Mount Battery × 1

User Manual × 1



Product Parameters

Capacity

14.54V 6.8Ah 99Wh

Product Dimension

112.0 × 72.0 × 53.8mm / 4.40 x 2.83 x 2.11 in

Material

Fireproof PC Material

Rated Total Power

Discharge : 100W
Charge : 65W

Product Weight

595.0+10g / 20.99oz

Figure 8: Package List and Product Parameters. This image details what is included in the box and provides a summary of the battery's key specifications.

4. SETUP AND MOUNTING

The SMALLRIG VB99 SE Mini V Mount Battery offers flexible mounting options and easy connectivity for your equipment.

4.1 Attaching the Battery

- The battery features a standard V-mount interface on its back for quick attachment to V-mount plates on cameras, rigs, or light stands.
- Additionally, 1/4"-20 and 3/8"-16 threaded holes are integrated into the V-mount backplate. These allow for direct mounting using compatible screws or adapters, providing secure attachment points for various accessories like ball heads or clamps.

4.2 Connecting Devices

The battery provides multiple output ports for powering a wide range of devices:

- USB-C (65W IN/OUT):** Use this port for fast charging the battery itself or for powering/charging USB-C compatible devices like laptops, tablets, and modern cameras.

- **USB-A (OUT):** Provides power for charging smartphones, wireless microphone receivers, or other USB-A powered accessories.
- **DC 5.5 x 2.1mm 8V (OUT) & DC 5.5 x 2.5mm 12V (OUT):** These barrel connectors are suitable for powering various camera accessories, monitors, or small LED lights that require 8V or 12V DC input.
- **D-Tap (6.8A Max IN; 10A Max OUT):** A common power output for professional video equipment, including larger monitors, video lights, and camera accessories. Ensure correct polarity when connecting D-Tap devices.

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Video 1: Unboxing and Port Overview. This video demonstrates the unboxing of the SMALLRIG VB99 SE battery, showcasing its compact size and detailing the various input/output ports available on the device, including USB-C, USB-A, DC, and D-Tap, along with the V-mount connections and threaded holes.

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Video 2: Product Features and Mounting. This video provides a detailed look at the SMALLRIG VB99 SE battery's features, including its various ports, dust covers, and the V-mount system. It also demonstrates how the battery can be mounted to a camera rig and used to power the camera and other accessories.

5. OPERATING INSTRUCTIONS

The SMALLRIG VB99 SE is designed for intuitive operation with its integrated OLED display and simple controls.

5.1 Powering On/Off and Checking Battery Status

- **Power Button:** Locate the power button on the side of the battery.
- **Check Battery Percentage:** A single short press of the power button will activate the OLED screen, displaying the current battery percentage and output information.
- **Toggle Display:** Double-click the power button to switch between voltage and power displays on the OLED screen.
- **Disable Ports:** Long press the power button (for 3 seconds) to disable the USB-C, USB-A, and DC ports, halting discharge. This can be useful to prevent accidental power draw or conserve battery when not in use.

5.2 Charging the Battery

To charge the SMALLRIG VB99 SE, connect a compatible USB-C PD charger (65W or above recommended) to the USB-C IN/OUT port. The OLED screen will indicate charging status.

5.3 Powering External Devices

Connect your devices to the appropriate output ports (USB-C, USB-A, DC 8V, DC 12V, D-Tap) using compatible cables. The battery will automatically begin supplying power. Monitor the OLED screen to observe the power draw of connected devices.

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Video 3: OLED Display and Port Usage. This video demonstrates how to use the OLED display to check battery percentage and power output. It also shows the functionality of the various ports, including the D-Tap and USB ports, and highlights the protective dust covers.

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Video 4: Powering a Camera Rig. This video illustrates how the SMALLRIG VB99 SE battery can be integrated into a compact camera rig to power the camera and a monitor simultaneously. It demonstrates connecting the battery via a V-mount plate and using a USB-C cable for power delivery.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your SMALLRIG VB99 SE battery.

- **Storage:** Store the battery in a cool, dry place away from direct sunlight and extreme temperatures. For long-term storage, ensure the battery is charged to approximately 50-60% capacity.
- **Cleaning:** Use a soft, dry cloth to clean the battery's exterior. Avoid using harsh chemicals or abrasive materials. Keep the ports free from dust and debris using the provided silicone cover.
- **Charging Cycles:** While modern lithium-ion batteries do not suffer from a 'memory effect', it is generally good practice to fully discharge and recharge the battery periodically (e.g., every few months) to recalibrate the battery management system.
- **Avoid Physical Damage:** Protect the battery from drops, impacts, and excessive pressure, which can damage internal components.

7. TROUBLESHOOTING

If you encounter issues with your SMALLRIG VB99 SE battery, consider the following:

- **Battery Not Charging:** Ensure the USB-C cable and charger are functioning correctly and meet the 65W PD 3.0 specification. Check the OLED screen for charging indicators.
- **Device Not Powering On:** Verify that the battery has sufficient charge. Ensure the correct port is used for the device and the cable is securely connected. Check the device's power requirements against the battery's output capabilities.
- **Intermittent Power Supply (with multiple devices):** If powering multiple high-wattage devices simultaneously, the total power draw might exceed the battery's maximum output (100W total). This can cause the battery to temporarily stop supplying power to protect itself. Reduce the number of connected devices or use devices with lower power consumption.
- **OLED Screen Not Responding:** Try a short press of the power button. If unresponsive, the battery might be fully discharged or require a reset (if applicable, refer to specific reset procedures or contact support).
- **Overheating:** If the battery feels excessively hot, disconnect all devices and allow it to cool down in a well-ventilated area. Overheating can trigger safety mechanisms and temporarily shut down the battery.

8. SPECIFICATIONS

Specification	Value
Capacity	14.54V 6.8Ah 99Wh
Material	Fireproof PC Material
Product Dimension	112.0 × 72.0 × 53.8mm / 4.40 × 2.83 × 2.11 in
Product Weight	595.0 + 10g / 20.99oz
Rated Total Power Discharge	100W
Charge	65W

Battery Cell Composition	Lithium Ion
Recommended Uses	Cameras, Camcorders, Monitors, LED Lights, Smartphones

9. WARRANTY AND SUPPORT

The SMALLRIG VB99 SE Mini V Mount Battery comes with a 24-month worry-free warranty. For any issues or support needs, please contact SMALLRIG customer service. The warranty policy is 'We Replace, Not Repair', ensuring quick resolution for any manufacturing defects.