

ACEIRMC 055887bd-a5dc-4052-8e97-d730478e02a8

ACEIRMC PD65W Fast Charging Module Type-C USB Interface User Manual

Model: 055887bd-a5dc-4052-8e97-d730478e02a8 | Brand: ACEIRMC

1. INTRODUCTION

The ACEIRMC PD65W Fast Charging Module is a compact and efficient power delivery solution designed for various electronic projects and applications. It features a Type-C USB interface and supports multiple fast charging protocols, including PD3.1 (PPS), QC3.0, and SCP, enabling versatile power output from 3.3V to 21V with a maximum power of 65W. This manual provides essential information for the safe and effective use of the module.

2. FEATURES

- **High Power Output:** Delivers up to 65W (e.g., 5V3A, 9V3A, 12V3A, 20V3.25A).
- **Wide Input Voltage Range:** Operates with DC 8V to 32V input.
- **Automatic Output Voltage Adjustment:** Automatically adjusts output between 3.3V and 21V for compatible Type-C devices.
- **Multi-Protocol Support:** Compatible with PD3.1 (PPS), QC3.0, and SCP fast charging protocols.
- **High Conversion Efficiency:** Achieves 92% to 97% conversion efficiency.
- **Comprehensive Protection:** Includes input overvoltage/undervoltage protection, output overcurrent/short-circuit protection, and overall over-temperature protection.
- **Compact Design:** Small form factor for integration into various projects.

3. SPECIFICATIONS

Parameter	Value
Input Voltage	DC 8-32V
Output Voltage	Automatic adjustment between 3.3V and 21V (Input voltage must be higher than output voltage; for 20V fast charging, input must be >20V)
Maximum Output Power	65W (e.g., 5V3A, 9V3A, 12V3A, 20V3.25A)

Parameter	Value
Maximum Output Current	3.25A at 20V
Conversion Efficiency	92%~97%
Output Voltage Ripple	<200mV
No-load Current	<3mA
Supported Charging Protocols	PD3.1 (PPS), QC3.0, SCP
Protection Features	Input Overvoltage/Undervoltage, Output Overcurrent/Short Circuit, Overall Over Temperature
Dimensions (Approx.)	32mm x 20mm (1.25 inches x 0.78 inches)
Item Weight	1.44 ounces
Connector Type	Type-C
Material	Metal, Plastic

4. PRODUCT OVERVIEW

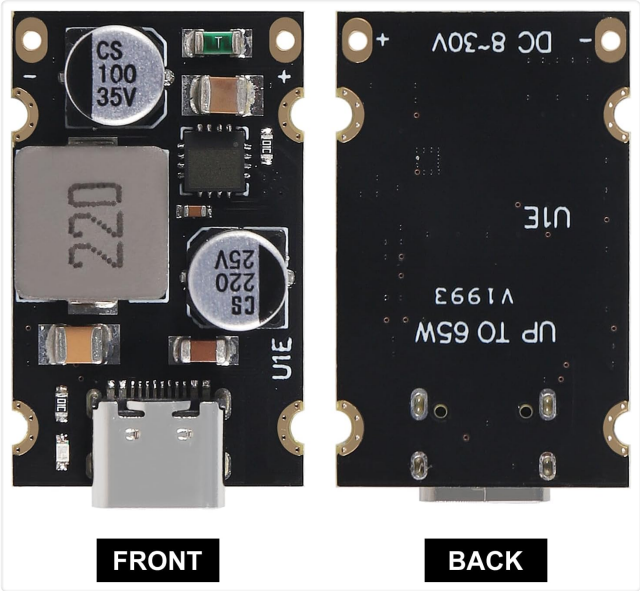


Figure 1: Front and back view of the PD65W Fast Charging Module. The front displays the Type-C port and various electronic components, while the back shows input voltage markings (DC 8-30V) and power rating (UP TO 65W).

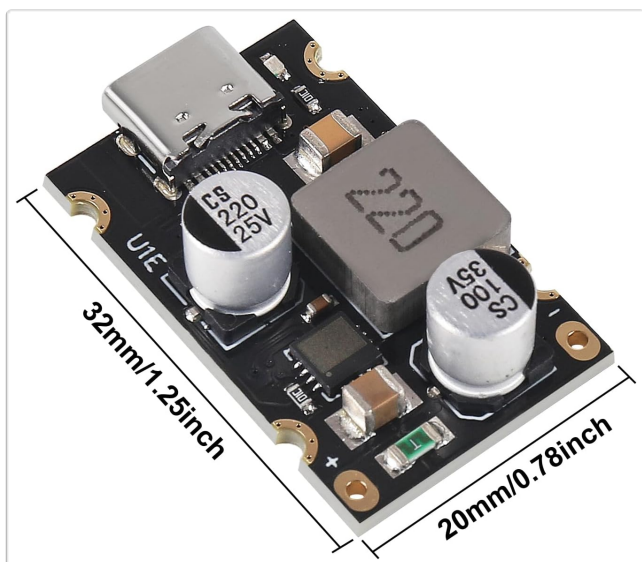


Figure 2: Dimensions of the PD65W Fast Charging Module, indicating a length of 32mm (1.25 inches) and a width of 20mm (0.78 inches).

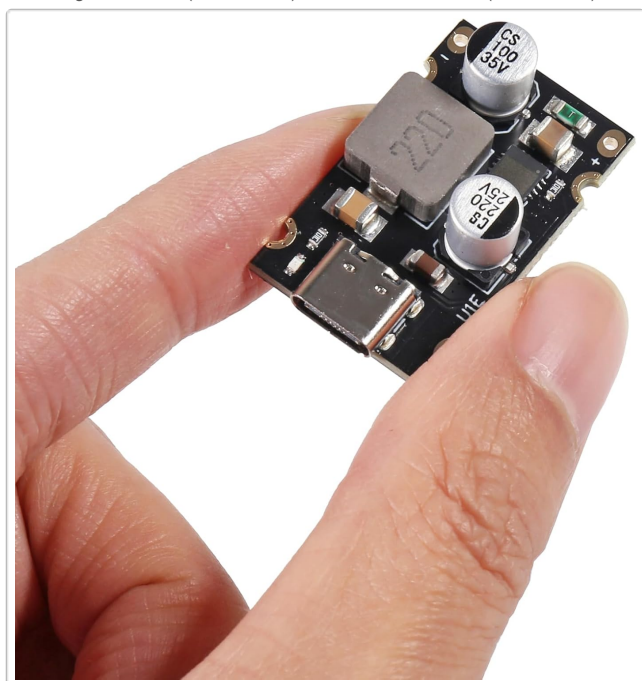


Figure 3: The compact size of the module demonstrated by being held in a hand.

Product Details



Figure 4: Detailed close-up views of the module's components, including

the Type-C connector, capacitors, and the main inductor.

Product Video

Your browser does not support the video tag.

Video 1: An overview of the PD65W Fast Charging Module, showcasing its features and potential applications. This video is provided by the seller, Aceirmc US.

5. SETUP AND CONNECTION

- Input Power Connection:** Connect your DC power source to the input terminals marked '+' and '-' on the module. Ensure the input voltage is within the specified range of DC 8V to 32V. Observe polarity carefully to prevent damage.
- Output Device Connection:** Connect your Type-C compatible device (e.g., laptop, smartphone) to the Type-C port on the module using a suitable Type-C cable.
- Voltage Requirements:** For the module to deliver a specific output voltage, the input voltage must be higher than the desired output voltage. For example, to trigger 20V fast charging, the input voltage must be greater than 20V.
- Mounting:** The module features mounting points for secure installation in your project enclosure.

Caution: Incorrect input voltage or reversed polarity can damage the module and connected devices. Always verify connections before applying power.

6. OPERATION

Once the input power is supplied and a compatible Type-C device is connected, the module will automatically negotiate and adjust its output voltage between 3.3V and 21V to match the requirements of the connected device, based on the supported fast charging protocols (PD3.1, QC3.0, SCP, PPS).

- The module prioritizes the highest possible charging speed supported by both the power source and the connected device.
- Monitor the charging status on your connected device to confirm fast charging is active.

7. SAFETY INFORMATION

To ensure safe operation and prevent damage to the module or connected devices, please adhere to the following safety guidelines:

- Do not exceed the maximum input voltage of 32V DC.
- Ensure correct polarity when connecting the input power.
- Avoid short-circuiting the output terminals. The module has built-in short-circuit protection, but prolonged short circuits can cause stress.
- Operate the module within its specified temperature range. While it has over-temperature protection, excessive heat can reduce lifespan.
- Do not expose the module to moisture or extreme environmental conditions.
- Keep out of reach of children.
- If the module exhibits unusual behavior (e.g., excessive heat, smoke, unusual odors), immediately disconnect power.

8. TROUBLESHOOTING

- **No Output Power:**
 - Verify that the input power source is connected correctly and providing voltage within the 8-32V DC range.

- Check for correct input polarity.
- Ensure the Type-C cable is properly connected to both the module and the device.
- Confirm the connected device is Type-C compatible and supports power delivery.

- **Slow Charging / Not Fast Charging:**

- Ensure your input power source can supply sufficient current and voltage for the desired fast charging protocol (e.g., >20V for 20V output).
- Verify that your Type-C cable supports fast charging protocols and the required power levels.
- Confirm that your connected device supports the fast charging protocols (PD3.1, QC3.0, SCP, PPS) that the module offers.

- **Module Overheating:**

- Ensure adequate ventilation around the module.
- Verify that the load connected is not exceeding the module's maximum 65W output.
- Check ambient temperature; operating in excessively hot environments can lead to overheating.

9. MAINTENANCE

The ACEIRMC PD65W Fast Charging Module requires minimal maintenance. To ensure its longevity and optimal performance:

- Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Avoid exposing the module to liquids or corrosive substances.
- Store the module in a dry, cool environment when not in use.
- Do not attempt to disassemble or modify the module, as this will void any potential warranty and may cause damage or injury.

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact the seller or manufacturer directly. Retain your purchase receipt for proof of purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

What is the operating temperature range for the ACEIRMC PD65W Fast Charging Module?

The official documentation for the ACEIRMC PD65W Fast Charging Module does not specify a numerical operating temperature range (e.g., -40°C to +85°C). However, it provides the following critical thermal information for your application: Over-Temperature Protection:...

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