AeroCool ACP-I600HG

Aerocool Integrator 600W 80 Plus Bronze Power Supply Unit

Model: ACP-I600HG

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Aerocool Integrator 600W 80 Plus Bronze Power Supply Unit (PSU). Please read this manual thoroughly before installation and retain it for future reference.

The Aerocool Integrator series power supplies are designed to provide stable and reliable power to your computer system. Key features include multiple SATA connectors for RAID storage, up to 85% efficiency for energy savings, and a single +12V rail for high CPU/GPU power delivery. These units provide stable DC output with low ripple and noise, and include comprehensive protection features to safeguard system components. Long 20+4P and 4+4P cables, up to 550mm, simplify installation in various chassis types.

2. SAFETY INFORMATION

- Always disconnect the power cord from the wall outlet before installing, removing, or cleaning the PSU or any other system components.

- This PSU is designed for use in personal computers only. Using it for other purposes may cause damage and void the warranty.

- Do not open the PSU casing. High voltages are present inside, and opening the unit will void the warranty and poses a risk of electric shock. There are no user-serviceable parts inside.

- Ensure proper grounding of your computer system.

- Install the PSU in a well-ventilated area, away from heat sources, direct sunlight, and moisture.

- Do not block the ventilation openings of the PSU.

- Use only the cables provided with the PSU.

- If the PSU is not functioning correctly, contact qualified service personnel.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Aerocool Integrator 600W 80 Plus Bronze Power Supply Unit

- AC Power Cord (UK 3 Pin)

- Mounting Screws
- User Manual (this document)

4. PRODUCT OVERVIEW

The Aerocool Integrator 600W PSU features a sleek black casing with fully black mesh cables for improved aesthetics and cable management. It is equipped with a large cooling fan for efficient heat dissipation.

Figure 4.1: Top-down view of the Aerocool Integrator 600W PSU, highlighting the fan and product label.

Figure 4.2: Rear view of the PSU, displaying the AC power input and on/off switch.

4.1. Connectors

The PSU comes with a variety of fixed cables to connect to your motherboard and peripherals:

- 20+4 Pin Main Power Connector (up to 550mm length)
- 4+4 Pin CPU Power Connector (up to 550mm length)
- PCI-E 6+2 Pin Connectors (for graphics cards)
- SATA Power Connectors (for storage drives)
- Molex (Peripheral) Power Connectors
- Floppy Power Connector (if applicable)

Refer to your motherboard and component manuals for specific connector requirements.

4.2. Product Video Overview

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Video 4.1: A 360-degree view of the Aerocool Integrator 600W Power Supply Unit, showcasing its design and various angles.

5. SETUP AND INSTALLATION

Follow these steps to install your Aerocool Integrator 600W PSU into your computer chassis:

1. **Prepare Your System:** Ensure your computer is completely powered off and unplugged from the wall outlet. Open your computer chassis according to its manufacturer's instructions.

2. **Remove Old PSU (if applicable):** If replacing an existing PSU, disconnect all power cables from the motherboard, graphics card, and other components. Unscrew and remove the old PSU from the chassis.

3. **Install New PSU:** Carefully slide the Aerocool Integrator 600W PSU into the designated PSU bay in your chassis. Ensure the fan is oriented correctly for optimal airflow (typically facing down if there's a bottom vent, or up if drawing air from inside the case). Secure the PSU to the chassis using the provided mounting screws.

4. **Connect Main Power:** Connect the 20+4 Pin main power connector to the corresponding port on your motherboard. Ensure it clicks securely into place.

5. **Connect CPU Power:** Connect the 4+4 Pin CPU power connector to the CPU power port on your motherboard. This is usually located near the CPU socket.

6. **Connect Graphics Card Power:** If your graphics card requires external power, connect the appropriate PCI-E 6+2 Pin connectors. Some high-end cards may require two such connectors.

7. **Connect Peripherals:** Connect SATA power connectors to your SSDs, HDDs, and optical drives. Use Molex connectors for any other peripherals that require them.

8. **Cable Management:** Route cables neatly to improve airflow and aesthetics. Utilize cable ties or the chassis's cable management features.

9. **Close Chassis:** Once all connections are secure, close your computer chassis.

10. **Connect AC Power:** Plug the AC power cord into the PSU's power inlet and then into a grounded wall outlet.

11. **Power On:** Flip the power switch on the back of the PSU to the 'I' (On) position, then power on your computer.

If your system does not power on or experiences issues, refer to the Troubleshooting section.

6. OPERATING INSTRUCTIONS

The Aerocool Integrator 600W PSU operates automatically once installed and connected. It provides continuous power to your system components. The fan will adjust its speed based on the internal temperature to maintain optimal cooling and minimize noise.

- **Power On/Off:** Use the main power switch on the back of the PSU to completely cut power to the unit. For normal operation, leave this switch in the 'I' (On) position and use your computer's power button to turn the system on or off.

- **Efficiency:** This PSU is 80 Plus Bronze certified, meaning it operates at up to 85% efficiency under typical loads, reducing energy waste and heat generation.

- **Protection Features:** The PSU includes various protection circuits (e.g., Over Voltage Protection, Under Voltage Protection, Short Circuit Protection) to safeguard your components from electrical anomalies.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your PSU:

- **Cleaning:** Periodically clean the exterior of the PSU and its fan grille to prevent dust buildup. Use compressed air to gently blow dust out of the fan and vents. **Always disconnect the PSU from the wall outlet before cleaning.**

- **Environment:** Ensure the computer operates in a clean, dry, and well-ventilated environment. Avoid extreme temperatures and humidity.

- **Cable Integrity:** Regularly check that all power cables are securely connected and not pinched or damaged.

8. TROUBLESHOOTING

If you encounter issues with your PSU, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
System does not power on.	Power cord not connected. PSU switch is off. Loose internal connections. Faulty component.	Ensure AC power cord is securely plugged into the PSU and wall outlet. Flip the PSU's rear switch to the 'I' (On) position. Check all internal power connections (20+4 pin, 4+4 pin CPU, PCI-E, SATA). Test components individually if possible, or consult a technician.
System powers on but immediately shuts down.	Overload or short circuit. Overheating. Faulty component.	Disconnect non-essential components to check for overload. Ensure proper ventilation and clean PSU fan/vents. Consult a technician.
Unusual noises from PSU.	Fan obstruction or defect. Coil whine (less common).	Ensure no cables or debris are obstructing the fan. If noise persists and is loud, contact support.

Warning: Do not attempt to repair the PSU yourself. Opening the unit is dangerous and voids the warranty.

9. SPECIFICATIONS

Figure 9.1: Detailed specifications label on the PSU casing.

Feature	Detail
Brand	AeroCool
Model Number	ACP-I600HG
Output Power	600 Watts
Efficiency Certification	80 Plus Bronze (up to 85% efficiency)
Form Factor	ATX12V
Cooling Method	Air (120mm fan)
Color	Black

Feature	Detail
Dimensions (L x W x H)	14 x 15 x 8.5 cm
Weight	1.6 Kilograms
Compatible Devices	Personal Computer
Main Power Connector	20+4 Pin
CPU Power Connector	4+4 Pin
PCI-E Power Connectors	6+2 Pin
SATA Power Connectors	Multiple (as per product design)
Protection Features	OVP, UVP, SCP, OPP, OTP (Over Voltage, Under Voltage, Short Circuit, Over Power, Over Temperature Protection)

10. WARRANTY AND SUPPORT

Manufacturer Warranty: This product comes with a 12-month manufacturer warranty from the date of purchase. Please retain your proof of purchase for warranty claims.

The warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, accident, abuse, misuse, natural disaster, or unauthorized modification or repair.

Technical Support: For technical assistance or warranty inquiries, please contact your retailer or visit the official AeroCool website for support resources and contact information. Do not attempt to open or repair the unit yourself, as this will void the warranty.

Website: www.aerocool.io