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› HighPower Astro APT-600 Digital Power Supply User Manual

HIGH POWER HPA-600PT-F14C

HighPower Astro APT-600 Digital Power Supply User Manual

Model: HPA-600PT-F14C

INTRODUCTION

This manual provides essential information for the safe and efficient use of your HighPower Astro APT-600 Digital 80+ Platinum 600-Watt ATX12V/EPS12V Power Supply (Model: HPA-600PT-F14C). Please read this manual thoroughly before installation and operation.

The Astro PT 600W features patented digital control technology for precise voltage regulation, known as D-VRM, which surpasses analog designs. Its H-Shaped Grill is designed for maximum ventilation, ensuring optimal performance and reliability.

KEY FEATURES

- **80 Plus Platinum Certified:** Achieves 90-92% efficiency at 20-100% load, reducing energy consumption and heat generation.
- **Silent Design:** Equipped with a 135mm dual ball bearing Golf-Surfaced fan for increased airflow and reduced noise levels.
- **100% Japanese-made Capacitors:** Ensures longer lifespan and enhanced durability compared to standard electrolytic capacitors.
- **Advanced DC to DC Converter:** Provides unparalleled DC to DC conversion for 3.3V & 5V outputs, contributing to high efficiency.
- **Modular Cabling:** Features easily detachable and flexible cables, allowing for reduced clutter and simplified installation.
- **Fanless and Energy Saving Mode:** The fan activates automatically when the load exceeds 230W for sufficient cooling. Below 230W, a fanless mode ensures silent operation.

PACKAGE CONTENTS

Verify that all items are present in the package:



Image: HighPower Astro APT-600 Power Supply and its accessories, including the power supply unit, a set of modular cables, a user manual, and a storage bag for cables.

- HighPower Astro APT-600 Digital Power Supply Unit
- Modular Cable Set (various types for CPU, PCIe, SATA, Peripheral)
- AC Power Cord
- Mounting Screws
- User Manual (this document)
- Cable Storage Bag

SETUP AND INSTALLATION

Follow these steps for proper installation of your power supply unit (PSU) into your computer system.

1. Prepare Your System

1. Ensure your computer is completely powered off and unplugged from the wall outlet.
2. Open your computer case. Refer to your computer case manual for specific instructions.
3. If replacing an existing PSU, disconnect all cables from the old PSU and remove it from the case.

2. Install the Power Supply Unit



Image: Angled view of the HighPower Astro APT-600 Power Supply, highlighting its compact design and the H-shaped grill on the top surface.

1. Carefully slide the HighPower Astro APT-600 PSU into the designated PSU bay in your computer case.
2. Align the screw holes on the PSU with those on the case.
3. Secure the PSU using the provided mounting screws.

3. Connect Modular Cables



Image: Rear view of the HighPower Astro APT-600 Power Supply, illustrating the clearly labeled modular cable connection ports for HDD/SATA/Floppy and PCIe.

1. Identify the necessary cables for your motherboard, CPU, graphics card(s), and storage devices.
2. Connect the required modular cables to the corresponding ports on the PSU. Ensure a firm connection.
3. Route the cables neatly within your case to improve airflow and aesthetics.
4. Connect the other end of each cable to the respective components (motherboard, CPU, GPU, SSD/HDD).

4. Final Checks

1. Double-check all cable connections to ensure they are secure.

2. Close your computer case.
3. Connect the AC power cord to the PSU's inlet and then to a wall outlet.

OPERATING INSTRUCTIONS

This section details the operation of your HighPower Astro APT-600 Power Supply.

Powering On/Off



Image: Rear panel of the HighPower Astro APT-600 Power Supply, featuring the main power switch (rocker switch) and the AC power inlet, along with a load indicator bar.

- Ensure the AC power cord is securely connected.
- Flip the main power switch on the rear of the PSU to the 'ON' (I) position.
- Power on your computer system using its front panel power button.
- To power off, shut down your computer normally, then flip the PSU's main power switch to the 'OFF' (O) position.

Fan Operation and Energy Saving Mode



Image: Top-down view of the HighPower Astro APT-600 Power Supply, showcasing the large cooling fan beneath the distinctive H-shaped grill, designed for optimal airflow.

- The Astro APT-600 features an intelligent thermal fan control.
- When the power load is below approximately 230W, the PSU operates in a fanless mode for silent operation.
- When the power load exceeds 230W, the 135mm fan will automatically activate and adjust its speed to provide sufficient cooling.
- This feature optimizes both cooling performance and noise levels based on system demand.

Efficiency and Load Indicator



Image: Rear panel of the HighPower Astro APT-600 Power Supply, featuring the main power switch (rocker switch) and the AC power inlet, along with a load indicator bar.

- The PSU is 80 Plus Platinum certified, indicating high efficiency.
- The load indicator bar on the rear panel provides a visual representation of the current power load on the PSU.
- Observe the indicator to understand your system's power consumption in real-time.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your power supply.

- **Dust Removal:** Periodically clean the exterior of the PSU and the fan grill to prevent dust buildup. Use compressed air or a soft brush. Ensure the PSU is powered off and unplugged before cleaning.

- **Ventilation:** Ensure adequate airflow around the PSU within your computer case. Do not obstruct the fan intake or exhaust vents.
- **Cable Management:** Maintain tidy cable routing to prevent obstruction of airflow inside the case, which can affect PSU cooling.
- **Operating Environment:** Operate the PSU in a well-ventilated area with stable room temperature. Avoid extreme temperatures and high humidity.

TROUBLESHOOTING

If you encounter issues with your HighPower Astro APT-600 Power Supply, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
PSU does not power on.	<ul style="list-style-type: none"> ◦ AC power cord not connected or loose. ◦ PSU main switch is OFF. ◦ Faulty wall outlet. ◦ Internal short circuit or component failure. 	<ul style="list-style-type: none"> ◦ Ensure AC power cord is firmly plugged into PSU and wall outlet. ◦ Flip the PSU main switch to 'ON' (I). ◦ Try a different wall outlet. ◦ Disconnect all components from PSU except motherboard (24-pin) and CPU (4/8-pin). If it powers on, reconnect components one by one to identify faulty component. If still no power, contact support.
System crashes or reboots randomly.	<ul style="list-style-type: none"> ◦ Insufficient wattage for components. ◦ Overheating. ◦ Loose cable connections. ◦ Faulty PSU. 	<ul style="list-style-type: none"> ◦ Verify your system's total power draw does not exceed 600W. ◦ Ensure proper ventilation and clean dust from PSU and case fans. ◦ Check all modular cable connections at both the PSU and component ends. ◦ If issues persist, consider testing with another known good PSU or contact support.
Loud fan noise.	<ul style="list-style-type: none"> ◦ High system load. ◦ Dust buildup in fan. ◦ Fan bearing issue. 	<ul style="list-style-type: none"> ◦ Fan speed increases with load; this is normal. ◦ Clean the fan and grill area to remove dust. ◦ If noise is excessive or grinding, contact support.

SPECIFICATIONS

Detailed technical specifications for the HighPower Astro APT-600 Digital Power Supply:

Feature	Detail
Brand	HIGH POWER
Model Number	HPA-600PT-F14C
Form Factor	ATX12V / EPS12V
Output Wattage	600 Watts
Efficiency Certification	80 Plus Platinum
Cooling Method	Air (135mm fan)
Power Supply Design	Modular
Compatible Devices	Personal Computer
Connector Types	ATX, EPS (Modular)
Product Dimensions (L x W x H)	16 x 15 x 8.6 Centimetres (approx. 6.3 x 5.9 x 3.4 inches)
Item Weight	3.18 kg (approx. 7 Pounds)
Capacitors	100% Japanese-made

WARRANTY AND SUPPORT

For warranty information and technical support, please contact High Power customer service.

Refer to the official High Power website or the product packaging for the most up-to-date contact details and warranty terms.

Manufacturer: High Power

Date First Available: July 15, 2013