

## FSP TwinsPro700

# FSP Twins Pro 700W ATX Redundant Power Supply User Manual

## 1. PRODUCT OVERVIEW

The FSP Twins Pro 700W is an ATX PS2 size redundant power supply designed for continuous, uninterrupted operation in critical systems such as servers, home systems, and office environments. It features two hot-swappable power modules that share the load, ensuring system stability even if one module fails. The unit is 80 Plus Gold certified, indicating high power efficiency, and includes the FSP Guardian software for comprehensive PSU monitoring.

### Key Features:

- ATX PS2 size redundant PSU, eliminating the need for a front-end bracket.
- 700W total power output with two redundant modules.
- Hot-swappable modules for 24/7 uptime without system shutdown.
- LED status indicators for quick fault identification.
- 80 Plus Gold certified for high energy efficiency.
- Compliant with the latest UL 62368 safety standards.
- Comprehensive safety protections: Over Current Protection (OCP), Over Voltage Protection (OVP), Short Circuit Protection (SCP), Over Power Protection (OPP), Over Temperature Protection (OTP), Fan Failure Protection (FFP), Under Voltage Protection (UVP).
- Includes FSP Guardian PSU monitoring software.



Figure 1: FSP Twins Pro 700W Redundant Power Supply.

## 2. SETUP AND INSTALLATION

This section provides instructions for installing the FSP Twins Pro 700W power supply into your system and managing its hot-swappable modules.

### 2.1 Installing the Power Supply Unit

1. Ensure your system is powered off and disconnected from the main power source.
2. Mount the FSP Twins Pro 700W PSU into your ATX PS2 compatible chassis. Secure it using appropriate screws.
3. Connect the necessary power cables (24-pin ATX, 4+4-pin CPU, 6+2-pin PCIe, SATA, Molex, Floppy, USB 8-pin) to your motherboard and components. Refer to the 'Connectivity' section for cable details.

### 2.2 Installing/Removing Power Modules

The Twins Pro features two independent power modules. These modules can be installed or removed while the system is running, ensuring continuous operation.

1. To install a module: Align the module with an empty slot in the PSU chassis and gently push it in until it clicks into place. Ensure the handle is fully engaged.
2. To remove a module: Pull the handle on the module to disengage it, then carefully slide the module out of the chassis.



Figure 2: Inserting a hot-swappable power module.



Figure 3: FSP Twins Pro with both power modules securely installed.

### 3. OPERATION

The FSP Twins Pro 700W operates in a redundant configuration, meaning both power modules share the electrical load. If one module experiences a failure, the other module automatically takes over the full load, preventing system downtime. This ensures continuous power delivery to your critical components.

#### 3.1 Hot-Swappable Functionality

The power modules are hot-swappable, allowing you to replace a faulty module without shutting down the entire system. This feature is crucial for maintaining 24/7 operation.

#### 3.2 LED Status Indicators

Each power module is equipped with an LED indicator. A red LED light indicates a PSU failure, alerting you to replace the affected module. A green LED typically indicates normal operation.

Your browser does not support the video tag.

Video 1: This video demonstrates the hot-swappable functionality of the FSP Twins Pro modules and shows the LED indicators for normal operation and PSU failure. It also highlights the FSP Guardian software interface and the power cord locking device.

### 4. FSP GUARDIAN SOFTWARE

The FSP Twins Pro 700W includes the FSP Guardian software, a monitoring utility that allows users to track the performance and status of their power supply in real-time. This software provides detailed information on voltage, current, power consumption, fan speed, and temperature for each module, enabling proactive

management and troubleshooting.

## 5. CONNECTIVITY

The FSP Twins Pro 700W comes with a comprehensive set of cables to support various system configurations. The following diagram illustrates the available connectors and their respective cable lengths.

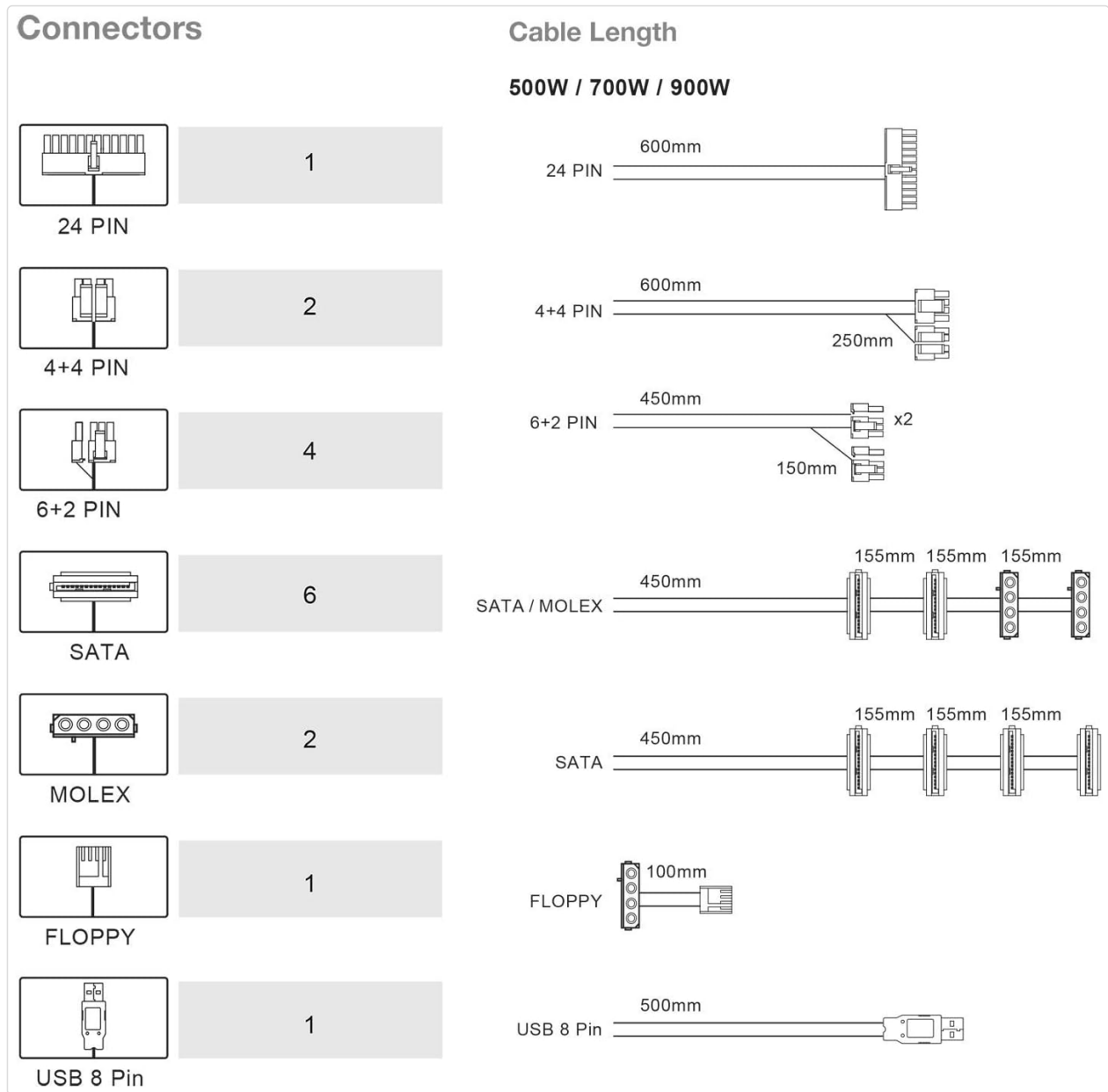


Figure 4: Connector types and cable lengths for the FSP Twins Pro 700W.

### Available Connectors:

- **24-PIN ATX:** 1 connector, 600mm length.
- **4+4 PIN CPU:** 2 connectors, 600mm + 250mm lengths.
- **6+2 PIN PCIe:** 4 connectors, 450mm + 150mm lengths (x2).
- **SATA:** 6 connectors, 450mm + 155mm + 155mm + 155mm lengths.
- **MOLEX:** 2 connectors, 450mm + 155mm + 155mm + 155mm lengths.
- **FLOPPY:** 1 connector, 100mm length.
- **USB 8 Pin:** 1 connector, 500mm length.

## 6. SPECIFICATIONS

Below are the detailed technical specifications for the FSP Twins Pro 700W ATX Redundant Power Supply.

AC Input 交流輸入/交流輸入/정격입력	100-240V~, 10-5A, 60-50Hz				
DC Output 直流輸出/直流輸出	+3.3V	+5V	+12V	-12V	+5Vsb
Max Output Current 最大電流/最大電流/정격출력	20A	20A	58.3A	0.5A	3A
Max Combined Power 最大功率/最大功率	130W				
Total Power 額定功率/額定功率	700W				

**SWITCHING POWER SUPPLY**

Caution! Don't remove the cover by yourself! Fixing has to be done by qualified personnel only. No parts were used that need any maintenance.

Attention! Veuillez ne pas ouvrir le bloc. Seul du personnel qualifié est habilité à effectuer des réparations. Les composants utilisés ne requièrent aucun entretien.

Warnung! VOR DEM ÖFFNEN DES GERÄTES NETZSTECKER ZIEHEN. KEINE SERVICE-RELEVANTEN BAUTEILE ENTHALTEN. SERVICEARBEITEN SOLLTEN NUR VON AUTORISIERTEM FACHPERSONAL DURCHFÜHRT WERDEN.

交換式電源供應器  
注意：請勿自行開啟電源外殼，否則不予保固！

开关电源供应器  
注意：勿自行开启电源外壳，否则不予质保！

FSP TECHNOLOGY INC.  
NO. 22, Jiaqiao East Road, Taoyuan City,  
Taiwan 330  
Tel: +886-3-3759888

全漢企業股份有限公司 / 全漢企業股份有限公司  
桃園市桃園區建國東路22號  
電話：03-3759888

Fortron/Source (Europa) GmbH  
Carl-Friedrich-Benz-Strasse 13, D-47877  
Willich, Germany  
Tel: 49-2154-894-012-0

UL E190414, CE, FC, RoHS, and other certification logos.

1H.0001.001B.001

Made In Taiwan

Figure 5: Product label showing electrical specifications and certifications. Part Number: [1H.0001.001B.001](#)

Specification	Value
Model Name	Twins Pro
Brand	FSP
Compatible Devices	Computer, PC
Connector Type	ATX, Redundant
Output Wattage	700 Watts
Form Factor	ATX
Cooling Method	Air

Specification	Value
Item Dimensions (L x W x H)	7.48 x 5.91 x 3.39 inches
Power Supply Design	Full Modular
Number of Fans	1 (per module)
Maximum Input Voltage	240 Volts
Minimum Input Voltage	110 Volts
Upper Temperature Rating	50 Degrees Celsius
System Bus Connector Type	ATX
Mfr Part Number	PPA7004600
UPC	845685014146, 845685010841

## 7. SAFETY PROTECTIONS

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The FSP Twins Pro 700W is equipped with multiple protection mechanisms to ensure the safety and longevity of your system and the power supply itself:

- **OCP (Over Current Protection):** Protects against excessive current on output rails.
- **OVP (Over Voltage Protection):** Safeguards components from damaging high voltages.
- **SCP (Short Circuit Protection):** Prevents damage from short circuits.
- **OPP (Over Power Protection):** Shuts down the PSU if total power draw exceeds safe limits.
- **OTP (Over Temperature Protection):** Protects against overheating.
- **FFP (Fan Failure Protection):** Monitors fan operation and alerts or shuts down if a fan fails.
- **UVP (Under Voltage Protection):** Prevents system instability from low voltages.

### Power Cord Locking Device

The PSU features a power cord locking device to prevent accidental disconnection of the power cables, ensuring stable power delivery.

## 8. MAINTENANCE

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Due to its hot-swappable module design, maintenance of the FSP Twins Pro 700W is simplified. In the event of a module failure (indicated by a red LED), the faulty module can be replaced without interrupting system operation. Regularly check the FSP Guardian software for any alerts or abnormal readings to ensure optimal performance.

## 9. TROUBLESHOOTING

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If you encounter issues with your FSP Twins Pro 700W power supply, consider the following troubleshooting steps:

- **No Power:** Ensure all power cables are securely connected, including the main AC input and internal connectors. Verify the power outlet is functional.

- **Red LED Indicator:** A red LED on a power module indicates a failure. The system should continue to operate on the remaining module. Replace the faulty module as soon as possible.
- **System Instability:** If your system experiences unexpected shutdowns or instability, check the FSP Guardian software for voltage fluctuations or other anomalies. Ensure the PSU is adequately rated for your system's power requirements.
- **Fan Noise:** While the PSU is designed for quiet operation, excessive fan noise might indicate a fan issue or high load. Monitor fan speeds via FSP Guardian.
- **Software Issues:** If FSP Guardian is not displaying correct information, ensure the software is up-to-date and the USB connection between the PSU and motherboard is secure.

For persistent issues, refer to the 'Warranty and Support' section for further assistance.

## 10. WARRANTY AND SUPPORT

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### 10.1 Warranty Information

The FSP Twins Pro 700W ATX Redundant Power Supply comes with a **5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

### 10.2 Technical Support

For technical assistance, troubleshooting, or warranty inquiries, please contact FSP customer support. You can typically find contact information on the official FSP website or through your product retailer.

Visit the [FSP Store on Amazon](#) for more product information and support resources.