

ALTAIR TECHNOLOGY ATPPTNCL

ALTAIR TECHNOLOGY Njord Inline Fan Control Board

User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the ALTAIR TECHNOLOGY Njord Inline Fan Control Board. The Njord board is designed to enhance the efficiency and performance of cryptocurrency mining setups by intelligently controlling inline fan speeds.

The Njord board enables Bitmain miners to automatically control the speed of an inline fan using the control board's native temperature control algorithm. It includes 4x fan adapter cables that allow compatibility with new S21 series Antminers.

2. PRODUCT OVERVIEW

The Njord Inline Fan Control Board is a specialized component engineered to optimize the cooling systems of cryptocurrency mining rigs. By integrating with your miner's control board, it automates fan speed adjustments, leading to reduced noise, lower power consumption, and stable operating temperatures.

Key Features:

- **Automated Fan Speed Control:** Utilizes the miner's native temperature control algorithm for dynamic fan speed adjustments.
- **Noise Reduction:** Optimizes fan operation to minimize acoustic output.
- **Energy Efficiency:** Reduces power consumption by preventing unnecessary high fan speeds.
- **Enhanced Compatibility:** Includes 4x fan adapter cables for compatibility with new S21 series Antminers that have square fan ports.
- **Seamless Integration:** Designed to integrate with all air-cooled Bitmain miners equipped with 4 stock fans.
- **Easy Installation:** Simple plug-and-play setup with existing miner control boards and AC Infinity fans.



Figure 2.1: Front view of the ALTAIR TECHNOLOGY Njord Inline Fan Control Board, showcasing its compact design and USB-C port.



Figure 2.2: Top-down view of the Njord Control Board, highlighting the "Njord Cloudline" branding and component layout.



Figure 2.3: Bottom view of the Njord Control Board, showing the "Pivotal Pleb Tech" manufacturer details and model information.

3. SPECIFICATIONS

Attribute	Detail
Model Number	ATPPTNCL
Brand	ALTAIR TECHNOLOGY
Product Dimensions	2 x 1 x 1 inches (5.08 x 2.54 x 2.54 cm)
Item Weight	0.528 ounces (0.02 Kilograms)
Color	Purple
Material	Iron
Included Components	Njord Control Board, 4x Fan Adapter Cables, Jumpers
Manufacturer	Pivotal Pleb Tech
Country of Origin	USA

Attribute	Detail
Display Type	LED
GTIN (UPC)	00197644440009

4. SETUP AND INSTALLATION

The Njord Cloudline board is designed for straightforward installation. Follow these steps to integrate it into your mining setup.

Required Components (Not Included):

- Air-cooled Bitmain miner with 4 stock fans.
- AC Infinity Fan (recommended for optimal results).
- Fan shroud (recommended for optimal results).

Installation Steps:

1. **Prepare the Miner:** Ensure your Bitmain miner is powered off and disconnected from the power source before beginning installation.
2. **Locate Fan Ports:** Identify the fan port connectors on your miner's control board. The Njord board is compatible with miners equipped with 4 stock fans.
3. **Connect Njord Board:** Carefully plug the Njord Cloudline board into the fan port connectors on your miner's control board. Ensure a secure connection.



Figure 4.1: The Njord board securely connected to the fan port headers of a Bitmain miner control board.

4. **Connect Fan Adapter Cables (if necessary):** If your S21 series Antminer has square fan ports, use the included 4x fan adapter cables. Connect one end of each adapter cable to the square fan ports on the miner's control board, and the other end to the corresponding ports on the Njord board.

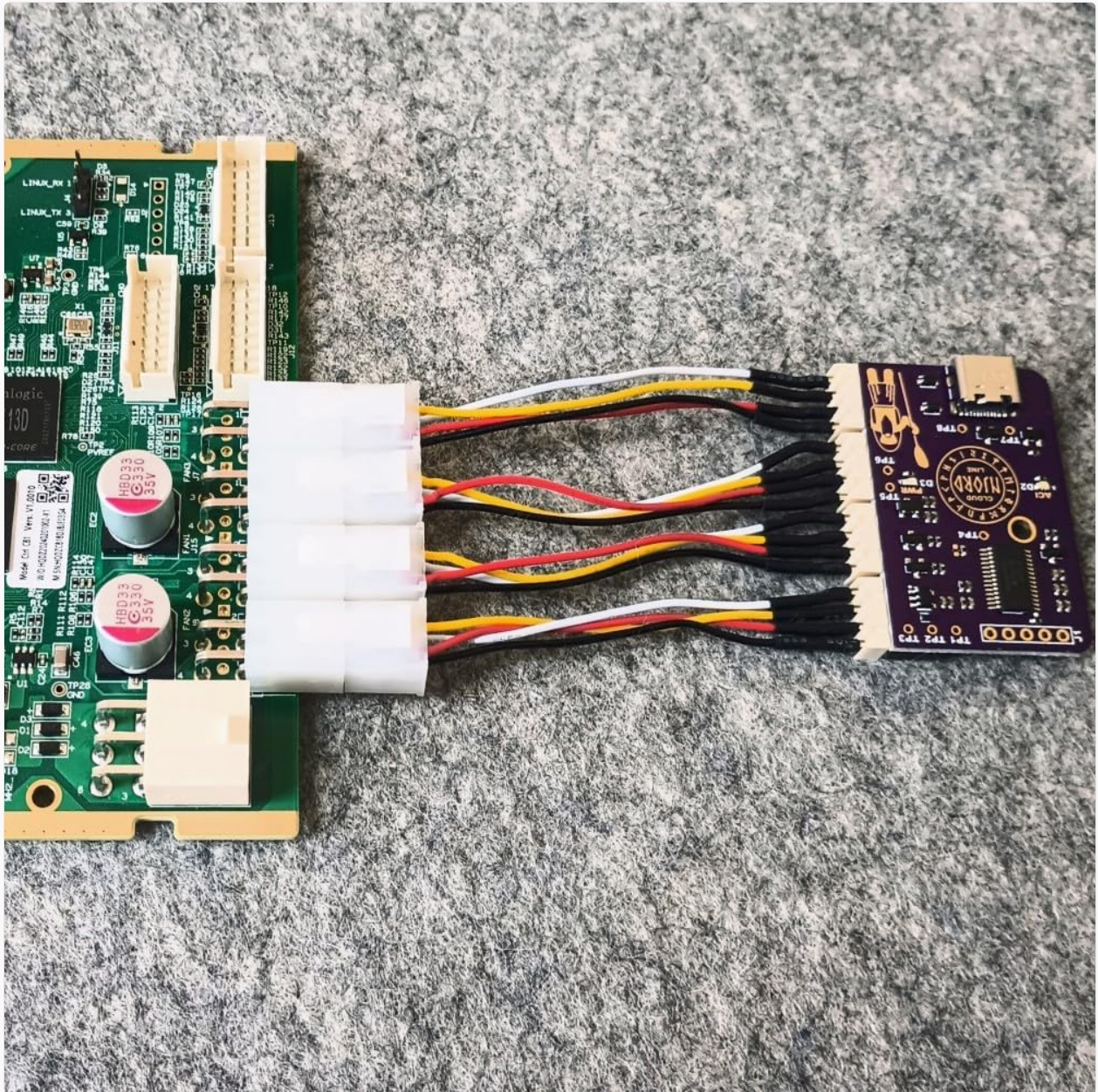


Figure 4.2: The included fan adapter cables connected to the miner's control board, ready for connection to the Njord board.

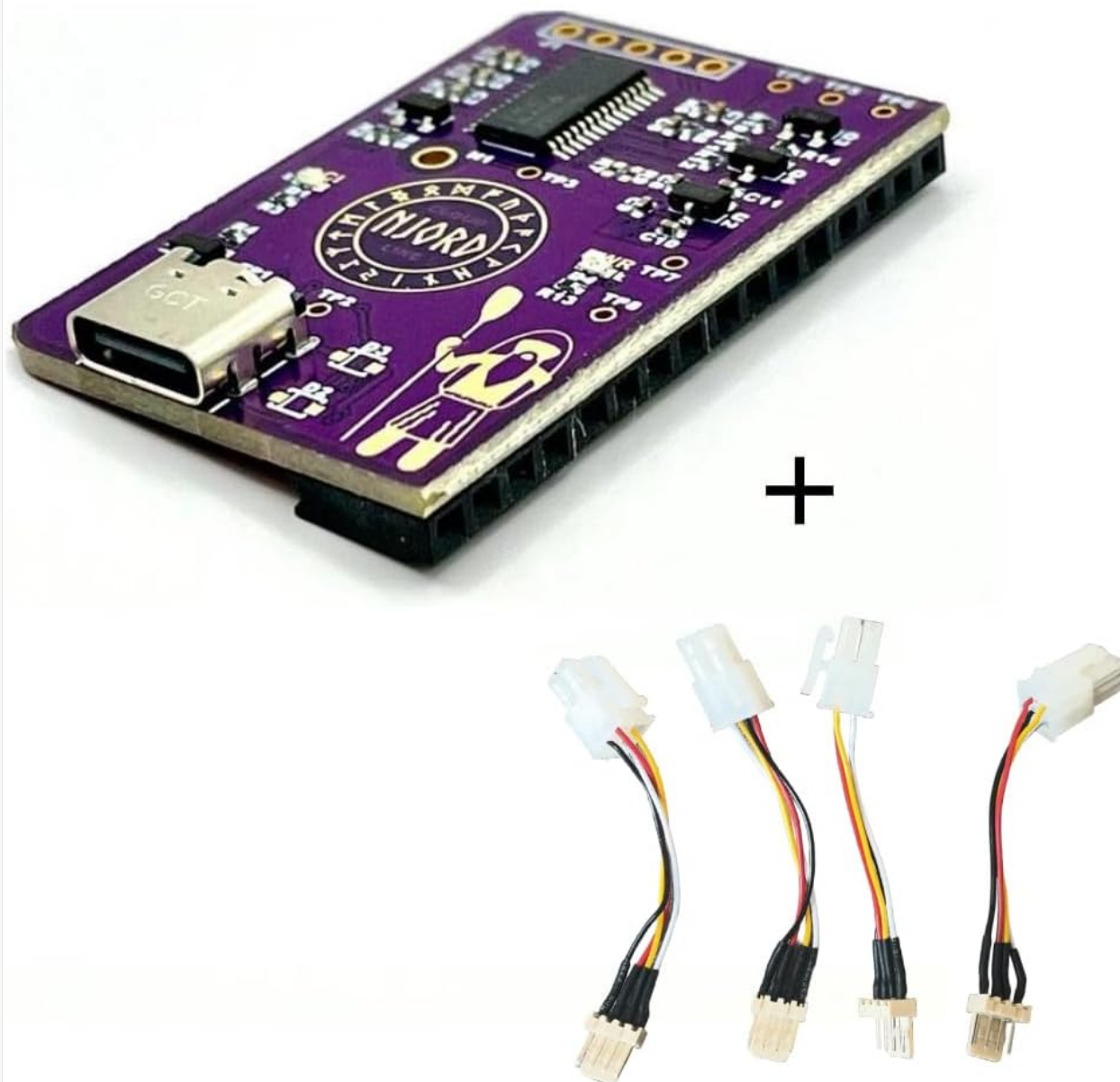


Figure 4.3: The Njord board shown alongside the four fan adapter cables, illustrating the complete package for installation.

5. **Connect AC Infinity Fan:** Connect the USB-C cable of your AC Infinity fan to the USB-C socket on the Njord Cloudline board.
6. **Secure Components:** Ensure all connections are firm and that the Njord board is securely positioned within your mining rig.
7. **Power On:** Reconnect power to your miner and power it on. The Njord board will begin to operate automatically.

For a visual guide, you may refer to the [Installation Manual \(PDF\)](#) provided by the manufacturer.

5. OPERATING INSTRUCTIONS

Once installed, the Njord Inline Fan Control Board operates autonomously, leveraging the miner's internal temperature sensors and control algorithms.

- **Automatic Operation:** The Njord board will automatically adjust the speed of the connected inline fan based on the temperature readings from your Bitmain miner. This ensures optimal cooling and efficiency without manual intervention.

- **Temperature Regulation:** The board's primary function is to maintain consistent miner temperatures, preventing overheating and ensuring stable performance.
- **Noise and Power Optimization:** By dynamically controlling fan speed, the Njord board contributes to a quieter operating environment and reduced energy consumption compared to fans running at constant maximum speed.

No user configuration is typically required for the Njord board itself, as it integrates with the miner's existing control logic.

6. MAINTENANCE

The ALTAIR TECHNOLOGY Njord Inline Fan Control Board is designed for low maintenance. However, periodic checks can help ensure its longevity and optimal performance.

- **Dust Removal:** Periodically inspect the board and surrounding components for dust accumulation. Use compressed air or a soft brush to gently remove any dust, ensuring proper airflow and preventing overheating of the board itself.
- **Connection Integrity:** Occasionally check all cable connections (to the miner and the AC Infinity fan) to ensure they remain secure and free from corrosion.
- **Environmental Conditions:** Ensure the mining environment remains within recommended temperature and humidity ranges to prevent stress on electronic components.

Do not attempt to open the board casing or modify its internal components, as this may void any applicable warranty and could damage the device.

7. TROUBLESHOOTING

If you encounter issues with your Njord Inline Fan Control Board, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Fan not spinning or not responding	Loose cable connection Incorrect fan port connection AC Infinity fan issue Miner control board issue	Check all USB-C and fan port connections. Ensure they are firmly seated. Verify the Njord board is correctly plugged into the miner's fan headers. Test the AC Infinity fan directly if possible to rule out fan malfunction. Consult your miner's manual for control board diagnostics.
Fan running at constant high speed	Miner temperature is consistently high Njord board not communicating with miner	Ensure adequate ventilation for the miner. Check for blockages in airflow. Verify the Njord board is fully seated. Restart the miner to re-establish communication.
Miner temperatures are unstable	Improper fan sizing/placement Environmental factors Njord board malfunction	Ensure the AC Infinity fan is appropriately sized for your mining setup and that the fan shroud is correctly installed. Check ambient room temperature and humidity. Ensure proper air intake and exhaust. If all other steps fail, contact ALTAIR TECHNOLOGY support.

Problem	Possible Cause	Solution
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If the problem persists after attempting these solutions, please contact ALTAIR TECHNOLOGY customer support for further assistance.

8. WARRANTY AND SUPPORT

ALTAIR TECHNOLOGY stands behind the quality of its products. For specific warranty terms and conditions, please refer to the documentation included with your purchase or visit the official ALTAIR TECHNOLOGY website.

For technical support, troubleshooting assistance, or inquiries regarding your Njord Inline Fan Control Board, please contact ALTAIR TECHNOLOGY customer service. You can often find contact information on the product packaging, the manufacturer's website, or through your point of purchase.

Additional resources, including the [Installation Manual \(PDF\)](#), may be available online.