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› R QIDI TECHNOLOGY QIDI Box for QIDI PLUS4 3D Printer Instruction Manual

R QIDI TECHNOLOGY QIDI Box

QIDI Box for QIDI PLUS4 3D Printer Instruction Manual

Model: QIDI Box

1. INTRODUCTION

The QIDI Box is an advanced accessory designed to enhance your QIDI PLUS4 3D printer with multi-color and multi-material printing capabilities. It features active filament drying, NFC intelligent recognition, and an automatic filament reload system to ensure consistent, high-quality 3D prints.

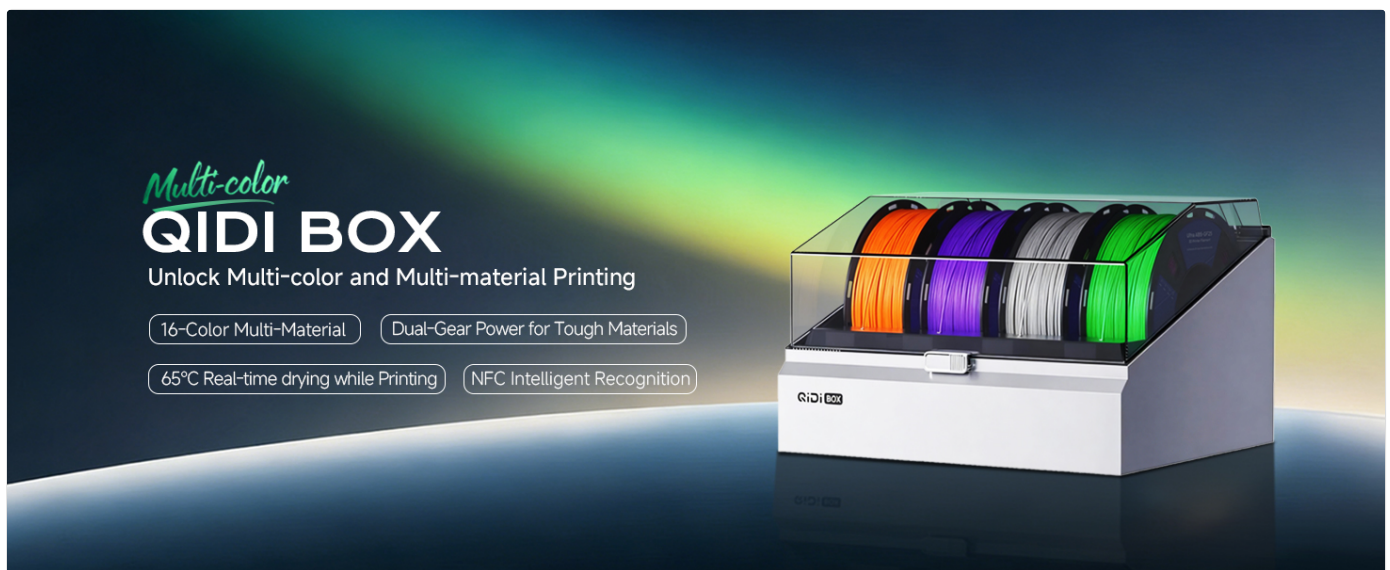


Image 1.1: The QIDI Box, designed for multi-color and multi-material 3D printing.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your QIDI Box package. If any components are missing or damaged, please contact customer support.

- QIDI Box Unit
- Power Cord
- 8-4 Pin Signal Cable
- BOX Hub Signal Cable

- BOX Hub and Bracket
- PTFE Tube 1000mm (x5)
- Desiccant (x4)
- PTFE Tube Buckle (x2)



Image 2.1: Visual representation of the QIDI Box packing list.

3. SETUP

Follow these steps to correctly set up your QIDI Box with your QIDI PLUS4 3D printer.

1. **Placement:** Position the QIDI Box securely on top of your QIDI PLUS4 3D printer. Ensure it is stable and does not obstruct any printer components.
2. **Connect Signal Cables:** Use the provided 8-4 Pin Signal Cable and BOX Hub Signal Cable to connect the QIDI Box to your QIDI PLUS4 printer. Refer to your QIDI PLUS4 manual for specific port locations.
3. **Power Connection:** Connect the power cord to the QIDI Box and then to a suitable power outlet.
4. **Filament Loading:** Open the QIDI Box lid. Insert filament spools into the designated slots. Guide the filament through the PTFE tubes and into the QIDI Box's feeding mechanism.
5. **Initial Power On:** Power on your QIDI PLUS4 printer. The QIDI Box should be recognized automatically.



Image 3.1: The QIDI Box integrated with the QIDI PLUS4 3D printer.

4. OPERATION

4.1 Multi-Color and Multi-Material Printing

The QIDI Box supports multi-color and multi-material printing by managing up to 4 filament spools. Multiple QIDI Box units can be cascaded to support up to 16 colors or materials. This allows for complex models and the use of dissolvable support materials.

4.2 Active Filament Drying (65°C)

The integrated 65°C active drying system maintains optimal filament dryness throughout the printing process, crucial for

moisture-sensitive materials like Nylon (PA) and PVA. A real-time humidity display allows monitoring of chamber conditions.



Image 4.1: Active drying system within the QIDI Box maintaining filament dryness.

4.3 NFC Intelligent Recognition and Auto-Reload

The QIDI Box features NFC intelligent recognition, which automatically identifies official QIDI filaments and applies optimized printing settings. The system also includes an automatic filament reload function, seamlessly switching to a backup spool when one runs out, ensuring continuous printing.



Image 4.2: NFC intelligent recognition and filament auto-reload interface.

4.4 Professional Extrusion System

Equipped with a robust dual hardened steel gear extruder, the QIDI Box reliably handles abrasive materials such as carbon-fiber (CF) and glass-fiber (GF) composites without clogging, ensuring smooth and durable operation.



Dual-Gear Power for Tough Materials

The hardened steel extrusion system offers long-lasting durability and stable feeding for a wide range of filaments—including carbon fiber, fiberglass and composites.

Image 4.3: Dual hardened steel gears for reliable filament extrusion.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your QIDI Box.

- **Cleaning:** Periodically clean the interior of the QIDI Box to remove any filament dust or debris. Use a soft, dry cloth.
- **Desiccant Replacement:** Monitor the desiccant packs. Replace them when they indicate saturation to maintain effective filament drying.
- **PTFE Tube Inspection:** Check PTFE tubes for wear or kinks. Replace damaged tubes to ensure smooth filament feeding.
- **Gear Inspection:** Inspect the hardened steel gears for any signs of wear, especially when frequently using abrasive filaments.

6. TROUBLESHOOTING

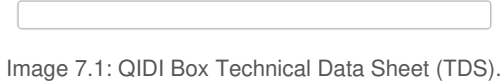
This section addresses common issues you might encounter with the QIDI Box.

Problem	Possible Cause	Solution
Filament not loading/unloading	Filament tangle, incorrect insertion, or motor issue.	Check for tangles on the spool. Ensure filament is correctly inserted into the PTFE tube and feeding mechanism. Power cycle the QIDI Box and printer.
Color switch errors during multi-color print	Filament not retracting/advancing correctly, sensor issue, or software glitch.	Verify filament path is clear. Check for any obstructions in the PTFE tubes. Ensure the QIDI Box firmware is up to date. Manually assist filament if necessary, then restart the print.

Problem	Possible Cause	Solution
Filament not drying effectively	Saturated desiccant, drying system malfunction, or lid not sealed.	Replace desiccant packs. Ensure the QIDI Box lid is properly closed and sealed. Check the real-time humidity display for abnormal readings.
NFC recognition failure	Non-official QIDI filament, damaged NFC tag, or sensor issue.	Ensure you are using official QIDI filaments with intact NFC tags. Try re-inserting the spool. If the issue persists, manually select filament type in the printer settings.

7. SPECIFICATIONS

Detailed technical specifications for the QIDI Box.



Feature	Specification
Product Dimensions	15 x 16 x 11.99 inches (381 x 406.4 x 304.5 mm)
Item Weight	14.52 pounds (6.6 kg)
Housing Material	ABS/PC
Number of Slots	4
Expandable Number	Up to 16 (with additional QIDI Box units)
Filament Channel Indicator Lights	4 individual indicator lights, one for each filament channel
Feed Gear	Hardened Steel Dual Gears
Filament Feeding Motors	4 x 42-stepper motors
Filament Diameter	1.75 mm
Spool Dimension	Width: 50 mm - 72 mm, Diameter: 195 mm - 202 mm
RFID Identification	Supported
Filament Monitoring	Supports tangle detection, clog detection, and run-out detection
Auto Filament Refill	Automatically switches to backup spool when filament runs out
Multi-color Printing	Supported - up to 16 colors (requires additional QIDI Box and accessories, sold separately)
Filament Drying	Supported and Support Simultaneous Drying and Printing
Maximum Drying Temperature	65°C

Feature	Specification
Filament Supported (Drying)	PLA, ABS, ASA, PET, PC, PVA (dried), BVOH (dried), PP, Nylon (PA), TPU (dried), ABS-CF/GF, PLA-CF/GF, PETG-CF/GF, PA6-CF, PET-CF/GF
Sealed Storage	Supported
Temperature and Humidity Detection	Supported, Real-time Temperature and Humidity can be Displayed on the Screen and QIDI Studio.
Desiccant Storage	Supported
Power Supply Voltage	100V / 220-240V AC, 50/60Hz (region-specific models available)
Max Rated Power	245W

8. SAFETY INFORMATION

The QIDI Box is engineered with safety in mind, incorporating a proactive thermal protection system.

- **Thermal Fuse:** Includes a 115°C thermal fuse for protection against overheating.
- **Smart Monitoring:** Dual thermal sensors provide real-time temperature monitoring.
- **Automatic Shutdown:** The system automatically cuts power when detecting abnormal temperatures to ensure safe operation.
- **Filament Detection:** Comprehensive filament run-out and tangle detection automatically pauses prints to prevent failures and potential damage.

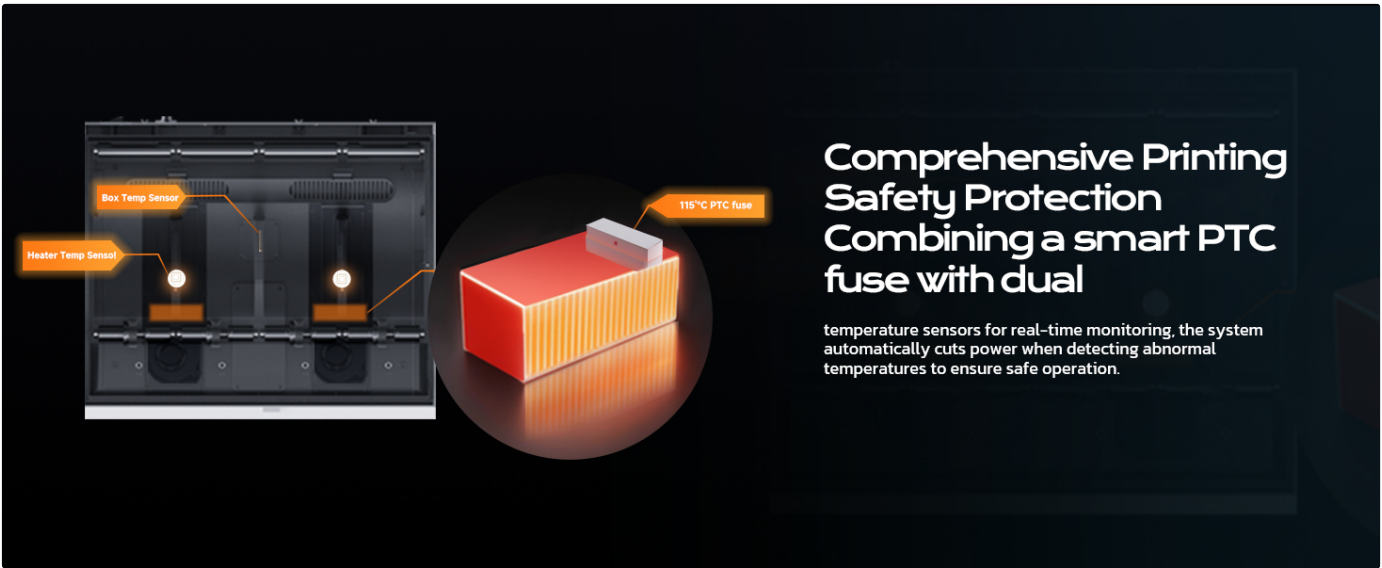


Image 8.1: Proactive Thermal Protection System components.

9. CUSTOMER SUPPORT

For technical assistance, warranty information, or to report issues, please contact R QIDI TECHNOLOGY customer support.

- **Manufacturer:** Zhejiang QIDI TECHNOLOGY CO.,LTD
- **Online Support:** Visit the official R QIDI TECHNOLOGY website for FAQs, drivers, and contact options.
- **Protection Plans:** Extended protection plans may be available for purchase. Refer to your retailer for details.

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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