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› [iVANKY FusionDock Max 2 Thunderbolt 5 Docking Station User Manual](#)

IVANKY FusionDock Max 2

iVANKY FusionDock Max 2 Thunderbolt 5 Docking Station User Manual

MODEL: FUSIONDOCK MAX 2

Your comprehensive guide to setup, operation, and maintenance.

1. Introduction

The iVANKY FusionDock Max 2 is a 23-in-1 Intel Certified Thunderbolt 5 docking station designed to expand the connectivity and display capabilities of your MacBook. It offers ultra-fast data transfer speeds, robust power delivery, and support for multiple high-resolution displays, all while maintaining optimal performance through its advanced cooling system. This manual provides detailed instructions to help you set up and utilize your docking station effectively.

2. Product Overview

The FusionDock Max 2 features a comprehensive array of ports on both its front and rear panels, designed to accommodate a wide range of peripherals and display configurations.



Figure 1: Front and rear view of the iVANKY FusionDock Max 2, highlighting all 23 ports and their functions.

Front Ports:

- **Power Button:** To power on/off the docking station.
- **SD/TF 4.0 Card Slots:** Supports up to 312MB/s data transfer for SD and MicroSD cards.
- **3.5mm Audio Jack:** For headphones or microphones.
- **USB-C 10Gbps (with 30W PD):** For high-speed data transfer and charging devices like smartphones or tablets.
- **2x USB-C 10Gbps:** For high-speed data transfer.
- **2x USB-A 10Gbps:** For high-speed data transfer.
- **2x USB-A 5Gbps:** For standard data transfer.
- **2x USB-A 2.0:** For connecting peripherals like keyboards and mice.

Rear Ports:

- **3.5mm Audio Jack:** For headphones or microphones.
- **USB-A 5Gbps:** For standard data transfer.
- **2.5GbE Ethernet Port:** For stable and fast wired network connection.
- **Laptop Upstream Port (140W PD):** Connects to your MacBook for data, video, and power delivery.
- **HDMI 2.0 Port:** Supports up to 4K@60Hz display output.
- **Optical Toslink Audio (S/PDIF):** For high-quality digital audio output.
- **3x Downstream Thunderbolt 5 Ports (80/120Gbps):** For ultra-high-speed data transfer and display output.
- **USB-C 10Gbps:** For high-speed data transfer.
- **DC-IN 240W:** Power input for the docking station.
- **Security Slot:** For physical security lock.

3. Setup Guide

Follow these steps to set up your iVANKY FusionDock Max 2 docking station:

1. **Connect Power:** Plug the provided 240W power adapter into the DC-IN port on the rear of the docking station, then connect it to a power outlet.
2. **Connect to MacBook:** Use the included dual USB-C cable. Split the magnetically articulated connectors into two USB-C connectors. Plug both connectors into the appropriate Thunderbolt ports on your

MacBook. Then, connect the other end of the cable to the 'Laptop' upstream port on the rear of the docking station.

3. **Power On:** On the first connection, the indicator light should turn on automatically. If not, press the power button on the front panel to power on the device.
4. **Connect Displays:** Connect your external monitors to the available HDMI 2.0 and Thunderbolt 5 ports on the rear of the docking station. Refer to the 'Display Configuration' section for specific compatibility based on your Mac model.
5. **Connect Peripherals:** Plug in your USB devices, Ethernet cable, SD/TF cards, and audio devices into the corresponding ports on the front and rear panels.

Video 1: Quick Start Guide for Mac Studio and Mac mini. This video demonstrates how to connect the FusionDock Max 2 to your Mac Studio or Mac mini using the provided dual USB-C cable.

Video 2: General Quick Start Guide. This video provides a general overview of the setup process for the iVANKY FusionDock Max 2.

4. Operating Instructions

Once the FusionDock Max 2 is connected and powered on, your MacBook should automatically recognize the connected displays and peripherals. You can manage display settings, audio output, and network connections through your macOS System Settings.

Reliable Performance:

The FusionDock Max 2 is engineered for stable and continuous operation, ensuring your connected devices and data transfers remain uninterrupted. Internal tests indicate consistent performance even under heavy workloads, preventing disconnections common with less robust docking solutions.

	 Mac Studio	 Mac mini M4 Pro	 Mac mini M4	 Mac mini M2	 Mac mini M2 Pro	 Mac mini M1
Dual 4K@60Hz	✓	✓	✓	✓	✓	✗
Triple 4K@60Hz	✓	✓	✓	✗	✗	✗
Dual 5K@60Hz	✓	✓	✓	✓	✓	✗
Dual 5K@60Hz + Single 4K@60Hz	✓	✓	✓	✗	✗	✗
Single 6K@60Hz	✓	✓	✓	✓	✓	✓
Dual 6K@60Hz	✓	✓	✓	✗	✓	✗
Dual 6K@60Hz + Single 4K@60Hz	✓	✓	✓	✗	✗	✗
Single 4K@120Hz / 144Hz	✓	✓	✓	✓	✓	✓
Dual 4K@120Hz / 144Hz	✓	✓	✗	✗	✗	✗
Single 5120 x 1440@240Hz	✓	✓	✓	✓	✓	✓
Dual 5120 x 1440@144Hz	✓	✓	✗	✗	✗	✗

Figure 2: The FusionDock Max 2 is designed for stable and efficient operation, minimizing disconnections.

Audio Management:

Utilize the 3.5mm audio jacks or the Optical Toslink (S/PDIF) port for your audio needs. Connect headphones, speakers, or other audio interfaces to enhance your sound experience.

	 M1 / M2 / M3 MacBook	 M1 / M2 / M3 Pro, M4 base MacBook	 M4 Pro / M5 base MacBook	 M4 Max MacBook	 M1 / M2 / M3 Max MacBook	 Intel Series Mac	 Windows and Chrome Laptop
Single 4K@60Hz	✓	✓	✓	✓	✓	✗	✗
Dual 4K@60Hz	✗	✓	✓	✓	✓	✗	✗
Triple 4K@60Hz	✗	✗	✗	✓	✓	✗	✗
Single 4K@120Hz / 144Hz	✓	✓	✓	✓	✓	✗	✗
Dual 4K@120Hz / 144Hz	✗	✗	✓	✓	✗	✗	✗

Swipe back for key compatibility details.



Figure 3: The docking station serves as a central hub for all your audio peripherals.

5. Display Configuration

The iVANKY FusionDock Max 2 supports various display configurations depending on your MacBook's chip. It is crucial to understand your Mac's capabilities to achieve the desired multi-display setup.

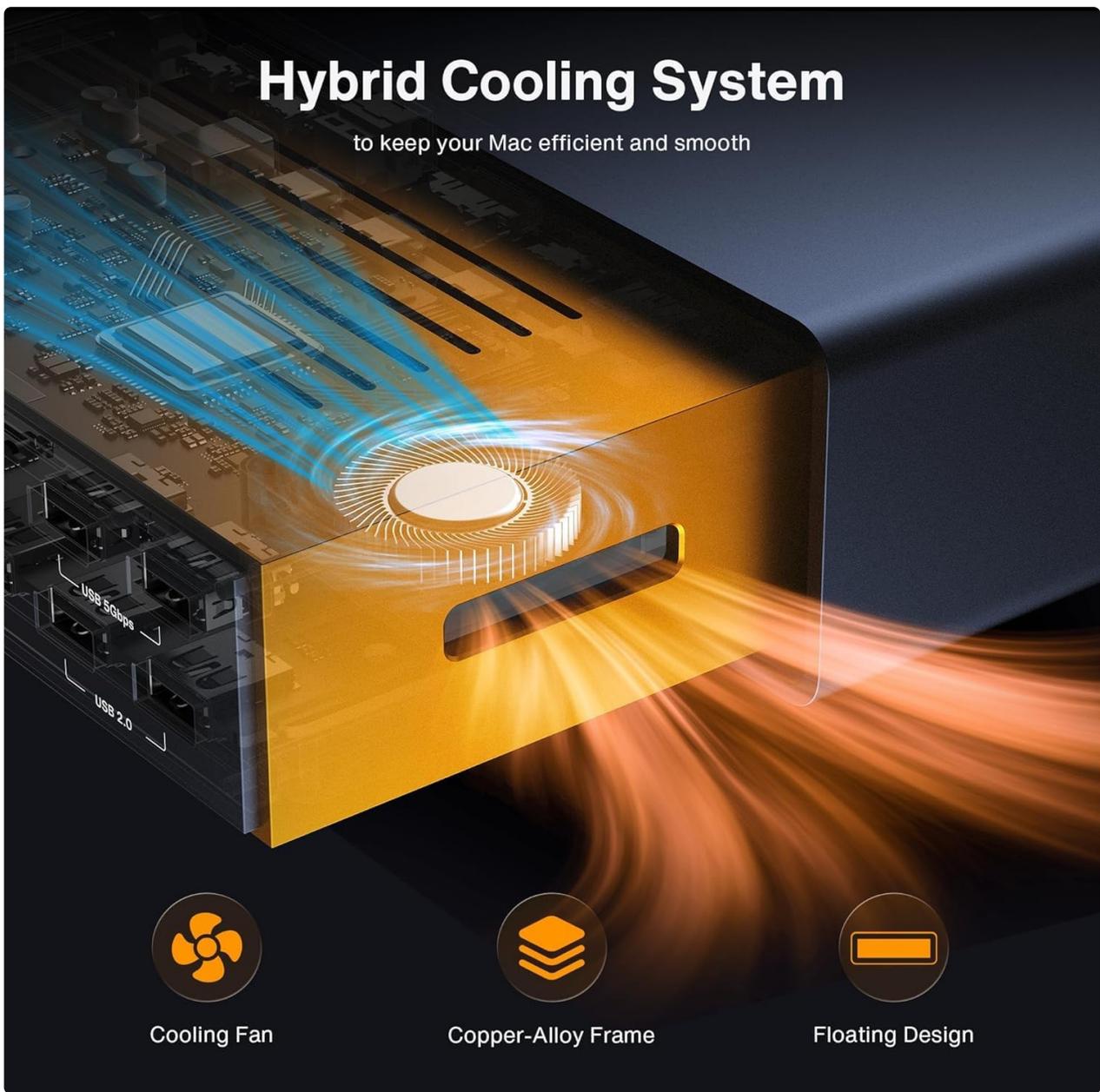


Figure 4: Example of a triple display setup with the FusionDock Max 2.

Compatibility by Mac Chip:

- **Mac series with M1/M2/M3 base chips:** Supports a single 6K@60Hz extended display.
- **Mac series with M4/M5 base chips or M1/M2/M3/M4 Pro chips:** Supports dual 6K@60Hz displays.
- **Mac series with M1/M2/M3/M4 Max chips:** Supports triple extended displays (Dual 6K@60Hz + Single 4K@60Hz).

For triple display output, you must use the single HDMI port and two Thunderbolt ports. The FusionDock Max 2 is **not compatible** with any Windows or Chrome laptops, and it is restricted to only one Mac, not supporting switching between multiple Macs.



Figure 5: Detailed compatibility chart for various Mac models and their supported display configurations.

Video 3: The Only Triple Display Thunderbolt 5 Dock. This video highlights the unique triple display capabilities of the FusionDock Max 2.

6. Cooling System

The FusionDock Max 2 incorporates a hybrid cooling system to ensure stable performance during extended use and under heavy loads. This system includes:

- **Multi-layer Heat Dissipation Design:** An internal copper plate efficiently dissipates heat.
- **Elevated Structure:** Promotes optimal airflow around the device.
- **Built-in Fan:** Provides continuous active cooling to maintain ideal operating temperatures.

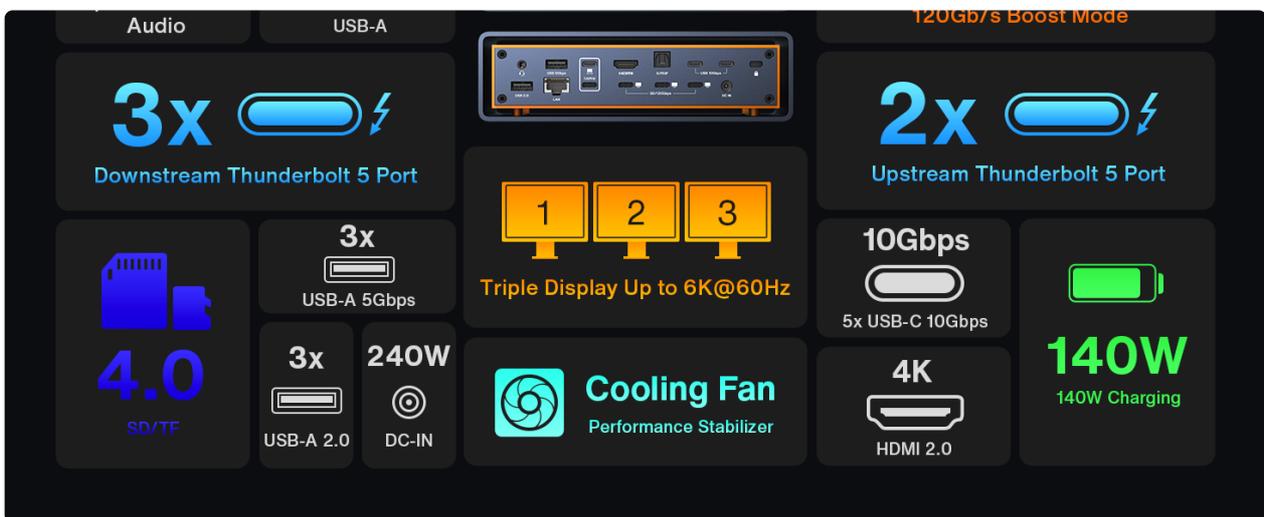


Figure 6: Diagram illustrating the internal hybrid cooling system of the FusionDock Max 2.

Noise Levels:

Despite the active cooling, the fan operates quietly, typically between 42-45dB, comparable to a quiet library environment, ensuring minimal distraction.

Charging Master for your Apple Devices



Thunderbolt 5 Upstream Port
140W Max

30W PD

26 Min
for 16" MacBook Pro via
Thunderbolt 5 Upstream Port

1H28 Min
for 16" MacBook Pro via
Thunderbolt 5 Upstream Port

Note: Ensure your laptop supports the Power Delivery 3.1 protocol to achieve 140W charging.

Figure 7: Noise level comparison for the FusionDock Max 2's cooling fan.

7. Data Transfer & Charging

Experience unparalleled speed and efficient power delivery with the FusionDock Max 2.

Ultra-Fast Data Transfer:

Equipped with 3x 120Gbps Thunderbolt 5 ports, the docking station allows for rapid upstream and downstream data transfer. Additionally, 10 USB ports support up to 10Gbps data transfer, enabling connection of numerous external devices without performance degradation.

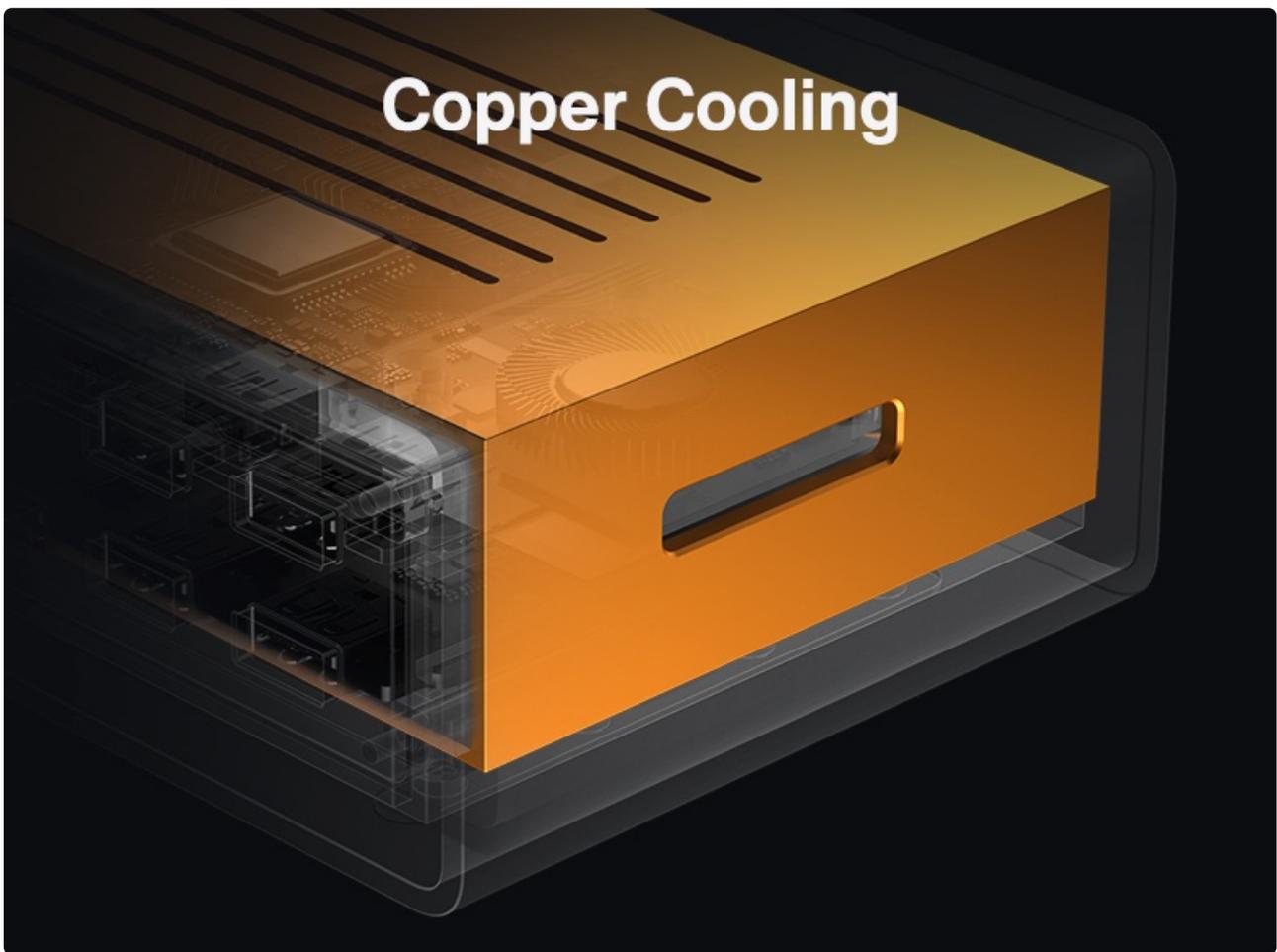


Figure 8: Thunderbolt 5 provides ultra-fast data transfer speeds up to 120Gbps.

High-Speed Charging:

The upstream Thunderbolt 5 port provides up to 140W Power Delivery to your MacBook, ensuring fast charging. A dedicated USB-C port on the front offers 30W Power Delivery for charging other devices like smartphones or tablets.

Floating Design



Figure 9: The FusionDock Max 2 supports 140W Power Delivery for your MacBook and 30W for other devices.

8. Compatibility

The iVANKY FusionDock Max 2 is specifically designed for Apple MacBooks with M1, M2, M3, M4, and M5 series chips (Pro/Max variants for multi-display support). It is **not compatible** with Windows or Chrome OS laptops, nor with Intel-based MacBooks.

For optimal performance and display configurations, ensure your MacBook model aligns with the specifications outlined in the 'Display Configuration' section.

9. Maintenance

To ensure the longevity and optimal performance of your iVANKY FusionDock Max 2, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry, lint-free cloth to clean the exterior of the docking station. Avoid using liquid cleaners or aerosols, as they may damage the device.
- **Ventilation:** Ensure the docking station's vents are not obstructed to allow for proper airflow and heat dissipation. Do not place the device on soft surfaces that may block the vents.
- **Cable Management:** Keep cables organized and free from kinks or excessive bending to prevent damage to the cables and ports.
- **Storage:** When not in use for extended periods, store the docking station in a cool, dry place away from direct sunlight and extreme temperatures.

10. Troubleshooting

If you encounter issues with your FusionDock Max 2, refer to the following common troubleshooting steps:

- **No Power:** Ensure the power adapter is securely connected to both the docking station and a working power outlet. Press the power button on the front panel.
- **Display Not Working:**
 - Verify that the display cables are securely connected to both the docking station and the monitor.
 - Check your MacBook's display settings to ensure the external display is detected and configured correctly.
 - Confirm your Mac's chip supports the desired number and resolution of external displays (refer to 'Display Configuration' section).
 - Try restarting your MacBook and the docking station.
- **Peripherals Not Recognized:**
 - Ensure the peripheral is properly connected to the correct USB port.
 - Try connecting the peripheral to a different port on the docking station or directly to your MacBook to isolate the issue.
 - Update your MacBook's operating system to the latest version.
- **Slow Data Transfer:**
 - Ensure you are using the appropriate high-speed ports (Thunderbolt 5, USB 10Gbps) for your devices.
 - Check the quality of your cables; using certified high-speed cables is recommended.
- **Overheating:**
 - Ensure the docking station has adequate ventilation and is not covered.
 - Reduce the number of high-power devices connected if the issue persists.

Video 4: Port Features Overview. This video provides a visual guide to the various ports on the iVANKY FusionDock Max 2, which can be helpful for troubleshooting connection issues.

11. Specifications

Feature	Detail
Model	FusionDock Max 2
Connectivity	23-in-1
Upstream Ports	1x Thunderbolt 5 (140W PD to Laptop)
Downstream Thunderbolt 5 Ports	3x (80/120Gbps)
USB-C Ports	3x USB-C 10Gbps (1x with 30W PD)
USB-A Ports	3x USB-A 10Gbps, 3x USB-A 5Gbps, 2x USB-A 2.0
Display Output	1x HDMI 2.0 (up to 4K@60Hz), 3x Thunderbolt 5 (up to 6K@60Hz)
Ethernet	2.5GbE RJ45
Card Reader	SD/TF 4.0 (up to 312MB/s)

Audio	2x 3.5mm Audio Jack, 1x Optical Toslink (S/PDIF)
Power Delivery	140W to host, 30W from front USB-C
Cooling System	Hybrid (Copper Plate, Elevated Structure, Built-in Fan)
Compatibility	MacBook series (2020 and after) with Apple Silicon (M1/M2/M3/M4/M5 Base, Pro, Max chips). Not compatible with Windows/Chrome OS/Intel Macs.
Dimensions	9.65 x 7.36 x 4.92 inches
Item Weight	6.12 pounds

12. Warranty and Support

The iVANKY FusionDock Max 2 MacBook Pro Docking Station comes with a **24-month warranty**. For any issues or inquiries, please contact iVANKY customer service. They are committed to providing responsive support and will assist with replacements if necessary.

For further assistance, please visit the official iVANKY support website or contact their customer service team directly.