

Inateck KU8212

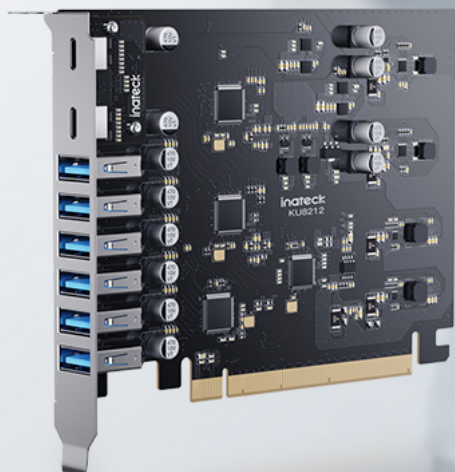
Inateck Power Supply USB PCIe Card KU8212 Instruction Manual

Model: KU8212

1. PRODUCT OVERVIEW

The Inateck KU8212 is a high-performance USB PCIe expansion card designed to provide additional USB connectivity and charging capabilities to your computer. It features 8 USB ports, including 2 USB-C ports with Power Delivery (PD) and 6 USB-A ports with BC 1.2 charging protocol. This card offers a total bandwidth of 16 Gbps, with individual ports capable of up to 10 Gbps data transfer when used solely.

inateck



PCIe to
USB 3.2 Gen2
Card

The card is powered directly by the PCIe interface, eliminating the need for an external power supply. It incorporates overcurrent and ESD protection for enhanced device safety.

2. PACKAGE CONTENTS

Please verify that all items are present in the package:

- Inateck KU8212 USB PCIe Card
- Instruction Manual
- Mounting Screws (typically included for PCIe card installation)



Video 1: Overview of the Inateck Power Supply USB PCIe Card KU8212, demonstrating its features and components.

3. SYSTEM REQUIREMENTS

Ensure your system meets the following requirements for proper functionality:

- **Compatible Devices:** Personal Computers, Laptops, Servers with an available PCIe slot.
- **Operating System:** Windows 7/8/10/11, Linux, Mac OS 10.8.2 and later.
- **PCIe Slot:** Compatible with PCIe 2.0, 3.0, and 4.0 slots.
- **Power:** The card is powered by the PCIe slot. For optimal performance, especially when utilizing the full 100W charging power (if applicable to your specific setup), ensure your chassis power supply can handle the additional power consumption.

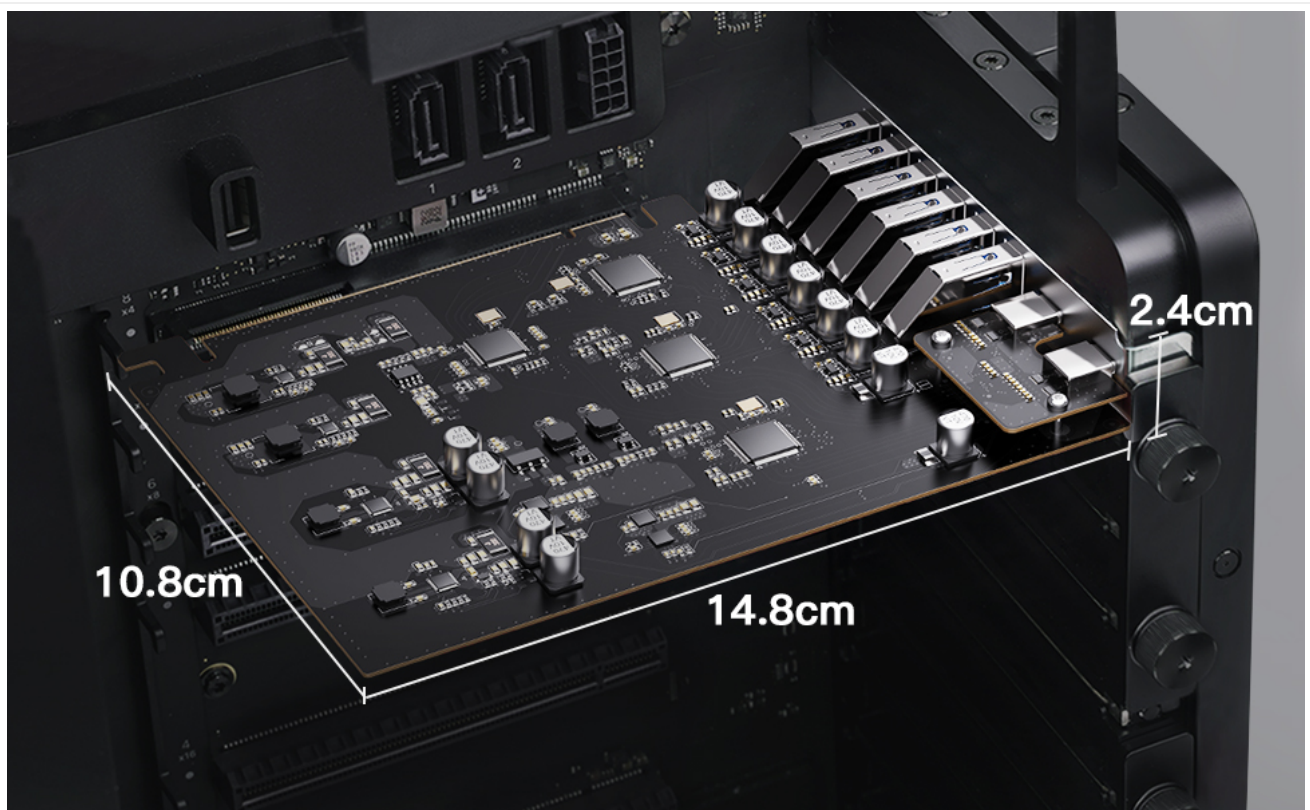


Image 2: Illustration of compatible operating systems: Windows 7/8/10/11, Mac OS 10.8.2 and later, and Linux.



Image 3: Details on PCIe compatibility (2.0, 3.0, 4.0) and important notes regarding bandwidth allocation and power supply considerations.

4. INSTALLATION GUIDE

4.1 Safety Precautions

- Always power off your computer and unplug it from the power source before opening the case or installing any internal components.
- Discharge any static electricity by touching a grounded metal object (e.g., the computer chassis) before handling the card.
- Handle the PCIe card by its edges to avoid touching the gold connectors or components.

4.2 Installation Steps

1. **Prepare Your Computer:** Power down your computer completely and disconnect all cables. Open the computer case.
2. **Locate an Available PCIe Slot:** Identify an empty PCIe x16, x8, or x4 slot on your motherboard. The card is designed to fit various slot sizes.
3. **Remove Slot Cover:** Remove the metal slot cover corresponding to the chosen PCIe slot on the back of your computer case.
4. **Insert the PCIe Card:** Carefully align the gold connectors of the Inateck KU8212 card with the chosen PCIe slot. Apply even, firm pressure to push the card straight down into the slot until it is fully seated. Ensure the retention clip (if present on your motherboard) locks the card in place.
5. **Secure the Card:** Use a screw to secure the metal bracket of the PCIe card to the computer case.
6. **Close Case and Reconnect:** Close your computer case, reconnect all cables, and power on your computer.
7. **Driver Installation (if necessary):** For most modern operating systems (Windows 10/11, recent Linux distributions, Mac OS), drivers should install automatically. If the card is not recognized, check the Inateck website for specific driver downloads for your operating system.



Dual Protection: Overcurrent Protection/ESD Protection

The new circuit design and overcurrent-protection chip effectively prevent abrupt changes or abnormalities in the output of the PC power supply, avoiding potential damages to the connected devices caused by overload. Having passed the IEC61000-4-2 Ed.2 ESD test, this PCIe card can effectively prevent long-term damage to electronic components from static electricity.

Image 4: The Inateck KU8212 PCIe card correctly installed within a computer's PCIe slot.

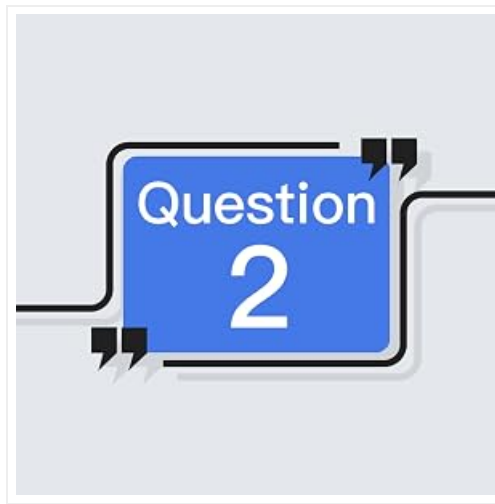


Image 5: Detail showing the elevated design of the USB-C ports, preventing obstruction by chassis baffles.

5. OPERATION

5.1 Data Transfer

The Inateck KU8212 card supports USB 3.2 Gen 2 standard, offering high-speed data transfer. Each port can achieve up to 10 Gbps transfer rate when used individually. The 8 USB ports share a total bandwidth of 16 Gbps. For optimal performance, avoid simultaneously transferring large files on all ports if maximum speed is required for a specific device.

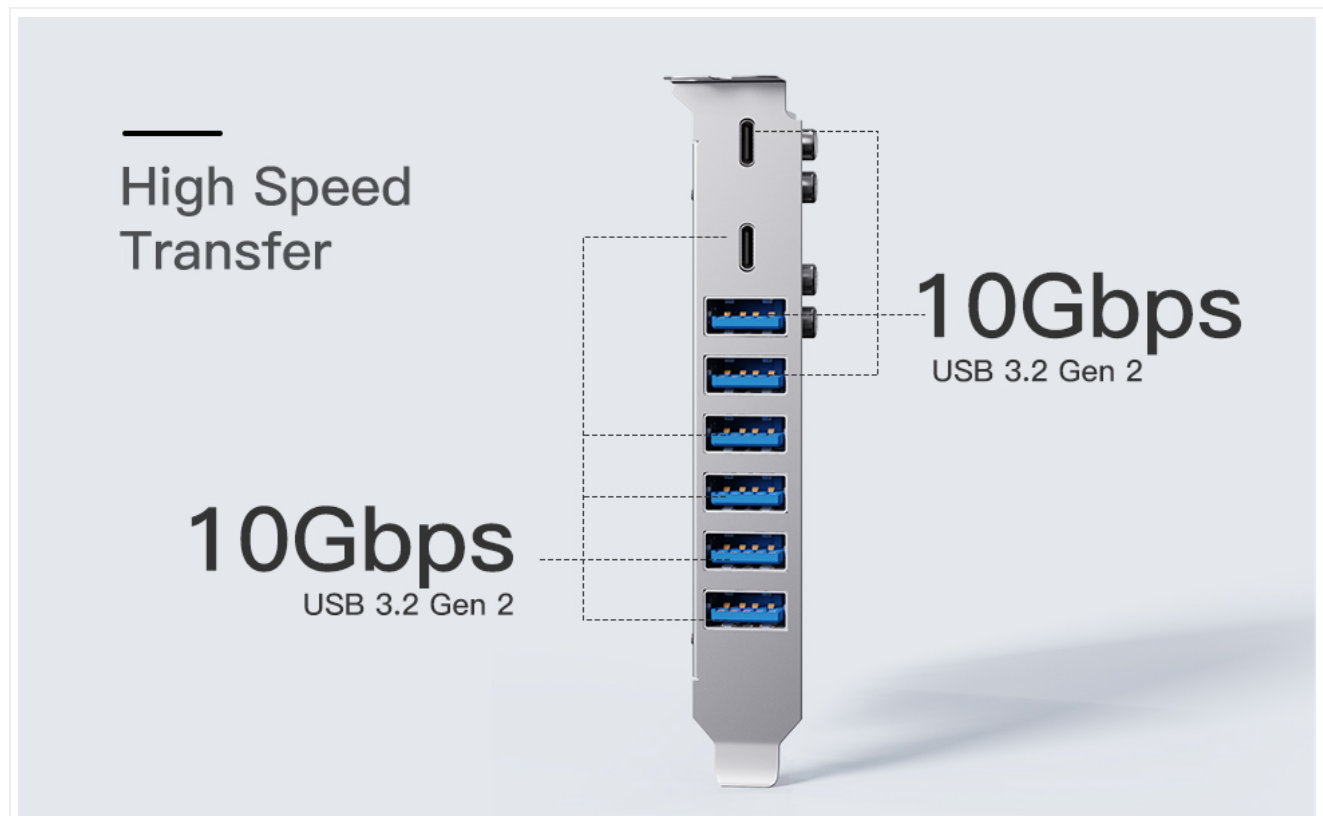


Image 6: Diagram illustrating the 10 Gbps data transfer rate per port and shared 16 Gbps bandwidth for USB 3.2 Gen 2.

5.2 Charging Capabilities

The card provides robust charging capabilities:

- **USB-C Ports (x2):** Support Power Delivery (PD) protocol, providing up to 30W charging power per port. Suitable for recharging phones, tablets, and even some laptops.

- **USB-A Ports (x6):** Support BC 1.2 protocol, providing up to 7.5W charging power per port. Ideal for charging smartphones and other standard USB devices.

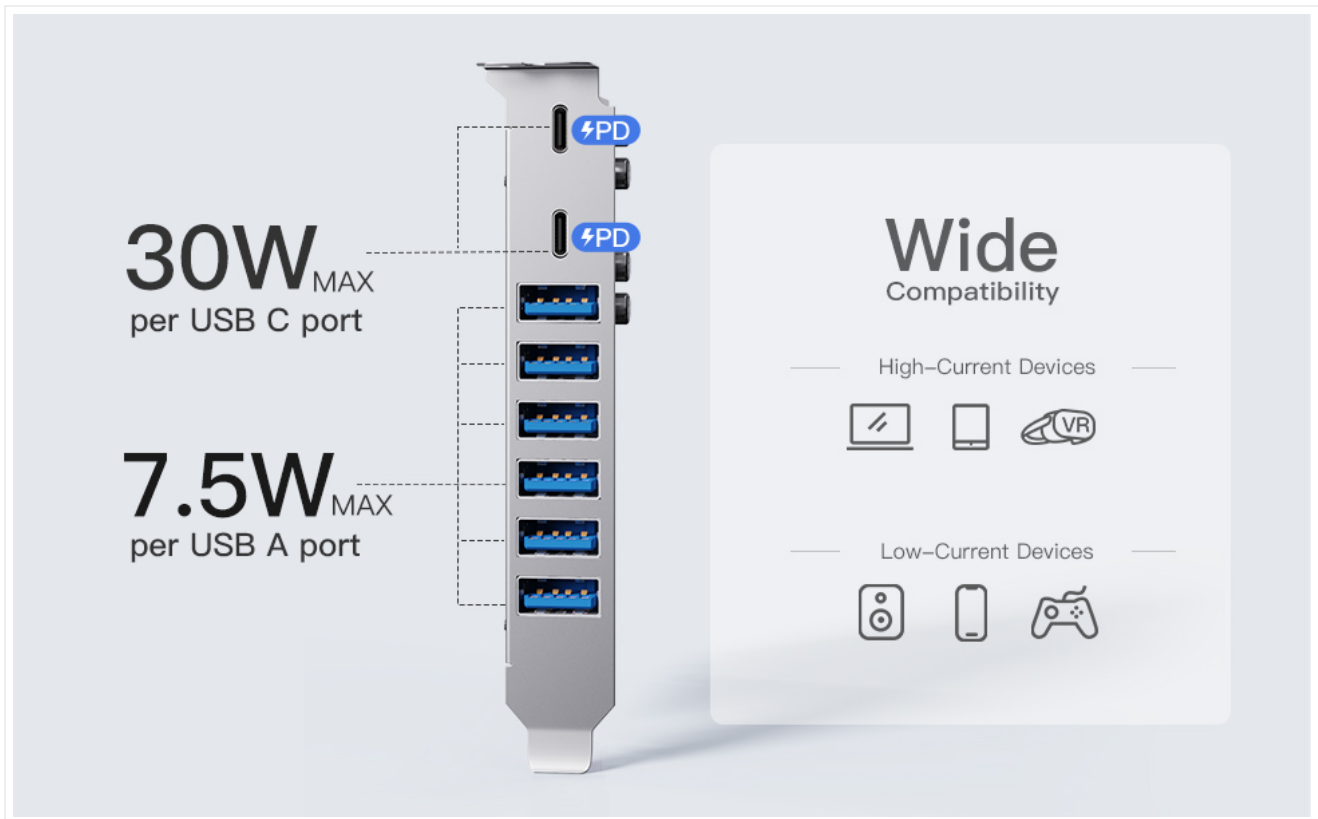


Image 7: Visual representation of charging capabilities: 30W Max per USB-C port and 7.5W Max per USB-A port.

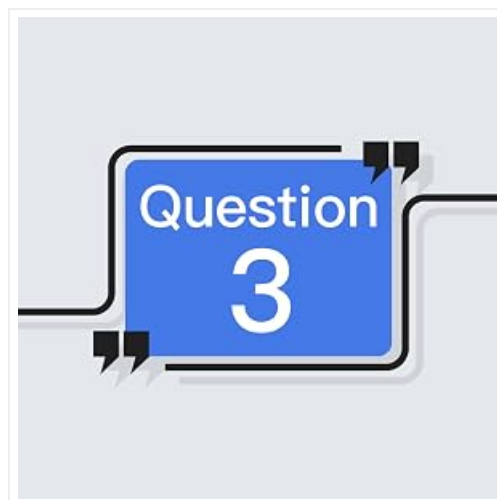


Image 8: Demonstrates wide compatibility with both high-current devices (laptops, tablets, VR headsets) and low-current devices (speakers, phones, game controllers).

6. MAINTENANCE

To ensure the longevity and optimal performance of your Inateck KU8212 PCIe card, follow these maintenance guidelines:

- **Keep Clean:** Periodically open your computer case and gently clean any dust accumulation on the card using compressed air. Ensure the computer is powered off and unplugged before cleaning.
- **Avoid Physical Damage:** Handle the card with care. Avoid bending or dropping it.
- **Environmental Conditions:** Operate the card within standard computer operating temperatures and humidity levels.

7. TROUBLESHOOTING

7.1 Common Issues and Solutions

- **Card Not Detected:**

- Ensure the card is fully seated in the PCIe slot.
- Try a different PCIe slot if available.
- Verify that your operating system is compatible (Windows 7/8/10/11, Linux, Mac OS 10.8.2+).
- Check if drivers are installed. For older OS versions, manual driver installation might be required from the Inateck website.

- **Slow Data Transfer Speeds:**

- Confirm that the connected device also supports USB 3.2 Gen 2 (10 Gbps).
- Ensure the PCIe slot used is compatible with PCIe 3.0 or 4.0 for optimal bandwidth. If the motherboard's allocated bandwidth/lane number for the PCIe interface is insufficient (e.g., PCIe 2.0 with 2X lanes instead of 4X for USB 3.2 Gen 2), speeds may be affected.
- Avoid simultaneous heavy data transfers on multiple ports if a single device requires maximum bandwidth.
- Refer to your motherboard's manual for information on PCIe lane allocation.

- **Charging Issues:**

- Ensure the device being charged supports the respective USB-C PD or USB-A BC 1.2 protocols.
- Check the charging cable for damage and ensure it supports the required power delivery.
- For high-power charging, ensure your computer's power supply unit (PSU) has sufficient wattage to support the card and connected devices.

7.2 Overcurrent and ESD Protection

The Inateck KU8212 PCIe card is equipped with advanced circuit design and an overcurrent-protection chip to prevent damage from sudden power fluctuations or overloads. It has also passed the IEC61000-4-2 Ed.2 ESD test, providing protection against electrostatic discharge, safeguarding both the card and connected devices.

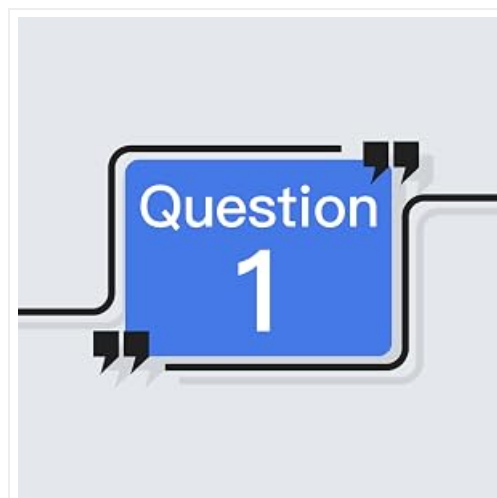


Image 9: Illustration of the dual protection features, including overcurrent and ESD protection, integrated into the card's design.

8. SPECIFICATIONS

Feature	Detail
Brand	Inateck
Model Number	KU8212
Hardware Interface	PCI Express x16
USB Ports	8 (2x USB-C, 6x USB-A)
USB Standard	USB 3.2 Gen 2
Max Data Transfer Rate	10 Gbps (per port, when used solely); 16 Gbps (total shared bandwidth)
USB-C Charging	Up to 30W per port (Power Delivery)
USB-A Charging	Up to 7.5W per port (BC 1.2)
Product Dimensions	5.83"L x 4.25"W x 0.94"H
Item Weight	0.26 Pounds
Compatible Operating Systems	Windows 7/8/10/11, Linux, Mac OS 10.8.2 and later
Protection Features	Overcurrent Protection, ESD Protection (IEC61000-4-2 Ed.2)

9. WARRANTY AND SUPPORT

Inateck products are designed for reliability and performance. For warranty information or technical support, please refer to the official Inateck website or contact their customer service directly. Keep your purchase receipt for warranty claims.

Contact Information: Please visit www.inateck.com for the latest support resources and contact details.