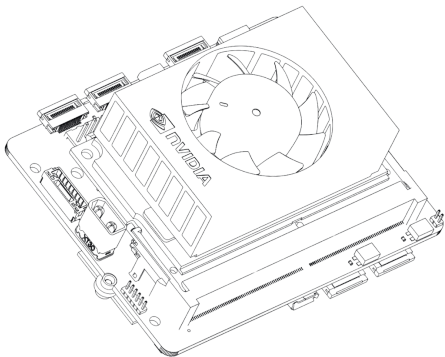


# JETCORE

Carrier Board



## Quick User Guide

## DISCLAIMER

**Safety:** The JetCore carrier board is NOT a toy and is not suitable for children under the age of 16. Adults should keep the product out of the reach of children and exercise caution when operating this product in the presence of children. Always follow electrical and safety guidelines when working with electronic hardware. Incorrect installation or use could result in damage to the JetCore carrier board, connected devices, or pose a risk of injury.

**Liability:** EXCEPT AS EXPRESSLY PROVIDED IN VECROS AFTER SALES SERVICE POLICIES AVAILABLE AT [www.vecros.com](http://www.vecros.com), THE PRODUCT, PRODUCT ACCESSORIES, AND ALL MATERIALS, AND CONTENT AVAILABLE THROUGH THE PRODUCT ARE PROVIDED "AS IS" AND ON AN "AS AVAILABLE" BASIS, WITHOUT WARRANTY OR CONDITION OF ANY KIND, EITHER EXPRESS OR IMPLIED. VECROS DISCLAIMS ALL WARRANTIES OF ANY KIND, EXCEPT AS EXPRESSLY PROVIDED IN VECROS AFTER-SALES SERVICE POLICIES, WHETHER EXPRESS OR IMPLIED, RELATING TO THE PRODUCT, INCLUDING: (A) ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, QUIET ENJOYMENT, OR NONINFRINGEMENT AND (B) ANY WARRANTY ARISING OUT OF COURSE OF DEALING, USAGE, OR TRADE. VECROS DOES NOT WARRANT, EXCEPT AS EXPRESSLY PROVIDED IN VECROS WARRANTY, THAT THE PRODUCT WILL BE UNINTERRUPTED, SECURE OR FREE OF ERRORS, VIRUSES, OR OTHER HARMFUL COMPONENTS, AND DOES NOT WARRANT THAT ANY OF THOSE ISSUES WILL BE CORRECTED. NO ADVICE OR INFORMATION, WHETHER ORAL OR WRITTEN, OBTAINED BY YOU FROM THE PRODUCT, PRODUCT ACCESSORIES, OR ANY MATERIALS WILL CREATE ANY WARRANTY REGARDING VECROS OR THE PRODUCT THAT IS NOT EXPRESSLY STATED IN THESE TERMS. VECROS accepts no liability for any direct or indirect damages, losses, or expenses caused by the use or misuse of this product, including but not limited to loss of data, downtime, or personal injury.

**Usage:** This product incorporates various advanced technologies and is intended for use by or under the supervision of individuals with adequate knowledge in electronics and system integration. Mishandling can lead to device malfunction or personal harm. Inappropriate use of the product could result in personal injury or property damage.

**Warranty:** The warranty does not cover damage due to improper installation, misuse, or operation outside of the specified conditions. See the full Warranty Information document available at [docs.vecros.com](https://docs.vecros.com) for details. Refer to the last page of this document for more information.

**Compatibility:** This carrier board is designed for use with specific modules or within certain system configurations. Ensure your setup matches the supported configurations listed in the User Manual. Use with incompatible hardware may lead to failure or damage.

**Environmental Impact:** Dispose of this product according to local environmental regulations. Do not discard with household waste.

**Modifications:** Any modifications to the hardware or software, unless explicitly allowed by VECROS, will void the warranty and might result in unsafe operation.

**Note:** By using this product, you hereby signify that you have read this disclaimer carefully and that you understand and agree to abide by the terms and conditions herein. YOU ASSUME ALL RISKS FOR ANY DAMAGE THAT MAY RESULT FROM YOUR USE OF OR ACCESS TO THE PRODUCT, PRODUCT ACCESSORIES, AND ANY MATERIALS. YOU UNDERSTAND AND AGREE THAT YOU USE THE PRODUCT AT YOUR OWN DISCRETION AND RISK, AND THAT YOU ARE SOLELY RESPONSIBLE FOR ANY PERSONAL INJURY, DEATH, DAMAGE TO YOUR PROPERTY (INCLUDING YOUR COMPUTER SYSTEM OR MOBILE DEVICE OR VECROS HARDWARE USED IN CONNECTION WITH THE PRODUCT) OR THIRD-PARTY PROPERTY, OR THE LOSS OF DATA THAT RESULTS FROM YOUR USE OF OR INABILITY TO USE THE PRODUCT. SOME JURISDICTIONS MAY PROHIBIT A DISCLAIMER OF WARRANTIES AND YOU MAY HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

The information in this document is essential for the safe and effective use of your JetCore product. Failure to read and follow the instructions and guidelines provided may result in improper operation, damage to your JetCore product or connected devices, or unintended consequences during its use. Always handle the product with care and ensure proper setup and configuration to avoid potential issues.

## Warnings

- Handle the JetCore carrier board with care in environments with high humidity or temperature extremes, as these conditions might affect performance or cause damage.
- Ensure proper ventilation around the JetCore carrier board to prevent overheating. Maintain at least 10 mm of clearance around the board for adequate airflow.
- DO NOT touch the connectors or any exposed electronic components. Use only recommended cleaning methods if cleaning is necessary.
- To avoid electrical shock, DO NOT disassemble the JetCore carrier board. Contact VECROS if any part needs to be replaced.
- The JetCore carrier board is designed to be used with specific modules. Using incompatible hardware can lead to malfunction or damage.
- Liquid damage is not covered under warranty.
- DO NOT drop the JetCore carrier board.
- The JetCore Carrier Board Quick Start Guide contains important information. Make sure to read it before using for the first time and keep for reference.

**Support:** For assistance, please refer to the contact information provided in this User Guide or visit [discuss.vecros.com](https://discuss.vecros.com). Technical support is available for issues related to the proper use of this product as described in our documentation. Refer to Q&A on Discuss for additional insights.

## Maintenance & Care:

- **Cleaning:** Use only a dry, soft cloth to clean the board. Avoid liquids or chemicals.
- **Handling:** Always handle by the edges to prevent damage to components.
- **Storage:** Store in a cool, dry place, away from direct sunlight and moisture.
- **Inspection:** Regularly check for physical damage or loose connections.
- **Dust:** Keep the board dust-free, particularly around connectors and vents.

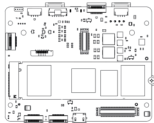
## Introduction

The JetCore Carrier Board by VECROS is engineered to unlock the full potential of the NVIDIA Jetson platform. This high-performance carrier board is designed for seamless integration with Jetson Nano, Xavier and Orin modules, providing a robust platform for AI-driven applications in robotics, drones, edge computing, and industrial automation.

The JetCore carrier board boasts an array of features including multiple USB 2.0 ports, HDMI, Gigabit Ethernet, CSI camera interfaces, and PCIe slots for versatile connectivity. Its rugged design makes it suitable for challenging environments, ensuring reliability and performance where it matters. Whether you're developing complex AI systems or deploying edge computing solutions, JetCore is built to deliver efficiency, scalability, and innovation.

## Box Includes:

Jetcore Carrier Board x 1



Power Connector Cable x 1



M.2 Mounting Screw x 1



## Hardware Setup for JetCore Carrier Board

### Before You Begin

- Ensure you have a static-free work environment to avoid damaging the electronic components.
- Gather all necessary tools and components: JetCore carrier board, power cable, compatible Jetson module (8GB or 16GB), any required cables for peripherals (e.g., Micro HDMI, FFC cables for USB), and appropriate storage (like an M.2 SSD if needed).

## Step-by-Step Setup:

### 1. Unboxing and Inspection:

- o Carefully unbox the JetCore carrier board and inspect it for any visible damage. If there's any, contact VECROS support immediately.

### 2. Module Installation:

- Locate the module slot on the carrier board.
- Align the Jetson module correctly with the connectors on the carrier board.
- Gently press down until it clicks or is fully seated. Ensure it's secure but do not force it.

### 3. Connecting Power:

- o Use the provided power cable to connect the carrier board to a power supply that outputs between 12-24 VDC. If using a power adapter, ensure it has a 2.5A rating.
- o Make sure the power supply can provide enough current for your setup, especially if you're using power-hungry peripherals.

### 4. Connecting Peripherals:

- o **Micro HDMI:** Connect a Micro HDMI cable to the Micro HDMI port for video output if needed.
- o **USB Devices:** Use FFC cables to connect USB devices to the available USB 2.0 FFC ports. The board has 7x USB 2.0 FFC connectors for various peripherals.
- o **Ethernet:** If networking is required, connect an Ethernet cable to the Gigabit Ethernet port.
- o **Storage:** If you're using an M.2 SSD, insert it into the M.2 Key-M SSD slot. Ensure proper orientation and secure it with screws if provided.

### 5. Powering On:

- o After ensuring all connections are secure, power on the system by connecting the power cable to the power source.
- o Look for LED indicators or boot screens to confirm the system is initializing properly.

### 6. Initial Configuration:

- o Refer to the user documentation for initial software setup, including installing drivers or configuring the Jetson module if necessary.

### 7. Testing:

- o Once powered on, test all connected peripherals to ensure they are recognized by the system. Check for any error messages or LED indicators that might indicate issues.

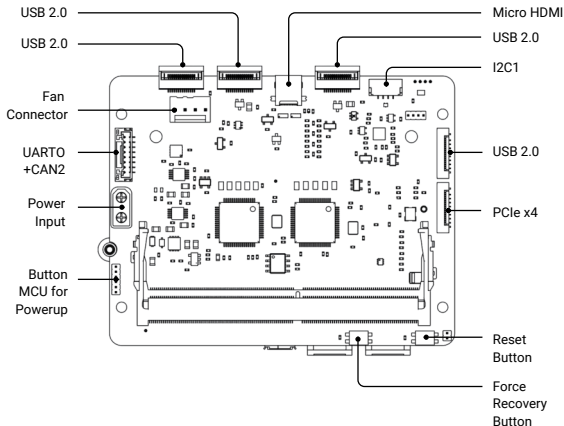
**Note:**

- Always follow the specific instructions in the user documentation for any unique setup requirements or warnings specific to the JetCore carrier board.
- If you encounter any issues, refer to the troubleshooting section in the user manual or contact VECROS support.

## Technical Specifications

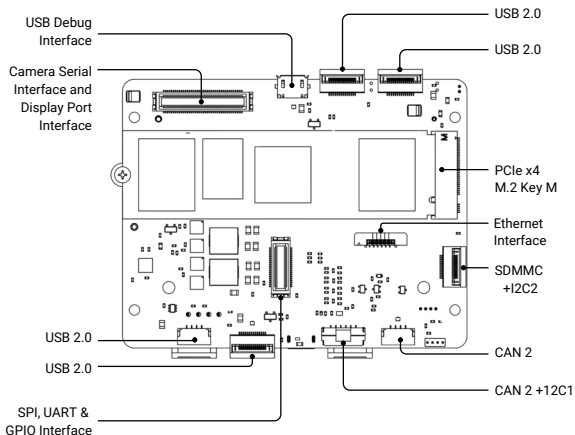
Feature	Details
Supported Modules	NVIDIA Jetson Nano, Xavier & Orin 8GB / 16GB
Graphics Interfaces	1 x Micro HDMI 2.0
USB Ports	7 x USB2.0 (FFC type) 1 x USB2.0 (JST-GH)
Additional USB	1 x USB 2.0 for debugging (Micro USB)
Ethernet	1 x 8 pin connector
Power Supply	12v to 24v
Extension Sockets	1 x MicroSD 1 x PCIe x4
Mass Storage	1 x M.2 Key-M SSD slot for PCIe x4 2280 NVMe SSD
Operating Conditions	-40°C to 85°C
Dimensions	86mm x 67mm x 18mm
IMU	BMI088
Weight	40 grams

## Jetcore Top View





## Jetcore Bottom View



## Warranty Information

**Warranty Coverage:** The JetCore board is covered under a 12-month warranty from the date of purchase. This warranty covers defects in material or workmanship under normal use. It includes the JetCore carrier board itself and its associated components.

### Exclusions:

The warranty does not cover:

- Damage caused by misuse, abuse, or unauthorized modifications.
- Damage resulting from improper installation, handling, or maintenance.
- Accessories or consumable parts, including cables, connectors, or external devices not manufactured by VECROS.

### Warranty Claim Process:

To file a warranty claim, please follow these steps:

- Contact our support team at [support@vecros.com](mailto:support@vecros.com).
- Provide your proof of purchase (e.g., invoice, receipt) and the serial number of the product.
- If necessary, send the product back to us for inspection. Instructions will be provided by our support team.

### Repair or Replacement:

- If the JetCore is found to be defective under warranty, it will be repaired or replaced at VECROS' discretion.
- The estimated turnaround time for repairs or replacements is 7 business days.

### Conditions for Warranty:

- The JetCore warranty is valid only if the device is used as per the user manual and properly maintained. For full warranty terms, visit <https://docs.vecros.com/R&D/Jetcore/warranty/>
- Any modifications or tampering with the product will void the warranty.

**Thank you for choosing JetCore! We are committed to providing you with the best experience possible. If you have any questions or need assistance, our support team is here to help.**



#### **Need Help?**

- Ask questions, get support, and connect with the community.
- Find step-by-step setup guides and troubleshooting solutions.
- Get hardware and software integration tips.
- Explore use cases and best practices for AI and robotics projects.
- Stay updated with firmware updates and new features.
- Access technical documentation and developer resources.
- Join discussions on AI, robotics, and embedded systems.
- Scan the QR code to visit [discuss.vecros.com](https://discuss.vecros.com)

#### **Customer Support**

For any technical queries or troubleshooting, please reach out to us:

**Email:** [support@vecros.com](mailto:support@vecros.com)

**Website:** [www.vecros.com/support](http://www.vecros.com/support)

**Support Hours:** Monday to Friday, 9:00 AM to 6:00 PM (IST)

For development use only.

See Terms & Conditions for more details.

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