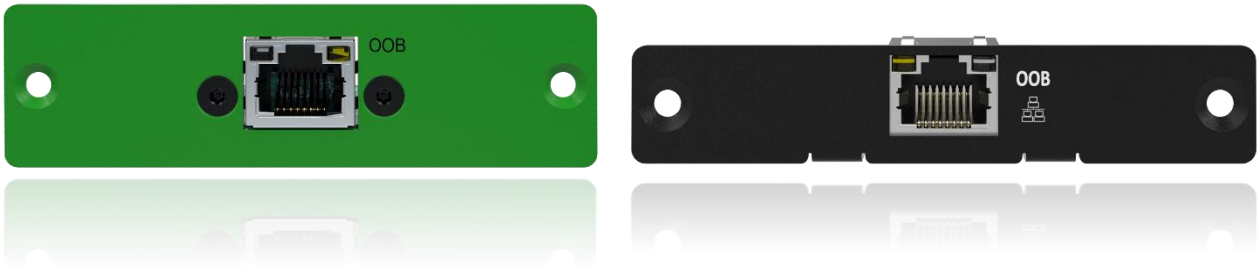
C&T SOLUTION INC.

USER'S MANUAL

Out-of-Band (OOB) Management Module



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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2025/7/14

Disclaimer

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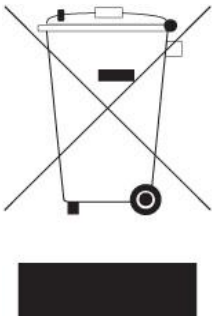
Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. Please recycle to minimize pollution and ensure environment protection.



Safety Precautions

Before installing and using the equipment, please read the following precautions:

- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The power outlet shall be installed near the equipment and shall be easily accessible.
- Turn off the system power and disconnect the power cord from its source before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge
- of power could ruin sensitive components. Make sure the equipment is properly grounded.
- When the power is connected, never open the equipment. The equipment should be opened only by qualified service personnel.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Disconnect this equipment from the power before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- Avoid the dusty, humidity and temperature extremes.
- Do not place heavy objects on the equipment.
- If the equipment is not used for long time, disconnect it from the power to avoid being damaged by transient over-voltage.
- The storage temperature shall be above -40°C and below 85°C.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- If one of the following situation arises, get the equipment checked be service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well or it cannot work according the user's manual.
    - The equipment has been dropped and damaged.
    - The equipment has obvious signs of breakage.

Technical Support and Assistance

1. Visit the C&T Solution Inc website at https://www.candtsolution.com where you can find the latest information about the product.
2. Contact your distributor, our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:
   - Model name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Conventions Used in this Manual

WARNING This indication alerts operators to an operation that, if not strictly observed, may result in severe injury.

CAUTION This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

NOTE This indication provides additional information to complete a task easily.

Chapter 1

Product Introductions

1.1 Overview

In today's connected world, maintaining seamless operations at the edge is more critical than ever. Out-of-Band (OOB) Remote Management technology ensures continuous monitoring and management of your systems, even during unforeseen disruptions. Whether it's for edge AI, IoT applications, or industrial automation, our solutions provide the reliability and control you need to prevent costly downtimes in 24/7 mission critical computing.

1.2 Specification

Specifications	
MCU	Nuvoton NUC980DR63YC
SDRAM	Built-in 64MB DDR2 SDRAM Memory (16KB data cache)
I/O	
LAN	1x RJ45 (10/100 Mbps)
Others	
On-board LED	LED Indicator Light • Power LED (Color: Blue) • MCU Activated LED (Color: Green)
DIP Switch	4x2 DIP Switch for General Setting • USB or SPI Flash Switching • Wi-Fi or Debug Switching
Environments	
Operating Temp.	-40˚C to 85˚C
Storage Temp.	-40˚C to 85˚C
Relative Humidity	10% to 95% (non-condensing)
Protection	1.5KV
Standards & Certifications	UL, CE, FCC

Chapter 2

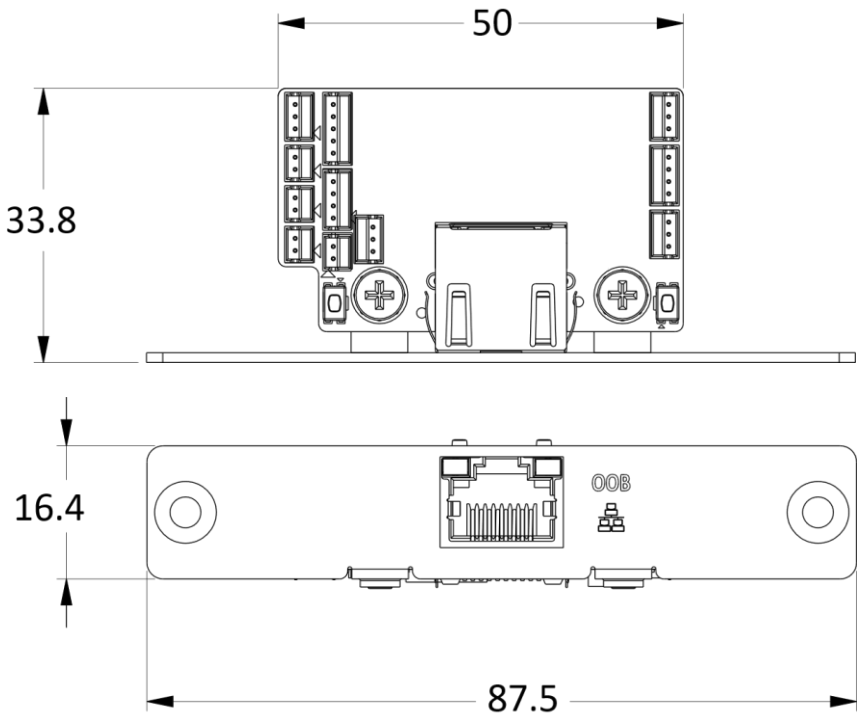
Mechanical Specifications

2.1 Hardware Overview

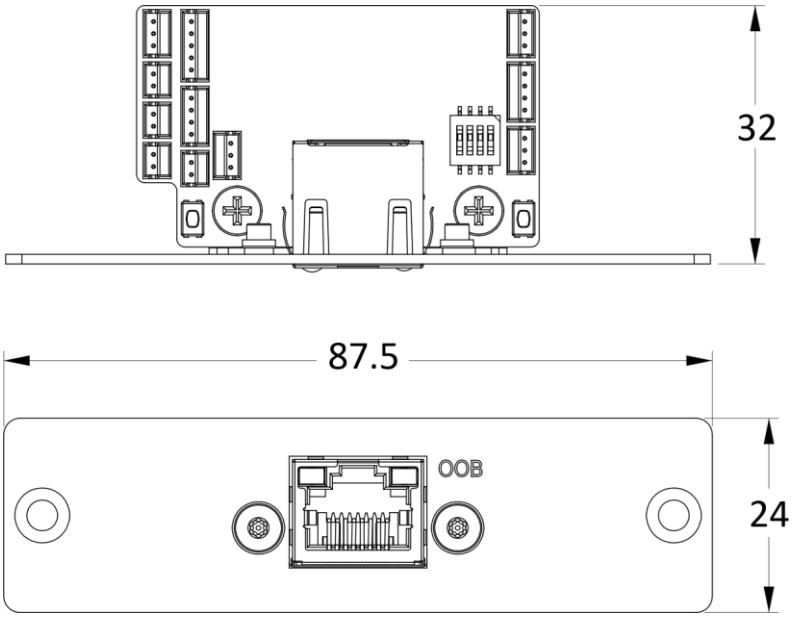
2.1.1 Mechanical Dimension

(mm)

EBIO-OOB

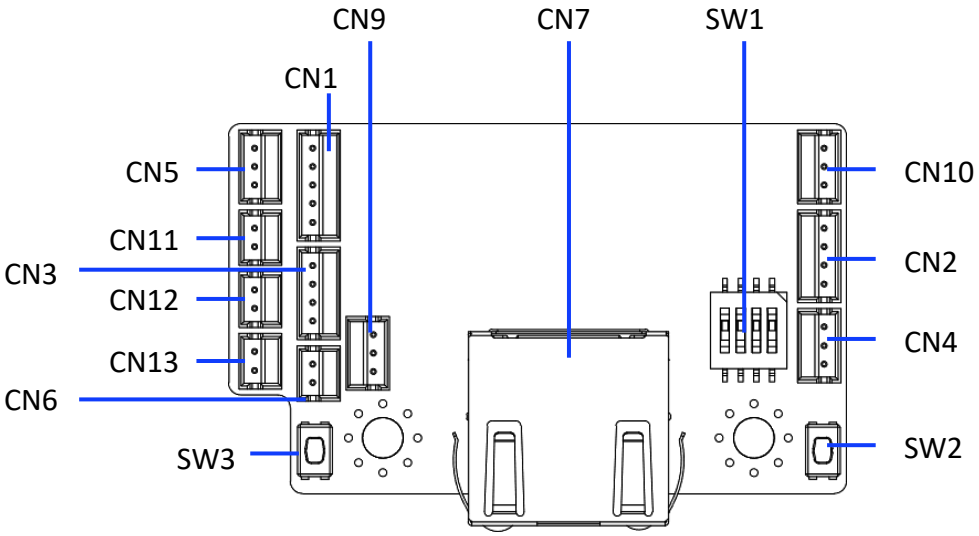


EBIO-OOB-J (JCO Series)

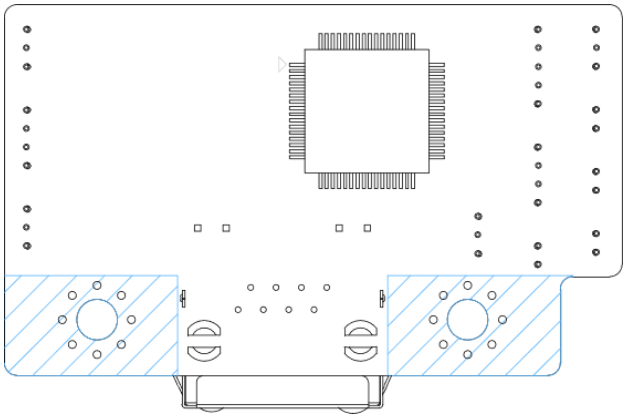


2.1.2 Mechanical Layout

Top Side



Bottom Side



2.1.3 Connector Location / Definition

Connector Location	Definition
CN5	Buzzer Connector
CN11	NVMe Recovery Connector
CN12	Reserved Pin Connector
CN13	Case Open Connector
CN1	OOB Connector
CN3	I2C Connector
CN6	Case Open Connector
SW3	OOB Reset Tact Switch

Connector Location	Definition
CN9	MCU Debug Connector
CN7	10/100 Mbps LAN Port
SW1	General Setting DIP Switch
CN10	Auto Link Connector
CN2	USB Connector
CN4	Pass Though TTL Connector
SW2	OOB Config Restore Tact Switch

Chapter 3

OOB Management Services Setup

3. OOB Management Services Setup

This section provides a complete guide for activating and configuring the Out-of-Band (OOB) management services on your device. Both In-Band and Out-of-Band (OOB) functions can be used together to achieve full remote access and control.

3.1 Setup Process Overview

3.1.1 Install the Allxon Agent

Begin by installing the Allxon Agent, which establishes secure communication between your device
and the Allxon Portal.

- Access the device desktop.
- Launch the installation process using the supported method for your hardware model.
- For command-line installation, refer to:
  Install Allxon Agent via Command Prompt

3.1.2 Register Device to Allxon Portal

Once the Agent is installed, proceed to register your device.

- **Retrieve Device Pairing Code:**
  Instructions:
  Get Device Pairing Code
- **Add Device to Portal:**
  After obtaining the pairing code, log in to the Allxon Portal and register your device following:
  Add Your Device on Allxon Portal

3.1.3 Activate Out-of-Band Features

After successful registration, enable the OOB Enabler to activate out-of-band management capabilities.

- **Follow the activation guide here:**
  Enable Out-of-Band Management on Device

3.2 Configure Allxon swiftDR Power Management

The Allxon swiftDR suite offers advanced OOB power management for disaster recovery scenarios. After enabling OOB services, you can configure power cycling and recovery controls via the Allxon Portal.

- **Full configuration steps available here:**
  Allxon swiftDR for Power Cycling

3.3 OOB Enabler Troubleshooting

3.3.1 Network Connectivity Requirements

To ensure proper operation of Allxon services, a stable and reliable internet connection is required.
In environments with restricted network policies or firewall settings:

- Verify that all required network ports and protocols are accessible.
- For full network configuration details, refer to:
  Allxon Service Port/Protocol and Whitelist Requirements