

# ACC-NM1Z1-01C4 ACC-NM1Z1-01C4B

## Exp. Networking Interface Module

- *Intel® i350-AM4 Ethernet Controller*
- *4x GbE Copper (4x RJ-45)*  
*(Model: ACC-NM1Z1-01C4)*
- *4x GbE Copper (4x RJ-45 w/ 2-pair LAN Bypass)*  
*(Model: ACC-NM1Z1-01C4B)*

## User Manual

Acrosser Technology Co., Ltd.  
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## Purpose

This document is intended to provide the information about the features and use of the product.

## Audience

The intended audiences are technical personnel, not for general audiences.

**Ver: 100-001**

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**To read this User Manual on your smart phone, you will have to install an APP that can read PDF file format first. Please find the APP you prefer from the APP Market.**

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# 1. Introduction

The ACC-NM1Z1-01C4 or ACC-NM1Z1-01C4B is a 4-port GbE LAN module designed for networking applications.

## 1.1. Specifications

### Model: ACC-NM1Z1-01C4

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<b>LAN Controller</b>	• Intel i350-AM4
<b>OS support</b>	• Linux Kernel 4.4 & above, (64-bit)
<b>Dimension</b>	• 72.0 mm(W) x 38.8 mm(H) x 200.0 mm(D)
<b>Storage Temp.</b>	• -20 ~ 80°C (-4 ~ 176°F)
<b>Relative Humidity</b>	• 0 ~ 90% @40°C, non-condensing

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### Model: ACC-NM1Z1-01C4B

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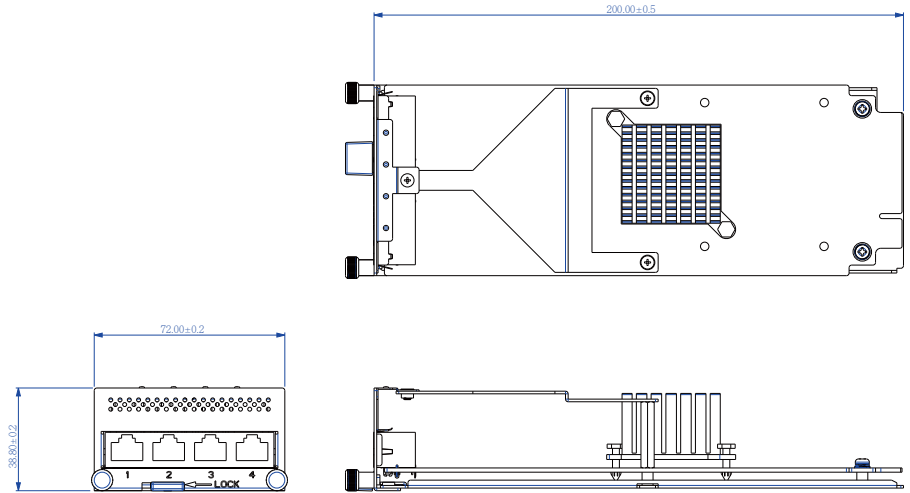
<b>LAN Controller</b>	• Intel i350-AM4
<b>LAN Bypass</b>	• Microchip PIC16F687 with Latching Relay • 2-pair LAN Bypass
<b>OS support</b>	• Linux Kernel 4.4 & above, (64-bit)
<b>Dimension</b>	• 72 mm(W) x 38.8 mm(H) x 200.0 mm(D)
<b>Storage Temp.</b>	• -20 ~ 80°C (-4 ~ 176°F)
<b>Relative Humidity</b>	• 0 ~ 90% @40°C, non-condensing

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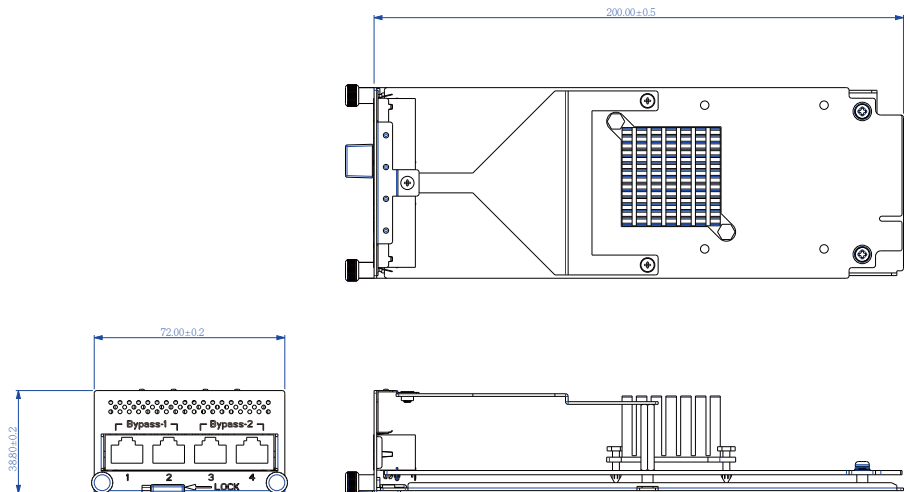
# 1.2. Layout & Dimension

(Unit: mm)

**Model: ACC-NM1Z1-01C4**



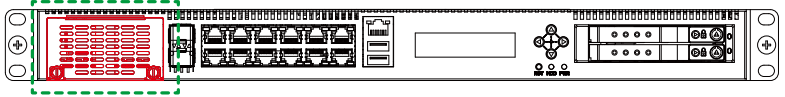
**Model: ACC-NM1Z1-01C4B**



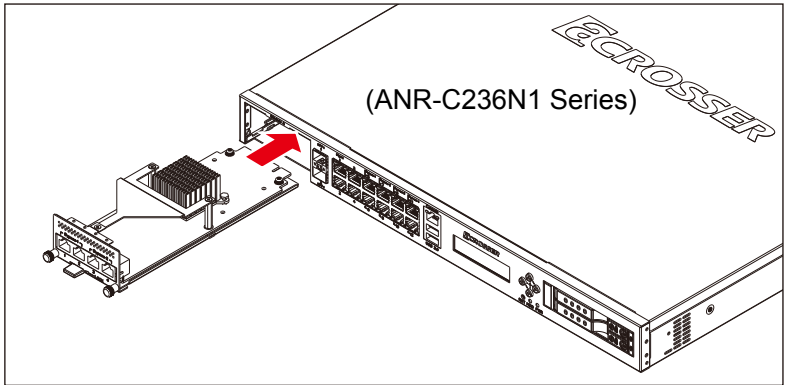
### 1.3. System Insertion

To install the LAN module into the ANR-C236N1 system:

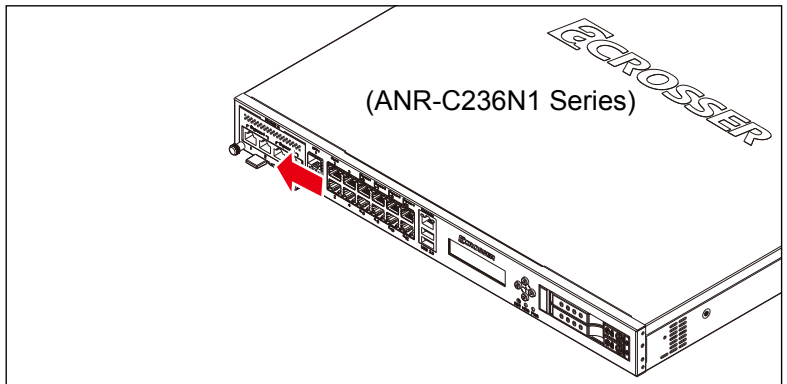
Step 1: Remove the plate that originally covers the **Module A** slot on ANR-C236N1 system.



Step 2: Insert the LAN module into the **Module A** slot on ANR-C236N1 system.



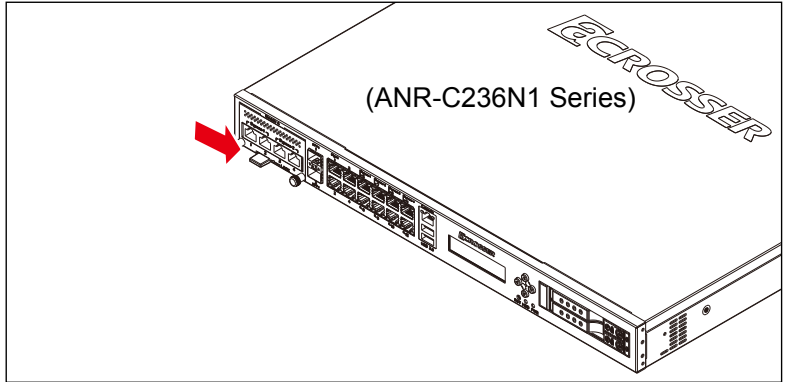
Step 3: Push the locker left to lock the board into system.



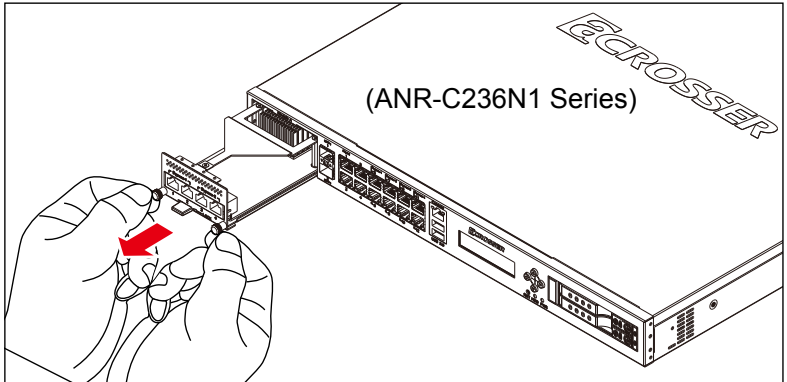
## 1.4. System Extraction

To uninstall the LAN module from the ANR-C236N1 system:

Step 1: Push the locker right to loosen the board.



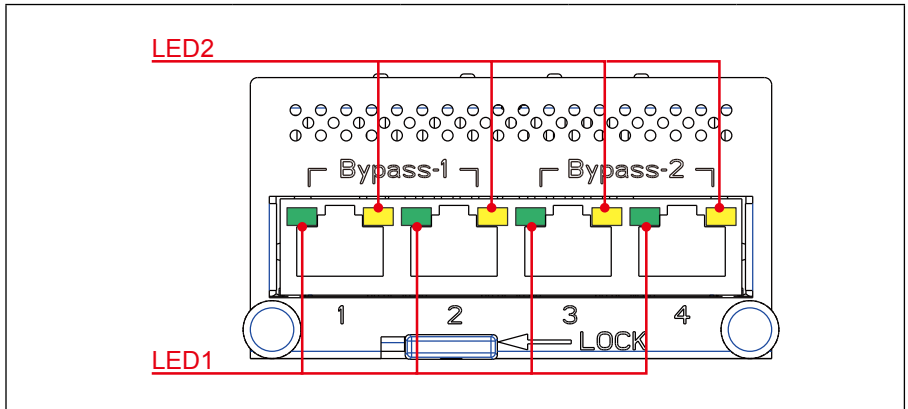
Step 2: Grab both knobs of the LAN module. Carefully pull the board out of the slot. Do not drop the board.





# 1.5. Connectors/Indicators Pin/Color Definition

## RJ45 Connectors



LED	Status	10Mbps	100Mbps	1000Mbps
LED1	Link	Green	Green	Green
	Active	Blinking	Blinking	Blinking
LED2	Speed	Off	Yellow	Green

## 2. Software Installation and Programming Guide

### 2.1. Introduction

#### 2.1.1. Environment

This test utility develop base on kernel 4.4 & above (Ubuntu 16.10 Server 64bit).

#### 2.1.2. LAN Bypass Subsystem

Two pairs of LAN ports on NM1Z1-01C4B implement the bypass function. Users can invoke the LAN Bypass APIs to control the bypass states of the LAN ports.

1. Get bypass firmware version.
2. Set bypass wdt.
3. Set bypass wdt action.
4. Get bypass wdt action.
5. Set bypass power on action.
6. Get bypass power on action.
7. Set bypass power off action.
8. Get bypass power off action.
9. Set bypass current action.
10. Get bypass current action.

### 2.2. File Descriptions

#### 2.2.1. LAN Bypass

##### 1. TestUtility.exe

The Watchdog, LAN Bypass Subsystem, Power Supply Unit LCM Control Module and chassis open. Graphic user interface bin binary.

##### 2. acrosserlib.h

This file includes the declarations of the APIs and macro definitions.

##### 3. libacrosser.a

The static library for linux.

##### 4. libacrosser.so

The dynamic library for linux.

### 5. Install\_driver

This file is linux shell script file, run this can help you install environment and modprobe driver on linux.

### 6. readme

Use this utility first, please read readme first.

## 2.3. API List and Descriptions

### 2.3.1. LAN Bypass Subsystem

<b>Syntax:</b>	<b>int lib_init(void)</b>
<b>Description:</b>	Using the library before, must be call this function first.
<b>Parameters:</b>	None.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int get_bypass_firmware_ver(int module, char *ver)</b>
<b>Description:</b>	This function can get which module, bypass firmware version and data to save in char pointer.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, char *ver: char pointer, this pointer to 7 character array.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int set_bypass_wdt(int module, int pair, int time)</b>
<b>Description:</b>	This function can set which module and which pair bypass Wdt timer.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4, time: 1-255(sec), 0:stop.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int set_bypass_wdt_action(int module, int pair, int action)</b>
<b>Description:</b>	This function can set which module and which pair bypass Wdt time up action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4, action: 0:bypass, 1:normal.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int get_bypass_wdt_action(int module, int pair)</b>
<b>Description:</b>	This function can get which module and which pair bypass Wdt time up action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4.
<b>Return Value:</b>	0: bypass, 1: normal, -1: fail.

<b>Syntax:</b>	<b>int set_bypass_poweron_action(int pair, int action)</b>
<b>Description:</b>	This function can set which module and which pair bypass power on action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4, action: 0:bypass, 1:normal.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int get_bypass_poweron_action(int module, int pair)</b>
<b>Description:</b>	This function can get which module and which pair bypass power on action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4.
<b>Return Value:</b>	0: bypass, 1: normal, -1: fail.

<b>Syntax:</b>	<b>int set_bypass_poweroff_action(int module, int pair, int action)</b>
<b>Description:</b>	This function can set which module and which pair bypass power off action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4, action: 0:bypass, 1:normal.
<b>Return Value:</b>	0: Successful, -1: fail

<b>Syntax:</b>	<b>int get_bypass_poweroff_action(int module, int pair)</b>
<b>Description:</b>	This function can get which module and which pair bypass power off action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4.
<b>Return Value:</b>	0: bypass, 1: normal, -1: fail

<b>Syntax:</b>	<b>int set_bypass_current_action(int module, int pair, int action)</b>
<b>Description:</b>	This function can set which module and which pair bypass current action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4, action: 0:bypass, 1:normal.
<b>Return Value:</b>	0: Successful, -1: fail.

<b>Syntax:</b>	<b>int get_bypass_current_action(int module, int pair)</b>
<b>Description:</b>	This function can get which module and which pair bypass current action.
<b>Parameters:</b>	module:1-3, 1:Module A slot, 2:Module B slot, 3:Module C slot, pair: 1-4.
<b>Return Value:</b>	0: bypass, 1: normal, -1: fail.

<b>Syntax:</b>	<b>void lib_close(void)</b>
<b>Description:</b>	Don't use the library, must be call this function.
<b>Parameters:</b>	None.
<b>Return Value:</b>	None.

### **3. FAQ**

**Q 1. *Where can I find the serial number of this product?***

- The serial number (S/N) is a label printed with alpha-numeric character. You can find the S/N label on the bottom of this product or on its packing box.

## Technical Support Form

We deeply appreciate your purchase of Acrosser products. Please find the “**tech\_form.doc**” file in our utility CD. If you have any questions or problems about Acrosser products, please fill in the following information. We will answer your questions in the shortest time possible.

### Describe Your Info and Acrosser System Info

- Your Company Name: \_\_\_\_\_
- Your Contact Info: \_\_\_\_\_ Phone Number: \_\_\_\_\_
- Your E-Mail Address: \_\_\_\_\_
- Your Company Address: \_\_\_\_\_  
\_\_\_\_\_
- Acrosser Model Name: \_\_\_\_\_
- Acrosser Serial Number: \_\_\_\_\_

### Describe System Configuration

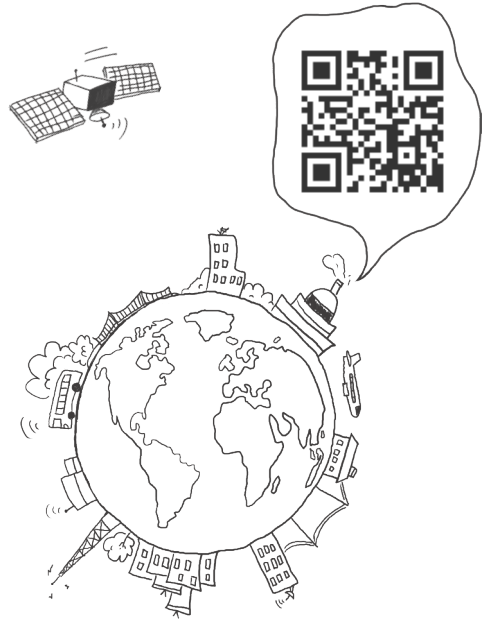
- CPU Type: \_\_\_\_\_
- Memory Size: \_\_\_\_\_
- Storage Device (e.g. HDD, CF, or SSD): \_\_\_\_\_
- Additional Peripherals (e.g. Graphic Card): \_\_\_\_\_
- Operating System & Version (e.g. Windows 7 Embedded): \_\_\_\_\_
- Special API or Driver: \_\_\_\_\_  
(If yes, please provide it for debug.)
- Running Applications: \_\_\_\_\_
- Others: \_\_\_\_\_

### Describe Your Problems or Questions:

### Send the above information to one of the following Acrosser contacts:

- Acrosser Local Sales Representative
- Acrosser Authorized Sales Channels
- Acrosser Inquiry --- <http://www.acrosser.com/inquiry.html>
- Acrosser FAX Number --- 886-2-29992887

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