Newland AIDC

EX232
REMORA

Accessories

Version: V1.0.0

User Guide

Disclaimer

Revision History

Version	Description	Date
V1.0.0	Initial release	2025-06-30

Table of Contents

Introduction:

RS232 / 485 / 422 To RJ45 Ethernet Module Industrial Isolated, Rail-mount
RS232/485/422 Serial Server

Industrial
Isolation

Rail-
Mount

Multi
Interfaces

Multi
Power
Supply
Methods

RJ45
Ethernet
(POE
optional)

Multi Host
Support

Host/Webpage
Configuration

Features at a glance

This is an RS232 device data acquisitor designed for any environment, such as industrial, retail, healthcare, and more. It combines multiple functions in one, including Modbus gateway, MQTT gateway, RS485 to JSON, etc. The module features RS232 and Ethernet port (PoE function), uses a DC port (outer diameter: 5.5mm, inner diameter: 2.1mm), and screw terminals for power input. The case with rail-mount support is small, easy to install, and cost-effective. It suits applications like data acquisition, IoT gateway, safety & security IoT, and intelligent instrument monitoring.

Main purpose:
Transform data from a Newland RS232 scanner to Ethernet output.

RS232   Ethernet (UDP or TCP)

Specifications:

- Multiple interfaces + PoE network port + Electrical isolation
- Serial comms, Modbus Gateway, MQTT Gateway
- Bi-directional transparent data transmission between RS232/485/422 and Ethernet
- RS232 port × 1; RS485 port × 1; RS422 port × 1; Ethernet port × 1
- DC power port, 6~31V DC, screw terminal, or PoE port
- PoE network port supports IEEE 802.3af standard
- 10 / 100M auto-negotiation RJ45 connector, 2 KV surge protection
- Isolated RS232/485/422
- Serial specifications: 300 ~ 115200 bps, parity: none, odd, even, mark, space, 5- 8 data bits, 1-2 stop bits
- Protocols / Ethernet: ETHERNET, IP, TCP, UDP, HTTP, ARP, ICMP, DHCP, DNS
- Configuration: host, web browser, device management Windows tool
- Operating mode: TCP server, TCP client, UDP, UDP multicast
- Operating temperature : -20℃ ~ 65℃, humidity : 5% ~ 95% relative humidity
- Dimensions : L × W × H: 88.7 × 72.5 × 24.2 mm

Multiple Methods for Power Supply

Support PoE Ethernet port power supply*, suitable for IEEE 802.3af PoE standard.
Support screw terminal and DC power port for power supply, DC 6~31V.
Wide voltage range output.

Ethernet Port

Power Supply Screw Terminal   DC Power Port

Multiple communication modes:

Supports TCP server / TCP client / UDP mode / UDP multicast

TCP Server

Support 30 concurrent TCP connections when used as a TCP Server.

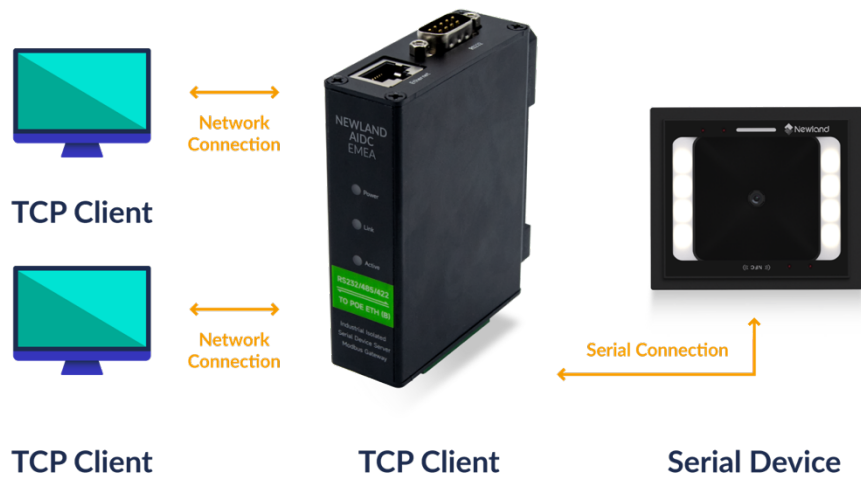**TCP Client**   **TCP Server**   **Serial Device**

The TCP Server will listen to the configured ports and wait for TCP Client connections. Data from the serial devices will be transferred via TCP Server to every connected client.
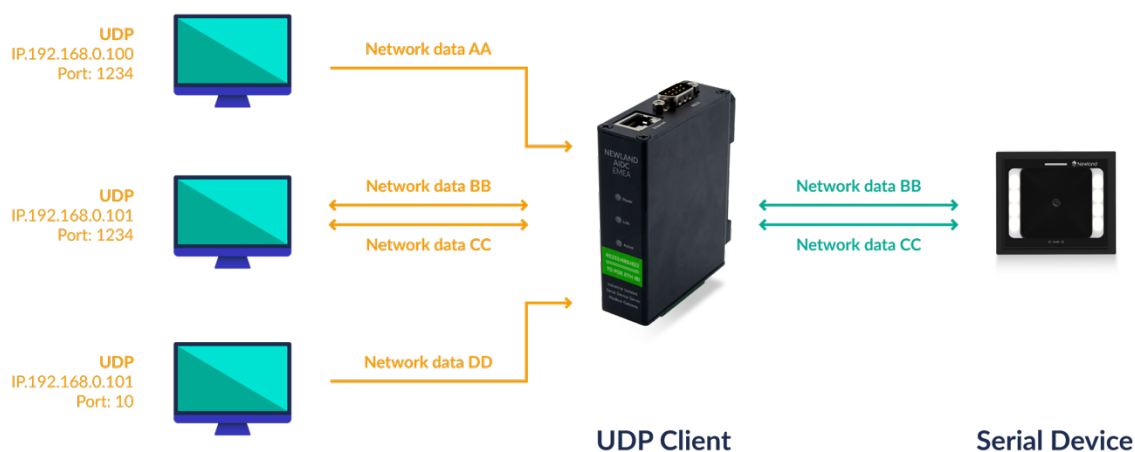
TCP Client

It allows concurrent connection to 7 target IPs when used as a TCP Client, and it can be used as a Server simultaneously, allowing 22 concurrent Client connections.

The TCP Client will try to establish a TCP connection with the configured IP to achieve Bi-directional transparent transfer between the server and the serial device, and keeps retrying if it fails.
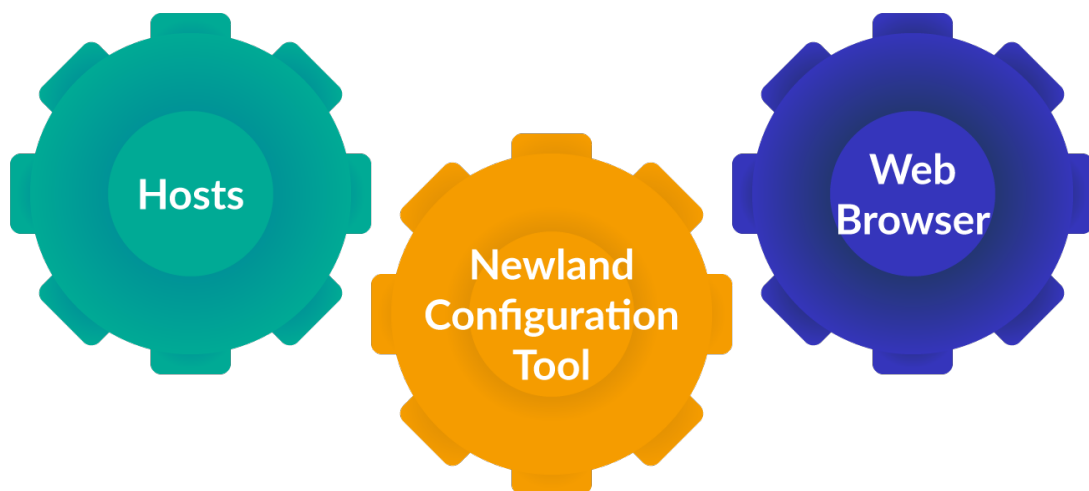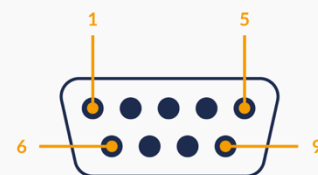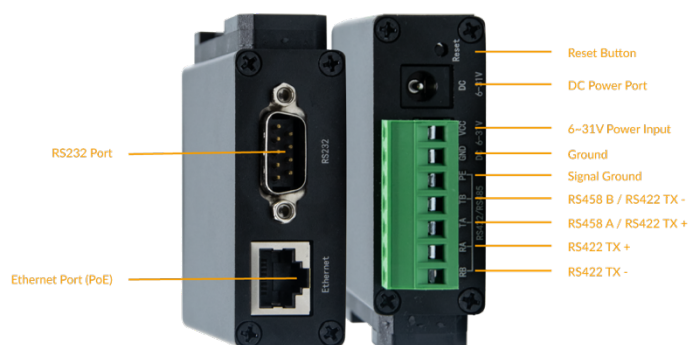
UDP Mode

The module will communicate with a specific IP and port number in UDP mode. only, Thus improving the data transfer accuracy.

Multi-Configuration Methods

It supports web browser configuration, obtaining a dynamic IP via DHCP, and a DNS protocol-connected domain server address.

Interface Introduction

RS232 Pinout Definition

RS232 Pinout	
DB9 Male (PIN)	RS232 (PIN)
2	(RXD)
3	(TXD)
5	GND
1,4,6,7,8	N/C
9	+5V (500 mA max)

Configuration:

1. Web Browser.

Note: The factory default password is empty

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Logout

Device Information

| Device Name | Device 1 | Firware Version | V1. 523 | Device MAC | 04-EE-E8-13-68-85 |

Network Settings

Device IP	192.168.0.200	Device Port	4196	Device Web Port	80
Work Mode	TCP Server	Subnet Mask	255.255.255.0	Gateway	192.168.0.1
Destination IP/DNS	192.168.1.3	Destination Port	4196	IP mode	DHCP

Serial Settings

| Baudrate | 115200 | Databits | 8 | Parity | None |
| Stopbits | 1 | Flow control | None | | |

Advaced Settings

| No-Data-Restart | Disable | No Data Restart Time | 300 second | 5~1270 | Reconnect-time | 12 | 1~255 second |

Mliti-Host Settings

| Protocol | None | Instruction Time out | 0 | 32~8000ms | Enable Multi-host | No |
| RS485 Conflict Time Gap | 0 | | 5~255ms | | | |

NOTE: 1. Multi-host is always enabled when Protocol is Modbus TCP to RTU. 2. Time out is always 0 when Multi-host is disabled.

3. Time out only can be set as mulitpy of 32.

Modify Web Login Key

| New Key | | Input Key Again | |

Submit

2. Newland NLS-EX232 Configuration tool

NLS-EX232 Configurator. Version : 1.0   — □ ✕

| Basic Setup | Web configuration | Debug terminal | Device View | Network reset | | **Newland AIDC** SCANNING MADE SIMPLE |

Device : 1

Name : **Device 1**

Device IP : 192.168.0.200 (DHCP)

Device ID : **28:7A:BE:D3:68:6D**

Local port : **4196**

Work mode : **TCP Server**

Device : 2

Name : **Device 2**

Device IP : 192.168.0.171 (Static)

Device ID : **28:7A:BE:F5:6F:E3**

Local port : **4196**

Work mode : **UDP mode**

By default, the NLS-EX232 adapter is set to use DHCP. If the adapter cannot be found, reset it by pressing the reset button for 5 seconds.

Refer to the 'Network Configuration Protocol Description' document for low-level TCP configuration.

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