

# CM-NET User Manual

Shenzhen Coolmay Technology Co., Ltd V6.71



CM-NET, developed and produced by Shenzhen Coolmay Technology Co., Ltd, is a device with small size, low consumption, fast speed and high stability. It is used to realize the transparent transmission between TCP network data package or UDP data package with RS232/RS485 interface data. It has a Rs485 and a standard Rs232. Through CM-NET, traditional serial devices such as PLCs and meters can easily connect with ethernet, thus realize the control and management of Internet of Things through transparent transmission. Meanwhile, CM-NET professionally optimizes data transmission field which is low discharge and low frequency, such as intelligent housing system、 smart power grids、 handheld device、 personal medical、 industrial control. CM-NET breaks through regionalization, provides reliable control and total solution for various facilities and meets the requirements of enterprise for the automatic control network.

- ◆ Realize flexible distributed automatic structure, simplify system management.
- ◆ Through RJ45 standard interface to access Ethernet, communication based on standard TCP/IP protocol
- ◆ Realize remotely programming, monitoring and diagnose through Ethernet to save time and expense.
- ◆ Store and manipulate data information through communication of Ethernet and upper computer, lay foundation of management and filing of simplify the process data
- ◆ Realize communication between Ethernet and automatic control device, so that these devices can be used in complicated system.
- ◆ Connect Ethernet to all automatic devices and levels with high cost performance and simple form.

## 1、Product description

### 1.1 Features

- ◆ DHCP function, can automatically achieve IP
- ◆ DNS function
- ◆ Webpage parameter configuration function, set parameters through webpage
- ◆ 10/100Mbps self-adapt to Ethernet port, support AUTO-MDIX cable cross directly and automatically switch.
- ◆ Baud rate can be set from 600bps to 921.6Kbps, support None, Odd, Even, Mark Space verification.
- ◆ Working mode of TCP Server, TCP Client, UDP Client, UDP Server can be selected.
- ◆ Parameters can be set by serial port or webpage
- ◆ Support virtual serial port, support CM virtual serial port software.
- ◆ Unique heartbeat mechanism to ensure connection reliable and eliminate dead links
- ◆ Can operate cross gateway, interchanger and router.
- ◆ Can work in local area network, and can also access to other outer network.
- ◆ Products can be customized according to individual requirements.
- ◆ Transmission distance (ideal environment): RS232- 15meter, RS485-1000meter, network cable 80meter (access to internet by interchanger, no distance limit)

### 1.2 Application

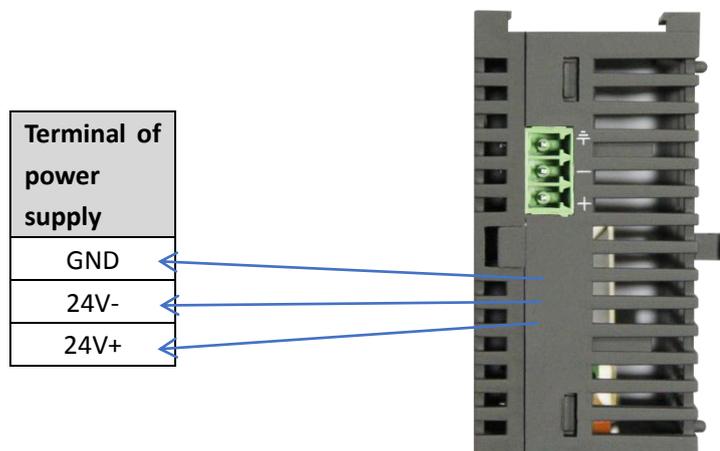
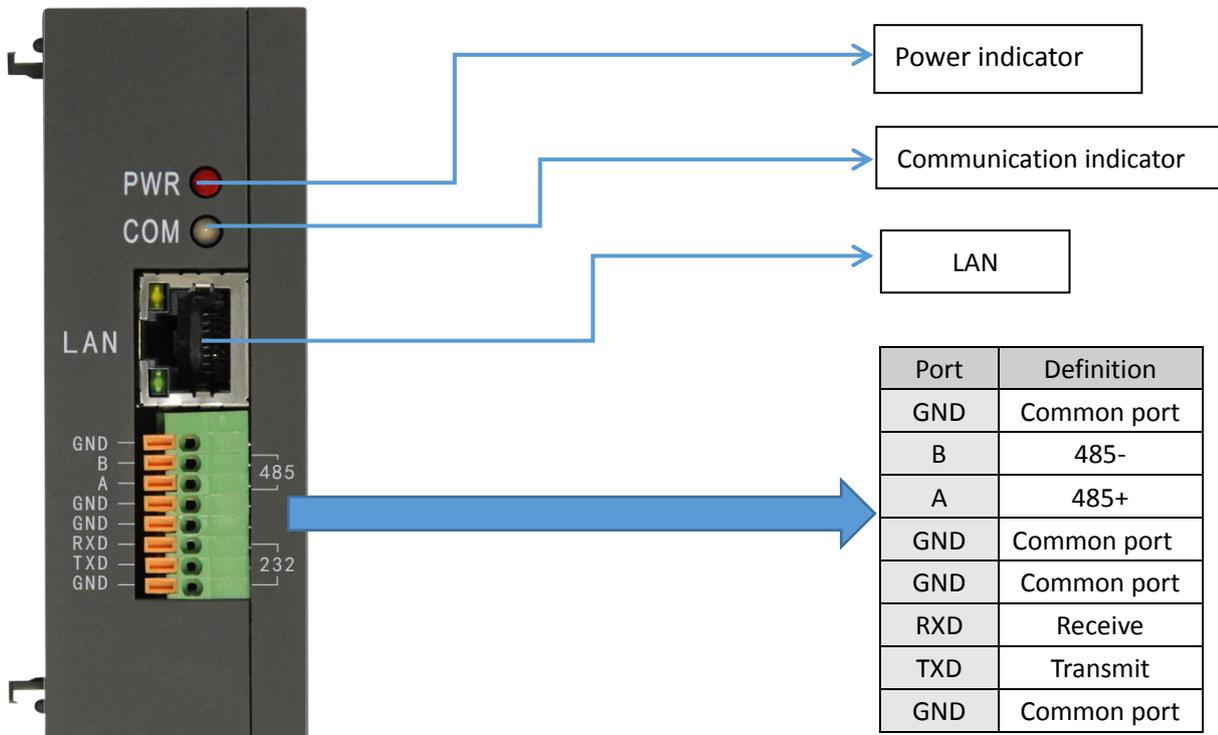
CM-NET is designed to connect industrial automatic devices with serial port, such as PLCs、sensors、meters、motors、drivers、bar code reader、displayer and so on.

CM-NET is widely used in attendance machine、access control system、canteen machine、POS system、building automation、fire-protection monitoring、bank system、UPS monitoring、electric power、oil field、environmental monitoring and so on.

### 1.3 Electrical parameter

Parameters	Value
Input voltage	DC 5V~30V
Current	35mA (24V)
Working temperature	-25~+75℃
Power consumption	1W
Storage Environment	-40~105℃, 5~95%RH
Installation	Standard DIN-Rail installation Can be installed in NS35\7.5 or NS32 slot
Dimension	90*60*32mm
Wiring	Power supply 3.50 pluggable terminal RS232/RS485 adopts 2.54 Press type quick terminals

## 2、 Model and appearance



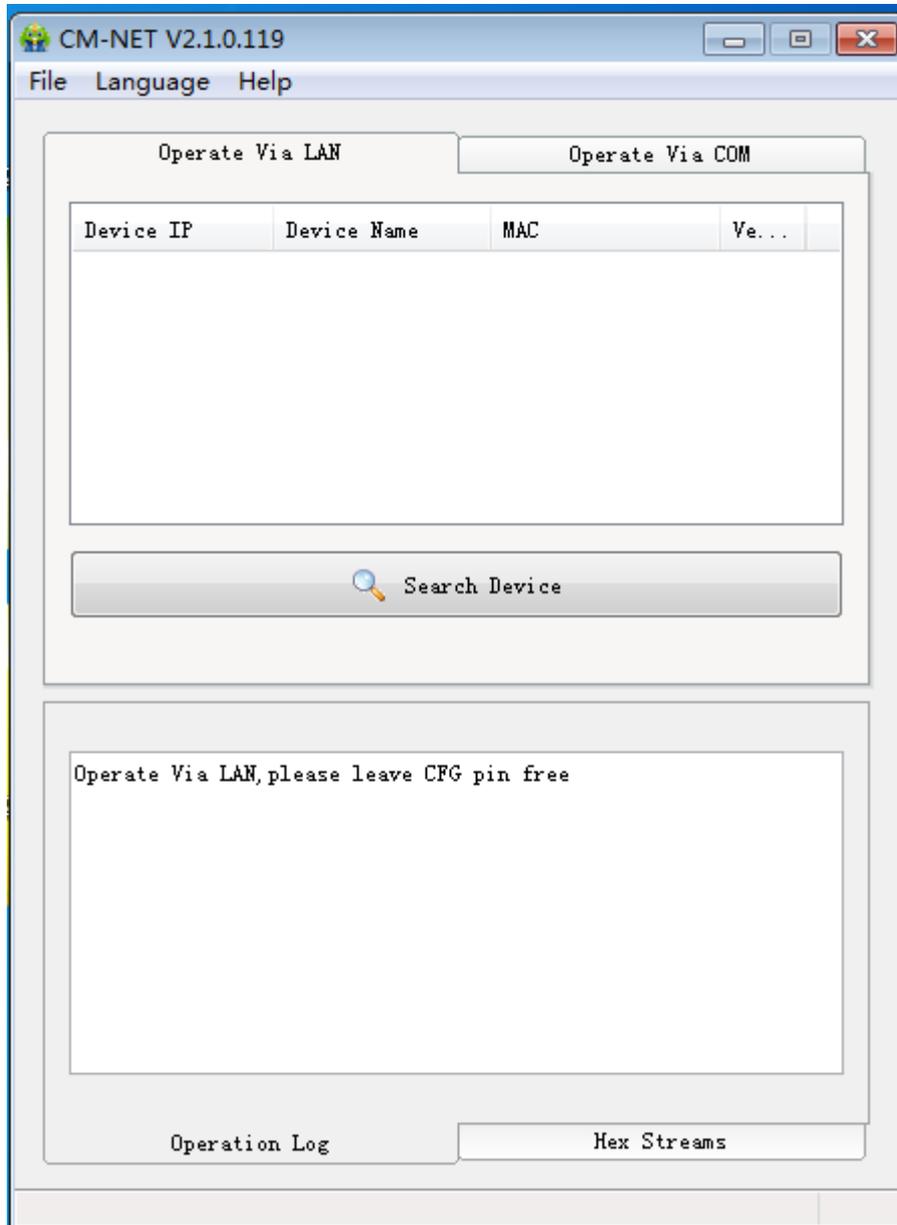
Model: CM-NET

Dimension: 90\*32\*60mm

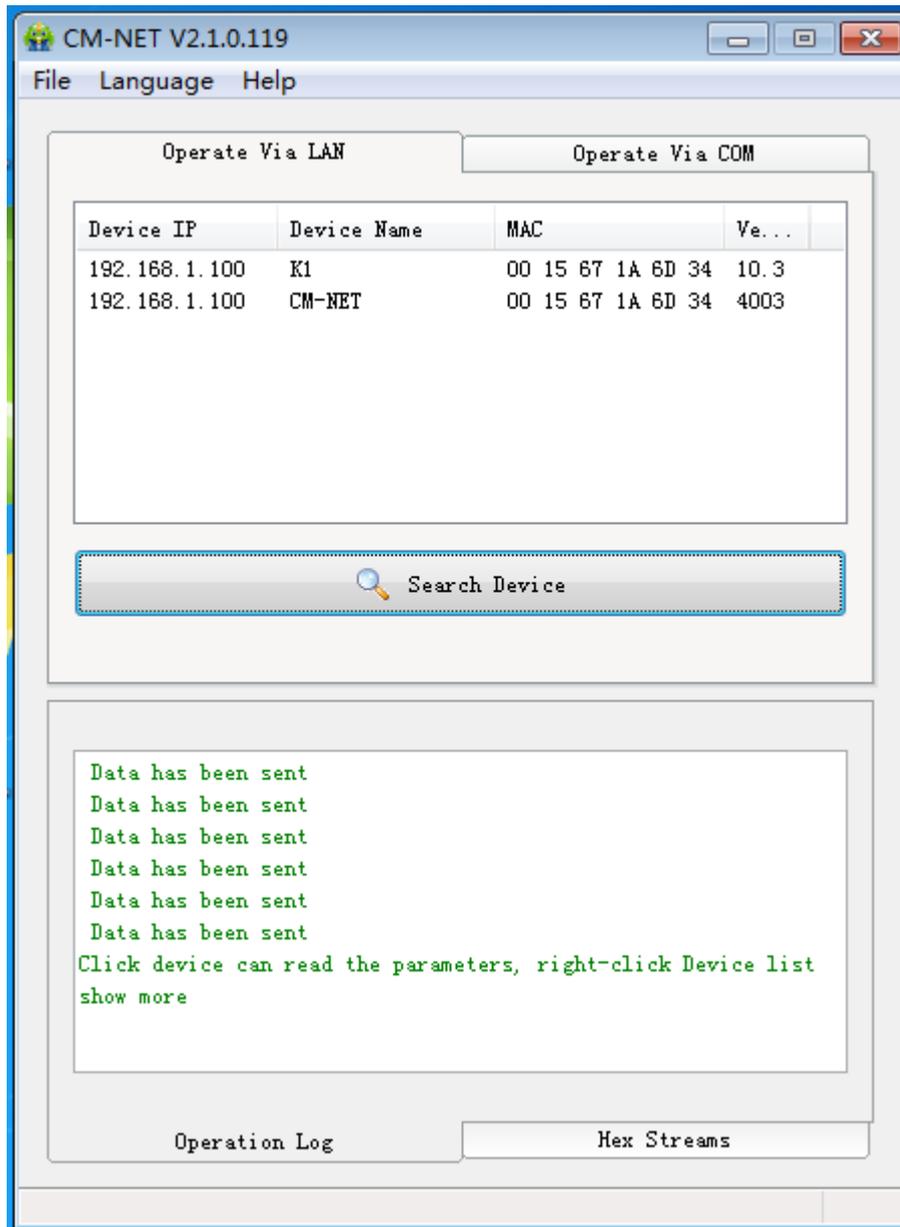
Installation: standard 35mm DIN-Rail

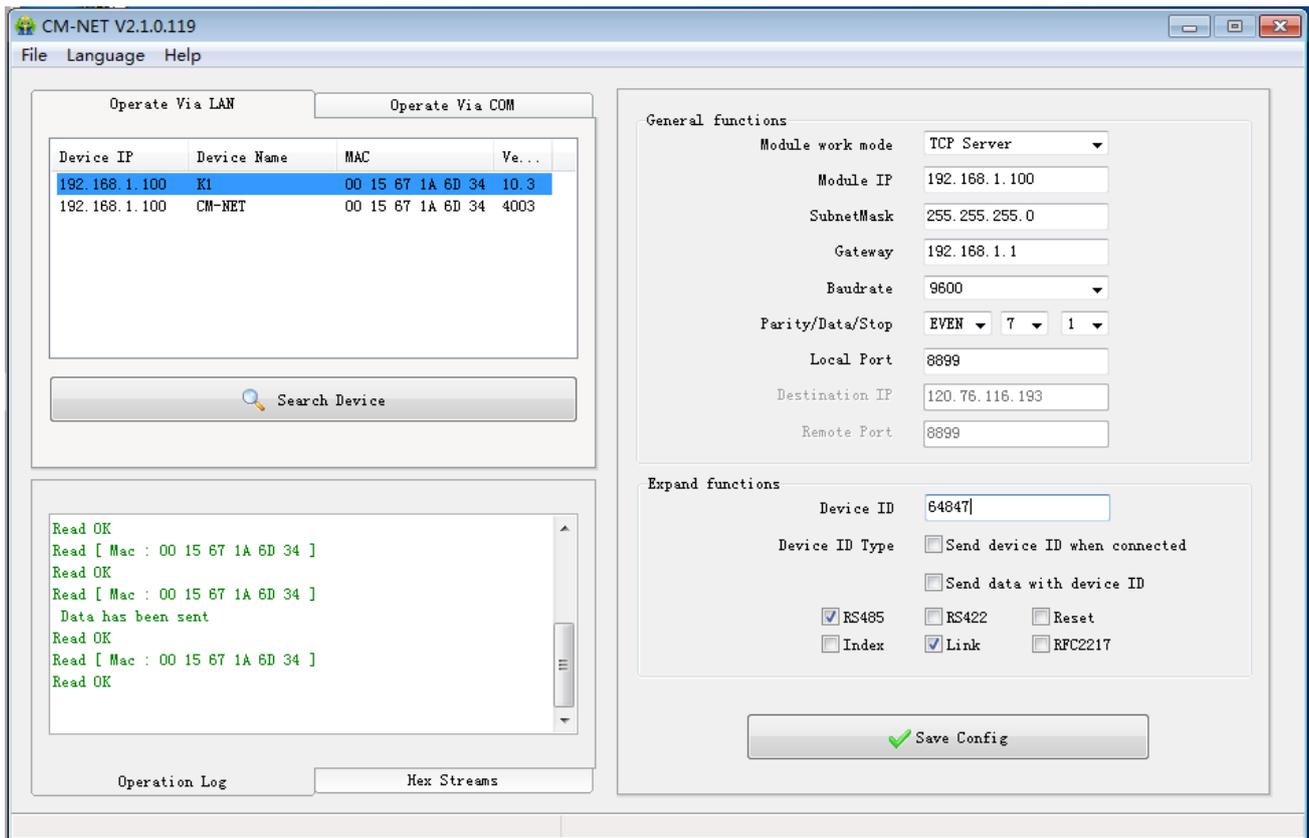
### 3、Parameters setting

1、Charger CM-NET, connect it with router or interchanger, open software CM-NET V2.1.0.112, click “Search device”



2、The following devices are searched:





3、Click CM-NET, [General function] and [Expand function] will appear in the right:

### Basic setting:

IP address: can be set as DHCP/ dynamic IP (dynamic IP address are allocated by router) or static IP ( fixed IP address)

Static IP: If IP address is DHCP/ dynamic IP, then modify this option to automatically obtain. If IP address is static IP, then set 192.168.1.100 by hand. (Modify to the IP address set by intranet)

Subnet mask: if IP address is DHCP/ dynamic IP, then modify this option to automatically obtain.

If IP address is static IP, generally set 255.255.255.0 by hand.

Gateway: If IP address is DHCP/ dynamic IP, then modify this option to automatically obtain. If IP address is static IP, then set 192.168.1.100 by hand.(modify to gateway set by intranet)

User name and password is defaulted as admin, device name is defaulted as CM-NET. For multiple modules, device name can be modified for easily distinguish

HTTP server port: 80 (web port is default as 80)

User name: default as admin

Password: default as admin

Device name: default as CM-NET, For multiple modules, device name can be modified for easily distinguish

Device ID: set 3 in the below screenshot, this ID needs to be set only when remote connection in WAN. (Note: please set after consulting with Coolmay technician.

### Port settings:

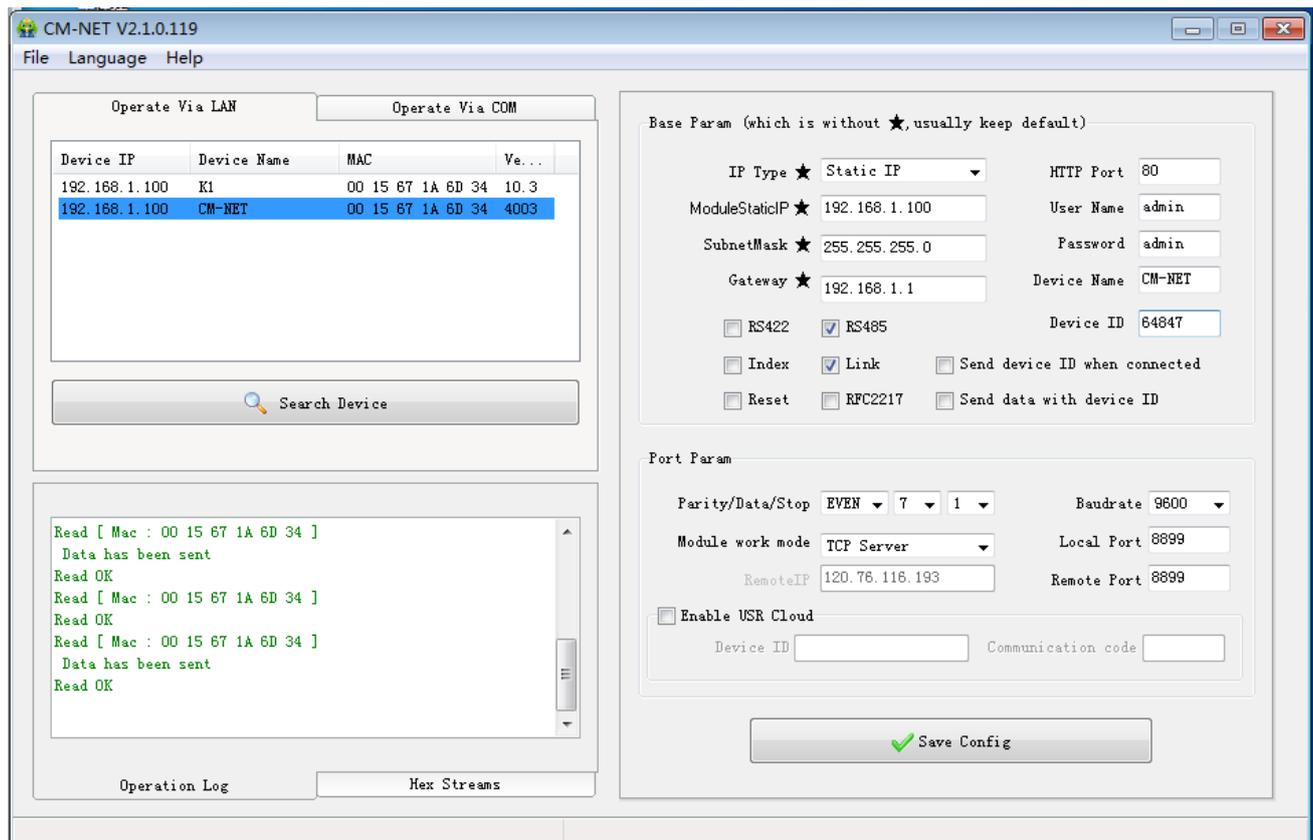
Parity/Data/Stop: set according to PLC, the below image is parameters EVEN/7/1 connected with Coolmay PLC.

Serial baud rate: set according to PLC type, the below image is parameters 9600 connected with Coolmay PLC.

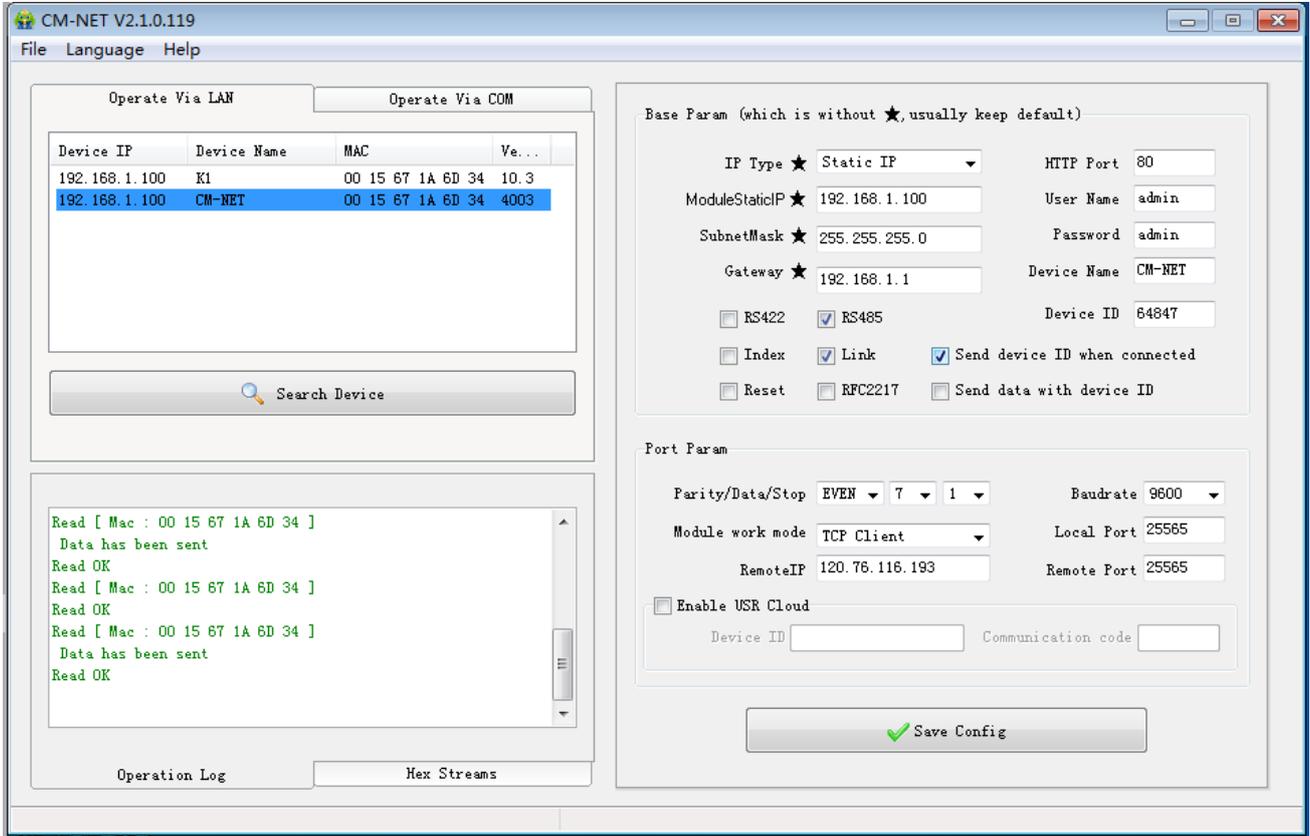
Working mode: TCP Server、TCP Client、UDP Server、UDP Client optional;

Local port、remote port、target IP/domain name and device ID should be set according to the working mode, as below:

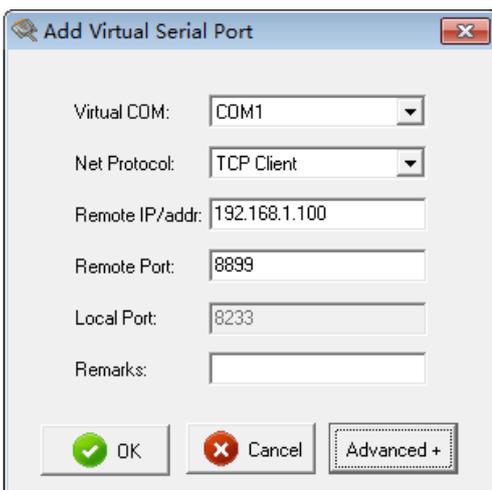
LAN setting: working mode set as TCP Server、local port set as 8899、remote port set as 8899,then transparent transmission can be achieved through LAN



WAN setting: working mode set TCP Client、local port set 25565、remote port set 25565 (Coolmay server port No.)、target IP/ domain name is 120.76.116.193 or coolmay.wicp.net(standby), device ID set as Coolmay provided, then transparent transmission can be achieved through WAN.



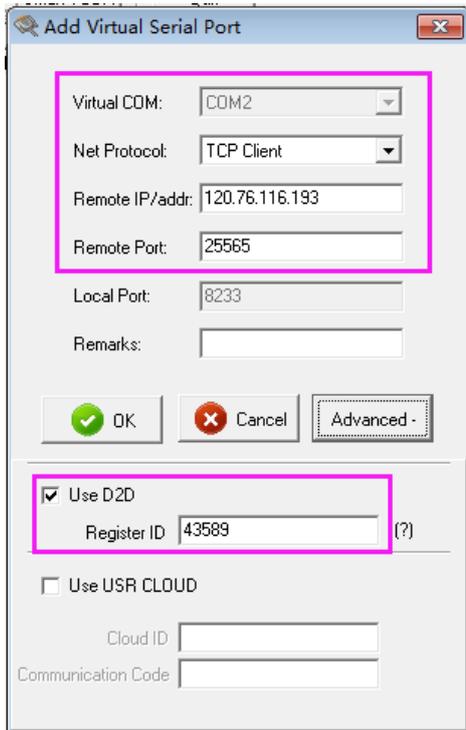
4. Install CM serial port software: 1) if connect in LAN, add a serial port COM1 as below:



Virtual COM select COM1 , net protocol select TCP Client; remote IP/address set 192.168.1.100(this IP set the same with CM-NET IP address); remote port set 8899。

**LAN SERIAL PORT SETTINGS**

2) In WAN, add a serial port COM2, as below image:

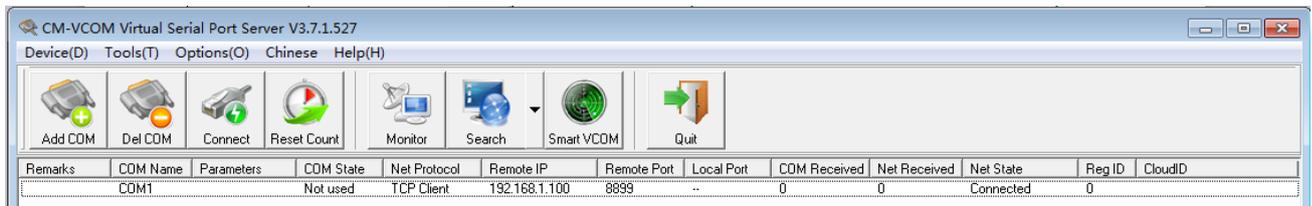


Virtual COM select COM1 , net protocol select TCP Client; remote IP/ address as 120.76.116.193 or coolmay.wicp.net (standby) (Note: remote IP/address is the domain name of Coolmay which needs to connect with Coolmay server) ; remote port select 25565; select Use D2D in [advance], register ID set 43589 (note: please set register ID after consult with Coolmay technician)

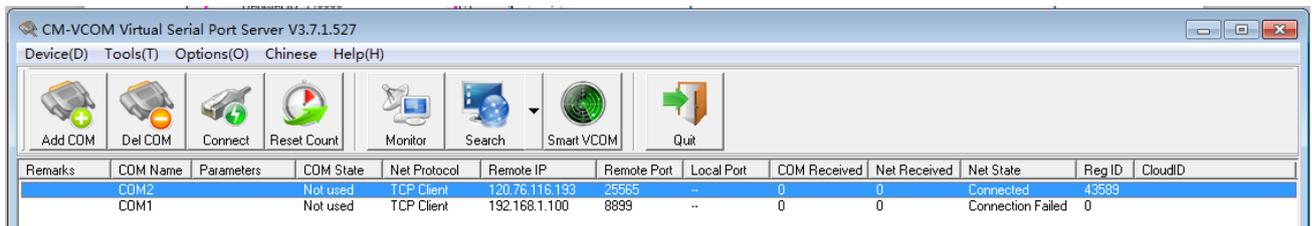
**WAN SERIAL PORT SETTING**

4、Successfully connected when network status displays connected, serial port and network are monitored to have data variation when communication.

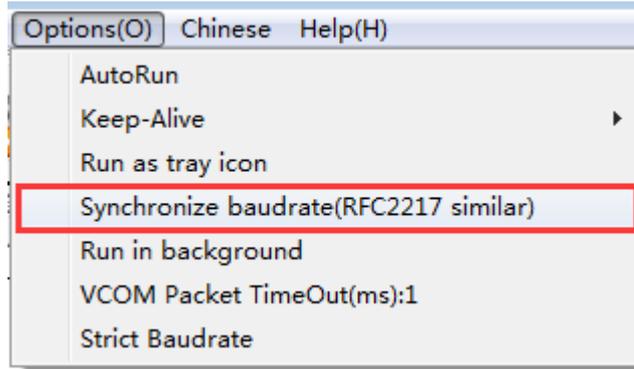
LAN mode:



WAN mode:



In order to connect with devices in long distance, [Synchronous baud rate] in CM serial port software should be modified as unselected.



5、Open PLC software, (note: PLC software must be **GX 8.52** or **WORKS 2**), Choose COM1 LAN or COM2 WAN to test separately.