



*A-9N Manual  
Fanless Edge Computing Controller*

A-9N setup steps: update wire or wireless correctly in order to login in Nod-Red develop interface

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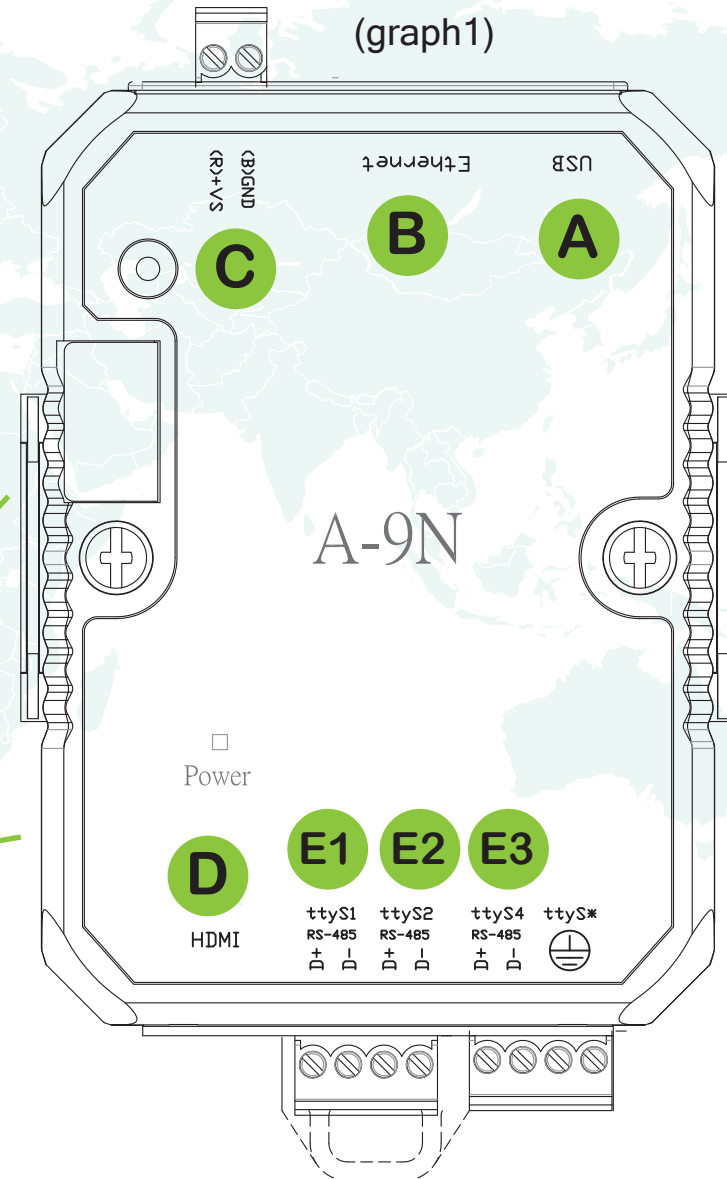
### (II) Parameters update

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(for example: keyin <http://192.168.5.86:1880/>) .....page 9/9

your PC is in the same domain  
network:192.168.5.xx

from port 1880

- A** USB/USB hub(external power supply) for mouse and keyboard  
USB dongle for WIFI(2.4G) wireless network connection
- B** Ethernet(RJ45) for local wire network connection
- C** External power supply(such as Yottacontrol ASPS)
- D** “Micro” HDMI port for monitor display
- E1** Extended RS485 slave (such as Yottacontrol A-10x/12x/51x/52x/53x)
- E2** Extended RS485 slave (such as Yottacontrol A-10x/12x/51x/52x/53x)
- E3** Extended RS485 slave (such as Yottacontrol A-10x/12x/51x/52x/53x)



```
debian@A9N:~$
```

*--- Wait 2 minutes for the boot until appear the device name: A9N*

*--- key in Linux command “sudo reboot” then press enter to reboot the device*

```
debian@A9N:~$ ip a
```

*--- key in command “ip a” then press enter to get initial internet parameters*

```
1: lo: <LOOPBACK, UP, LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
```

```
2: eth0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN group default qlen 1000
    link/ether de:ad:be:ef:ca:fa brd ff:ff:ff:ff:ff:ff permaddr e0:ff:f1:9e:a7:c2
    inet 192.168.5.201/24 brd 192.168.5.255 scope global dynamic eth0
        valid_lft 30658sec preferred_lft 30658sec
```

*--- you could find the Ethernet ip is 192.168.5.201*

```
3: usb0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc pfifo_fast state DOWN group default qlen 1000
    link/ether e0:ff:f1:9e:9a:45 brd ff:ff:ff:ff:ff:ff
```

```
4: usb1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc pfifo_fast state DOWN group default qlen 1000
    link/ether e0:ff:f1:9e:9a:47 brd ff:ff:ff:ff:ff:ff
```

```
5: can0:<NOARP, ECHO> mtu 16 qdisc noop state DOWN group default qlen 10
    link/can
```

```
6: can1:<NOARP, ECHO> mtu 16 qdisc noop state DOWN group default qlen 10
    link/can
```

```
7: wlan0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
    link/ether c4:6e:1f:10:fd:91 brd ff:ff:ff:ff:ff:ff
    inet 192.168.5.86/24 brd 192.168.5.255 scope global dynamic wlan0
        valid_lft 73795sec preferred_lft 73795sec
```

*--- you could find the WIFI ip is 192.168.5.86*

```
    inet6 fe80::c66e:1fff:fe10:fd91/64 scope link
        valid_lft forever preferred_lft forever
```

```
debian@A9N:~$
```



```
debian@A9N:~$ sudo nano /etc/systemd/network/eth0.network
```

*--- key in Linux command “sudo nano /etc/systemd/network/eth0.network” then press enter to get initial Ethernet parameters(go inside to page 5/9), need to reboot system to active the update. initial password for default account(debian) is: temppwd*

```
[Match]
Name=eth0
Type=ether

[Link]
RequiredForOnline=yes

[Network]
##DHCP
DHCP=ipv4
##STATIC IP
# Address=192.168.5.251/24
# Gateway=192.168.5.1
# DNS=192.168.5.1
```

--initial is DHCP(white letters), please add “#” in front these four white lines and remove”#” in front these six blue lines, then save to change to static address(below is the example)

```
[Match]
Name=eth0
Type=ether

[Link]
RequiredForOnline=yes

[Network]
##DHCP
#DHCP=ipv4
##STATIC IP
Address=192.168.5.251/24
Gateway=192.168.5.1
DNS=192.168.5.1
```

--How to save?

use Ctrl+X to exit, and will ask you if save or not, press Y to save and N to not save

[ Read 14 lines ]

**^G** Help  
**^X** Exit

**^O** Write Out  
**^R** Read File

**^W** Where Is  
**^\**Replace****

**^K** Cut  
**^U** Paste

**^T** Excute  
**^J** Justify

**^C** Location  
**^\_** Go to Line

**M-U** Undo  
**M-E** Redo

**M-A** Set Mark  
**M-6** Copy

**M-J** To Bracket  
**^Q** Where Was

**M-Q** Previous  
**M-W** Next

```
debian@A9N:~$ sudo nano /etc/wpa_supplicant/wpa_supplicant-wlan0.conf
```

*--- key in command “ sudo nano /etc/wpa\_supplicant/wpa\_supplicant-wlan0.conf” then press enter to get initial WIFI parameters(go inside to page 7/9), need to reboot system to active the update.  
initial password for default account(debian) is: temppwd*

```
ctrl_interface=DIR=/run/wpa_supplicant GROUP=netdev
update_config=1
p2p_disabled=1
```

```
#country=US
```

```
network={
    ssid="A9N"
    psk="yottacontrol"
}
```

--initial SSID is A9N(white letters)  
--initial password is yottacontrol(white letters),  
--replace your real SSID and Password then save to update  
(below is the example)

```
ctrl_interface=DIR=/run/wpa_supplicant GROUP=netdev
update_config=1
p2p_disabled=1

#country=US

network={
    ssid="your real SSID"
    psk="your real password"
}
```

--How to save?

use Ctrl+X to exit, and will ask you if save or not, press Y to save and N to not save

[ Read 9 lines ]

^G Help  
^X Exit

^O Write Out  
^R Read File

^W Where Is  
^\_ Replace

^K Cut  
^U Paste

^T Excute  
^J Justify

^C Location  
^\_ Go to Line

M-U Undo  
M-E Redo

M-A Set Mark  
M-6 Copy

M-J To Bracket  
^Q Where Was

M-Q Previous  
M-W Next

網路連線

← 設定

← 控制台 > 網路和網際網路

組合管理 ▾ 停用這個網路裝置 診斷這個連線

Wi-Fi A9N Qualcomm Atheros QCA9377 W...

網路和網際網路

狀態

Wi-Fi

乙太網路

撥號

VPN

飛行模式

行動熱點

Proxy

## VPN

新增 VPN 連線

尋找設定

乙太網路 內容

網路功能 共用

網際網路通訊協定第 4 版 (TCP/IPv4) - 內容

一般

如果您的網路支援這項功能，您可以取得自動指派的 IP 設定。否則，您必須詢問網路系統管理員正確的 IP 設定。

☐ 自動取得 IP 位址(I)

☒ 使用下列的 IP 位址(S):

IP 位址(I): 192 . 168 . 5 . 20

子網路遮罩(U): 255 . 255 . 255 . 0

預設閘道(D): 192 . 168 . 5 . 1

☐ 自動取得 DNS 伺服器位址(B)

☒ 使用下列的 DNS 伺服器位址(E):

慣用 DNS 伺服器(P): 192 . 168 . 5 . 1

其他 DNS 伺服器(A): 192 . 168 . 5 . 1

☐ 結束時確認設定(L)

進階(V)...

確定 取消

Setup the same domain network

3 個項目 | 已選取 1 個項目

在這裡輸入文字來搜

上午 11:50 2023/3/23



Node-RED : 192.168.5.86    keyin A9N wireless IP address: <http://192.168.5.86:1880/>

Node-RED interface showing a flow with three parallel connections:

- A** (ttyS): ttyS1, ttyS2, and ttyS4 nodes, each connected to a Modbus Response node. Each connection includes a note: "reconnecting after 2000 msec."
- B** (Ethernet): Ethernet node.
- C** (Information panel): Information panel on the right showing the flow ID "25e136551a27d2a3" and a warning message: "按住 ↑ 後按一下並拖動節點可以將該節點的多個連接一併移動到其他節點的埠。"

Windows taskbar at the bottom shows the time 04:25 on 2023/3/22.

- A** Demo code for Modbus RTU
- B** Demo code for Modbus TCP/IP
- C** Node-Red website to get all documents