

# **NICGIGA**

## **Wifi bridge**

**User Guide**

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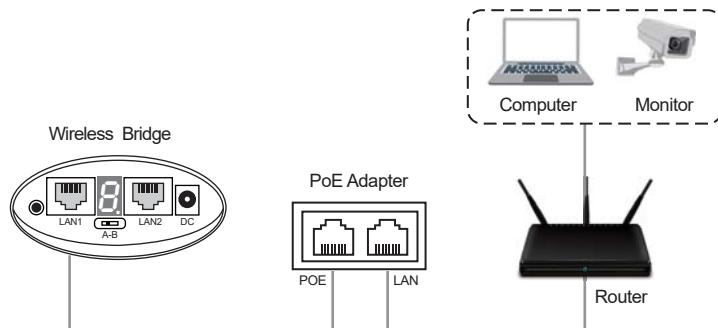
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## 1. Hardware Connection

Take the 5.8G1000M as an example



## 2. Description of keys and interfaces

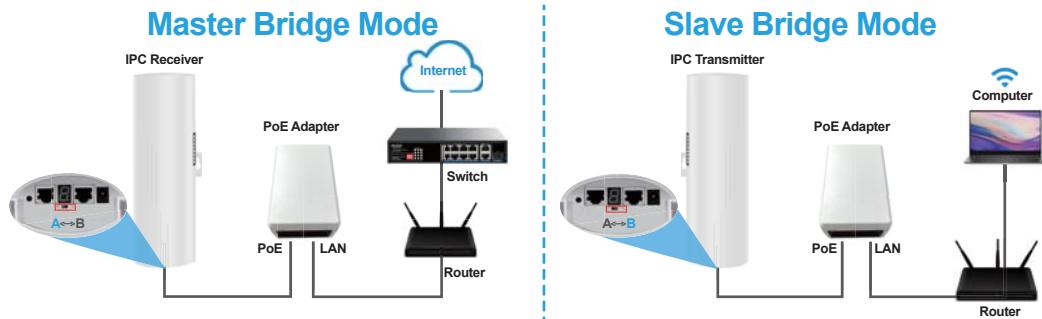
Keys/Interfaces	Description
A<->B	Working mode A: Master Mode B: Slave Mode
DC	DC power supply interface. The device supports 12V/1A DC power supply access.
Digital switch/ Reset switch	Press briefly during power-up to add one to the digital tube value (the digital tube configuration takes approximately 3 seconds to take effect). Press and hold for 15 seconds during power-up, the device will return to the original factory settings.

2.4G 300M Wireless Bridge	
LAN	Data transmission and power supply port, the network port acts as a LAN port in bridge mode, connect POE power adapter POE port.

5.8G 300M Wireless Bridge	
LAN1	Data transmission and power supply port, the network port acts as a LAN port in bridge mode, connect POE power adapter POE port.
LAN2	Data transmission and power supply port, the network port acts as LAN port in bridge mode, connect POE power adapter POE port

5.8G 1000M Wireless Bridge	
LAN1	LAN data transmission port, port rate 10/100M adaptive, can be connected to computers, cameras, switches and other devices
LAN2	Data transmission and power supply port, port rate 10/100/1000M adaptive, bridge mode network port acts as LAN port function, connect POE power adapter POE port

### 3. Digital bridge pairing settings



#### 3.1 Pairing settings

1. **A-B** mode is set via the **A-B** dip switch, the led appears and flashes **L**. When the **L** disappears the configuration remains successful.
2. The led digital display is set via the **RESET** button, pressed once to activate the configuration state and pressed again to increase it automatically. It can be increased continuously.  
For example, to configure a pair of bridges with the number "1", set up the bridge as follows.
  - 1). After setting A to "1", set B to "1". The LED will blink first, please wait patiently.
  - 2). After the L blinks into the number "1", "1" will continue to blink until the LED shows "1" is always on and no longer blinks, at this time A-B has been successfully networked.

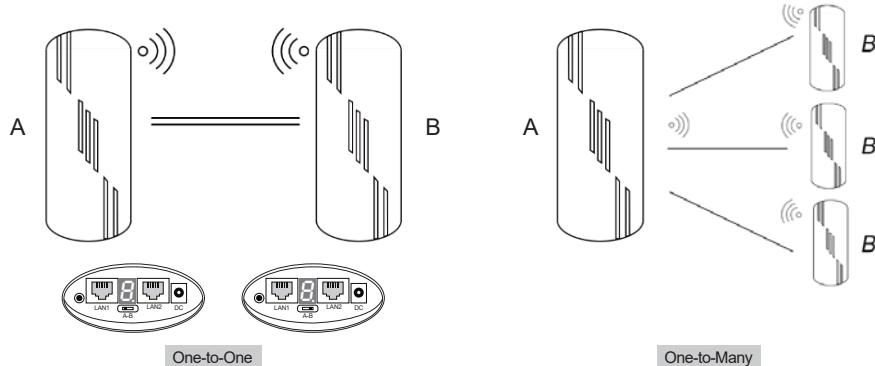
#### 3.2 Digital switch for quick pairing

##### One-to-one matching method

1. Dial one bridge to "A" and the other bridge to "B".
2. Short press the digital on/off/reset button, each press will add one to the digital tube value.
3. Set the paired bridge to the same value for successful pairing.

##### One-to-many pairing method (up to 1 pair of 8)

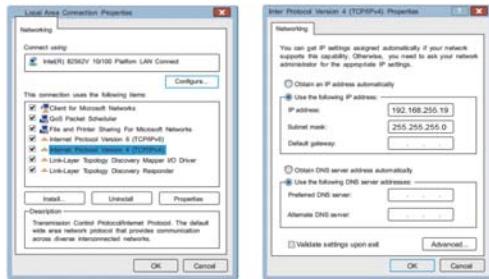
1. Dial one bridge to "A" and the others to "B".
2. Short press the "digital switch/reset" button, each press adds one to the value of the digital tube.
3. Set the paired bridge to the same value for successful pairing.



### 3.3 Bridge setup via browser

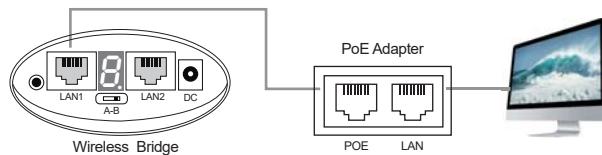
#### Computer Settings

1. Right click "Local Area Connection" and select "Properties".
2. In the Properties dialog box double click on "Internet Protocol Version 4(TCP/IPv4)".
3. Select "Use the following IP address". Set the IP address to 192.168.255.X (X is any number from 2-253) and the Subnet mask to 255.255.255.0. Then click "OK".



#### Advanced Settings - Custom Settings

1. Turn off the digital display and set the mode and pairing network ID via the web page.
2. The computer settings are attempted as follows.



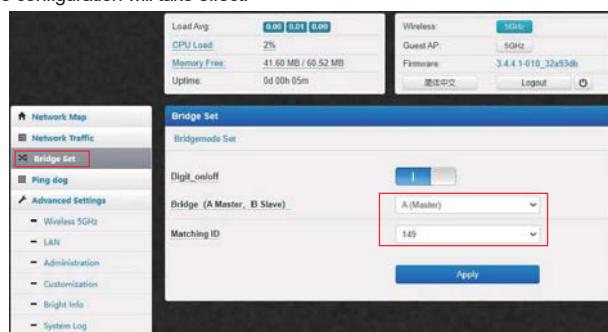
3. Configure the IP address of the PC, the IP address configured for the PC is 192.168.255.X.
4. Open Google Chrome and type the IP address of the bridge into the IE address bar. IP address please refer to **Appendix I: Comparison table of pairing settings**.

#### 5. Enter the following login management interface operation:

- 1). The device is in bridge mode by default, open the computer browser, (when the dip switch is in A, the digital display shows the number "5" for example), set the IP address 192.168.255.105.
- 2). In the device management platform, User name/Password is "admin", then click "login".
- 3). In the [Bridge Set] screen, you can turn off the digital display function.

#### 6.Master bridge configuration method:

- 1). Click "Bridge Set".
- 2). Set the bridge mode to **A** mode.
- 3). Set the ID number.
- 4). Click "Apply" and the configuration will take effect.



#### 7. Slave bridge configuration method

- 1). Click "Bridge Set".
- 2). Set the bridge mode to **B** mode.
- 3). Set the ID number(The ID number should match the ID number of the paired **A** device).
- 4). Click "Apply" and the configuration will take effect.



### Appendix I: Comparison table of pairing settings

Digital display	Corresponding ID	Management IP of A	Management IP of B
0	0	192.168.255.100	192.168.255.200
1	165	192.168.255.101	192.168.255.201
2	161	192.168.255.102	192.168.255.202
3	157	192.168.255.103	192.168.255.203
4	153	192.168.255.104	192.168.255.204
5	149	192.168.255.105	192.168.255.105
6	48	192.168.255.106	192.168.255.206
7	44	192.168.255.107	192.168.255.207
8	40	192.168.255.108	192.168.255.208
9	36	192.168.255.109	192.168.255.209
A	140	192.168.255.110	192.168.255.210
B	132	192.168.255.111	192.168.255.211
C	124	192.168.255.112	192.168.255.212
D	116	192.168.255.113	192.168.255.213
E	108	192.168.255.114	192.168.255.214
F	100	192.168.255.115	192.168.255.215

## Appendix II: Product Parameter

Model	CPE-S300
Main Chipset	AR9344
Flash	8MB
Memory	64MByte DDR2
Interface	2 x 10/100Mbps Adaptive RJ45 network interface(support 24V PoE)
Wireless Technology	5G:450M 802.11a/n/ac 1T1R technology
Power consumption	24V 0.5A Passive PoE DC 12V 1A,<10W
Antenna	Built-in high gain 14dBi directional panel antenna (horizontal wave half-angle 60°, vertical wave half-angle 60°)
Frequency range	ISM band: 4.900GHz ~ 5.850GHz
Channel Distribution	5G: 36、40、44、48、52、56、60、64、100、104、108、112、116、120、124、128、132、136、140、149、153、157、161、165
Output power	11a @54M:20±2dB,@6M:23±2D; 11n 20MHz: @MCS9:20±2dB,@MCS0:23±2dB; 11n 40MHz: @MCS9:20±2dB,@MCS0:23±2dB; 11ac 40MHz @MCS9:20±2dB,@MCS9:20±2dB; 11ac 80MHz @MCS9:20±2dB,@MCS0:23±2Db
Reception Sensitivity	11a: <-72dbm@54Mbps, <-89dbm@6Mbps; 11n 20MHz: <-89dbm@MCS0; 1ac 40MHz: <-66dbm@MCS9, <-84dbm@MCS0; 11ac 80MHz: <-63dbm@MCS9, <-81dbm@MCS0
EVM	802.11n: ≤ -28 dB, 802.11a: ≤ -25 dB
PPM	<±20ppm
Throughput	300Mbps
Bridge Configuration	Wireless mode: Bridge Access Point, Bridge Client Switching Bridge Access Point: Bridge SSID, encryption method (WPA2-PSK, WPA-PSK, no encryption), bridge password, wireless protocol, wireless bandwidth, wireless channel, wireless power (100%, 75%, 50%, 25%, 10%, 5%) Bridge client: Bridge SSID, encryption method (WPA2-PSK, WPA-PSK, no encryption), bridge password, MAC address lock at the other end, wireless channel, wireless power (100%, 75%, 50%, 25%, 10%, 5%)
Working mode	Master AP (bridge access point), slave AP (bridge client), switchable via dip switches
Environment	Operating Temperature: -30~55 °C; Storage Temperature: -40~70 °C; Operating Humidity: 10%~90% non-condensing; Storage Humidity: 5%~95% non-condensing

Model	CPE-S900
Main Chipset	MTK7620A+7621E+IP1001M 900Mbps
Flash	8MB
Memory	64MByte DDR2
Interface	WAN:1*10/100/1000 Mbps Adaptive RJ45 Network Interface LAN:1*10/100Mbps Adaptive RJ45 Network Interface
Wireless Technology	5G:900M 802.11a/n/ac MIMO technology
Power Consumption	24V 0.5A Passive PoE DC 12V 1A,<10W
Antenna	Built-in high gain 14dBi directional panel antenna (horizontal wave half-angle 60°, vertical wave half-angle 60°)
Frequency Range	ISM band: 4.900GHz ~ 5.850GHz
Channel Distribution	5G: 36、40、44、48、52、56、60、64、149、153、157、161
Output Power	11a @54M:20±2dB, @6M:23±2Db 11n 20MHz: @MCS7:23±2dB, @MCS0:23±2dB 11n 40MHz: @MCS7:20±2dB, @MCS0:23±2dB 11ac 40MHz @MCS7:20±2dB, @MCS0:23±2dB 11ac 80MHz @MCS7:20±2dB, @MCS0:23±2Db
Reception Sensitivity	11a: -65dbm@54Mbps, -81dbm@6Mbps 11n 20MHz: -64dbm@MCS7, -82dbm@MCS0 11ac 40MHz: -61dbm@MCS7, -79dbm@MCS0 11ac 80MHz: -58dBm@MCS7 -76dBm@MCS0
EVM	802.11n: ≤ -28 dB 802.11a: ≤ -25 dB
PPM	<±20ppm
Throughput	300Mbps
Network	Bridge: Static IP/Dynamic Acquisition Gateway: Static IP/Dynamic Acquisition/PPPoE
Working Mode	Master AP, Slave AP (dial switch)
Environment	Operating Temperature: -30~55 °C; Storage Temperature: -40~70 °C; Operating Humidity: 10%~90% non-condensing; Storage Humidity: 5%~95% non-condensing

## FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.