



InRouter 600

APPLICATION GUIDE FOR WLAN USAGE

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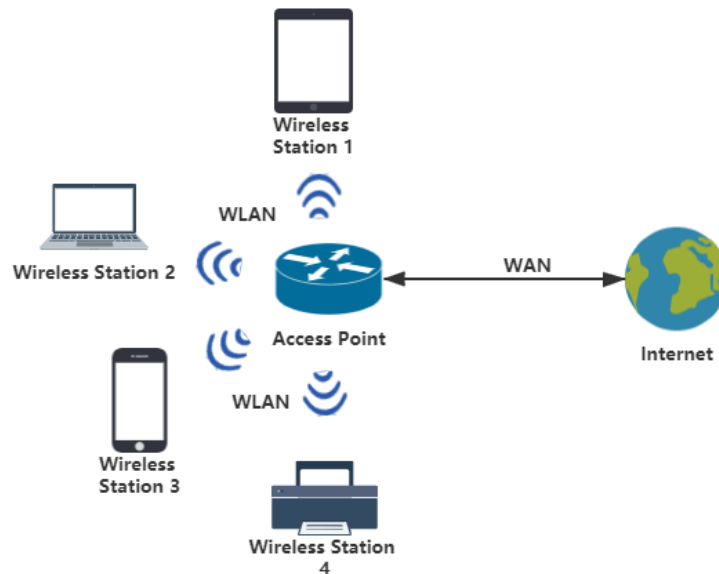
InHand Networks
Global Leader in Industrial IoT

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1. Abstract

This application guide shows how to configure IR600 using WLAN.



The above figure shows a simple WLAN. Access Point (AP) provides Wireless Access Service. It allows other wireless devices to access. Station (STA) is similar as the network terminal. It can access to AP, but other wireless devices cannot access to it. With WLAN, we can greatly improve the flexibility and mobility of the network.

2. Configuration

2.1 Click **Network** → **WAN**, select the WAN Type as **DHCP** and then click **Apply**.

WAN

Type	Dynamic Address (DHCP) ▼	
Shared Connection(NAT)	<input checked="" type="checkbox"/>	
Default Route	<input checked="" type="checkbox"/>	
MAC Address	00:18:05:0E:5D:5A	Default Clone
MTU	Default ▼	1500

2.2 AP mode

1) Click **Network** → **Switch WLAN Mode**

Please select **AP** and click **Apply**.

- 2) Click **System** → **Reboot**

Please reboot the router when the WLAN Type is changed. The reboot may take tens of seconds.

- 3) Click **Network** → **WLAN**, enable **WLAN**

- 4) Name **SSID**

You can name your WLAN at will. Then the wireless device can search the WLAN.

- 5) Choose **Auth Mode**

The default value is **OPEN**. That means everyone can connect to your WLAN. Otherwise, please select an authorization mode as you need. Here **SHARED** is as a testing example.

- 6) Select **Encryption Method** and set **Key** (optional)

If the **Encryption Method** choice is **NONE**, please skip this step. After setting the key, only the user with correct key can connect to the WLAN.

7) Click **Apply**

2.3 STA Mode

1) Click **Network** → **Switch WLAN Mode**

Switch WLAN Mode

WLAN Type STA ▼ (*Reboot to take effect)
STA
AP

Please select **STA** and click **Apply**.

2) Click **System** → **Reboot**

Please reboot the router when the WLAN Type is changed. The reboot may take tens of seconds.

3) Click **Network** → **WAN(STA)**, select **DHCP**

WAN(STA)

Type Dynamic Address (DHCP) ▼

Shared Connection(NAT)

Default Route

MAC Address 00:18:05:0E:5D:5C

MTU Default ▼ 1500

Remember to click **Apply**!

4) Click **Network** → **WLAN Client** and enable it

5) Click **Scan** and find the WLAN you want to connect, then click **Connect**.

WLAN Client

Channel	SSID	BSSID	Security	Signal(%)	Mode	Select AP
1	SNQU	44:d1:fa:64:06:2a	NONE	29	11b/g/n	<input type="button" value="Connect"/>
1	DH-3	24:69:68:14:89:25	WPA1PSK/WPA2PSK/AES	34	11b/g/n	<input type="button" value="Connect"/>
6	SNQU	44:d1:fa:64:05:f2	NONE	39	11b/g/n	<input type="button" value="Connect"/>
9	Xfan-NEWIFI	20:76:93:40:9b:c4	WPA1PSK/WPA2PSK/AES	15	11b/g/n	<input type="button" value="Connect"/>
11	SNQU	44:d1:fa:64:06:46	NONE	24	11b/g/n	<input type="button" value="Connect"/>
11	Inhand-CD	84:a9:c4:5f:71:c1	WPA1PSK/WPA2PSK/TKIP/AES	39	11b/g/n	<input type="button" value="Connect"/>
6	WLANtest	62:d0:ad:d3:d8:08	WPA2PSK/AES	86	11b/g/n	<input type="button" value="Connect"/>

6) Fill in the password (if needed) and then click **Apply**.

WLAN Client

Enable

Mode 802.11b/g/n ▼

SSID WLANtest

Auth Mode WPA2-PSK ▼

Encryption Method AES ▼

WPA/WPA2 PSK

2.4 WDS Function (only for AP mode)

WDS is used to expand the coverage of wireless signal and enhance the signal strength. Before configuring WDS, please confirm that the main router has been configured and the WDS function of the main router is **closed**.

1) Tick **Enable WDS**

Enable WDS

Default Route

Bridged SSID WLANtest

Bridged BSSID f2:d8:1e:52:21:91 (Example: 00:11:22:33:44:55)

Auth Mode WPA2-PSK ▼

Encryption Method AES ▼

WPA/WPA2 PSK

2) Fill in the information of bridged main router

Bridged SSID is the name of the main router.

Bridged BSSID is the MAC address of the main router.

Please click **Scan**.

WLAN							
Channel	SSID	BSSID	Security	Signal(%)	Mode	Select AP	
1	SNQU	44:d1:fa:64:06:2a	NONE	39	11b/g/n	<input type="button" value="Connect"/>	
1	DH-3	24:69:68:14:89:25	WPA1PSKWPA2PSK/AES	29	11b/g/n	<input type="button" value="Connect"/>	
6	WLANtest	f2:d8:1e:52:21:91	WPA2PSK/AES	86	11b/g/n	<input type="button" value="Connect"/>	
6	SNQU	44:d1:fa:64:05:f2	NONE	44	11b/g/n	<input type="button" value="Connect"/>	

Find the main router and click **Connect**. If there is no target router, please click **Refresh**.

3) Click **Apply**

3. Test and Verify

3.1 Test AP mode

After configuring, the SSID name can be searched on a wireless device. After connection, the wireless device should access to the Internet.



3.2 Test STA mode

Click **Status** → **WLAN**

Channel	SSID	BSSID	Security	Signal(%)	Mode	Status
1	DH-3	24:69:68:14:89:25	WPA1PSKWPA2PSK/AES	24	11b/g/n	
1	SNQU	44:d1:fa:64:06:2a	NONE	24	11b/g/n	
6	SNQU	44:d1:fa:64:05:f2	NONE	39	11b/g/n	
11	SNQU	44:d1:fa:64:06:46	NONE	24	11b/g/n	
11	Inhand-CD	84:a9:c4:5f:71:c1	WPA1PSKWPA2PSK/TKIPAES	39	11b/g/n	
9	Xfan-NEWIFI	20:76:93:40:9b:c4	WPA1PSKWPA2PSK/AES	0	11b/g/n	
11	8Q-6666	54:36:9b:0f:64:3e	NONE	0	11b/g/n	
6	WLANtest	ce:03:b6:cb:21:2e	WPA2PSK/AES	86	11b/g/n	Connected

As the figure shows, the WLAN which SSID is WLANtest is **connected**.

3.3 Test WDS

Press **Windows + R** to open **Run** box. Type **cmd** and then click **OK**. Then the **cmd** block will show up.

Type command **ping** with the IP address of your main router and command **-t**, then press **Enter**. As the following figure shows, the bridged router is established successfully.

```
C:\WINDOWS\system32>ping 192.168.20.1 -t
Pinging 192.168.20.1 with 32 bytes of data:
Reply from 192.168.20.1: bytes=32 time=11ms TTL=64
Reply from 192.168.20.1: bytes=32 time=4ms TTL=64
Reply from 192.168.20.1: bytes=32 time=4ms TTL=64
Reply from 192.168.20.1: bytes=32 time=3ms TTL=64
Reply from 192.168.20.1: bytes=32 time=5ms TTL=64
Reply from 192.168.20.1: bytes=32 time=230ms TTL=64
```

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