



Microhard Systems Inc.

Application Note

VIP in router mode

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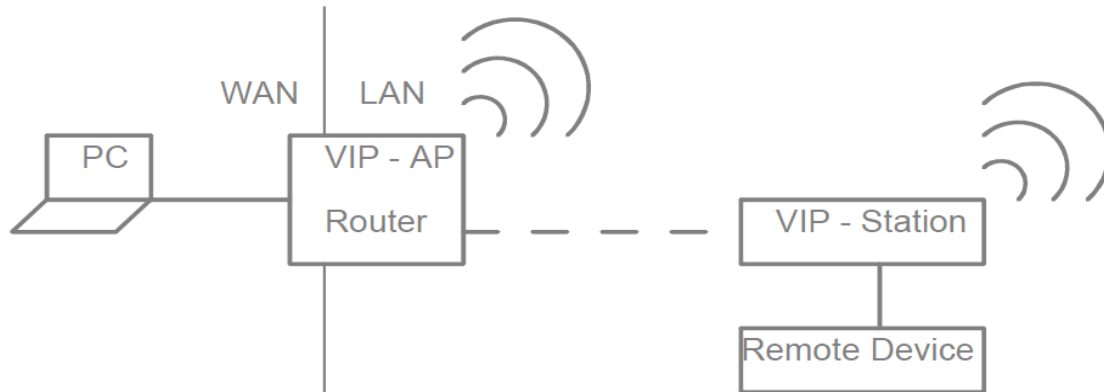
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Basic Configuration



1. Power up first unit to be used as Access Point in Router mode.
2. From **System Configuration**, change **System Operation Mode** to **Router**.
3. In **Radio Configuration** menu change following:
 - **Operation Mode** to **Access Point**
 - Set unique **Network Name(SSID)**
4. From **Network Configuration** select **Local IP Config**. In router mode ethernet interface is split into two parts, WAN and LAN. Select **WAN Interface IP Config**. In *dhcp* mode *IP* settings are assign automatically by DHCP server. Select *static* mode for *IP Address Mode* and *DNS mode* to manually enter *IP* settings.

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Network Configuration

Local IP Config...

WAN Interface IP Config...

IP Address Mode:	<input checked="" type="radio"/> static <input type="radio"/> dhcp
IP Address:	<input type="text" value="192.168.1.201"/>
IP Subnet Mask:	<input type="text" value="255.255.255.0"/>
IP Gateway:	<input type="text" value="192.168.1.1"/>
DHCP Timeout:	<input type="text" value="60"/>
DNS Mode:	<input checked="" type="radio"/> static <input type="radio"/> automatic
Preferred DNS Server:	<input type="text" value="192.168.1.6"/>
Alternate DNS Server:	<input type="text" value="0.0.0.0"/>
<input type="button" value="Submit"/>	<input type="button" value="Reset"/>

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5. Go back to **Local IP Config** menu and select **LAN Interface IP Config**. Enter following for LAN interface:
 - *IP Address*: 192.168.2.201
 - *IP Subnet Mask*: 255.255.255.0
6. Go Back to **Network Configuration** menu and select **DHCP Serve Config**. Alternatively remote devices can have static IP addresses.

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Network Configuration

DHCP Server Config...

Server Status:	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Server Subnet:	<input type="text" value="192.168.2.0"/>
Server Netmask:	<input type="text" value="255.255.255.0"/>
Starting Address:	<input type="text" value="192.168.2.200"/>
Ending Address:	<input type="text" value="192.168.2.210"/>
Gateway Address:	<input type="text" value="192.168.2.100"/>
DNS Address:	<input type="text" value="192.168.1.6"/>
WINS Address:	<input type="text" value="0.0.0.0"/>
New Binding MAC:	<input type="text" value="00:00:00:00:00:00"/>
New Binding IP:	<input type="text" value="0.0.0.0"/> <input type="button" value="Add"/>
Delete Binding:	<input type="button" value="No"/> <input type="button" value="Delete"/>
	<input type="button" value="Submit"/> <input type="button" value="Reset"/>

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7. Power up second unit to be used as a remote on wireless network.
8. In **Radio Configuration** menu change following:
 - **Operation Mode** to Station
 - Set **Network Name(SSID)** to match SSID on a Access Point
9. From **Network Configuration** select **Local IP Config**. In *dhcp* mode *IP* settings are assign automatically by DHCP server configured on VIP Access Point. Optionally *IP* settings can be enter manually by selecting *static* mode as below.

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Network Configuration

Local IP Config...

IP Address Mode:	<input checked="" type="radio"/> static <input type="radio"/> dhcp
IP Address:	<input type="text" value="192.168.2.201"/>
IP Subnet Mask:	<input type="text" value="255.255.255.0"/>
IP Gateway:	<input type="text" value="192.168.2.100"/>
DHCP Timeout:	<input type="text" value="60"/>
DNS Mode:	<input checked="" type="radio"/> static <input type="radio"/> automatic
Preferred DNS Server:	<input type="text" value="192.168.1.6"/>
Alternate DNS Server:	<input type="text" value="0.0.0.0"/>
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

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In this configuration, devices on Local Area Network can talk to each other and communicate with device on Wide Area Network as well. But device on WAN can't initiate communications with devices on LAN.

Port Forwarding Configuration

Port forwarding allows remote devices to connect to a specific computer within a private local network.

1. Configure system as in previous section, Basic Configuration.
2. On Access Point, select **Security Configuration → Firewall Config → Port Forwarding Config**.

Add two devices to the list, and configure as follows.

First device, remote VIP

Internal Server IP: 192.168.2.201

Internal Port: 80

Protocol: TCP

External Port: 9201

Comment: Remote VIP

Second device, remote computer:

Internal Server IP: 192.168.2.209

Internal Port: 23

Protocol: TCP

External Port: 9202

Comment: Laptop

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Security Configuration

Firewall Config...

Port Forwarding Config...

Internal Server IP:	<input type="text" value="192.168.2.209"/>
Internal Port:	<input type="text" value="23"/>
Protocol:	<input type="text" value="TCP"/>
External Port:	<input type="text" value="9202"/>
Comment:	<input type="text" value="Laptop"/>
<input type="button" value="Add/Update"/>	

Port Forwarding Summary:

Connection to External Port: 9201 with Protocol: TCP will be forwarded to LAN:192.168.2.201:80. Comment: Remote VIP
Connection to External Port: 9202 with Protocol: TCP will be forwarded to LAN:192.168.2.209:23. Comment: Laptop

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3. Go back to **Firewall Config** and enable firewall.
4. Once firewall is enabled, you can login into a remote IP from browser with following command: <192.168.1.201:9201> or remote laptop with telnet if telnet service is enabled: <telnet 192.168.1.201.9202>