



Quick Note 23

Configuring Wi-Fi Client mode on a TransPort Router

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1 VERSION

Version Number	Status
1.0	Published
1.1	Updated for new web UI released in firmware 5123 and above
1.2	Note added about DHCP
1.3	Updated screenshots and instructions for new web interface, rebranding (Mar 2016)
1.4	Updated screenshots and instructions for new web interface Added reference to ETH0 in WiFi client configuration Other minor fixes (Sep 2020)

2 CONFIGURATION

The Wi-Fi client mode configuration involves configuring an Ethernet interface that will be associated with the Wi-Fi module, configuring the Wi-Fi parameters to match the Access Point (AP) that this client will be connected to and finally setting the default route to use the Ethernet interface linked with the Wi-Fi client.

2.1 Configure an Ethernet interface with either a static IP address or use the DHCP client

2.1.1 Option 1: Static IP address

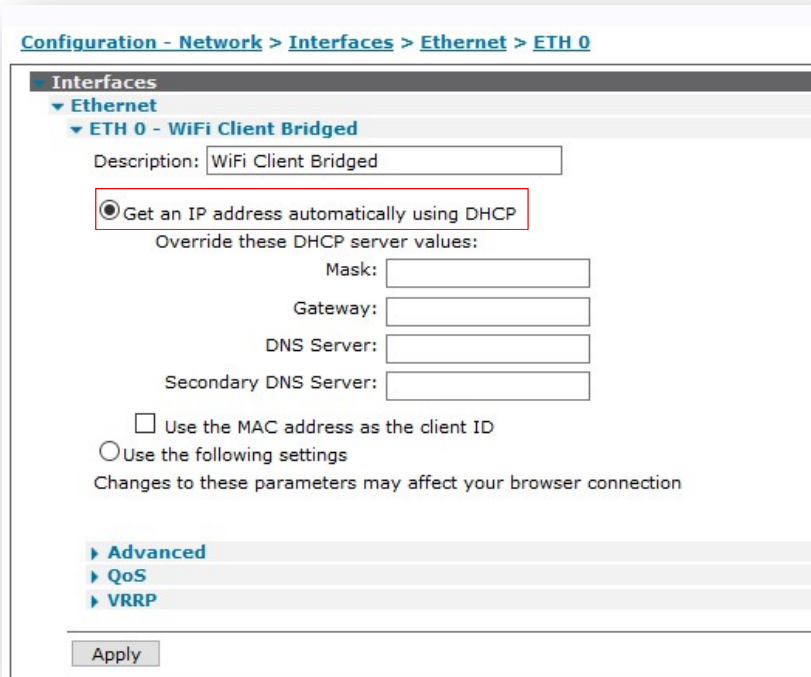
Select 'Use the following settings' and input the IP Address, Subnet Mask, Gateway, DNS server, and then click the 'Apply' button:

The screenshot shows the configuration page for the Ethernet interface ETH 0. The breadcrumb path is Configuration - Network > Interfaces > Ethernet > ETH 0. Under the 'Ethernet' section, 'ETH 0 - WiFi Client Bridged' is expanded. The 'Description' field contains 'WiFi Client Bridged'. Two radio buttons are present: 'Get an IP address automatically using DHCP' (unselected) and 'Use the following settings' (selected). The 'Use the following settings' section is highlighted with a red box and contains four input fields: IP Address (192.168.1.1), Mask (255.255.255.0), Gateway (192.168.1.254), and DNS Server (192.168.1.254). A 'Secondary DNS Server' field is empty. Below these fields is a warning: 'Changes to these parameters may affect your browser connection'. At the bottom, there are expandable sections for 'Advanced', 'QoS', and 'VRRP', and an 'Apply' button.

Parameter	Setting	Description
Description	Free text	Friendly name
Use the following settings	Selected	Enables IP parameters
IP Address	192.168.1.1	Sets the IP address of ETH 0
Mask	255.255.255.0	Sets the subnet mask of ETH 0
Gateway	192.168.1.254	Sets the gateway to use
DNS Server	192.168.1.254	Sets the DNS server to use

2.1.2 Option 2: DHCP client

Select 'Get an IP address automatically using DHCP', and then click the 'Apply' button. This is the default setting.



NOTE: If there is an existing DHCP server on the local Ethernet segment, this router's ETH 0 interface may obtain an IP address from that local DHCP server instead of from the TransPort's Wi-Fi AP. In this situation, either configure a static IP address as described in 2.1.1 or configure a logical Ethernet interface (instead of ETH 0) and ensure it's in a separate hub group (see User Guide for more info about hub groups: [Configure advanced Ethernet parameters](#)).

Parameter	Setting	Description
Description	Free text	Friendly name
Get an IP address automatically using DHCP	Selected	Enables DHCP client

NOTE: For both 2.1.1 & 2.1.2, Bridge mode is not enabled, as this is only needed in AP mode.

2.2 Configure the Global Wi-Fi settings

Select your Country, ensure the default 'Auto' channel option is selected, and then click the 'Apply' button.

Configuration - Network > Interfaces > Wi-Fi > Global Wi-Fi Settings

▼ Interfaces

- ▶ Ethernet
- ▼ Wi-Fi
 - ▼ Global Wi-Fi Settings

Country: Germany

Remote management access: No restrictions

Network Mode: B/G/N

Channel: Auto

▶ Advanced

▶ Wi-Fi Hotspot

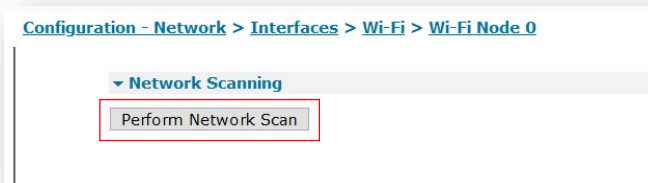
▶ Wi-Fi Filtering

Apply

Parameter	Setting	Description
Country	Select correct Country	Sets the Wi-Fi channels to be used
Channel	Auto	Allows automatic channel selection

2.3 Configure the Wi-Fi node

If the AP to be connected to is broadcasting its SSID, scroll down to expand the 'Network Scanning' sub menu to reveal the 'Perform Network Scan' button.

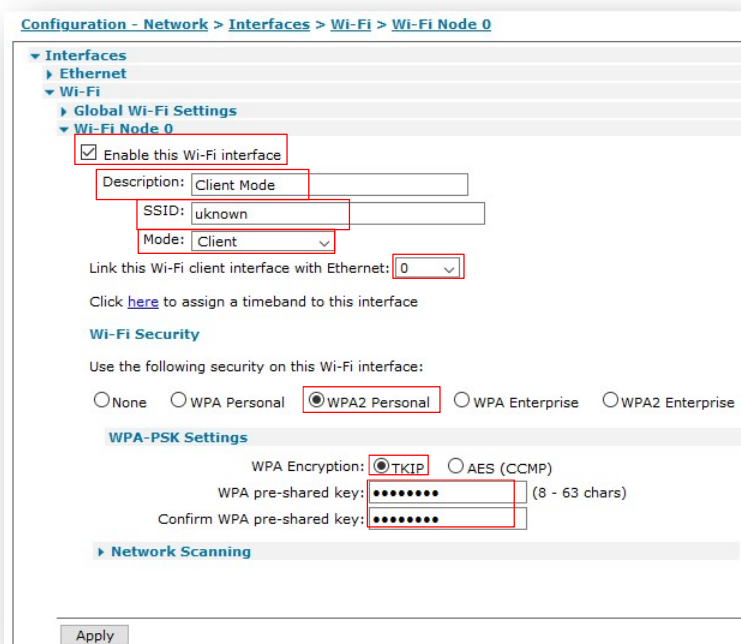


Clicking this will perform a network scan and list APs that are visible in your location.



Clicking the 'Connect' button for the appropriate SSID will enter the appropriate configuration details for the client configuration. Only the pre-shared key (PSK) should then need to be entered.

If the SSID is hidden, the scanning function will not be able to see the AP; manually enter the details as shown below.



Parameter	Setting	Description
Enable this Wi-Fi interface	Checked	Enables Wi-Fi
Description	Free text field	Friendly name
SSID	SSID text	Sets the SSID to connect to at the Access Point
Mode	Client	Sets the mode of the Wi-Fi
Link this Wi-Fi client interface with Ethernet	0	Select the ETH interface to which this WiFi client will be linked
Security	WPA2-Personal	Sets the security method. This must match the Access Point
WPA Encryption	TKIP	Sets the WPA encryption type. This must match the Access Point
WPA pre-shared key	Password	Sets the pre-shared key. This must match the Access Point
Confirm WPA pre-shared key	Password	Confirms the pre-shared key. This must match the Access Point

NOTE: In order to maximize the security of the wireless connection, the use of a long pseudo-random pre-shared key is recommended.

2.4 Configure the default route

Configuration - Network > IP Routing/Forwarding > Static Routes > Default Route 0

Set the interface to the Ethernet interface configured in 2.1, in this example, ETH 0.

Configuration - Network > IP Routing/Forwarding > Static Routes > Default Route 0

- ▶ Interfaces
- ▶ DHCP Server
- ▶ Network Services
- ▶ DNS Servers
- ▶ Dynamic DNS
- ▼ IP Routing/Forwarding
 - ▶ IP Routing
 - ▼ Static Routes
 - ▶ Routes 0 - 9
 - ▶ Routes 10 - 19
 - ▶ Routes 20 - 29
 - ▶ Routes 30 - 39
 - ▶ Routes 40 - 49
 - ▼ Default Route 0

Description:

Default route via

Gateway:

Interface:

Use PPP sub-configuration:

Metric:

▶ Advanced

NOTE: This gateway parameter will only need configuring if the Ethernet interface IP parameters were filled in manually (2.1.1). Otherwise, the DHCP client will take care of this, assuming the DHCP server is correctly configured with a default gateway option.

Wi-Fi Client mode configuration is now complete.

3 TESTING

3.1 Confirm the Wi-Fi client has connected to the AP

Browse to **Management - Network Status > Interfaces > Wi-Fi**

The screenshot displays the 'Management - Network Status > Interfaces > Wi-Fi' page. It shows the Wi-Fi interface status, including module detection, admin and operational status, channel mode, channel, and MAC address. It also provides statistics for bytes and packets received and sent, along with error counts. Below this, it indicates that there are 0 connected Wi-Fi clients and 1 access point connection. A table lists the access point details, including its name, Wi-Fi node, RSSI, flags, power save mode, and supported data rates. The table shows one connection to an 'unknown' access point with a Wi-Fi node of '0' and an RSSI of '27'. The table also includes a 'Disconnect' button for the connection and a 'Disconnect All Clients' button. A 'Refresh' button is located at the bottom of the page.

Management - Network Status > Interfaces > Wi-Fi

▼ Interfaces
▶ Ethernet
Wi-Fi

Module Detected: Yes (168C:003C)
Admin Status: Up
Operational Status: Up
Channel Mode: B/G/N
Channel: 1
MAC Address: 04:f0:21:35:2b:b7

Bytes Received: 21861 Bytes Sent: 3258
Packets Received: 252 Packets Sent: 26
Receive Errors: 3 Transmit Errors: 0
Received Packets Dropped: 0

Number of Connected Wi-Fi Clients: 0

Number of Access Point Connections: 1

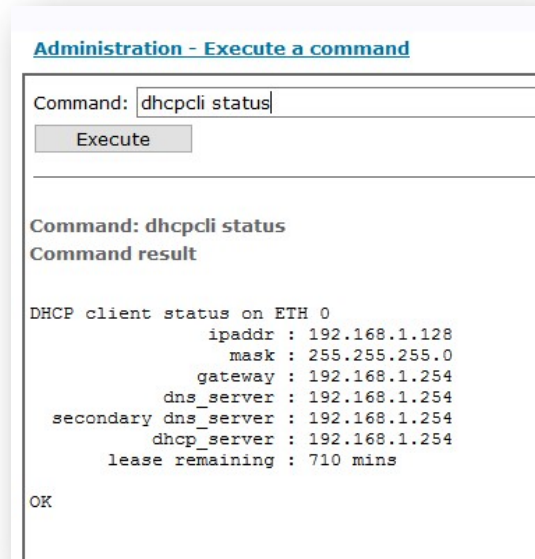
Access Point	Wi-Fi Node	RSSI	Flags	Power Save	Mode	Neg. Rates (Mbps)	RX Rate (Mbps)	Capability Info
unknown (f8:df:a8:d3:de:0c)	0	27	-	Awake	N	6.5, 13.0, 19.5, 26.0, 39.0, 52.0, 58.5, 65.0, 13.0, 26.0, 39.0, 52.0, 78.0, 104.0, 117.0, 130.0	1.0	ESS, Privacy, Short Preamble, Short Slottime, <input type="button" value="Disconnect"/>

The status should be Up & the Wi-Fi Client mode connections should show 1.

3.2 Check the DHCP client status

If DHCP client mode was configured as in 2.1.2, navigate to **Administration - Execute a command**

Run the CLI command 'dhcpcli status', then review the output to confirm Eth 0 obtained an IP address:



```
Administration - Execute a command
Command: dhcpcli status
Execute

Command: dhcpcli status
Command result

DHCP client status on ETH 0
    ipaddr : 192.168.1.128
    mask   : 255.255.255.0
    gateway : 192.168.1.254
    dns_server : 192.168.1.254
    secondary dns_server : 192.168.1.254
    dhcp_server : 192.168.1.254
    lease remaining : 710 mins

OK
```

3.3 Ping test

Return to 'Execute a command' and try and ping a FQDN such as www.google.co.uk:



```
Administration - Execute a command
Command: ping www.google.co.uk
Execute

Command: ping www.google.co.uk
Command result

Pinging 'www.google.co.uk' [172.217.19.67]

sent PING # 1
PING receipt # 1 : response time 0.10 seconds
Iface: ETH 0
Ping Statistics
Sent      : 1
Received  : 1
Success   : 100 %
Average RTT : 0.10 seconds

OK
```

Wi-Fi Client mode is now properly configured.