

TITAN

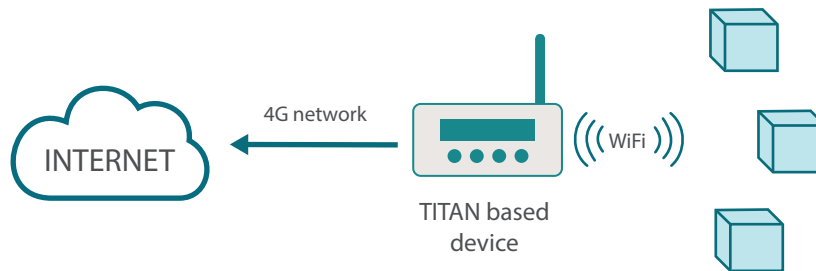
Application Note 25

Using the Router as a Wi-Fi Access Point with a 4G
Internet Output

Using the Router as a Wi-Fi Access Point with a 4G Internet Output

1. Introduction

One of the many features of a TITAN-based router is its ability to behave as a Wi-Fi Access Point to provide Internet connectivity (via 4G/3G/2G) to Wi-Fi devices. A typical configuration for this scenario is provided in this application note.



2. Configuration

To configure the TITAN-based device as a Wi-Fi Access Point, go to the “Wi-Fi > Basic Settings” section of the configuration menu. Here we will choose the “Wi-Fi Access Point” operating mode, we will enter an SSID (the name that will be seen by other Wi-Fi devices) and we will indicate the type of security (WPA2-Personal is recommended), the channel and an appropriate KEY.

The screenshot shows the webdyn configuration interface in a browser window. The page title is 'Intelligent Router' and the URL is '192.168.1.2/wifi-settin...'. The webdyn logo and 'powered by TITAN' are at the top. The left sidebar shows a navigation menu with categories: Mobile, Ethernet, Wifi, Firewall, Serial Settings, External Devices, and Other. The 'Wifi' category is expanded, and 'Basic Settings' is selected. The main content area is titled 'Wifi Basic Settings' and contains two columns of settings. The left column has a red box around the 'Wifi mode' section. The right column has a red box around the 'Internet access' and 'LAN access' sections.

Setting	Value	Description
Enabled:	Disabled	Enable Wifi
Wifi mode:	Wifi Access Point	Select between Wifi Access Point or Wifi Client
Wifi SSID:	TITAN	Select the public name for the Wifi Network
Security:	WPA2-Personal	Select security mode
KEY:	*****	Password for WPA2-Personal security mode
Channel:	1	Wifi Channel
IP Address:	192.168.2.1	Local IP LAN
IP Subnet Mask:	255.255.255.0	Local Mask
DNS 1:	8.8.8.8	DNS Server 1
DNS 2:	8.8.4.4	DNS Server 2
IP Gateway:		Left blank if not used or using another WAN interface
Internet access:	<input checked="" type="checkbox"/>	Check if wifi devices can access to Internet
LAN access:	<input type="checkbox"/>	Check if wifi devices can connect with LAN devices

[SAVE CONFIG](#)

It is important to specify a Wi-Fi IP address on a different subnet than the Ethernet IP address. For example, if the Ethernet IP address of the TITAN-based device is in subnet (192.168.1.X), the Wi-Fi IP address would have to be in another range, for example (192.168.2.X).

The IP Gateway box should not be filled in, since we are going to use the 4G/3G/2G WAN interface as the Internet connection. Lastly, as the goal is to provide Internet access to Wi-Fi-connected devices, we must activate the "Internet Access" box to enable this.

The next step is to activate the DHCP server for the Wi-Fi interface. Go to the "Wi-Fi > DHCP Server" configuration menu.

In this section, as pictured above, we should activate the "Enabled" box and specify a range for the Wi-Fi IP addresses to be assigned to the devices connected via DHCP. The range of IP addresses should match the configured subnetwork from the last section. That is, if we have established that the Wi-Fi IP address of the Titan router is 192.168.2.1 (subnetwork 192.168.2.X), the start and end DHCP addresses should be from the same subnetwork. E.g. from 192.168.2.100 to 192.168.2.110.

Intelligent Router

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webdyn powered by **TITAN**
flexitron group

- Mobile
 - Status
 - Basic Settings
 - Keep Online
- Ethernet
 - Basic Settings
- Wifi
 - Basic Settings
 - DHCP Server**
- Firewall
 - NAT
 - Authorized IPs
- Serial Settings
 - Serial Port1-RS232
 - Serial Port2-RS485
 - SSL Certificates
- External Devices
 - Logger configuration

Wifi > DHCP Server

Enabled: ☒ DHCP Server enabled / disabled

Starting IP Address: 192.168.2.100 First IP address for DHCP (ex 192.168.2.100)

Ending IP Address: 192.168.2.110 Last IP address for DHCP (ex 192.168.2.110)

SAVE CONFIG

MAC Address	IP Address
MAC Address: <input type="text"/>	Set a MAC address (ex 54:42:49:0A:E9:2C)
IP Address: <input type="text"/>	Set assigned IP address (ex 192.168.2.120) Important note: This IP must be outside the previous range of automatic assignment

SAVE RULE

In this section, as is shown in the previous figure, the "Enabled" box must be checked and a range indicated for the Wi-Fi IP addresses to be assigned to the devices that connect via DHCP. Obviously, the range of IP addresses must correspond to the subnet configured in the previous section. As such, if we have established that the Wi-Fi IP address of the TITAN-based device is 192.168.2.1 (subnet 192.168.2.X), the start and end DHCP addresses must also be from the same subnet. For example, from 192.168.2.100 to 192.168.2.110.

Of course, the 4G/3G/2G section must also be configured, as indicated in “Wan > Basic Settings”. The following figure shows a basic configuration:

The screenshot shows a web browser window with the address bar displaying "192.168.1.2/wan-settings.php". The page header includes the "webdyn" logo, "flexitron group", and "powered by TITAN". A left sidebar contains a menu with categories: Mobile, Ethernet, Wifi, Firewall, Serial Settings, External Devices, and Other. The "Mobile" category is expanded, and "Basic Settings" is highlighted. The main content area is titled "Mobile > Basic Settings" and contains a form for configuring the Mobile WAN interface. The form is enclosed in a red rectangular box. The form fields are as follows:

Field	Value	Description
Mobile WAN	Enabled (IP active)	Enable Wireless WAN interface
Sim Mode	SIM1 + SIM2 (backup)	Sim selection
SIM1 APN:	movistar.es	APN of SIM card 1
SIM1 Username:	MOVISTAR	Username of SIM card 1
SIM1 Password:	*****	Password of SIM card 1
SIM1 Pin:		PIN of SIM card 1
SIM2 APN:	movistar.es	APN of SIM card 2
SIM2 Username:	MOVISTAR	Username of SIM card 2
SIM2 Password:	*****	Password of SIM card 2
SIM2 Pin:		PIN of SIM card 2
Authentication:	Auto	Authentication method
Network selection:	4G	Network selection
DNS selection:	Get DNS from Operator	
DNS1:	8.8.8.8	Preferred DNS1
DNS2:	8.8.4.4	Preferred DNS2

Once this has been configured, go to the “Other > Reboot” menu and restart the TITAN-based device.

After restarting, wait a few seconds for it to connect to the 4G/3G/2G network and to establish the Wi-Fi network, you can then connect to the Internet via the TITAN-based device and access its configuration interface over Wi-Fi.