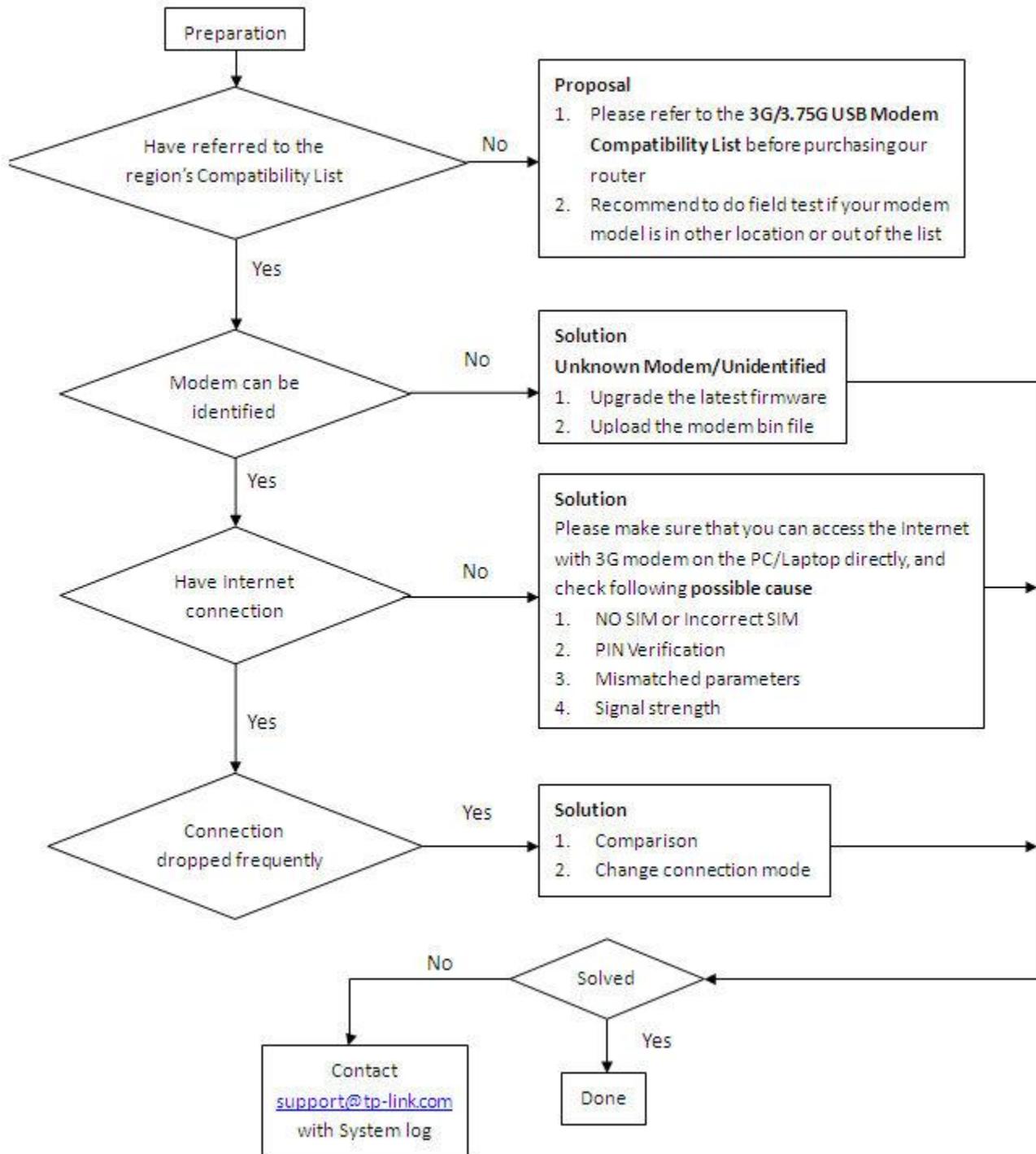# 3G/4G Router All-in-One Troubleshooting Guide

User Application Requirement
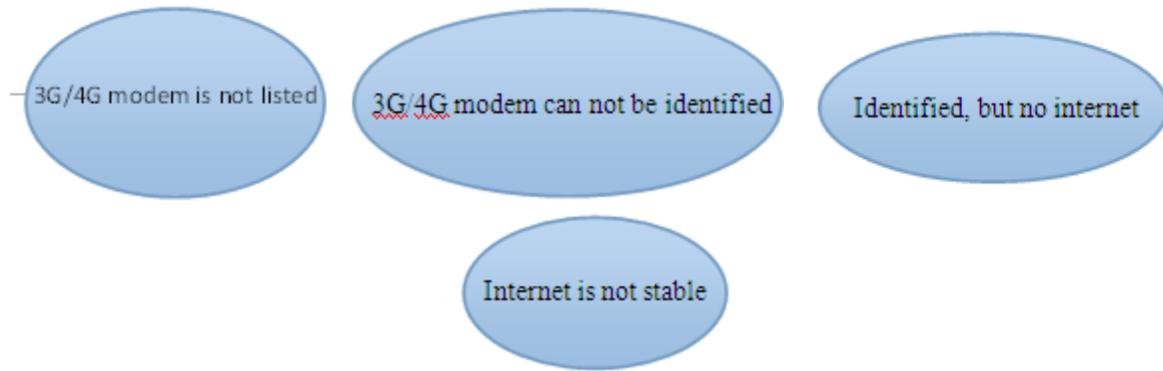Updated 04-18-2019 02:13:03 AM *218153*
This Article Applies to:
For better compatibility, TP-Link keeps testing all the mainstream modems all over the world, and continuously updating the firmware and compatibility list as soon as a new modem get compatible. However, some customers still encounter compatible problem, this document will guide you to do the troubleshooting and resolve it.

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                 ┌──────────────┐
                 │ Preparation  │
                 └──────┬───────┘
                        │
                        ▼
                                                    ┌────────────────────────────────────────┐
                                                    │ Proposal                               │
                   ╱╲                               │ 1.  Please refer to the 3G/3.75G USB   │
                  ╱  ╲        No                    │     Modem Compatibility List before    │
        Have referred to the  ──────────────────►  │     purchasing our router              │
       region's Compatibility List                 │ 2.  Recommend to do field test if your │
                  ╲  ╱                              │     modem model is in other location   │
                   ╲╱                               │     or out of the list                 │
                    │                               └────────────────────────────────────────┘
                   Yes
                    │
                    ▼
                                                    ┌────────────────────────────────────────┐
                   ╱╲              No                │ Solution                               │
                  ╱  ╲       ──────────────────►     │ Unknown Modem/Unidentified             │
           Modem can be                              │ 1.  Upgrade the latest firmware        │
             identified                              │ 2.  Upload the modem bin file          │
                  ╲  ╱                               └────────────────────────────────────────┘
                   ╲╱
                    │
                   Yes
                    │
                    ▼
                                                    ┌────────────────────────────────────────┐
                                                    │ Solution                               │
                   ╱╲                               │ Please make sure that you can access   │
                  ╱  ╲        No                     │ the Internet with 3G modem on the      │
          Have Internet  ──────────────────►        │ PC/Laptop directly, and check          │
            connection                               │ following possible cause               │
                  ╲  ╱                               │ 1.  NO SIM or Incorrect SIM            │
                   ╲╱                                │ 2.  PIN Verification                   │
                    │                                │ 3.  Mismatched parameters              │
                   Yes                               │ 4.  Signal strength                    │
                    │                                └────────────────────────────────────────┘
                    ▼
                                                    ┌────────────────────────────────────────┐
                   ╱╲           Yes                  │ Solution                               │
                  ╱  ╲       ──────────────────►     │ 1.  Comparison                         │
           Connection                                │ 2.  Change connection mode             │
         dropped frequently                          └────────────────────────────────────────┘
                  ╲  ╱
                   ╲╱
```

Preparation

Have referred to the region's Compatibility List — No → Proposal
1. Please refer to the **3G/3.75G USB Modem Compatibility List** before purchasing our router
2. Recommend to do field test if your modem model is in other location or out of the list

Yes

Modem can be identified — No → Solution
Unknown Modem/Unidentified
1. Upgrade the latest firmware
2. Upload the modem bin file

Yes

Have Internet connection — No → Solution
Please make sure that you can access the Internet with 3G modem on the PC/Laptop directly, and check following **possible cause**
1. NO SIM or Incorrect SIM
2. PIN Verification
3. Mismatched parameters
4. Signal strength

Yes

Connection dropped frequently — Yes → Solution
1. Comparison
2. Change connection mode

No → **Solved** → Yes → Done

Contact support@tp-link.com with System log

Please click on the problem category below for solutions:

3G/4G modem is not listed

3G/4G modem can not be identified
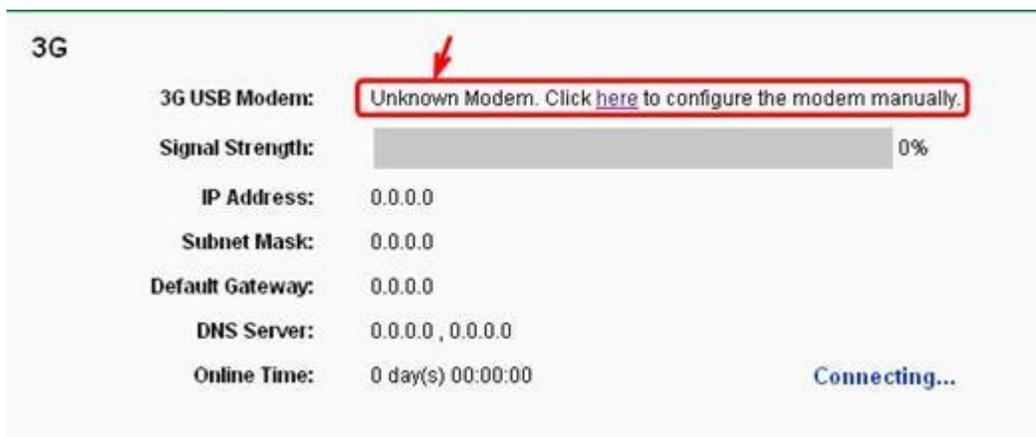
Identified, but no internet

Internet is not stable

Situation 1: 3G/4G modem/Region/ISP is not listed in the compatibility list of our router.

We recommend our users to check the 3G/3.75G USB Modem Compatibility List before purchasing our 3G router. This list contains the tested modems with corresponded information such as region/ISP. If your country is not in the list, please take "Other Location" option for reference only. **Please note**, due to the firmware upgrading or various parameters changed by some 3G ISPs, there are some 3G modems in the "Other Location" list that may NOT be compatible with our router. So please be careful with the "Other Location" list.

If you have a 3G modem out of the region's compatibility list, we recommend you to test your 3G modem with our router before purchasing, and we do really appreciate receiving your feedback to TP-Link Support as it is really valuable information for other customers.

Situation 2: My 3G/4G modem is not identified by the TP-Link router.
Unknown modem

3G

3G USB Modem:	Unknown Modem. Click here to configure the modem manually.
Signal Strength:	0%
IP Address:	0.0.0.0
Subnet Mask:	0.0.0.0
Default Gateway:	0.0.0.0
DNS Server:	0.0.0.0 , 0.0.0.0
Online Time:	0 day(s) 00:00:00 Connecting...

(1)Update Firmware
Please click here to download the latest firmware and then upgrade the firmware of your router.
(2)Upload Modem Bin File
When we make a brand new modem compatible with our 3G router without the new firmware released right away, we will upload the **Modem Bin File** to our website at first. Please click here to go to the **Modem Bin File**page to download it if the bin file for your modem is available.
Then please go to **Network-> 3G**-> **Modem settings-> Add New** toupload the **Modem Bin File**

QSS

Network
- Internet Access
- 3G
- WAN
- MAC Clone
- LAN

Wireless

DHCP

Forwarding

Security

Parental Control

Access Control

Advanced Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

Mobile ISP: Bigpond ▼ Default Dial Number: *99 # APN: telstra.bigpond

☐ Set the Dial Number and APN manually

Dial Number:

APN:

Username: (optional)

Password: (optional)

Connect | Disconnect | Disconnected

Connection Mode: ● Connect on Demand
○ Connect Automatically
○ Connect Manually
Max Idle Time: 15 minutes (0 means remain active at all times)

Authentication Type: ● Auto ○ PAP ○ CHAP
Notice: The default is Auto, do not change unless necessary.

MTU Size (in bytes): 1480 (The default is 1480, do not change unless necessary)

☐ Use the following DNS Servers

Primary DNS:

Secondary DNS: (Optional)

Save | Modem Settings

3G USB Modem Settings

ID	Vendor	Model	Delete

Add New... | Delete All

Back

Upload 3G USB Modem Configuration File

File: [_____] [Browse...] ← **Step 1: Browse**

Please Note: If you restore the router's factory setting, the bin file will be lost. In the event that you do lose the bin file, you will need to re-upload it, or download our latest firmware from www.tp-link.com . The updated firmware will be installed into your 3G router and restore all of its functions.

Step 3: Upload

[Upload] [Back]

Choose file

Look in: [bin ▼]

E169.bin ← **Step 2: Select the bin file**

My Recent Documents

Desktop

My Documents

My Computer

My Network Places

File name: [mr3420v1_en_3_11_8_up(100803).bin ▼] [Open]

Files of type: [All Files (*.*) ▼] [Cancel]

Finally, please go to **System Tools-> Reboot** and **reboot** your 3G router,.

Reboot

Click this button to reboot the device.

[Reboot]

If the modem still cannot be identified by the 3G router, please plug your modem to the router then restart the router and wait for about 5-10min, next go to **System Tools-> System Log** to save the log of the router andthen send the log with some other related information such as the 3G modem model, your country name and ISP to TP-Link support ..

Situation 3: 3G/4G modem is identified, but there is no internet access through the TP-Link router.

Before sharing the broadband with our 3G router, please make sure you do have Internet access with the 3G modem on PC/Laptop directly.

Now we assume that your 3G modem can be identified successfully by the 3G router, as you can see the following picture. Here we take Huawei EC169 as an example.

If you cannot have Internet via the 3G router, it may be caused by following issues.

(1) No SIM or incorrect SIM

It is necessary for you to have a suited SIM and 3G modem, and please make sure that you have installed your SIM into the 3G modem correctly.

(2) PIN Verification

Some SIM cards need to validate the PIN number by factory default. If so, please plug the 3G modem into your PC directly, and then disable this function in the bundled 3G modem utility. Here we take two models as example.
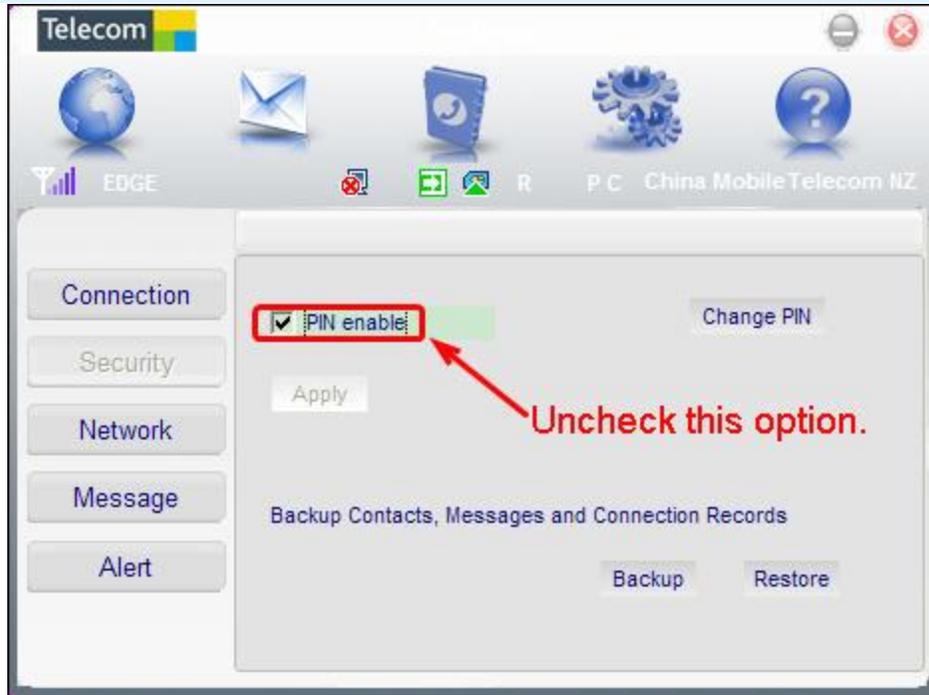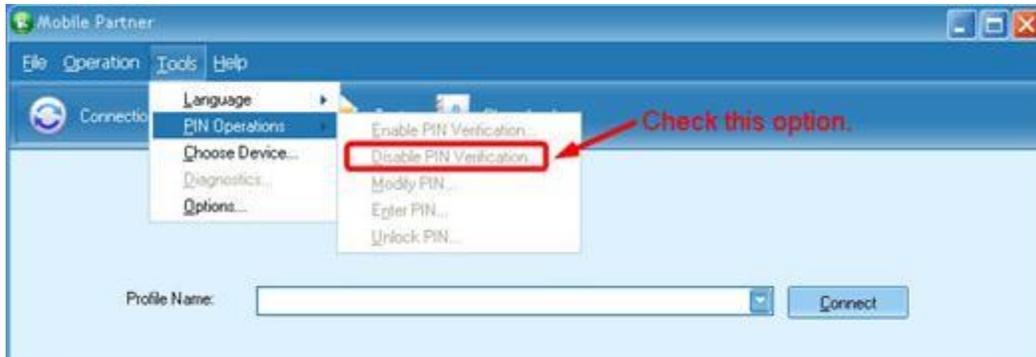
(3) Mismatched parameters

When we try to connect to a 3G network, some parameters such as **Dial number, APN, username** and**password** are required. It is very important for us to know the correct information. If you see the following red-circled words in the **System Tools-> System Log** page, that means you need to **ask your ISP (who provide you the 3G service)** to confirm the above parameters.

16	1st day 00:06:07	3G	NOTICE	USB modem is ready
17	1st day 00:18:18	3G	NOTICE	3G Modem connecting error, please check the dial number and APN.

After you get the correct information from your ISP, please type them into the "**Network-> 3G**" page as the following picture.

(4) Signal strength

If the 3G signal is weak or unstable in your location, there will be a probability to suffer this problem, so it is recommended to compare the performance in a different place.

If you still suffer this problem after following the troubleshooting procedures above, please save the system log (click here to check how to save it) and feel free to contact with TP-Link support).

Situation 4: Internet is not stable,drops frequently though the TP-Link router.

Please first make sure that your 3G modem has been identified successfully and dialed up to the Internet on the router.

(1) Comparison

If you suffered the problem of dropping Internet frequently, please save the log and send it to us first. Then unplug the 3G modem from the router and plug it directly to PC/Laptop in the same place to test whether there is a similar phenomenon. More tests and comparisons would be better.
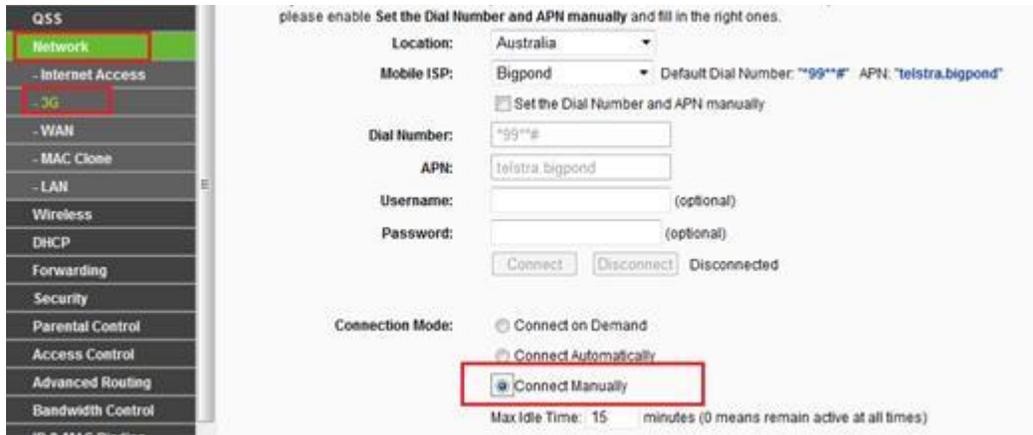
If not, please plug the 3G modem back into the router and compare the performance in a different place.

What's more, please also compare the performance between wired connection through Ethernet cable and wireless connection to check whether there are any differences about this issue.

(2) Connection Mode

Please go to **Network-> Internet Access** and select **3G Only** option.

Next please go to **Network-> 3G** and select **Connect Manually** of **Connection Mode** option.

If you still suffer this problem after following the troubleshooting procedures above, please save the system log (click here to check how to save it) and feel free to contact with TP-Link support.