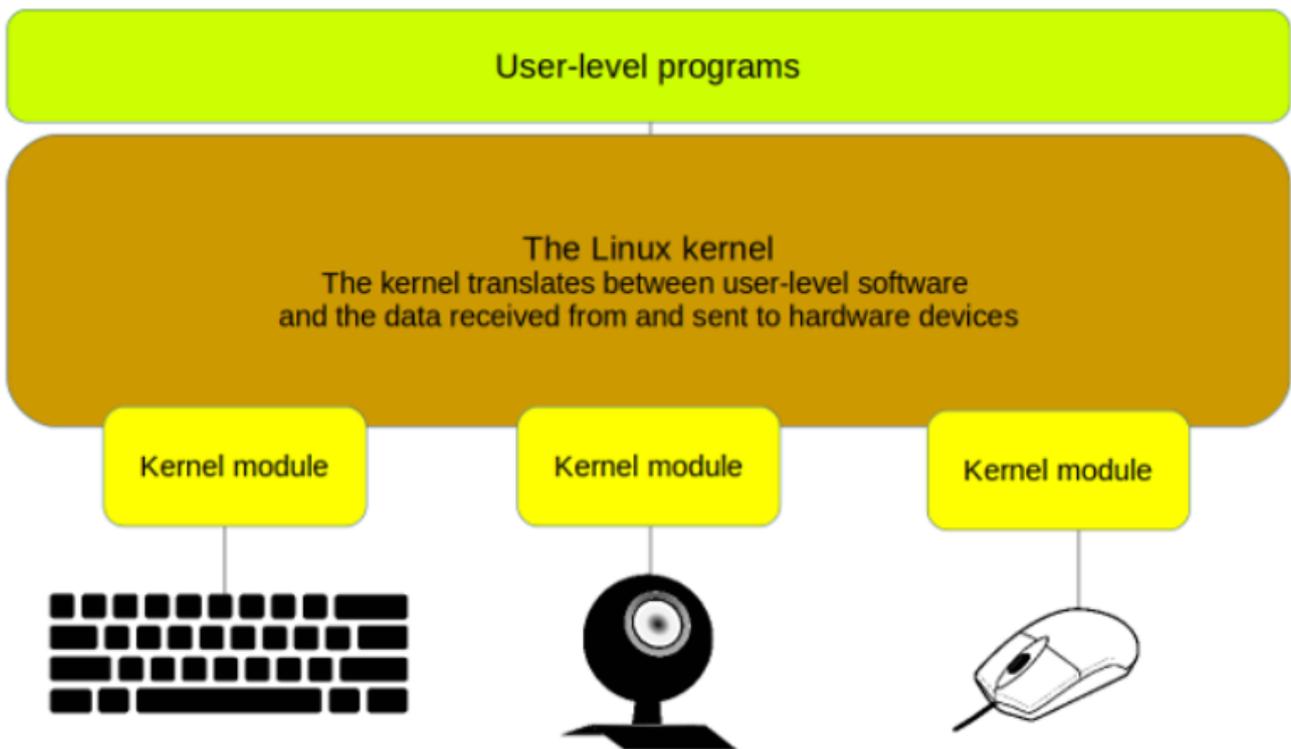


Make WiFi work on vanilla Klipper Qidi machines with Tenda dongle and RTL8188GU chip

You have a Vanilla Klipper installed on your machine!?

To enable WiFi on the Qidi machine a kernel module has to be loaded and will manage the WiFi dongle present in your machine. Qidi machines coming with a Tenda technologies dongle equipped with RTL8188GU chip.

Some Linux commands are required to make it work. Please dig into it and understand what it means. I will summarize the most important things here.



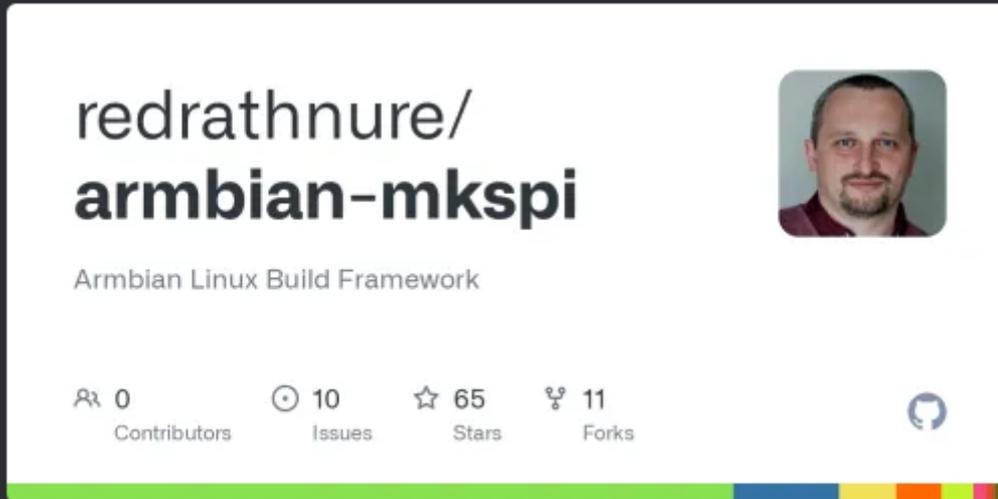
1) You should use a rather new version of Armbian. I use this fantastic release here:

<https://github.com/redrathnure/armbian-mkspi>

GitHub

GitHub - redrathnure/armbian-mkspi: Armbian Linux Build Framework

Armbian Linux Build Framework. Contribute to redrathnure/armbian-mkspi development by creating an account on GitHub.



2) Depending on your release you have to make sure that you de-freeze your Kernel and install Kernel headers. This is required because you need usb-modeswitch. In case you install

However in case you use [0.3.4-24.2.0-trunk](#) with an edge 6.7 Kernel all your problems are solved and you can jump to the next step.

Update your system

```
sudo apt-get update
```

Install armbian firmware

```
sudo apt-get install armbian-firmware-full
```

List your usb devices, possibly you see realtek device in "CD ROM Mode"

```
lsusb
```

Fix with usb-modeswitch

```
sudo apt-get install usb-modeswitch
```

command

```
sudo usb_modeswitch -KW -v 0bda -p 1a2b
```

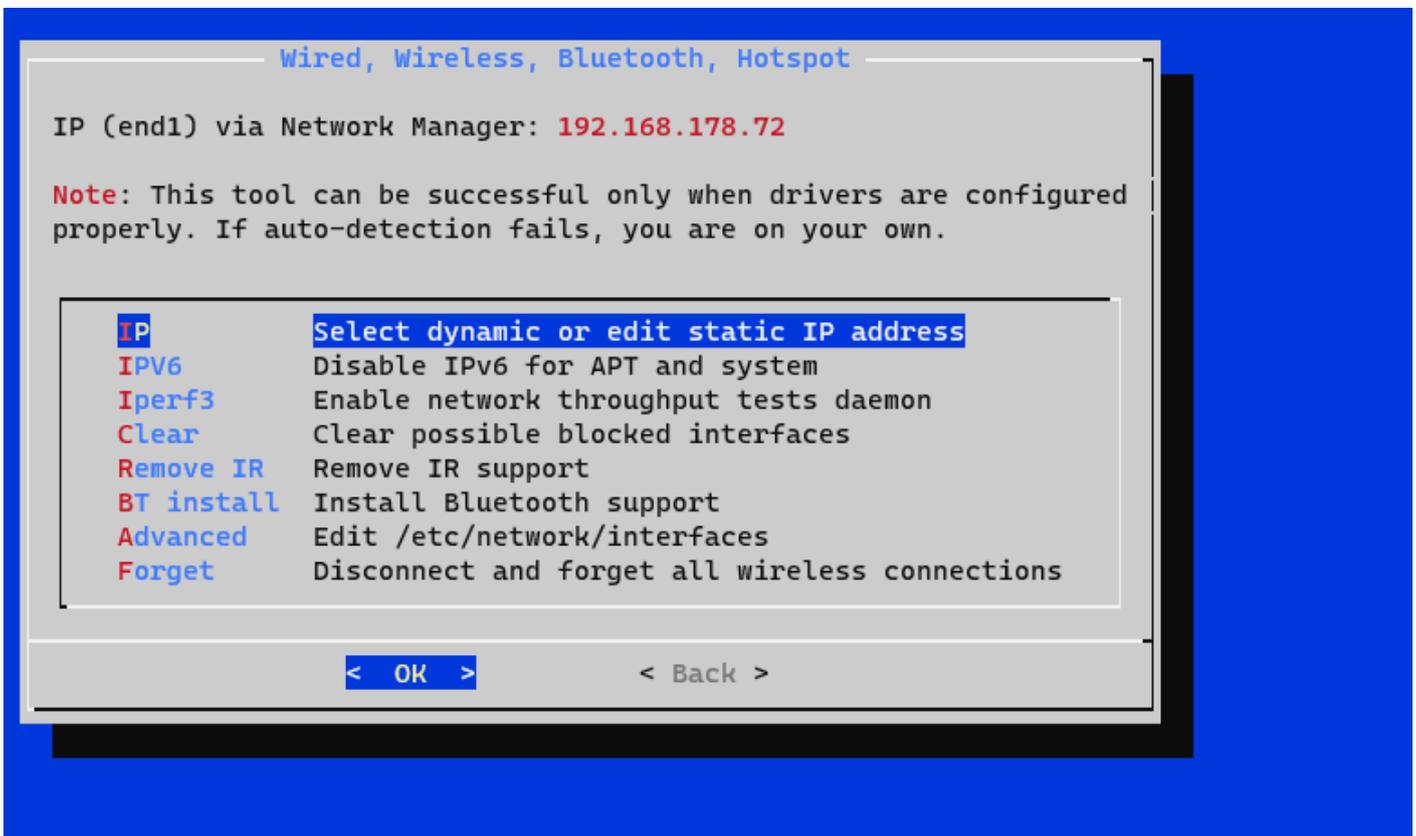
If successful you see something like this:

```
..mKSEmKSP1.~3 1susb
Bus 003 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 002 Device 003: ID 0bda:b711 Realtek Semiconductor Corp. RTL8188GU 802.11n WLAN Adapter (After Modeswitch)
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 005 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 004 Device 004: ID 046d:0825 Logitech, Inc. Webcam C270
Bus 004 Device 003: ID 04d8:e72b Microchip Technology, Inc. Beacon RevH
Bus 004 Device 002: ID 1a40:0101 Terminus Technology Inc. Hub
Bus 004 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 002: ID 1d50:614e OpenMoko, Inc. rp2040
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

3) Check if you have the module up and running. In my case it never worked.

perform: `sudo armbian-config` or `nmtui`

No wireless device is showing up here...



Also check your status from time to time with these useful commands:

```
lsusb
```

```
lsblk
```

```
sudo iwconfig
```

```
mks@mkspi:~$ sudo iwconfig
lo          no wireless extensions.

end1       no wireless extensions.
```

I loaded rtl8xxxu module with `sudo lsmod | grep rtl` and `sudo modprobe rtl8xxxu`

```

mks@mkspi:~$ lsusb
Bus 003 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 002 Device 003: ID 0bda:b711 Realtek Semiconductor Corp. RTL8188GU 802.11n WLAN Adapter (After Modeswitch)
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 005 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 004 Device 004: ID 046d:0825 Logitech, Inc. Webcam C270
Bus 004 Device 003: ID 04d8:e72b Microchip Technology, Inc. Beacon RevH
Bus 004 Device 002: ID 1a40:0101 Terminus Technology Inc. Hub
Bus 004 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 002: ID 1d50:614e OpenMoko, Inc. rp2040
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
mks@mkspi:~$ sudo lsmod | grep rtl
[sudo] password for mks:
rtl8xxxu          204800  0
mac80211         1007616  1 rtl8xxxu
cfg80211         987136  2 mac80211,rtl8xxxu
mks@mkspi:~$ sudo modprobe rtl8xxxu
mks@mkspi:~$ sudo dmesg | grep rtl8xxxu
[  19.458911] usb 2-1: rtl8xxxu: Loading firmware rtlwifi/rtl8710bufw_SMIC.bin
[  19.465924] rtl8xxxu: probe of 2-1:1.0 failed with error -11
[  19.481454] usbcore: registered new interface driver rtl8xxxu
mks@mkspi:~$ sudo iwconfig
lo          no wireless extensions.

end1       no wireless extensions.

mks@mkspi:~$

```

Still no effect. Really dont know why. It should work by now.

4) Install another driver! What worked for me is this one from wander-cn. There are many other drivers available but this one is stable and fast. (Source: <https://github.com/wander-cn/RTL8188GU>)

```
lsusb|grep WLAN
```

WLAN model is "RTL8188GU"

Build kernel to get linux-headers. Should be done in previous step or simply come with a suitable release.

Install the required packages and reboot

```
sudo apt install -y bc build-essential git
```

```
sudo reboot
```

Get source code

```
git clone https://github.com/wandercn/RTL8188GU.git
cd RTL8188GU/8188gu-1.0.1

sudo make

sudo make install
```

Install the required packages and reboot

```
sudo apt install -y dkms bc build-essential git dh-make

sudo reboot
```

DKMS install

```
cd /usr/src

sudo git clone https://github.com/wandercn/RTL8188GU.git

sudo mv RTL8188GU/8188gu-1.0.1 8188gu-1.0.1
sudo rm -rf RTL8188GU

sudo dkms add -m 8188gu -v 1.0.1

sudo dkms build -m 8188gu -v 1.0.1

sudo dkms install -m 8188gu -v 1.0.1
```

check status

```
sudo dkms status
```

5) unplug/re-plug WiFi dongle !!! Most important step. Don know why but do it!

6) `sudo iwconfig` shows now something like this. SUCCESS!

```
mks@mkspi:~$ sudo iwconfig
[sudo] password for mks:
lo          no wireless extensions.

end1       no wireless extensions.

wlx502b73e013f9 IEEE 802.11  ESSID:"
                Mode:Managed  Frequency:2.4
                Bit Rate=72.2 Mb/s   Tx-Po
```

7) For the case if it will loose the module after reboot I also added RTL8188GUXX in `/etc/modules`

Remarks: I still dont know why the armbian release doesn't native support this stick. In my view all requirements are met. However with this little adjustment and the driver from wanderer you have a working solution for your Xmax 3 or X Plus 3 machines.

Revision #3

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