

SELECTING AND INSTALLING A Wi-Fi ADAPTER FOR A "UBUNTU" LINUX COMPUTER

by Francis Chao

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Web location for this
presentation:

<http://aztcs.apcug.org>

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SUMMARY

Wireless "Wi-Fi 5", "Wi-Fi 6", and "Wi-Fi 6E" adapters can provide your "Ubuntu Desktop" Linux computer with a fast, state-of-the-art wireless connection to the Internet. These "Wi-Fi" adapters are available in PCIe and USB form factors.

TOPICS

- PCIe Wi-Fi 6E Adapter With Intel AX210 ("Fenvi")
- USB Wi-Fi 6E Adapter With MediaTek MT7921AUN Chipset ("ALFA")
- USB Wi-Fi 5 Adapter With RealTek RTL88x2bu ("BrosTrend")
- Comparison of the Above Three Adapters
- References

COMPARISON

- PCIe Wi-Fi 6E Adapter With Intel AX210 ("Fenvi") Chipset:
This is the best Wi-Fi adapter for Ubuntu Desktop 23.04,
This adapter can connect to 2.45, 5,
and 6 Gigahertz Wireless Access
Points

COMPARISON (continued)

- USB Wi-Fi 6E Adapter With MediaTek MT7921AUN Chipset ("ALFA"):
It can connect to 2.45 and 5 Gigahertz Wireless Access Points.
It cannot connect to 6 Gigahertz Wireless Access Points but we expect this capability to be eventually added to the in-kernel driver.

COMPARISON (continued)

- USB Wi-Fi 6E Adapter With RealTek RTL88x2bu Chipset ("Brostrend"):
It can connect to 2.45 and 5 Gigahertz Wireless Access Points.
It cannot connect to 6 Gigahertz Wireless Access Points.

COMPARISON (continued)

- The Fenvi Intel AX210 PCIe adapter had the highest LAN-based upload and download speeds and the highest Internet broadband speeds.
- The ALFA Mediatek USB adapter was slower than the Fenvi in both LAN-based speeds and Internet broadband speeds

COMPARISON (continued)

- While the Fenvi adapter and the Alfa adapters are Wi-Fi 6E-capable, the Brostrend adapter is only Wi-Fi 5-capable. As expected, it's LAN-based speeds and Internet broadband speeds are lower than the speeds for the Fenvi and Alfa adapters.

PCIe Wi-Fi 6E ADAPTER WITH AN INTEL AX210 CHIPSET (Fenvi)

See

Amazon.com: fenvi AX210ngw
Card 6Ghz WiFi 6E Three Band
BT5.2 PCI-E wifi card 802.11ax
MU-MIMO 2.4Ghz,5Ghz 160Mhz
Extended to 5400Mbps OFDMA
Miracast AX210 Desktop PCIe
Wireless Adapter support vPro for
pc gaming: Electronics

FV-AXE3000RGB



Roll over image to zoom in



WiFi 6E

for Gaming

fenvi AX210 WiFi
6E PCI-E WiFi
Adapter BT5.2 RGB
Gaming 802.11ax
ac 160MHz 2.4GHz
5GHz 6GHz Tri-
Band 5400Mbps
AX210NGW
Desktop WiFi Card
for PC
Windows(Only WiFi
6E Router
Antennas Support
6Ghz Band)

[Visit the F FENVI Store](#)

4.3 ★★★★★ 252 ratings
| 28 answered questions

-5% \$52⁹⁹

Fenvi FV-AXE3000RGB WiFi 6E Dual Band BT5.2 PCI-E wifi card

- This fenvi AX210 PCIe adapter full support the latest Microsoft Windows 10,64 bit OS, as well as Linux.Support the new 802.11ax standard with its unique features such as OFDMA, 1024QAM, Target Wake Time, 160MHz channels and spatial reuse. Compatible with all the wireless routers and any 11ac or 11n devices.Compatible with all Intel base CPU, some AMD CPU may have comaptibility issue.Compact with Almost computer with PCI Express (PCI-E 1X/4X/8X/16X slot) Intertaces;Such as Samsung/Dell/Sony/ACER/ISUS/MSI/Clevo/Terransforce/Hasee etc.

Intel 6 AX210/AX211/AX411 160MHz

Visible Networks



Sundeck1!_6GHz 1

Connected



Cancel

Sundeck1!_6GHz

Details

Identity

IPv4

IPv6

Security

Signal Strength Good

Link speed 1441 Mb/s (6.4 GHz)

Security WPA3

Speedtest by Ookla - The x

https://www.speedtest.net/re 80%

SPEEDTEST

SHARE Result ID 14817372086 RESULTS SETTINGS

DOWNLOAD Mbps 187.71

UPLOAD Mbps 224.88

Ping ms 4 13 57

Connections Multi

Frontier Los Angeles, CA Change Server

Frontier 47.153.158.141

HOW DOES THE CUSTOMER SERVICE OF FRONTIER COMPARE WITH YOUR EXPECTATIONS?

1 2 3 4 5

Much worse As expected Much better



Efax-gtk



Zoom



XSane



VueScan



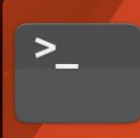
Home



GNU Image Manipulation P.



Kaffeine



Terminal

USB Wi-Fi 6E ADAPTER WITH AN MEDIATEK CHIPSET (ALFA)

See

https://www.amazon.com/ALFA-AWUS036AXML-802-11axe-Adapter-AXE3000/dp/B0BY8GMW32/ref=sr_1_7_sspa

USB Wi-Fi 6E ADAPTER WITH AN MEDIATEK CHIPSET (ALFA) (continued)

See

<https://www.alfa.com.tw/products/awus036axml?variant=39754360684616>



Roll over image to zoom in



ALFA
AWUS036AXML
802.11axe WiFi 6E
USB 3.0 Adapter
AXE3000, Tri Band
6 GHz, Gigabit
Speed up to 3Gbps

Brand: ALFA Network

3.0 ★★★★★ 2 ratings

\$79⁹⁷

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Brand ALFA Network

Hardware USB
Interface

Specifications

Chipset	MediaTek MT7921AUN
IEEE 802.11 standards	a/b/g/n/ac/ax
Bluetooth	5.2
Frequency	2.4 GHz (20 / 40 MHz)
	5 GHz (20 / 40 / 80 MHz)
	6 GHz (20 / 40 / 80 MHz)
Data rate	2.4 GHz up to 600 Mbps
	5 GHz up to 1200 Mbps
	6 GHz up to 1200 Mbps
USB connector	USB Type-C
Antenna connector	2x RP-SMA (female) for WiFi
Antenna	2x 5 dBi external antennas
Power consumption	2.7 Watts (max.)
Dimensions	85 x 63 x 20 mm (3.4 x 2.5 x 0.8 inches)
Operating temperature	-25° C - 75° C (-13° F - 167° F)
Operation voltage	5 V
OS support	Windows / Linux

The image shows a close-up of a MediaTek Wi-Fi logo. The logo consists of the text "MediaTek Wi-Fi" in a bold, sans-serif font, centered within a light gray rectangular background. This background is part of a larger, slightly textured surface, possibly a device casing or a label. Above the logo, there is a thin black horizontal line. The overall image is in grayscale.

MediaTek Wi-Fi

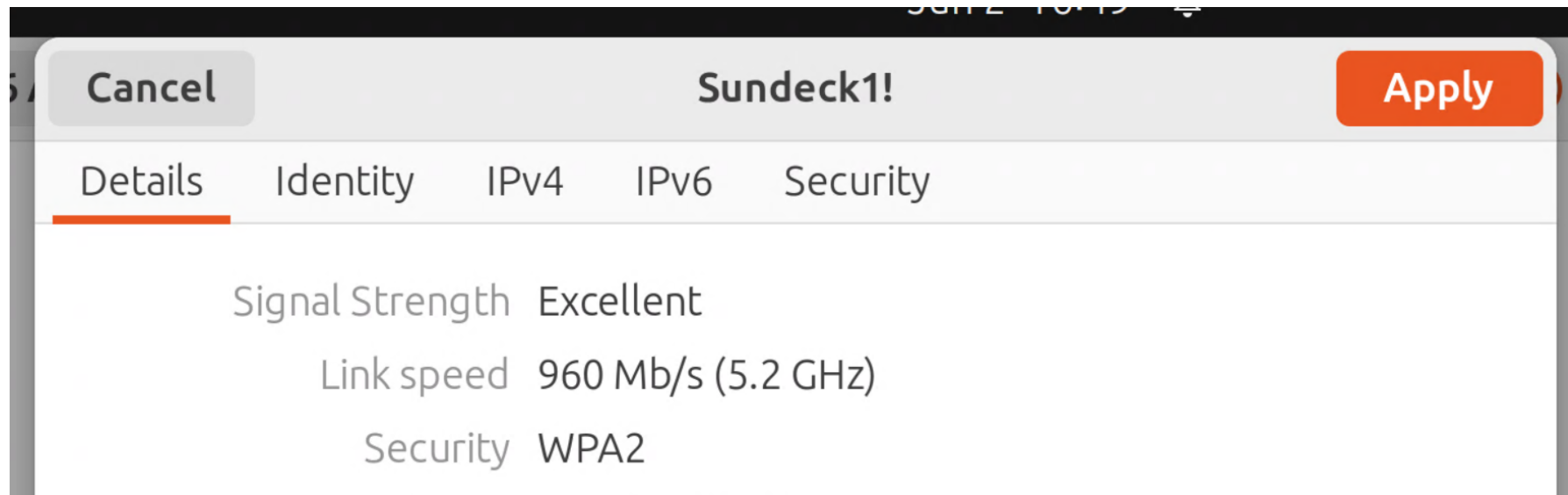
Visible Networks



Sundeck1!

Connected





Speedtest by Ookla - The x

https://www.speedtest.net/re 80%

SPEEDTEST

Result ID 14817397972

DOWNLOAD Mbps: 182.10

UPLOAD Mbps: 175.23

Ping ms: 4

Connections: Multi

Frontier
Los Angeles, CA
Change Server

Frontier
47.153.158.141

HOW DOES THE CUSTOMER SERVICE OF FRONTIER COMPARE WITH YOUR EXPECTATIONS?

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Much worse		As expected		Much better



Efax-gtk



Zoom



XSane



VueScan



Home



GNU Image Manipulation P...



Kaffeine



Terminal

USB Wi-Fi 5 ADAPTER WITH A REALTEK RTL88x2bv (BROSTREND)

See

https://www.amazon.com/dp/B07FCN6WGX/ref=emc_b_5_t



Roll over image to zoom in

BrosTrend Linux WiFi Adapter for Ubuntu, Mint, Kali, Debian, Lubuntu, Xubuntu, Mate, Zorin, PureOS, Raspberry Pi 2+, Windows 11, 1200Mbps, 5GHz/2.4GHz, Long Range 2X5dBi Antennas, USB3.0

[Visit the BrosTrend Store](#)

4.2 ★★★★★ 1,386 ratings | 61 answered questions

-5% \$37⁹⁹

List Price: ~~\$39.99~~

✓prime One-Day

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Extra Savings Buy 2, save 3% 1 Applicable Promotion

Brand	BrosTrend
Hardware Interface	USB 3.0
Operating System	Elementary OS, KDE neon, antiX Linux, Q4OS, Parrot OS, PureOS, Bodhi, deepin, Linux Lite, SparkyLinux, Peppermint OS, Devuan, Linux Kernels up to 6.2, Ubu...

Operating System



Elementary OS, KDE neon, antiX Linux, Q4OS, Parrot OS, PureOS, Bodhi, deepin, Linux Lite, SparkyLinux, Peppermint OS, Devuan, Linux Kernels up to 6.2, Ubuntu, Debian, Linux Mint, LMDE, Kali Linux, Raspberry Pi OS (Raspbian), MATE, GNOME, Cinnamon, Kubuntu, Lubuntu, Xubuntu, Ubuntu Studio, Budgie, Kylin, MX Linux, Zorin OS,

Realtek RTL88x2bu

Visible Networks



Sundeck1!

Connected



Cancel

Sundeck1!

Details

Identity

IPv4

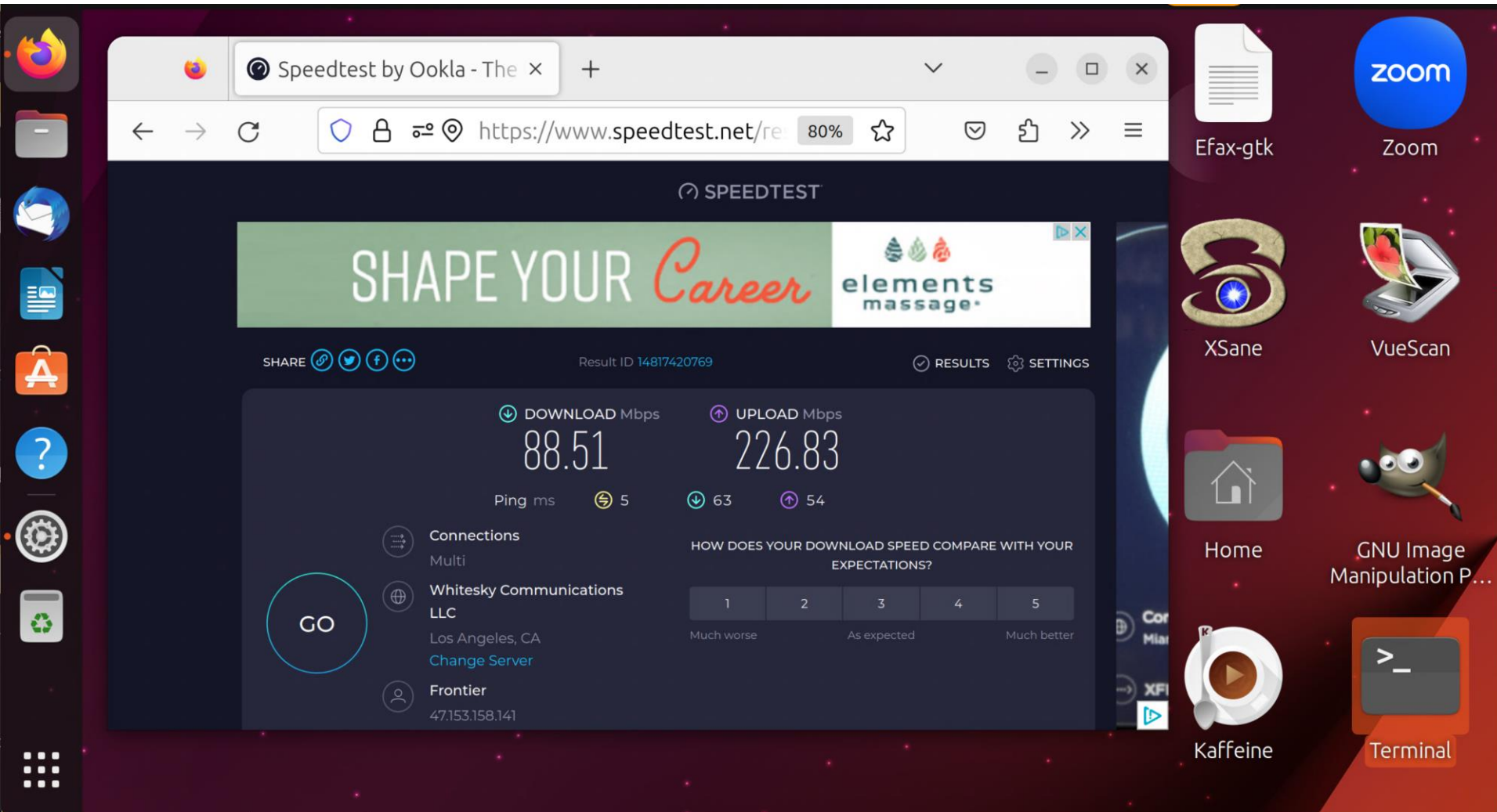
IPv6

Security

Signal Strength Excellent

Link speed 866 Mb/s (5.2 GHz)

Security WPA2



REFERENCES

- <https://github.com/morrownr/USB-WiFi>
- https://github.com/morrownr/USB-WiFi/blob/main/home/USB_WiFi_Adapters_that_are_supported_with_Linux_in-kernel_drivers.md