

Wi-Fi Module set-up and FAQs

Agile X IS

Type 17-A1B4-..../.....

ATEX / IECEx Zone 1

IECEx Zone 1

UL Class I Division 1

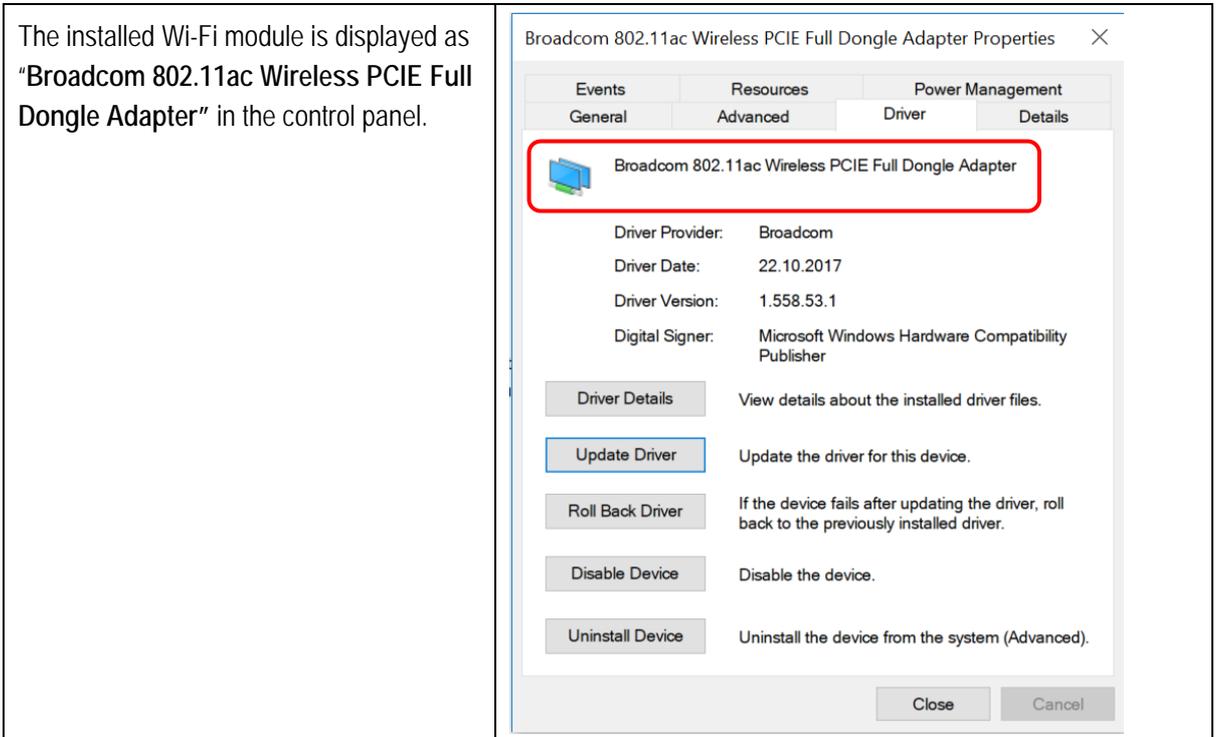
Revision A / Status: 28th May 2019

Reservation: We reserve the right to make technical modifications. Changes, errors and misprints shall not justify any claim for damages.

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1. Wi-Fi module used



The installed module is a 2x2 Wi-Fi + Bluetooth 4.1 model.

Properties

- Dual band radio in acc. with 802.11a/b/g/n/ac with virtual simultaneous dual band operation
- Dual-stream spatial multiplexing with a data rate of up to 867 Mbit/s.
- Supports 20, 40, 80 MHz channels with optional SGI (256 QAM modulation)
- Supports IEEE 802.11 ac/n beam formation.
- Supports IEEE 802.15.2 external coexistence interface to optimise the bandwidth use with other localised wireless technologies such as LTE, GPS or WIMAX.
Supports standard SDIO / PCIe interfaces.
- BT host digital interface:
 - HCI UART (up to 4 Mbps)
 - PCM for audio data
- Meets the Bluetooth Core Specification Version 4.1 with provisions for supporting future specifications. With Bluetooth Class1 or Class 2 transmitter operation.
- Supports extended synchronous connections (eSCO) to improve the voice quality by enabling packages to be transmitted again.
- Adaptive frequency hopping (AFH) to reduce radio frequency interference.

2. Requirements

The following are required during set-up:

- Agile X IS
All configurations are equipped with a Wi-Fi module by way of standard.
An installed Windows operating system

3. Setting up the Wi-Fi module

3.1 Set-up

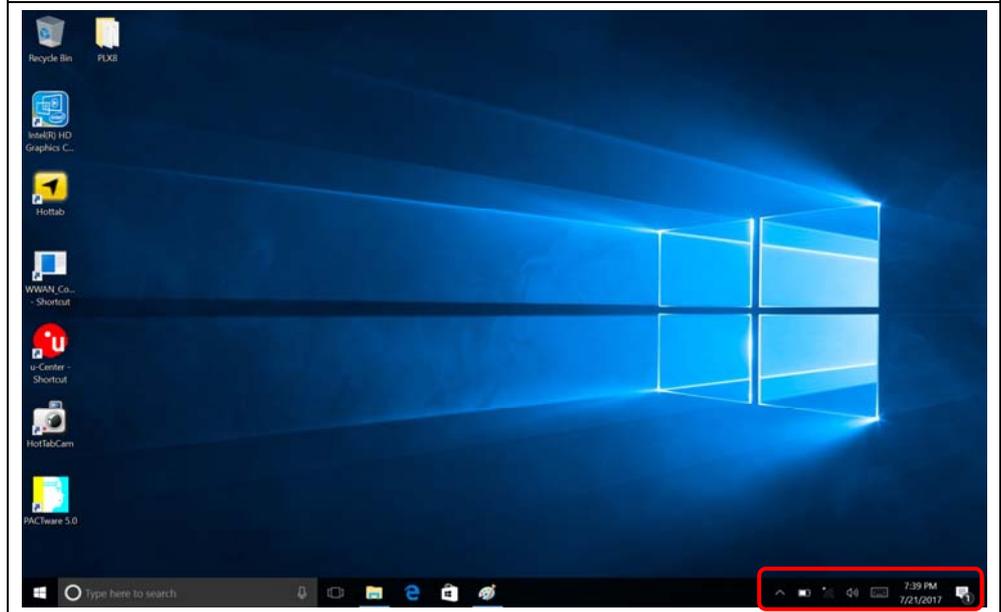


The entire set-up and control takes place using the Microsoft operating system.

The Wi-Fi module is not managed/activated via the HotTab tool.

3.1.1 Activating/disabling the Wi-Fi module

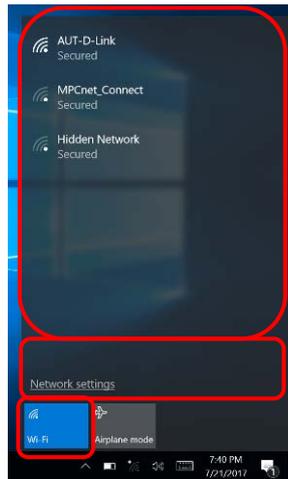
The Wi-Fi module can be directly accessed from the quick access on the task bar.



The Wi-Fi module is selected using the “Wireless Networks” icon.



Selecting the icon opens a menu in which the Wi-Fi can be activated/disabled and in which all available wireless networks are displayed.



List of all visible “wireless networks”
 Only visible when Wi-Fi is activated.

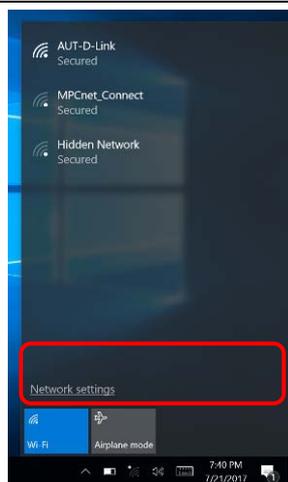
“Network Settings”:

Quick access to the control panel to perform Wi-Fi settings for the specific network.

Activate/disable Wi-Fi:

- Activated = Icon with blue background
- Disabled = Icon with grey background

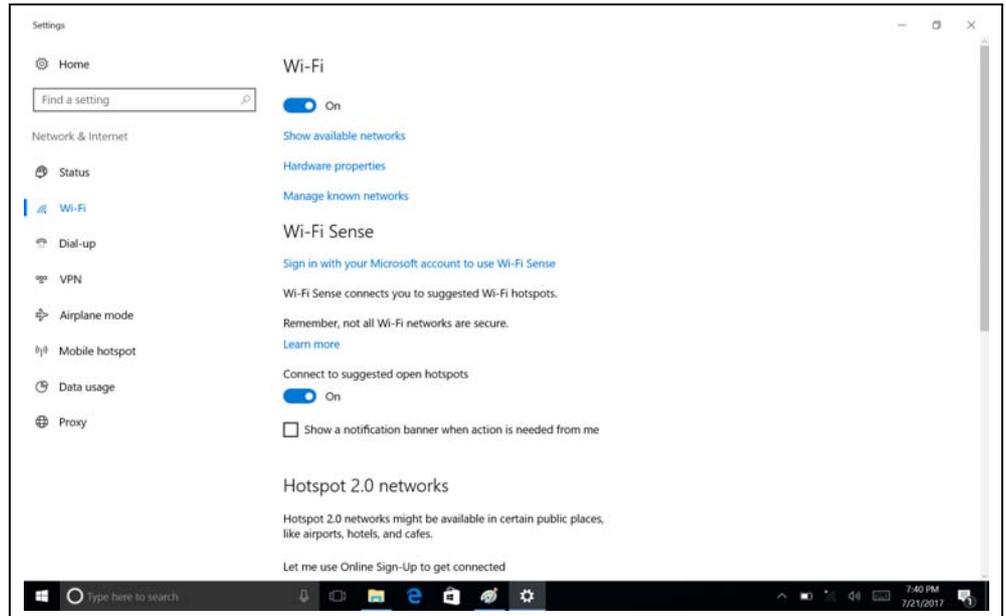
3.1.2 Wi-Fi module settings



Open “Network Settings” for quick access to the control panel to perform settings for the specific network.

“Network Settings”:

The Wi-Fi control panel is opened using the menu.
 Enables settings to be made for the specific system.



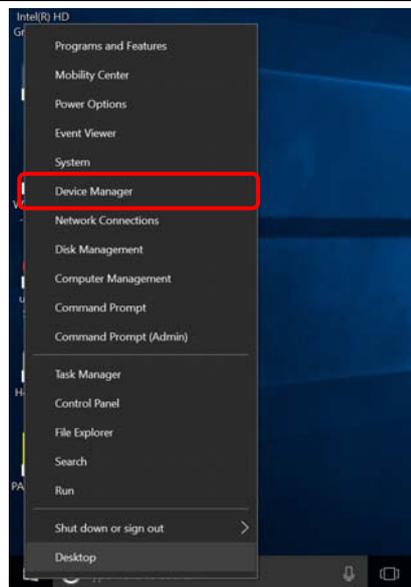
3.1.3 Advanced settings on the Wi-Fi module

Right click on the Start icon.

Alternatively press the Start icon with your finger until the drop-down menu opens.



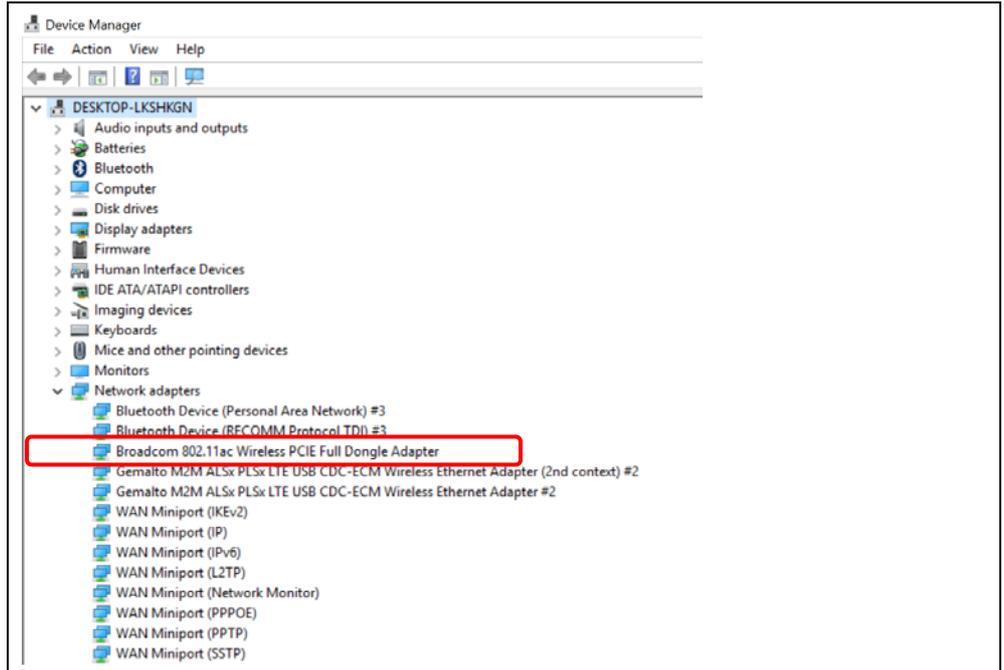
Select "Device Manager" in the drop-down menu.



Select the Wi "Broadcom 802.11ac Wireless PCIE Full Dongle Adapter" -Fi module in the "Device manager"

Open the drop-down menu as follows:

- By right clicking on the Wi-Fi module
- By pressing on the Wi-Fi module with your finger until the drop-down menu opens.

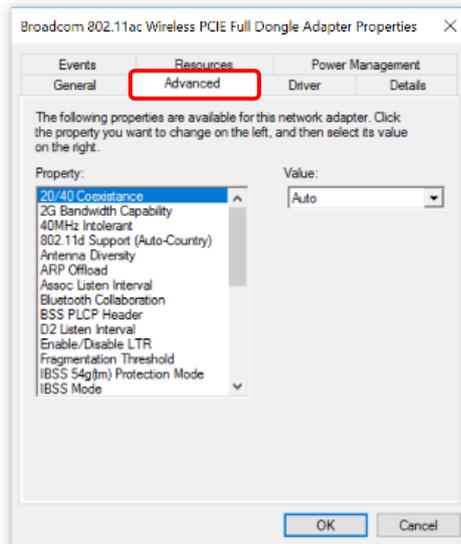


Select "Properties".



Advanced settings can be performed in the “Advanced” menu under “Properties”. Examples include the following:

- Bandwidth
- 802.11d support
- “Power output”
- and many others



4. FAQs for the Wi-Fi module

4.1 Wi-Fi does not connect to the network

In some networks it is not possible to connect the mobile terminal equipment to the Wi-Fi access point.

In most cases the reason is that the settings between the mobile terminal equipment and the access point do not match.

4.1.1 Disabling IEEE 802.11 d

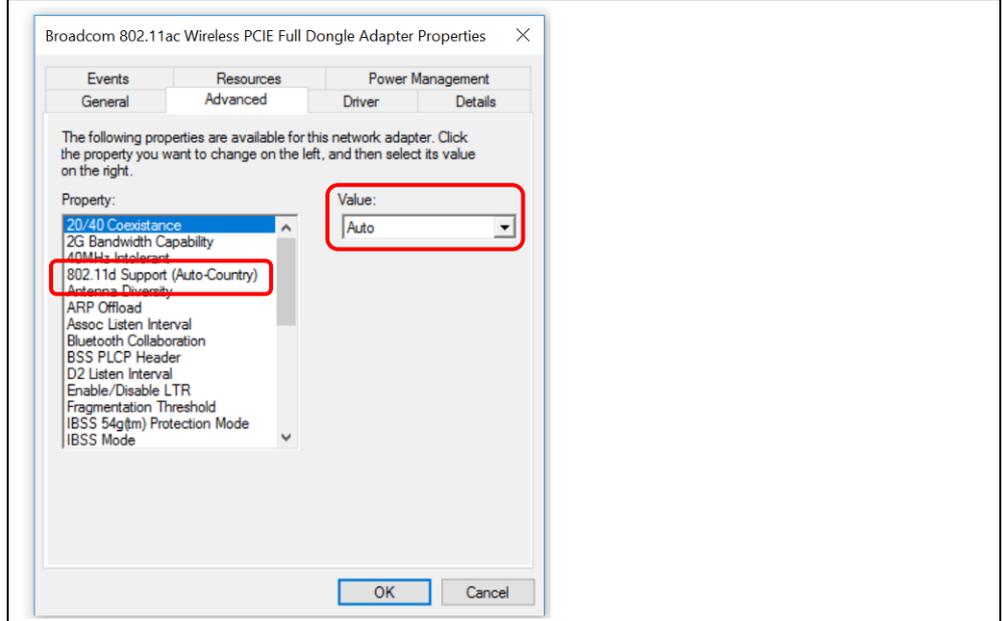
One known option is to disable the IEEE802.11 d standard on the mobile terminal equipment.

Then check the connection to the access point again.

To disable, open the "Advanced" menu of the Wi-Fi module as described in Chapter 3.1.3.

Select 802.11d Support (Auto-Country).

Select "Disable" in the "Value" menu and exit the menu by clicking OK.



4.2 Wi-Fi connection is not possible under Windows 10 with Version 1709 or later

Question:

Broadcom 802.11ac Wireless PCIE Full Dongle Adapter no longer connects with the access point after running the Microsoft Creators Update.

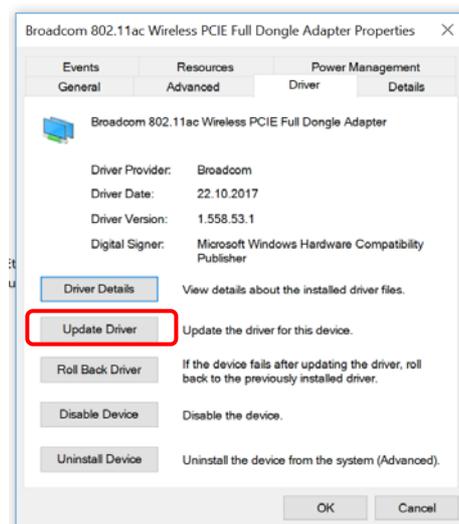
Creators Update:

Windows 10 is given a major update with the Creators Update. The current Windows 10 version is Version 1709 (as of March 2018), also referred to as the "Fall Creators Update".

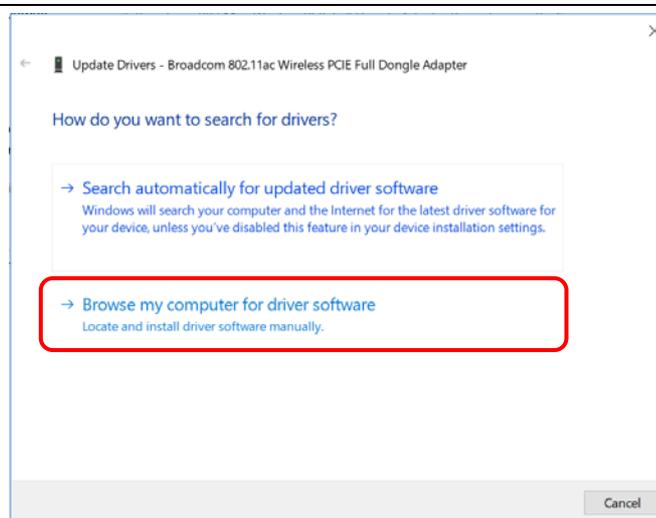
Solution:

Open the advanced properties of the Wi-Fi module as set out in Chapter 3.1.3.

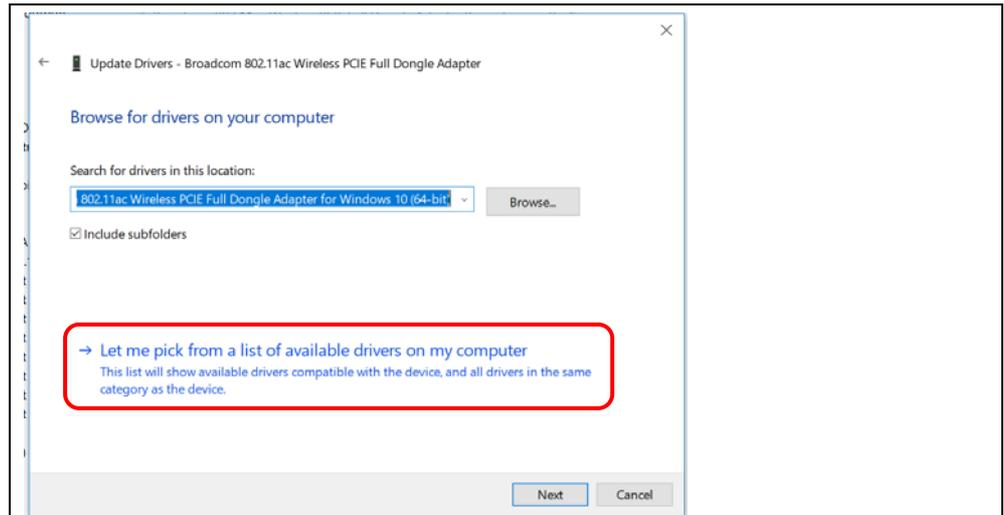
- Select "Driver"
- Select "Update Driver"



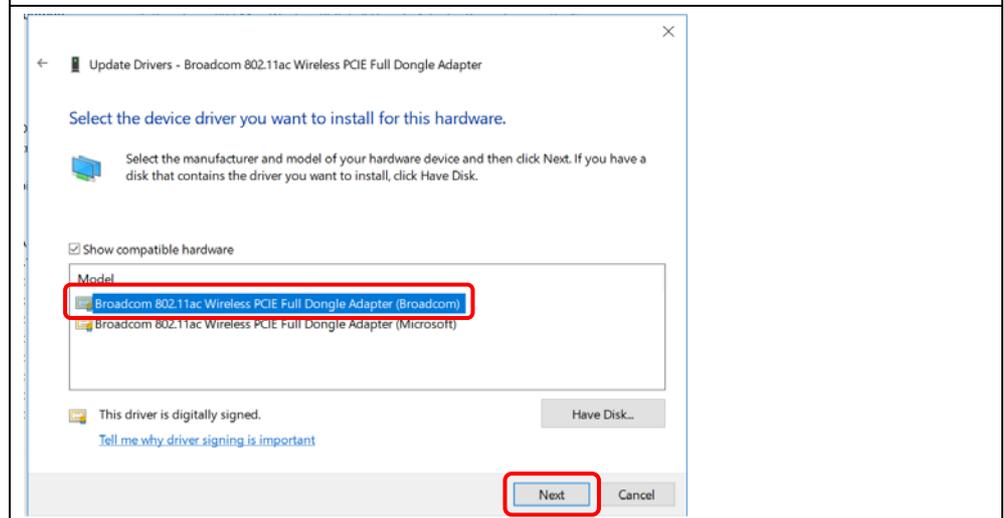
Select "Browse my computer for driver software"



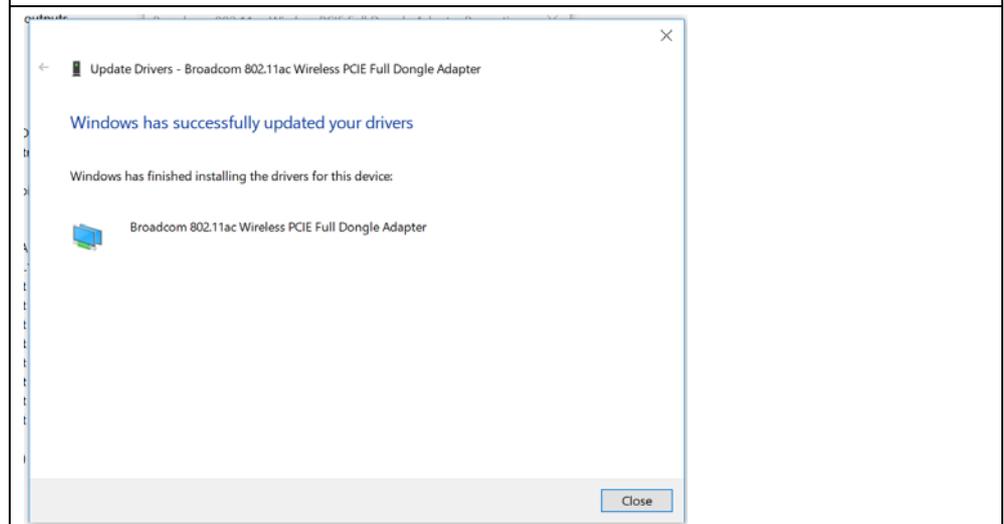
Select "Let me pick from a list of available drivers on my computer".



Select "Broadcom 802.11ac Wireless PCIE Full Dongle Adapter (Broadcom)".
Confirm with "Next" to start the reinstallation of the driver.

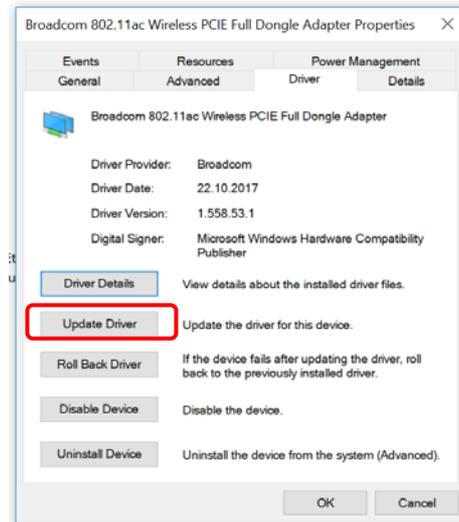


Wait until the installation has finished.

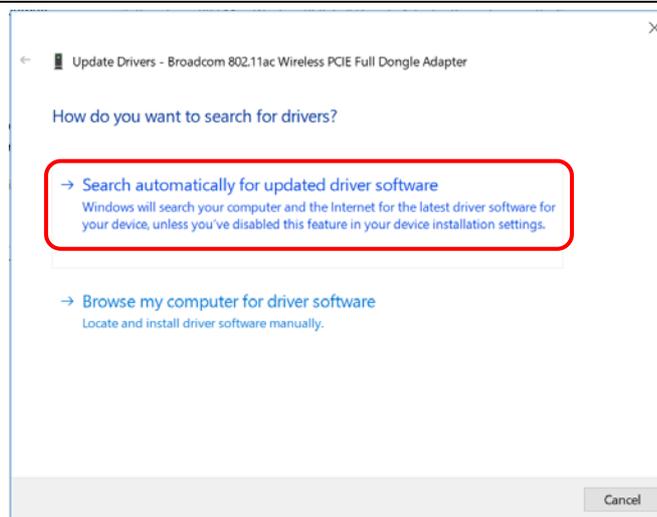


Then check the Wi-Fi connection.
This should now be working again.
Recommendation:

We recommend updating the driver once the Wi-Fi connection is working again.
To do this, open the menu again and select "Update Driver".

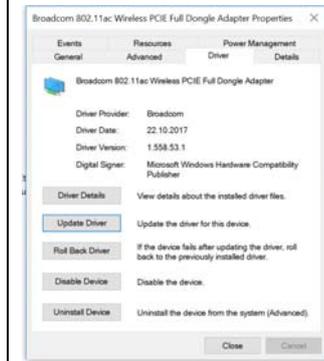


Select "Search automatically for updated driver software".
Important:
There must be a Wi-Fi connection.



The device searches online for the latest version of the driver and installs this.

The latest version of the driver in March 2017



Further articles on this subject with solutions can also be found on the Microsoft support website.

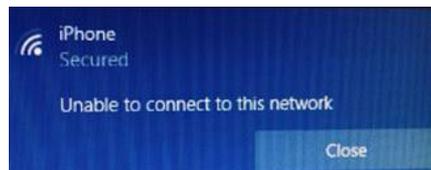
https://answers.microsoft.com/en-us/windows/forum/windows_10-networking/broadcom-80211ac-wireless-pcie-cant-be-started/30b4d780-e630-4691-bf17-b9cbfc0d68b

4.3 Wi-Fi – Access point is visible but can't connect

Question:

One or more access points are visible but it is not possible to establish a connection.

"Unable to connect to this network" message appears.



Solution:

Check that file "4356r2nvram.txt" is copied into "C:\Windows\System32\drivers" folder. If not then Wi-Fi connection is visible but connection cannot be established.

In the driver package for Wi-fi is a readme file and the folder "NVRAM".

The readme is with a short instruction for the file "4356r2nvram.txt" (content of NVRAM folder).

Installation – manually:

The file is to copy into "C:\Windows\System32\drivers" folder.

Installation – batch file:

In "NVRAM" folder is a batch file "copy_nvram.cmd" what you can execute instead of copy the file manually.

Content of the WiFi driver package

- Readme file with instruction.
- Folder "NVRAM"

Name	Änderungsdatum	Typ	Größe
NVRAM	10.01.2019 11:41	Dateiordner	
4350c5rtecdc.bin	27.09.2018 11:08	BIN-Datei	635 KB
4356a2rtecdc.bin	27.09.2018 11:08	BIN-Datei	646 KB
4365c0rtecdc.bin	27.09.2018 11:08	BIN-Datei	842 KB
4371c2rtecdc.bin	27.09.2018 11:08	BIN-Datei	626 KB
43596a0rtecdc.bin	27.09.2018 11:08	BIN-Datei	505 KB
43602a1rtecdc.bin	27.09.2018 11:08	BIN-Datei	629 KB
bcmpeciedhd63.cat	27.09.2018 11:08	Sicherheitskatalog	13 KB
bcmpeciedhd63.sys	27.09.2018 11:08	Systemdatei	1.063 KB
bcmwdidhdpcie.inf	27.09.2018 11:08	Setup-Informatio...	24 KB
readme.txt	27.09.2018 13:30	Textdokument	1 KB

Content of folder "NVRAM"

- File "4356r2nvram.txt" where to copy to "C:\Windows\System32\drivers".
- Batch File "copy_nvram.cmd" to copy the file "4356r2nvram.txt" to the target directory.

Name	Änderungsdatum	Typ	Größe
4356r2nvram.txt	22.05.2018 13:18	Textdokument	3 KB
copy_nvram.cmd	04.07.2017 13:48	Windows-Befehls...	1 KB