BARTEC

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

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1. Wi-Fi module used

The installed Wi-Fi module is displayed as "Broadcom 802.11ac Wireless PCIE Full Dongle Adapter" in the control panel.	Broadcom 802.11ac Wireless PCIE Full Dongle Adapter Properties X Events Resources Power Management General Advanced Driver Details
	Broadcom 802.11ac Wireless PCIE Full Dongle Adapter
	Driver Provider: Broadcom
	Driver Date: 22.10.2017
	Driver Version: 1.558.53.1
	Digital Signer: Microsoft Windows Hardware Compatibility Publisher
	Driver Details View details about the installed driver files.
	Update Driver Update the driver for this device.
	Roll Back Driver If the device fails after updating the driver, roll back to the previously installed driver.
	Disable Device Disable the device.
	Uninstall Device Uninstall the device from the system (Advanced).
	Close Cancel

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





3.1.2 Wi-Fi module settings



Enables settings to be made for the specific system.

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Netv	vork & Internet	Show available networks			
Ø	Status	Hardware properties			
	Wi-Fi	Manage known networks			
0	Dial-up	Wi-Fi Sense			
	VDN	Sign in with your Microsoft account to use Wi-Fi Sense			
~~~	VPN	Wi-Fi Sense connects you to suggested Wi-Fi hotspots.			
⊳	Airplane mode	Remember, not all Wi-Fi networks are secure.			
$\phi_{\parallel}\phi$	Mobile hotspot	Learn more			
G	Data usage	Connect to suggested open hotspots On			
0	Proxy	Show a notification banner when action is needed from me			
		Hotspot 2.0 networks			
		Hotspot 2.0 networks might be available in certain public places, like airports, hotels, and cafes.			
		Let me use Online Sign-Up to get connected			
	O Type here to search	🕘 🖸 🧰 🍘 🏟 👘 🕹 👘 🕹	7,40	PM /2017	5

#### 3.1.3 Advanced settings on the Wi-Fi module



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.

# Agile X Agile X IS Wi-Fi module set-up and FAQs Type 17-A1B4-..../

4	Dev	ice Mar	nager		
F	ile	Action	Vi	ew	Help
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	>	Ke	yboar	rds	
	>	Mi 🕘	ce an	d oth	er pointing devices
	>	Mo	onitor	s	ataa
	~	INC.	Rive	c ada tooth	pters b Device (Perropal Area Network) #3
		- 7	Blue	tooth	Device (RECOMM Protocol TDI) #3
ſ		-	Broa	dcon	n 802.11ac Wireless PCIE Full Dongle Adapter
ľ		-	Gem	alto	M2M ALSx PLSx LTE USB CDC-ECM Wireless Ethernet Adapter (2nd context) #2
		- 2	Gem	alto	M2M ALSx PLSx LTE USB CDC-ECM Wireless Ethernet Adapter #2
		- 2	WAN	N Mir	niport (IKEv2)
		-	WAN	N Mir	niport (IP)
		-	WAN	N Mir	niport (IPv6)
		-	WAN	N Mir	niport (L2TP)
		- ਵ	MAN	N Mir	iport (Network Monitor)
		_ 2	WAN	N Mir	hiport (PPPOE)
		- 2	WAN	N Mir	hiport (PPTP)
			WAN	N Mir	viport (SSTP)

#### 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
Resources         Power Management         General Advanced Driver Detais         The following properties are available for this network adapter. Click the property you want to change on the left, and then select its value on the right.         Property:         Value:         Value:         Power Management         Value:         Val
OK Cancel

## 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.

Events	Resources	Power Ma	anagement		
General	Advanced	Driver	Details		
he following prop ne property you w n the right.	erties are available for th ant to change on the left	is network adapte t, and then select	r. Click its value		
Property:		Value:			
20/40 Coexistance 2G Bandwidth Ca 40MHz Intelegent	apability	Auto			
802.11d Support	(Auto-Country)				
Antenna Diversity					
ARP Officad Assoc Listen Inte	rval				
Bluetooth Collabo	ration				
BSS PLCP Head	er				
Enable/Disable L	TR				
Fragmentation Th	reshold				
IBSS 54g(tm) Prot IBSS Mode	tection Mode				

## 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"

oadcom 802.11ac V	/ireless PCIE Full Dor	ngle Adapter Propertie	is X				
Events	Resources	Power Manageme	nt				
General	Advantood		dito				
Broadcom 8	02.11ac Wireless PCIE	Full Dongle Adapter					
Driver Provid	er: Broadcom						
Driver Date:	22.10.2017						
Driver Versio	n: 1.558.53.1						
Digital Signe	r: Microsoft Wind Publisher	ows Hardware Compatib	iity				
Driver Details	View details abou	t the installed driver files.					
Update Driver	Update the driver	for this device.					
Roll Back Driver	If the device fails	after updating the driver,	roll				
	back to the previo	usiy installed driver.					
Disable Device	Disable the device	9.					
Uninstall Device	Uninstall the device	ce from the system (Adva	nced).				
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lect "Brows	e my comp	uter for drive	ancel er softw	vare"	×		
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# Agile X Agile X IS Wi-Fi module set-up and FAQs Type 17-A1B4-..../

÷	Update Drivers - Broadcom 802.11ac Wireless PCIE Full Dongle Adapter
	Browse for drivers on your computer
	Search for drivers in this location:
	802-11ac Wireless PCIE Full Dongle Adapter for Windows 10 (64-bit, v Browse
	☑ Include subfolders
	→ Let me pick from a list of available drivers on my computer
	This list will show available drivers compatible with the device, and all drivers in the same category as the device.
	Next Cancel
Se	lect "Broadcom 802 11ac Wireless PCIF Full Dongle Adapter (Broadcom)"
	onfirm with "Next" to start the reinstallation of the driver
	×
÷	Update Drivers - Broadcom 802.11ac Wireless PCIE Full Dongle Adapter
	Select the device driver you want to install for this hardware.
	Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
	⊘ Show compatible hardware
	Broadcom 802;11ac Wireless PCIE Full Dongle Adapter (Broadcom) Broadcom 802;11ac Wireless PCIE Full Dongle Adapter (Microsoft)
	This driver is digitally signed. Have Disk
	Tell me why driver signing is important
	Next
Na	ait until the installation has finished.
	TA I MALL DEFER LIFT A POLY K
÷	Update Drivers - Broadcom 802.11ac Wireless PCIE Full Dongle Adapter
	Windows has successfully updated your drivers
	Windows has finished installing the drivers for this device:
	Broadcom 802.11ac Wireless PCIE Full Dongle Adapter
	Close

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".

Br	oadcom 802.11ac	Wireless PCIE Full D	ongle Adapter	r Properties X
	Events	Resources	Power	Management
	General	Advanced	Driver	Details
	Broadcom	802.11ac Wireless PC	IE Full Dongle A	Adapter
	Driver Prov	ider: Broadcom		
	Driver Date	22.10.2017		
	Driver Vers	ion: 1.558.53.1		
	Digital Sigr	ner: Microsoft Wi Publisher	ndows Hardware	e Compatibility
	Driver Details	View details ab	out the installed	driver files.
	Update Driver	Update the driv	er for this device	
	Roll Back Driver	If the device fai back to the pre-	ls after updating viously installed o	the driver, roll driver.
	Disable Device	Disable the dev	rice.	
	Uninstall Device	Uninstall the de	vice from the sy	stem (Advanced).
			OK	Cancel
2	lect "Searc	h automat	ically for	undated c
		automat	iculty for	uputiou t
	portant:			
	ere must b	e a Wi-Fi d	connectio	on.
	Update Drive	rs - Broadcom 802.11	ac Wireless PCIE	Full Dongle Adapte
	How do you	want to search f	or drivers?	

 $\rightarrow$  Search automatically for updated driver software

→ Browse my computer for driver software

ocate and install driver so

Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

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

Cancel

e latest version of the drive	er in March 2017
adcom 802.11ac Wireless PCIE Full Dongle Adapter Properties 🛛 🗙	
Events Resources Power Management General Advanced Driver Details	
Broadcom 802.11ec Wieless PCIE Full Dongle Adapter	
Driver Provider: Broadcom Driver Date: 22.10.2017	
Driver Version: 1.558.53.1 Digital Signer: Microsoft Windows Hantware Compatibility Publisher	
Driver Datalis View details about the installed driver files.	
Update Driver Update the driver for this device.	
Roll Back Driver If the device fails after updating the driver, roll back to the previously installed driver.	
Disable Device Disable the device.	
Uninstall Device Uninstall the device from the system (Advanced).	
Close Canoal	

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-b9cbcfc0d68b

### 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	Тур	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
bcmpciedhd63.cat	27.09.2018 11:08	Sicherheitskatalog	13 KB
bcmpciedhd63.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-Befehlss	1 KB