



PRODUCT GUIDE IQMC412 & IQMC520





Inside the box you should find the following items:







INSIDE THE IQMC 520 BOX

Inside the box you should find the following items:









Your IQMC router provides fast dual-band Wi-Fi for all your devices, and features built-in network security, guest Wi-Fi, and automatic software updates OTA (over-the-air).



Reset Button

If you experience difficulties with your router, please check the antenna connections, as well as making sure power is connected. You may also want to move the router to another location as this may affect it's functionality. If it is still not connecting, you can do a hard reset. Press the reset button for 2-3 seconds, and then allow the router to cycle for 5 minutes before attempting to connect.





SETTING UP YOUR IQMC ROUTER

Your IQMC comes ready to connect. There's nothing required

other than attaching the antenna, finding the optimum location, and plugging it in!

Installing the Antenna

The IQMC412 comes with 6 antennas, and the IQMC520 comes with 8. Near the antenna's connectors on the device are the antenna labels. There are two antenna labeled "2.4G/5.8G" and four (IQMC412) or six (IQMC520) antenna labeled "4G/5G". The two antennas labeled "2.4G/5.8G" are to be installed onto the sides of the IQMC that correspond to this specification.







POSITIONING YOUR ROUTER

For the best wireless signal transmission from the cellular network to your IQMC:

- Place the IQMC near a window, ideally with clear line of sight to a cellular tower.
- Keep the IQMC away from metal obstructions and away from direct sunlight.
- Keep the IQMC away from any 802.11g or 20MHz only Wi-Fi devices, 2.4Ghz computer peripherals, Bluetooth devices, cordless phones, transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, air conditioners and other industrial equipment to prevent signal interference or loss.



Setup Requirements

Configure your wireless network via smart phone, tablet, or computer. You will need the following system requirements on computer:

- Ethernet RJ-45 (LAN) port.
- Wi-Fi (IEEE 802.11a/b/g/n/ac wireless capability)
- Web browser such as Chrome, Safari, Firefox, Edge





SETTING UP

Plug the IQMC into a power outlet with the included power adapter.

Wait at least 5 minutes for router to establish a cell connection & automatically perform necessary updates. Proceed once the SYSTEM LIGHT stops blinking.

You can connect your devices to the IQMC's Wi-Fi network named SparQ-#######. You can find the login information on the label underneath the IQMC, or on the box. You can also connect internet devices by using the Ethernet cable and connecting one end to a LAN port on the IQMC, and the other end to your device's Ethernet port. Follow the steps in the next section to configure settings such as your Wi-Fi password.

Login to Your IQMC Settings and Configuration User Interface

- You can login to your router's Web User Interface (Web UI) to access and change any of your router's settings and functions, such as Wi-Fi security.
- You can also access network information such as connected devices and data usage.
- You can login to the Web UI using a computer, cellphone or tablet.
- First connect your device to your router, then access the Web UI, as shown below. Your router is pre-set with WPA2 security, but it is always recommended to change the default Wi-Fi password.





CONNECT & LOGIN

Ensure Wi-Fi is enabled on the device you wish to use to connect to the IQMC.



3 Connect to the SparQ-##### network by using the password located on the bottom label of your IQMC or located on the box the IQMC came in.

- If Wi-Fi is not available on the device you wish to use, then you must use an Ethernet cable and plug one end into a LAN port on the IQMC and the other end of the Ethernet cable into your computer.
- Open your web browser. This could be Chrome, Safari, Firefox or Edge.
- In the web browser's URL address bar, often found at the top of the web browser, enter the default IQMC address 192.168.1.1

7 Enter the password found on the bottom label of your IQMC or on the box in which it came in. The default password is "admin."

 $\leftarrow \rightarrow \mathbf{C}$ (i) 192.168.1.1

Authorizatio	n Required
Please enter your usernar	ne and password.
Username	root
Password	
	LOGIN





WEB USER INTERFACE

Your IQMC's Web User Interface (Web UI) allows you to setup and configure its various functions . You can access the Web UI anytime by entering the router's default address 192.168.1.1 in the address bar of web browser on a device connected to the IQMC. The default password is located on the label of the IQMC or on the box. The default password is usually "admin."

Menu

The left side of the screen is the navigation menu.

SPAR@fi

Status 🗸			
System	\sim		
Administration	\sim		
Modem	\sim		
VPN	\sim		
Services	\sim		
Network	\sim		
Bandwidth Monit or			
Speed Test	\sim		
Splash Screen	\sim		
➔ Logout			

Saving Changes

Remember to save your changes to settings with the save button located on the bottom of a page!



SAVE

RESET





Changing the Wi-Fi Network Name and Password

It is advised to change your Wi-Fi network name and password to something you can easily identify and share with others. You can do this within the Web User Interface of your IQMC. Follow previous steps to log into your IQMC. Once you're logged in, you may begin these steps.

Navigate to the "Network" —> "Wireless" page.

Status	\sim
System	\sim
Administration	\sim
Modem	\sim
VPN	\sim
Services	\sim
Network	^
Interfaces	
Wireless	
Switch	
Guest Wifi	
DHCP and DNS	
Hostnames	
Static Routes	





On the "Wireless Overview" page you can see there are two listed items that contain:

SSID: SparQ_##### —> This network is your 2.4Ghz Wi-Fi network

SSID: SparQ_5ghz_#### —> This network is your 5Ghz Wi-Fi network

Your networks may have different SSID (Wi-Fi Names) and also different passwords. If you would like to set both to be the same, you must change both to have the same name and password. It is typically best practice to add a 5 to the SSID (Wi-Fi network name) to differentiate the two networks. Some devices may not be able to connect to the 5ghz network.





To change the name of your Wi-Fi network, in the "General Setup" tab at the bottom of the panel, you will need to identify the fields named "BSSID"

Wireless Overvie	W	
👳 radio0	MediaTek MT7603E 802.11bgn Channel: 4 (2.427 GHz) Bitrate: ? Mbit/s	RESTART SCAN ADD
dBm ال	SSID: SparQfi_ Mode: Master BSSID: Encryption: WPA2 PSK (CCMP)	DISABLE EDIT REMOVE
🧑 disabled	SSID: Hotspot Manager Interface Mode: Cilent Wireless is disabled	ENABLE EDIT REMOVE
👷 radiol	MediaTek MT76x2E 802.11acn Channel: 36 (5.180 GHz) Bitrate: ? Mbit/s	RESTART SCAN ADD
díl dBm	SSID: SparQfi_5ghz_ Mode: Master BSSID: Encryption: WPA2 PSK (CCMP)	DISAST EDIT REMOVE

Enter your new Wi-Fi name in the field and press "Save" at the bottom of the screen.

General Setup	Wireless Security	MAC-Filter Advanced Settings
	Mode	Access Point
	ESSID	SparQfi_5ghz_######
	Network	lan: 💯 🖉 🖉 🥸
		Choose the network(s) you want to attach to this wireless interface or fill out the custom field to define a new network.
	Hide <u>ESSID</u>	
	WMM Mode	
		7
		DISMISS SAVE





6 To change the password, select the tab "Wireless Security".

Wireless Network: Master "SparQfi_5ghz_ ' (wlan1)

General Setup	Advanced Settings	
	Status	Mode: Master SSID: SparQfi_5ghz dBmBSSID: Encryption: WPA2 PSK (CCMP) Channel: 36 (5.180 GHz) Tx-Power: 18 dBm Signal: 0 dBm Noise: 0 dBm Bitrate: 0.0 Mbit/s Country: US
Wirele	ess network is enabled	DISABLE
		Mode Channel Width
	Operating frequency	AC v auto v 80 MHz v
Max	ximum transmit power	driver default v - Current power: 18 dBm
		Specifies the maximum transmit power the wireless radio may use. Depending on regulatory requirements and wireless usage, the actual transmit power may be reduced by the driver.
General Setup	Wireless Security	MAC-Filter Advanced Settings
	Mode	Access Point
	ESSID	SparQfi_5ghz_
	Notwork	
	Network	lan: :: ::::::::::::::::::::::::::::::::
		Choose the network(s) you want to attach to this wireless interface or fill out the custom field to define a new network.
•	Hide ESSID	
	WMM Mode	
		DISMISS SAV

T Enter the new password you would like to use in the field "Key".

General Setup	Wireless Security	MAC-Filter Advanced Settings	
Encryption		WPA2-PSK (strong security)	~
	Cipher	auto	~
	Key	12345678	*
ε	802.11r Fast Transition		
		Enables fast roaming among access points that belong to the same Mobility Domain	
802.11	w Management Frame	Disabled	~
	Requires the 'full' version of wpad/hostapd and support from the wifi driver (as of Jan 2019: ath9k, ath10k, mwlwifi and mt76)		support from the wifi driver 6)
Enable key	reinstallation (KRACK) countermeasures	0	
		Complicates key reinstallation attacks on the cli This workaround might cause interoperability is traffic load.	ent side by disabling retransmission of EAPOL-Key frames that are used to install keys. sues and reduced robustness of key negotiation especially in environments with heavy

DISMISS SAV







Press "Save" at the bottom of the screen.

You may repeat these steps for the other Wi-Fi network by selecting the corresponding "Edit" button on the "Wireless Overview" page.

Wireless Overview

👳 radio0	MediaTek MT7603E 802.11bgn Channel: 4 (2.427 GHz) Bitrate: ? Mbit/s	RESTART SCAN ADD
di dBm	SSID: SparQfi_ Mode: Master BSSID: Encryption: WPA2 PSK (CCMP)	DISABY EDIT REMOVE
🧑 disabled	SSID: Hotspot Manager Interface Mode: Client Wireless is disabled	ENABLE EDIT REMOVE
👷 radio1	MediaTek MT76x2E 802.11acn Channel: 36 (5.180 GHz) Bitrate: ? Mbit/s	RESTART SCAN ADD
di dBm	SSID: SparQfi_5ghz Mode: Master BSSID: Encryption: WPA2 PSK (CCMP)	DISABLE EDIT REMOVE

connect everywhere





IQMC-412-520 LIGHTS

PWR: The "POWER" light lets you know the router is powered on. Solid green when powered on.

SYS: The "SYSTEM" light lets you know the router is checking for an update or its going through a firmware update. This light blinks until firmware check, or upgrade is done. **DO NOT POWER OFF WHEN FLASHING.**

2.4G: The "2.4Ghz Wi-Fi" light indicates that the 2.4Ghz Wi-Fi connection is broadcasting. This light is solid when there is not a device connected and blinking when connected to another device.

5.8G: The "5.8Ghz Wi-Fi" light indicates that the 5.8Ghz Wi-Fi connection is broadcasting. This light is solid when there is not a device connected and blinking when connected to another device.

4G/5G: The "4G/5G" light is your connection indicator, and will be ON when you have a connection. This light will be off if there is no connection at all. The light will be solid when the router connects to the SIM bank, and then flickering when it gets a cellular data connection.



USB: Future use, no functionality.

IQMC Light Pattern During an Update

Tips:

- There are some cases where the router loses the 4G/5G light during this process. This does not affect the update process or harm the firmware.
- DO NOT POWER OFF DURING THE FIRMWARE UPDATE PROCESS

Reset Button

If you experience issues with your router, you can hard reset the router. Press the reset button for 2–3 seconds to perform a reset.

