

## AC-720M IEEE 802.11ac/a/b/g/n High-Powered Industrial USB Module

AirRunner™ WiFi Series

The AC-720M is the latest 802.11ac/n dual-band industrial USB embedded module from Zcomax. The AC-720M features the QCA9377 high-performance SoC with advanced 2.4GHz/5GHz 802.11ac Wave 2 MU-MIMO Wi-Fi capability. Other advanced features such as Host wake-on-wireless and ARP (Address Resolution Protocol) offloading enable the WLAN link to remain associated for extended periods for additional power savings. The module consumes minimum power during idle/sleep modes with excellent power-saving performance. Adjustable output (up to 23dBm) from the high performance amplifier makes the module suitable for applications with requirements such as extended coverage area or low power consumption. Industry-leading receiver sensitivity (-94dBm) with low-noise-floor design distinguishes the module further from the competition.

The AC-720M is a superb choice for any wireless application requiring enhanced connectivity and performance using a USB embedded form factor.



- IEEE 802.11ac/a/b/g/n compliant
- 433Mbps (5GHz)
- 23dBm output power (adjustable)
- -94dBm sensitivity
- U.FL antenna connector
- USB 2.0 interface
- Embedded form factor
- Chipset Family – QCA9377
- Wave 2 compatible
- WPS – easy security setup
- Low-power modes

### AC-720M - At A Glance

<b>Chipset</b>	Qualcomm QCA 9377
<b>Transmit Power</b>	23dBm
<b>Receive Sensitivity</b>	-94dBm

IEEE	Radio	RoHS	Interface
			

Radio Specification			
Standard	IEEE 802.11ac/a/b/g/n Compliant		
Chipset	Qualcomm QCA9377		
Modulation	11b: DSSS (CCK, DQPSK, DBPSK)		11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
	11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)		
	11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)		
RF Frequency (subject to local regulations)			
IEEE 802.11b/g/n 20MHz band	2.412GHz ~ 2.462GHz		
IEEE 802.11n 40MHz band	2.422GHz ~ 2.452GHz		
IEEE 802.11a/ac	5.180GHz ~ 5.825GHz		
RF Output Power (± 2dB)	<b>IEEE 802.11b</b>	23dBm @ 11Mbps	
	<b>IEEE 802.11g/n</b>	23dBm @ 6Mbps; 23dBm @ MCS0; 21dBm @ MCS7 (HT40)	
	<b>IEEE 802.11a/ac</b>	21dBm @ 6Mbps; 21dBm @ MCS0; 14dBm @ MCS9 (VHT80)	
Receiver Sensitivity	<b>IEEE 802.11b</b>	<b>IEEE 802.11n</b>	<b>IEEE 802.11ac</b>
	-94dBm @ 1Mbps	-92dBm @ HT20 (MCS0) -72dBm @ HT40 (MCS7)	-90dBm @ VHT20 (MCS0) -61dBm @ VHT80 (MCS9)
Antenna Design	1Tx 1Rx – 1 U.FL Compliant Connector		
Power Consumption (max)	Tx ≤ 750mA, Rx ≤ 250mA		

Physical Specification	
Interface	USB 2.0
Dimensions	65.0(L)*20.9(W)*1.0(H)mm
Operating voltage	DC 5V ± 5%
Working Temperature	-40°C to 80°C, < 80% relative humidity (non-condensing)
Storage Temperature	-40°C to 80°C, 5-90% relative humidity (non-condensing)

Features		
Supported OS	Linux	
WLAN	Network Modes	AP Mode
		STA Mode
	Radio Mode	2.4/5GHz
	Encryption	64/128 WEP, TKIP/AES
	Authentication	WPS, WEP, WPA, WPA2
	Advanced Functions	MU-MIMO
		Host wake-on-wireless
		ARP Offload
		Gating clocks to idle or inactive SoC blocks
		Voltage scaling
Processor frequency scaling		
VLAN		

**Features**

WLAN	Advanced Functions	PSPF
		Hidden SSID
		Power Save, Cab Queue
		Packet Logging

**Warranty**

Warranty Period	1 Year limited warranty from the date of purchase
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**Pin Definition**

Pin #	Pin Description
1	WL_enable (active high)
2	VCC (+5V)
3	USB_D-
4	USB_D+
5	GND

