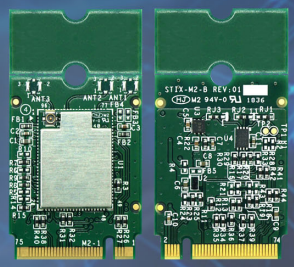
STIX-9377-M2-B



- STIX-9377-M2-B delivers all your IoT multi-mode wireless communication needs in one compact and secure M.2 KEY-B module.
- Based on Qualcomm Atheros QCA9377 System-in-Package (SiP) supporting 802.11 a/b/g/n/ac Dual-Band 1x1 and Bluetooth 5 (BR+EDR+BLE).
- The module offers the latest and most stringent security and robust radio performance for noisy industrial environments.
- Pre-certified STIX-9377-M2-B with approval from regulatory agencies, including European Union (CE/ETSI/RED), United States (FCC), Canada (IC), Australia/New Zealand (RCM) and Japan (TELEC).

Specifications

System-in-Package

Chipset	Qualcomm QCA9377

Connectivity

Wi-Fi Standards	802.11 a/b/g/n/ac
Wi-Fi Generation	Wi-Fi 5
Wi-Fi Operating Frequency	2412MHz ~ 2462MHz 5180MHz ~ 5825MHz
BT Operating Frequency	2402MHz ~ 2480MHz
TX/RX Streams	Dual-Band 1x1
Bluetooth	BT (BR+EDR+BLE)

Antenna

Antenna Connector	1x MHF4

Signaling

Wi-Fi	PCIe
Bluetooth	USB

Power Specifications

Operating Voltage	3.3V DC +/-10%
Power Consumption	TX Mode: max. 510mA RX Mode: max. 160mA

Driver Support

Standard Support	Linux Yocto Ubuntu Android Windows 10

Radio

Transmitted Power	802.11b: 19dBm +/- 2dB @11M 802.11g: 17dBm +/- 2dB @54M 802.11gn: 16dBm +/- 2dB @HT20 MCS7 802.11gn: 16dBm +/- 2dB @HT40 MCS7 802.11a: 12dBm +/- 2dB @54M 802.11an: 11dBm +/- 2dB @HT20 MCS7 802.11an: 11dBm +/- 2dB @HT40 MCS7 802.11ac: 9dBm +/- 2dB @VHT20 MCS8 802.11ac: 9dBm +/- 2dB @VHT40 MCS9 802.11ac: 9dBm +/- 2dB @VHT80 MCS9 BT*:0 ≤ Output Power ≤ 10 dBm *BT(Class 1 Device)
Receive Sensitivity	802.11a: ≤ -70dBm@54Mbps 802.11b: ≤ -88dBm@11Mbps 802.11g: ≤ -72dBm@54Mbps 802.11gn HT20: ≤ -65dBm@MCS7 802.11gn HT40: ≤ -65dBm@MCS7 802.11an HT20: ≤ -65dBm@MCS7 802.11an HT40: ≤ -65dBm@MCS7 802.11ac VHT80: ≤ -51Bm@MCS9 BT: < 0.1% BER at -70dBm

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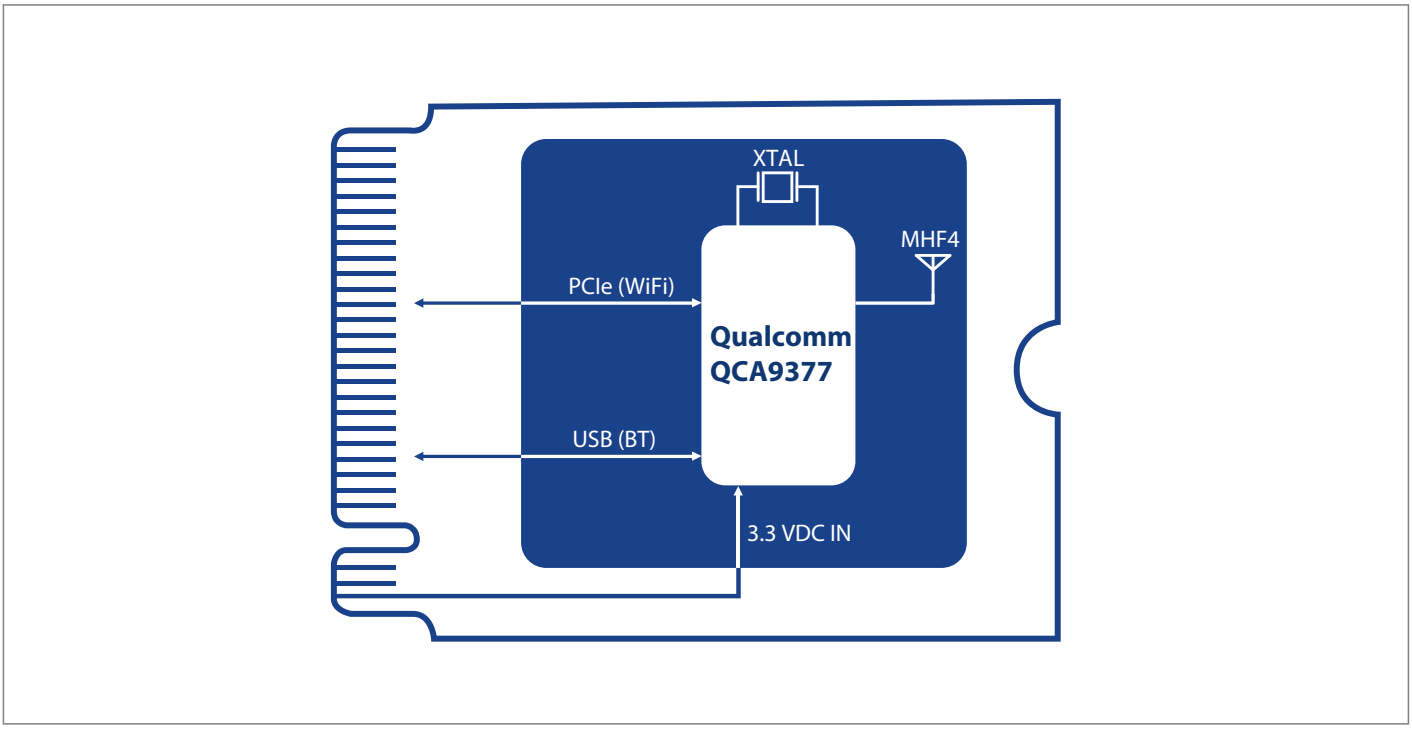
Block Diagram



Environmental and Mechanical

Dimensions	22 x 30 mm / 22 x 42 mm
Form Factor	M.2 KEY-B
Weight	≤ 3 grams
Temperature	Commercial: 0° to +60° C
Relative Humidity	10 to 90 %
MTBF	50000 Hours
Shock	50G/25ms
Vibration	20G/0-600Hz

Certification and Compliance

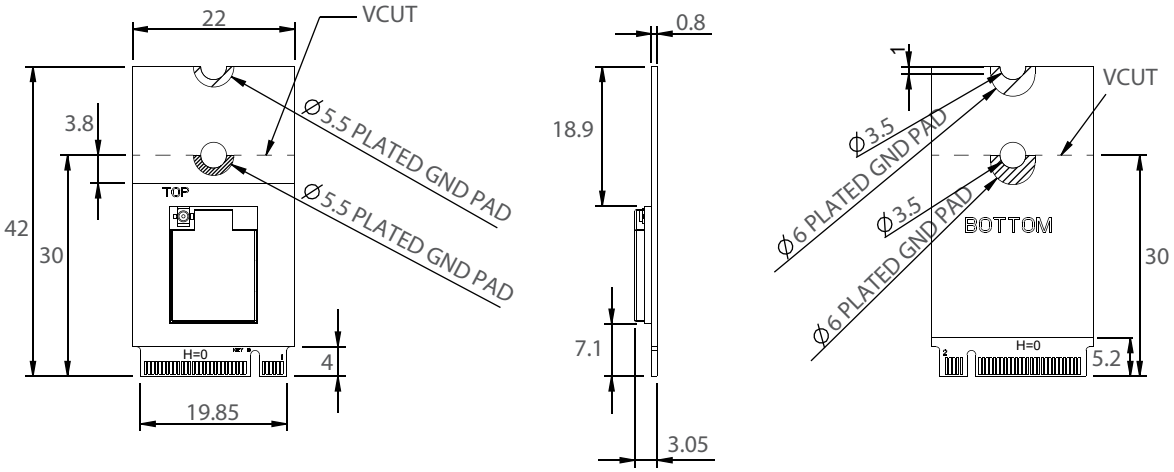
USA	FCC ID: 2AKZA-QCA9377
Canada	IC: 22364-QCA9377
Japan	TELEC: 201-180629
European Union	EN 55032 / EN 55024
	EN 300 328 v2.2.2
	EN 301 893 v2.1.1
Australia/New Zealand	RCM
Bluetooth Logo	QDID150839 (Bluetooth 4.2)
Certification	Compliant with RoHS / REACH directives

Order Information :

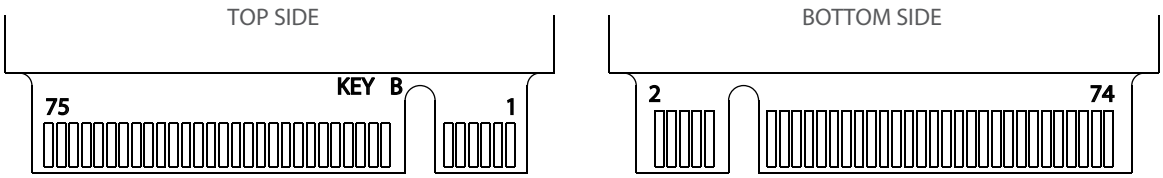
Code	Module	Signaling
STIX-9377-M2-B	Qualcomm QCA9377 SiP M.2 KEY-B Type 2242 IoT module.	PCIe (Wi-Fi) / USB (BT)

Mechanical Dimension

(units in mm)



Signal Pinout



Pin	Signal	Type	Description
1	GND	P	Ground
3	GND	P	Ground
5	GND	P	Ground
7	USB_D+	I/O	USB differential pair signal
9	USB_D-	I/O	
11	GND	P	Ground
Connector Key			
21	GND	P	Ground
23	NC		Not Connected
25	NC		Not Connected
27	GND	P	Ground
29	NC		Not Connected
31	NC		Not Connected
33	GND	P	Ground
35	NC		Not Connected
37	NC		Not Connected
39	GND	P	Ground
41	PETn0	O	PCIe Transmit differential pair signal
43	PETp0	O	
45	GND	P	Ground
47	PERn0	I	PCIe Receive differential pair signal
49	PERp0	I	
51	GND	P	Ground
53	REFCLKn	I	PCIe Clock differential pair signal
55	REFCLKp	I	
57	GND	P	Ground
59	NC		Not Connected
61	NC		Not Connected
63	NC		Not Connected
65	NC		Not Connected
67	NC		Not Connected
69	GND	P	Ground
71	GND	P	Ground
73	GND	P	Ground
75	NC		Not Connected

Pin	Signal	Type	Description
2	PCIE_3V3	P	3.3V
4	PCIE_3V3	P	3.3V
6	NC		Not Connected
8	WL_REG_ON	I	WLAN Enable. (Active High)
10	WL_LED_n	OD	Wi-Fi LED Signal
Connector Key			
20	NC		Not Connected
22	NC		Not Connected
24	NC		Not Connected
26	NC		Not Connected
28	NC		Not Connected
30	NC		Not Connected
32	NC		Not Connected
34	NC		Not Connected
36	NC		Not Connected
38	NC		Not Connected
40	NC		Not Connected
42	NC		Not Connected
44	NC		Not Connected
46	NC		Not Connected
48	NC		Not Connected
50	PCIE_PERSTn	I	PCIe Reset Signal
52	PCIE_CLKREQn	I	PCIe Clock Request Signal
54	PCIE_WAKEn	I	PCIe Wake Up Signal
56	NC		Not Connected
58	NC		Not Connected
60	NC		Not Connected
62	NC		Not Connected
64	NC		Not Connected
66	NC		Not Connected
68	NC		Not Connected
70	PCIE_3V3	P	3.3V
72	PCIE_3V3	P	3.3V
74	PCIE_3V3	P	3.3V