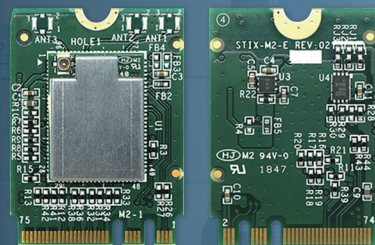


STIX-9377-M2-AE

- Delivers all IoT multi-mode wireless communication needs in one compact and secure M.2 KEY-A+E module.
- Qualcomm QCA-9377 802.11ac + Bluetooth Combo Module.
- Offers the latest and most stringent security and robust radio performance for noisy industrial environments.
- Pre-certified FCC/CE/IC/RCM/TELEC.



Specifications

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)

Power Specifications

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

System-in-Package

Chipset	Qualcomm QCA9377
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Driver Support

Standard Support	Linux Yocto Ubuntu Android Windows 10
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Antenna

Antenna Connector	1x MHF4
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Signaling

Wi-Fi	PCIe
Bluetooth	USB

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	
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: ≤ -51dBm @MCS9
	BT: < 0.1% BER at -70dBm

*BT(Class 1 Device)

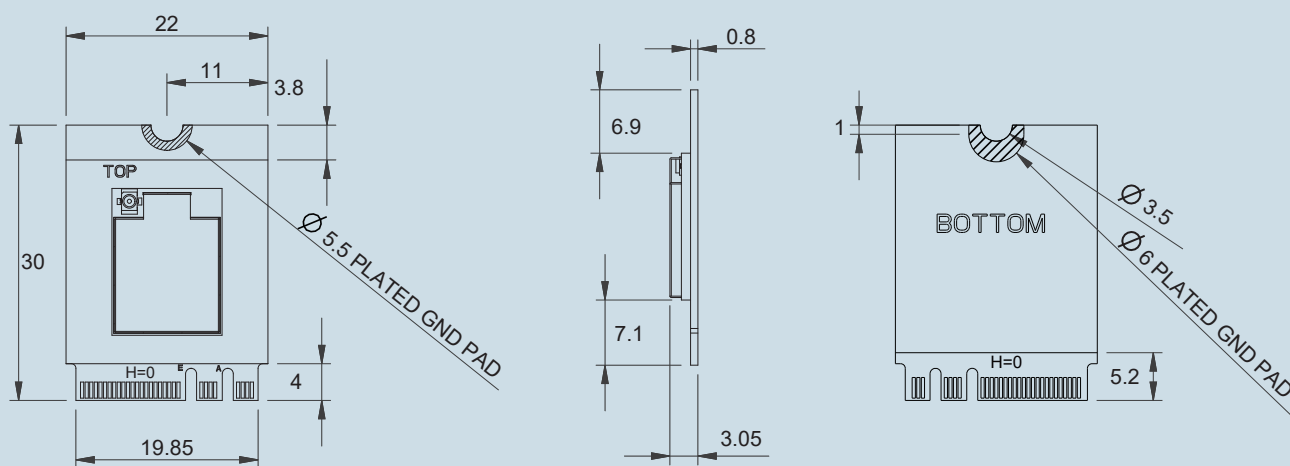
Environmental and Mechanical

Dimensions	22 (W) x 30 (H) x 3.05(D) mm
Form Factor	M.2 KEY-E Type 2230
Relative Humidity	10 to 90 %
MTBF	50,000 Hours
Operation Temperature	Commercial: 0° to +60° C
Weight	≤ 3 grams

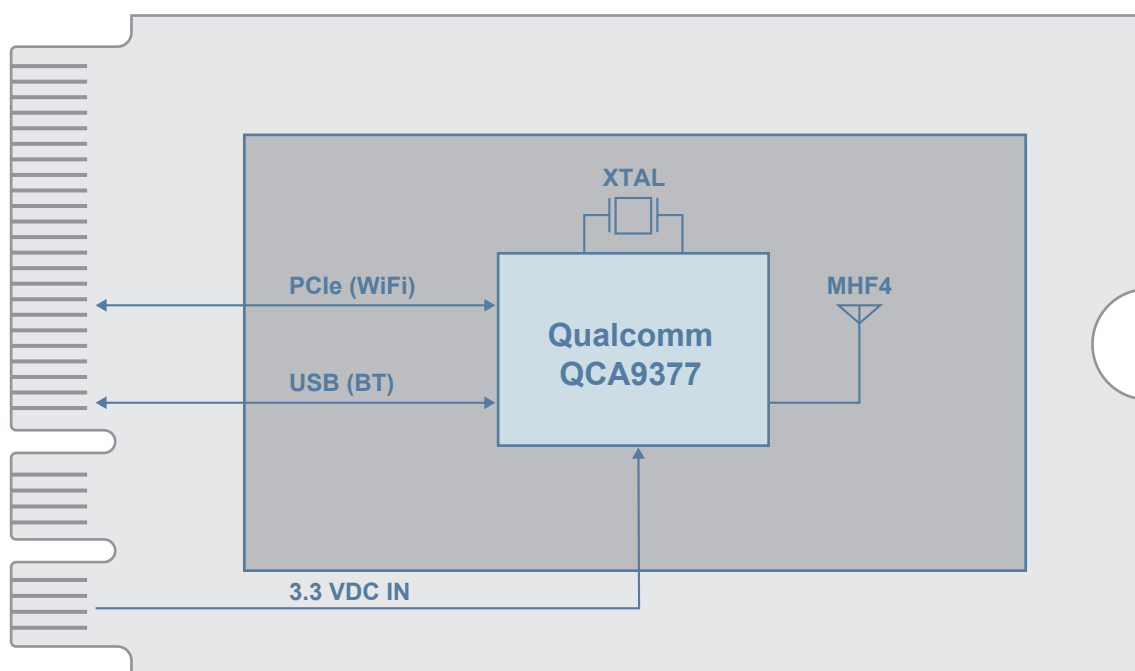
Certification and Compliance

USA	FCC ID: 2AKZA-QCA9377
Canada	IC: 22364-QCA9377
European Union	EN 300 328 v2.2.2
	EN 301 893 v2.1.1
	EN 55032 / EN 55024
Japan	TELEC: 201-180629
Australia/New Zealand	RCM Compliant
Bluetooth Logo	QDID 150839 (Bluetooth 4.2) QDID 193238 (Bluetooth 5)
Certification	Compliant with RoHS / REACH directives

Dimensions (units in mm)



Block Diagram

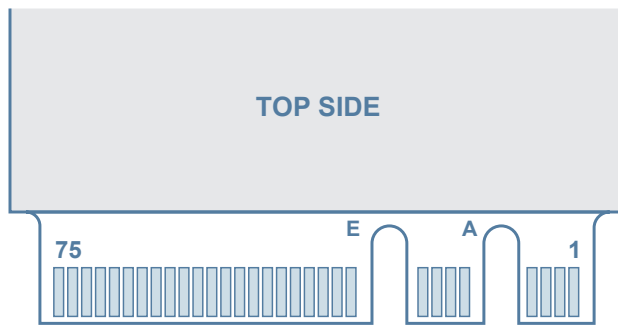


Order Information

Code	Description	Signaling
PIXI-9377-S	Qualcomm QCA9377 System-in-Package (SiP) IoT module	SDIO (Wi-Fi) / UART (BT) / I ² S
PIXI-9377-P	Qualcomm QCA9377 System-in-Package (SiP) IoT module	PCIe (Wi-Fi) / USB (BT)
STIX-9377-M2-AE	Qualcomm QCA9377 SiP M.2 KEY-A+E Type 2230 IoT module	PCIe (Wi-Fi) / USB (BT)
STIX-9377-M2-B	Qualcomm QCA9377 SiP M.2 KEY-B Type 2242 IoT module	PCIe (Wi-Fi) / USB (BT)
STIX-9377-MPCIE	Qualcomm QCA9377 SiP mini-PCIe half size IoT module	PCIe (Wi-Fi) / USB (BT)

Code	Description	Wireless SiP module
PIXI-9377-EVK	Development Kit for Qualcomm QCA9377 based on PIXI-9377-S	Antenna and cable set

Signal Pinout



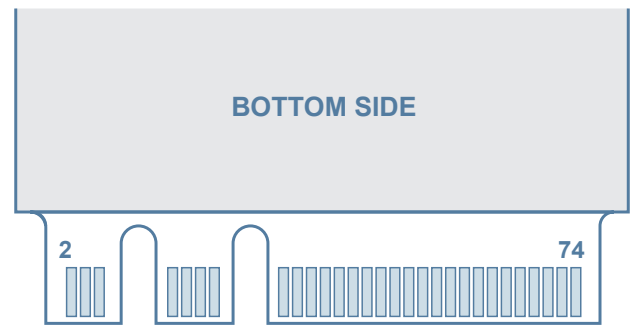
Pin	Signal	Type	Description
1	GND	P	Ground
3	USB_D+	I/O	USB differential pair signal
5	USB_D-	I/O	USB differential pair signal
7	GND	P	Ground

Connector Key

1	NC	Not Connected
3	NC	Not Connected
5	NC	Not Connected
7	NC	Not Connected

Connector Key

33	GND	P	Ground
35	PERp0	I	PCIe Receive differential
37	PERn0	I	pair signal
39	GND	P	Ground
41	PETp0	O	PCIe Transmit differential
43	PETn0	O	pair signal
45	GND	P	Ground
47	REFCLKp	I	PCIe Clock differential
49	REFCLKn	I	pair signal
51	GND	P	Ground
53	PCIE_CLKREQn	I	PCIe Clock Request Signal
55	PCIE_WAKEn	I	PCIe Wake Up Signal
57	GND	P	Ground
59	NC		Not Connected
61	NC		Not Connected
63	GND	P	Ground
65	NC		Not Connected
67	NC		Not Connected
69	GND	P	Ground
71	NC		Not Connected
73	NC		Not Connected
75	GND	P	Ground



Pin	Signal	Type	Description
2	PCIE_3V3	P	3.3V
4	PCIE_3V3	P	3.3V
6	WL_LED_n	OD	Wi-Fi LED Signal

Connector Key

16	NC	Not Connected
18	GND	P Ground
20	NC	Not Connected
22	NC	Not Connected

Connector Key

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	NC	Not Connected
52	PCIE_PERSTn	PCIe Reset Signal
54	WL_REG_ON	WLAN Enable. (Active High)
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	NC	Not Connected
72	PCIE_3V3	3.3V
74	PCIE_3V3	3.3V