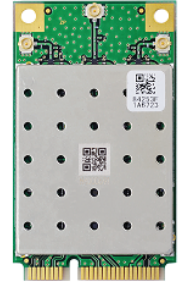


# SX-PCEAC-DB

## Dual Band 802.11ac PCIe WLAN Module



### 3x3 MIMO - High Speed Wi-Fi for 2.4GHz and 5GHz Bands

The SX-PCEAC-DB is an 802.11ac compliant dual-band 3x3 PCIe Mini Card. It is based on the the Qualcomm Atheros QCA9880 chipset, designed to deliver wireless data rates of up to 1.3Gbps. The SX-PCEAC-DB supports 20/40/80MHz and 256-QAM to maximize bandwidth efficiency.

Unlike the other similar solutions, the design, manufacturing, and tuning processes are strictly controlled in-house at the Silex state-of-the-art ISO9001 facility in Japan. Each card is individually tested and inspected to ensure the industry's highest quality resulting greater performance and reliability.

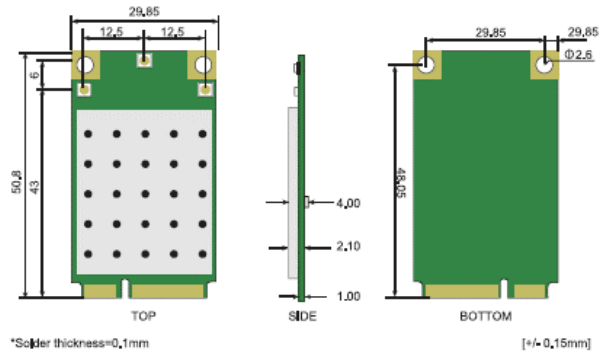
#### Typical Applications:

SX-PCEAC-DB card gives customers the ability to easily and reliably support applications where this extra bandwidth and performance is required, like deploying HD video over Wi-Fi.

Applications include commercial AP, routers, gateways, large-size printers, video devices, medical devices etc.

#### Key Features:

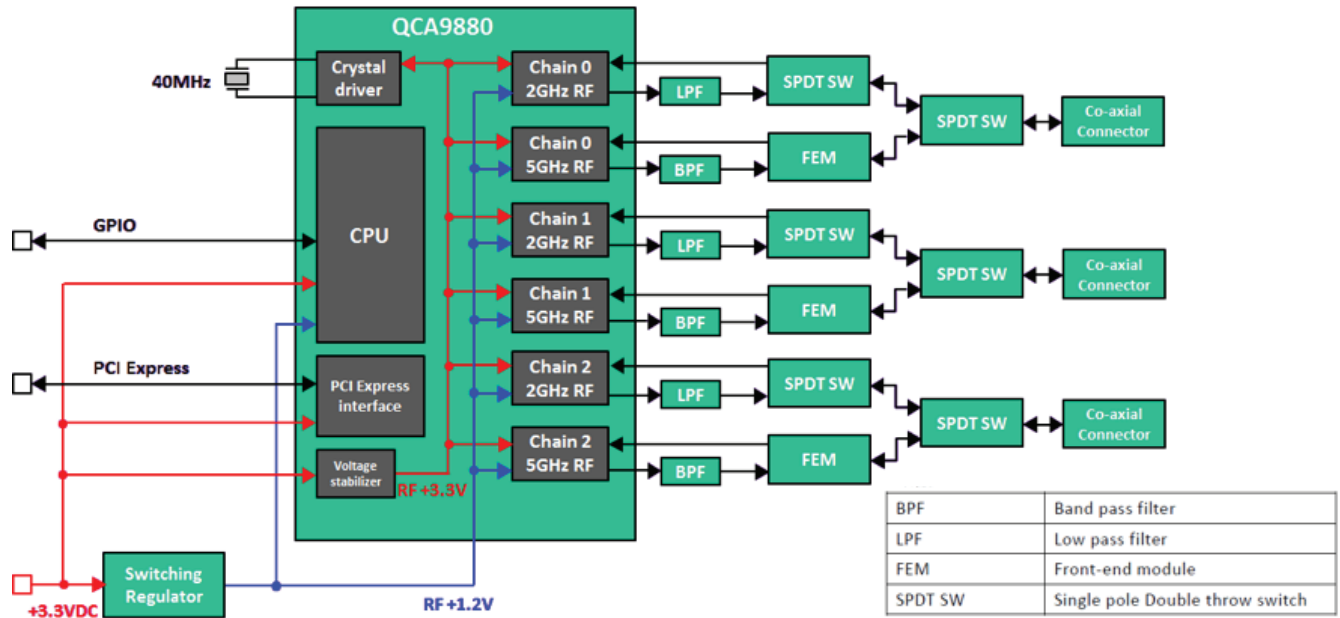
- Max data transfer rate: 1.3Gbps (Theoretical value, at 11ac mode)
- PCI Express interface
- Qualcomm Atheros QCA9880 chipset
- IEEE 802.11ac(Wave1)/a/b/g/n
  - Wide band 80MHz mode
  - High density modulation mode (256QAM)
- 3x3 SU-MIMO enhances high speed and stability
- Silex Linux reference driver with IEEE802.11x EAP support
- Wireless standard
  - IEEE 802.11ac/a/n/e/h/i
- EU directive RoHS certification
- Modular certification for FCC/IC, ETSI and MIC



#### Specifications:

Product Name	SX-PCEAC-DB R2
Chipset	Qualcomm Atheros QCA9880
Host Interface	PCI Express mini card v1.2
Radio Specifications	IEEE 802.11 ac (Wave1)/a/b/g/n
Antenna Terminal	U.FL connector x3
Operating Voltage	3.3V ± 5%
Average Current Consumption	<p>[2.4GHz] Tx: 350~660mA Rx: 210~250mA</p> <p>[5GHz] Tx: 450~890mA Rx: 220~290mA</p>
Weight	7.2g
Operating Temperature & Humidity	Temperature: 0 ~ +60°C Humidity: 20 - 80%RH
Storage Temperature & Humidity	Temperature: 0 ~ +60°C Humidity: 20 - 80%RH
Dimensions	29.9 x 50.8 x 4.0mm Thickness = 1.0mm
Connector Type	PCI Express mini card edge

**Block Diagram**



**Wireless LAN General Specifications**

	Bandwidth	Wireless	Channel
Frequency Spacing	2.4 GHz	11b/g/ng (20/40 MHz)	5 MHz
		11a/na/ac (20 MHz)	20 MHz
	5 GHz	11na/ac (40 MHz)	40 MHz
		11ac (80 MHz)	80 MHz
Link Rate	11b	1 - 11 Mbps	
	11a/g	6 - 54 Mbps	
	11na	MCS 0, 1, 2, 3, 4, 5, 6, 7	
	11ng/ac(20MHz)	MCS 0, 1, 2, 3, 4, 5, 6, 7, 8	
	11ng/ac(40MHz)	MCS 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	
	11ac (80MHz)	MCS 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	
Modulation	11b	DSSS(DBPSK, DQPSK, CCK)	
	11a/g/na	OFDM(BPSK, QPSK, 16QAM, 64QAM)	
	11ng/ac	OFDM(BPSK, QPSK, 16QAM, 64QAM, 256QAM)	

**Ordering Information**

SX-PCEAC-DB R2: 2.4/5.0 GHz, Bulk Package  
 SX-PCEAC-DB R2 SP: 2.4/5.0 GHz, Sample Pack (3 x Unictron Antenna)

**Driver Support**

**Silex Reference Platform:**

- NXP's i.MX 6 Quad/Dual (MCIMX6Q-SDB)

**Operating System:**

- Linux (kernel version 3.10.70)\*

**Silex Reference Driver:**

- Based on QCA's LSDK 10.2-00082-4

**Driver Features:**

- AP Mode Only. (STA mode planned)
- WPA2/WPA, TKIP, AES Encryption, IEEE 802.1X, EAP
- IEEE 802.11e (QoS)
- WPS2.0
- WDS Function
- Multiple SSID's
- Hidden SSID Support

\* Contact Silex for driver support for other OS's.

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