ANCYWICED007

WICED™ Studio 4
CYW9207x9WCDEVAL Evaluation Board Hardware User Manual

Associated Part Family: CYW207x9

This document describes the CYW9207x9WCDEVAL board and provides various pins, jumpers, switches, ports, and test points to access the CYW207x9 (20719 or 20729) to perform development, debug, evaluation, and troubleshooting.

Contents

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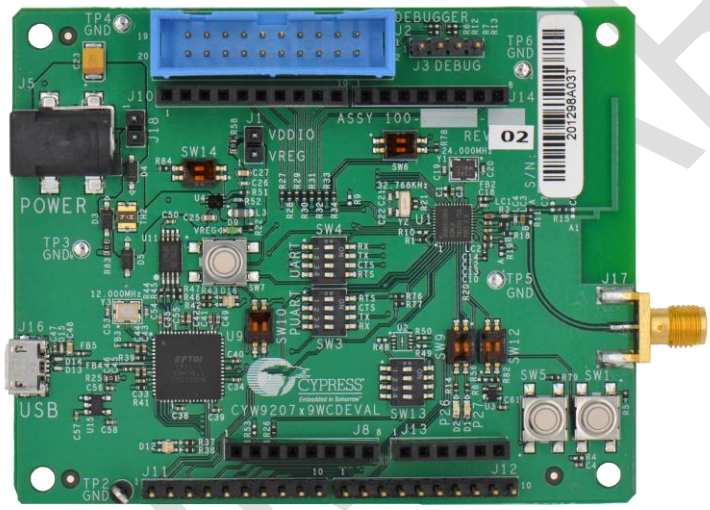
1 Product Description

The CYW207x9 (20719 or 20729) is a monolithic, single chip, System-on-a-Chip (SoC) that includes a baseband processor, an ARM® Cortex™-M3 processor and an integrated transceiver. The CYW20719 is a Bluetooth device, the CYW20729 is a ZigBee device.

The Cypress CYW9207x9WCDEVAL board (Figure 1) is an evaluation board that provides various pins, jumpers, switches, ports, and test points to access either version of the CYW207x9 to perform debug, evaluation, and troubleshooting.

Figure 1. CYW9207x9WCDEVAL Board



2 Board Layout

Figure 2 shows the location of key jumpers and switches on the CYW9207x9WCDEVAL board.

Note: Default jumper settings are identified in red.

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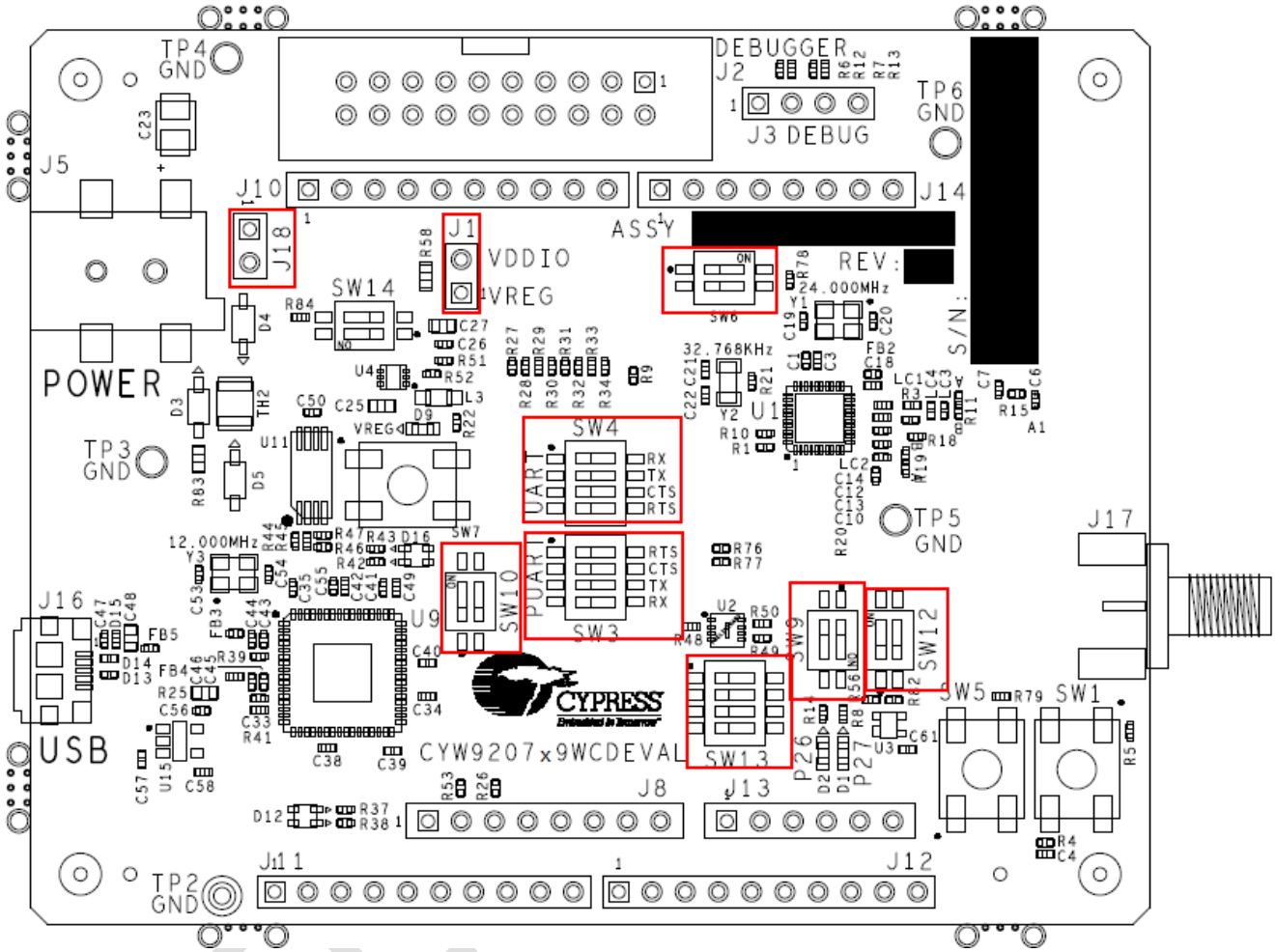
Figure 2. CYW9207x9WCDEVAL Evaluation Board Layout and Component Locations



3 DIP Switch Setup

Figure 2 shows the locations for the CYW9207x9WCDEVAL DIP switches. Settings are shown in the following tables.

Table 1: SW4 DIP Switch Settings

DIP	State	Description
1	OFF	Connect UART_RX to FTDI_TX
2	OFF	Connect UART_TX to FTDI_RX
3	OFF	Connect UART_CTS to FTDI_RTS
4	OFF	Connect UART_RTS to FTDI_CTS

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Table 2: SW3 DIP Switch Settings

DIP	State	Description
1	OFF	Use P6 as PUART_RTS
2	OFF	Use P7 as PUART_CTS
3	OFF	Use P32 as PUART_TX
4	OFF	Use P4 as PUART_RX

Table 3: SW9 DIP Switch Settings

DIP	State	Description
1	OFF	Use P27 To control LED D1
2	OFF	Use P26 to control LED D2

Table 4: SW12 DIP Switch Settings

DIP	State	Description
1	OFF	Use SW1 for RST_N
2	OFF	Use Voltage Detector for RST_N

Table 5: SW10 DIP Switch Settings

DIP	State	Description
1	ON	Enable level shifter for UART
2	ON	Enable level shifter for PUART

Table 6: SW14 DIP Switch Settings

DIP	State	Description
1	OFF	Set VDDIO supply voltage to 3.3V
2	OFF	Set VDDIO supply voltage to 1.8V

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Table 7: SW6 DIP Switch Settings

DIP	State	Description
1	OFF	Use P1 as SWDCK
2	OFF	Use P1 for Generic Button SW5

Note: For SW14, both positions CANNOT be set to ON at the same time

Figure 2 shows the location for SW13, a switch that is used to configure serial flash and authentication IC connections. Settings are shown in Table 8.

Table 8: SW13 DIP Switch Settings

Dip	Default State	Description
1	OFF	Power authentication IC from VDDIO
2	OFF	SDA connection between CYW and authentication IC
3	OFF	SCL connection between CYW and authentication IC
4	OFF	NC

Authentication IC U4 is DNI by default. If the user decides to install this, then SW13 positions 1-3 should be placed in the ON position for proper connection. If authentication IC is not used, set these to the OFF position.

4 Jumper and Switch Settings

See Figure 2 for the jumpers and switch locations. Table 9 shows the CYW9207x9WCDEVAL board jumper and switch settings.

Table 9: CYW9207x9WCDEVAL Board Jumper and Switch Settings

Jumper/Switch	State	Comment
J1	Oopen	Power supply to CYW207x9.
J18	Open	Optional: External 5V DC jack to provide extra current if needed
SW1	–	Reset
SW3	OPEN	See Table 2
SW4	Open	See Table 1
SW5	–	Generic button
SW6	Open	See Table 7
SW7	–	Recovery

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Jumper/Switch	State	Comment
SW9	Open	See Table 3
SW10	OPEN	See Table 5
SW12	OPEN	See Table 4
SW14	OPEN	See Table 6

Table 10 shows the CYW9207x9WCDEVAL board headers.

Table 10: CYW9207x9WCDEVAL Board Headers

Header	Description
J2	Debug interface
J3	Debug interface
J8	Arduino shield connection
J10	Arduino shield connection
J11	CYW test header - GPIO
J12	CYW test header - GPIO
J13	Arduino shield connection
J14	Arduino shield connection

5 Current Consumption Measurement

Table 11 lists the jumper locations for measuring current.

Note: Remove the listed jumper and measure the current across the exposed pins.

Table 11: Current Measurements

To Measure...	Remove the Jumper and Measure Across...
Entire CYW207x9	J1

Note: R58 needs to be removed as well.

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6 Further Information

For further information on the CYW9207x9WCDEVAL hardware board, refer to the following documents available as part of WICED Studio and available for download at the Cypress Support Community website [1]:

- CYW9207x9WCDEVAL-Schematic [2]

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Document History

Document Title: ANCYWICED007 - CYW9207x9WCDEVAL Evaluation Board Hardware User Manual

Document Number: 001-CYWICED007

Revision	Submission Date	Description of Change
*A	11/14/2016	Board photo and product name updates, removed schematic
**	10/18/2016	Initial revision

References

[1] Cypress Support Community (http://community.cypress.com/)

[2] Bluetooth SoC for Embedded Wireless Devices: CYW9207x9WCDEVAL Schematic

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