Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

FEATURES

- Compatible with MityARM-335x based Development Kits from Critical Link

- WiFi Support
  – IEEE 802.11 b/g/n

- Bluetooth Support
  – 2.1+EDR
  – Power Class 1.5

- Utilizing LSR's TiWi-R2 Module
  – Based on TI WL1271 Transceiver

(1.7" x 1.8" – actual size)

DESCRIPTION

The CL TiWi-R2 Expansion Kit is compatible with Critical Link's line of MityARM-335x based development kits; one is required to interface with this expansion kit. All MityARM-335x based System on Modules support the CL TiWi-R2 expansion kit and can be added to a development kit to add WiFi and Bluetooth functionality.

Each kit comes complete with a U.FL cable and a 2.4GHz 2dbi external antenna. It seamlessly integrates into the Sitara^{TM} application processor that is used in Critical Links MityARM-335x System on Modules. It is based upon the TiWi-R2 from LS Research utilizing a Texas Instruments WL1271 Transceiver.

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

CL TiWi-R2 Interface Description
The CL TiWi-R2 interfaces directly with a MityARM-335x Development Kit through the 41-pin Hirose connector on the bottom of the Development Kit, J700. This interface provides the necessary communications and voltage signals used by the CL TiWi-R2 Expansion Kit.

Linux Driver and API examples are available to support the WiFi functionality. The 802.11 b/g/n WiFi interface works directly with the Linux operating system and common wireless LAN utilities such as WPA Supplicant and WPA_CLI are compatible.

For further information concerning the configuration and specifications of the TiWi-R2 module that the kit is based upon please visit LS Research: http://www.lsr.com/wireless-products/tiwi-r2

CL TiWi-R2 Electrical Description
The CL TiWi-R2 Expansion Kit provides standard WiFi IEEE 802.11 data rates up to 65Mbps. The communications interface is routed to I2C0 on the MityARM-335x module that is installed in a MityARM-335x Development Kit.

The electrical interface between the CL TiWi-R2 Expansion Kit and MityARM-335x based Development Kit is provided via the 41-pin Hirose header described in Table 1.

Please reference the MityARM-335x Development Kit documentation for further details on the pin-out of this connector.

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

CL TiWi-R2 Expansion Kit Pinout
Table 2 shows the 41-pin Hirose header, J1, used to interface the CL TiWi-R2 Expansion Kit to a MityARM-335x based development kit.

Table 1: CL TiWi-R2 Expansion Kit 41-Pin Header

Pin	Name	Type	Note
1	SPI_CSX/SDIO_D3_B	I/O	
2	+3.3V	Power	
3	SDIO_D2_B	I/O	
4	+3.3V	Power	
5	SDIO_D1_B	I/O	
6	GND	Power	
7	SPI_DOUT/SDIO_D0_B	I/O	
8	Reserved	-	
9	RESETn	I	
10	Reserved	-	
11	CB_HOST_WL_IRQ_3V3	I/O	
12	Reserved	-	
13	UART_IRQ	O	
14	Reserved	-	
15	Reserved	-	
16	Reserved	-	
17	Reserved	-	
18	GND	Power	
19	Reserved	-	
20	Reserved	-	
21	Reserved	-	
22	SPI_DIN/SDIO_CMD_B	I/O	
23	Reserved	-	
24	Reserved	-	
25	Reserved	-	
26	Reserved	-	
27	Reserved	-	
28	Reserved	-	
29	Reserved	-	
30	HOST_CB_SPI/SDIO_CLK_B	I/O	
31	Reserved	-	
32	GND	Power	
33	GND	Power	
34	VIO_1P8	Power	
35	Reserved	-	
36	Reserved	-	
37	HOST_CB_WL_EN_3V3	I/O	
38	Reserved	-	
39	I2C0_SDA	I/O	
40	Reserved	-	
41	I2C_SCL	I/O	

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

ABSOLUTE MAXIMUM RATINGS

If Military/Aerospace specified cards are required, please contact the Critical Link Sales Office or unit Distributors for availability and specifications.

Maximum Supply Voltage, Vcc   3.4 V

Storage Temperature Range   -65 to 85C

OPERATING CONDITIONS

Industrial Temperature Range	-40 to +85C
Humidity	0 to 95% Non-condensing

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Vcc	Voltage supply, 3.3 volt input.			3.3	3.4	Volts
Icc	Quiescent Current draw, 3.3 volt input			TBD	TBD	Milliamps

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

ORDERING INFORMATION

The following table lists the orderable module configurations. For shipping status, availability, and lead time of these or other configurations please contact your Critical Link representative.

A compatible 802.11 antenna and cable (may vary) are provided with each CL TiWi-R2 Expansion Kit.
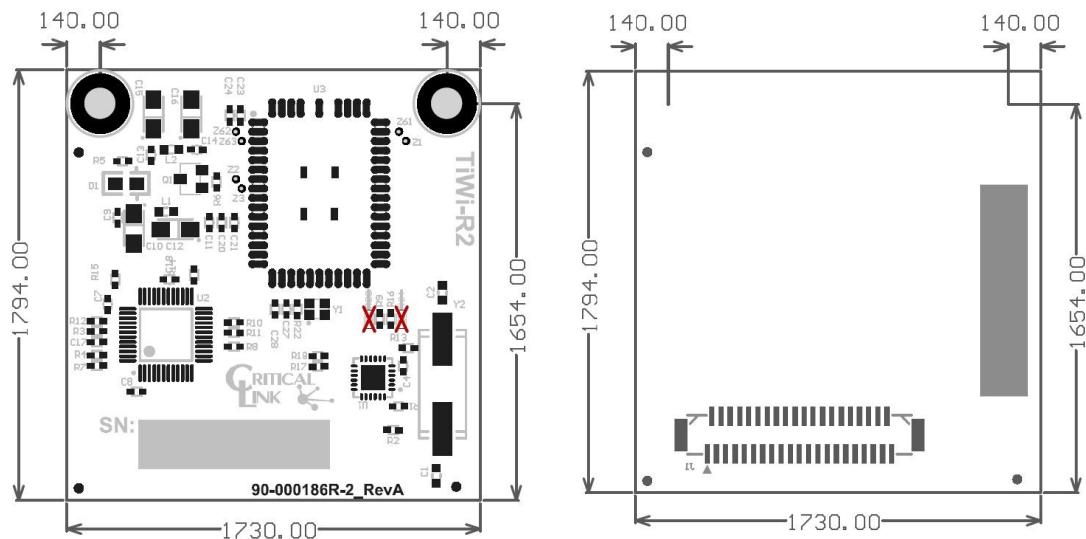
Table 2: Orderable Model Numbers

Part Number	Protocol(s) Supported
80-000535	802.11 b/g/n and Bluetooth 2.1

MECHANICAL INTERFACE
A mechanical outline of the CL TiWi-R2 Expansion Board is illustrated below.

Figure 1: Dimensions 1.73'' x 1.79'' – Top and Bottom Mechanicals

Critical Link, LLC
www.CriticalLink.com
www.MityDSP.com

CL TiWi-R2 Expansion Kit
23 April 2013

REVISION HISTORY

Date	Change Description
10-OCT-2012	Initial release.
17-OCT-2012	Update part number
26-OCT-2012	Update product images
23-APR-2013	Remove Bluetooth from Linux Driver and API support