

Wireless LAN Module Evaluation Board

WBSACVLXY-1



This evaluation board is an object for experiment of operation, and does not guarantee quality. Moreover, the conditions of a module of operation are not recommended in the schematic, the parts, the software, etc. currently used for evaluation board.

ATTENTION: This module has an API (Application Programming Interface) Specification that is under Japan export control. Depending on the customer's country and application (e.g. weapons), TAIYO YUDEN CO., LTD. may not be able to provide the API Specification to all customers. Please contact your local TAIYO YUDEN CO., LTD. sales office for additional information.

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Rev. Records

22-Feb.2016> Ver. 0.1 Released, Tentative version.

24-Mar.2016> Ver. 1.0 Released, Official release.

6-Apr.2017> Ver. 1.1 Add schematic of evaluation board.

5-Oct.2017> Ver. 1.2 Revised schematic of evaluation board.

WBSACVLXY-1

Introduction

The evaluation board is designed for customers to easily work with "WYSACVLXY-XX", **MCU embedded Wireless LAN** module, for functional evaluation purpose. This document describes the hardware configuration and the usage.

Target module

WYSACVLXY-XX

Accessories

1	Evaluation Board (WBSACVLXY-1)	1 piece
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Recommended operating environment

HOST PC:

CPU: 1000MHz or higher

Interface: USB

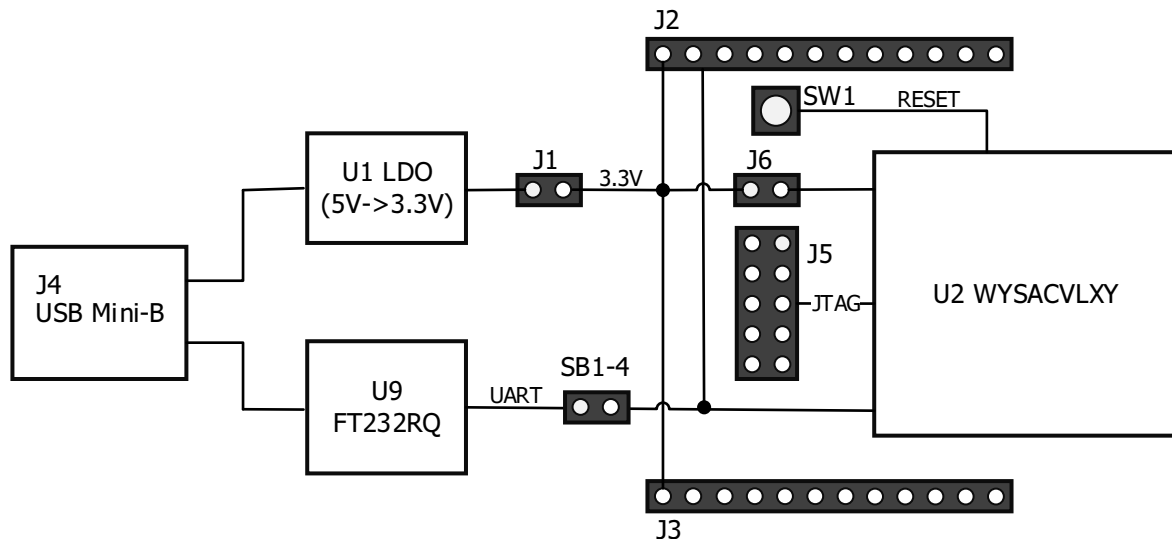
DC Power Supply: (External power supply is not required.)

Supplying Voltage = 4.5V to 5.5V

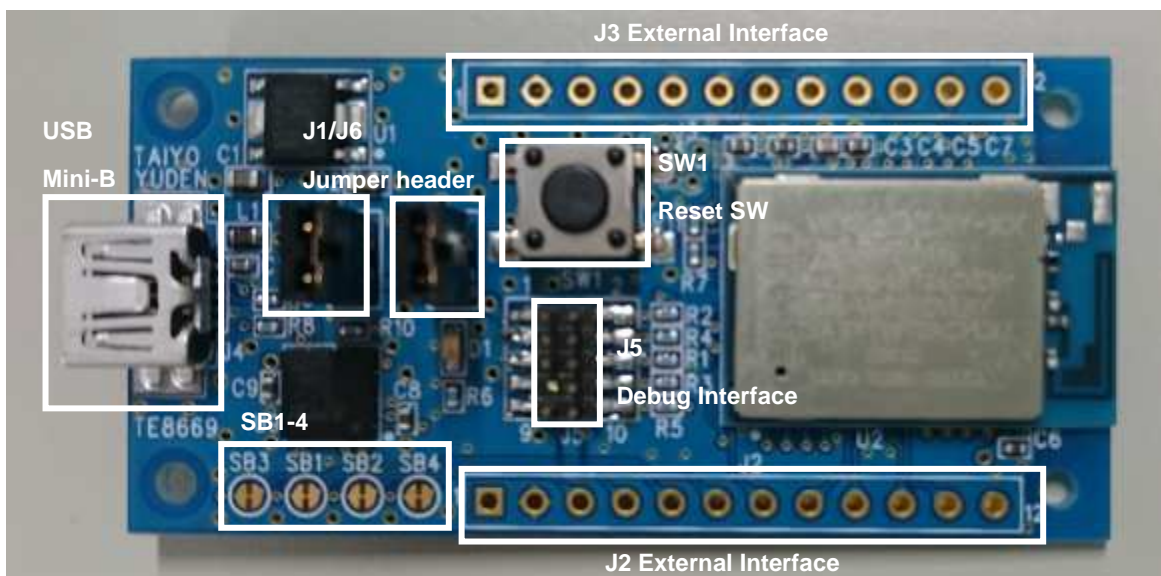
Current limit should be set 1A.

Block diagram

WBSACVLXY-1 has several connectors. J4 (USB mini B connector) is used for USB signal that is converted from UART by FT232RQ. The embedded application running on WBSACVLXY uses UART as a host interface usually. Solder bridge port (SB1-4) are used to switch UART interfaces (U9 or J2). J1 and J6 are jumper connector to switch power sources (from LDO or from J2/J3).



Evaluation Board Layout



WBSACVLXY-1

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Pin description of evaluation board

J2 External Interface

Pin#	Name	Direction	Description
1	EX3V3_PWR	-	Power Supply 3.3V
2	GND	-	Ground
3	UART1_TXD	Output	UART1 TXD signal
4	UART1_RTSN	Output	UART1 RTS signal Hardware flow control is active by default with TAIYO YUDEN CO., LTD. standard application
5	UART1_RXD	Input	UART1 RXD signal
6	UART1_CTSN	Input	UART1 CTS signal Hardware flow control is active by default with TAIYO YUDEN CO., LTD. standard application
7	GPIO41	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
8	SPI_CLK	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
9	SPI_SEL	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
10	SPI_TXD	Output	not used by TAIYO YUDEN CO., LTD. standard application
11	SPI_RXD	Input	not used by TAIYO YUDEN CO., LTD. standard application
12	SPI_RDY	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application

J3 External Interface

Pin#	Name	Direction	Description
1	EX3V3_PWR	-	Power Supply 3.3V
2	GND	-	Ground
3	UART0_TXD	Output	UART0 TXD signal
4	UART0_RXD	Input	UART0 RXD signal
5	I2C_SDA	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
6	I2C_SCL	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
7	WAKEUP0	Input	
8	WAKEUP1	Input	
9	GPIO41	Input/Output	not used by TAIYO YUDEN CO., LTD. standard application
10	NC_CON5	-	not used by TAIYO YUDEN CO., LTD. standard application
11	NC_CON4	-	not used by TAIYO YUDEN CO., LTD. standard application
12	RESET	Input	Reset signal (Active Low)

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J5 Debug Interface (not used by TAIYO YUDEN CO., LTD. standard application)

Pin#	Name	Direction	Description
1	EX3V3_PWR	-	Power (to monitor power supply voltage)
2	TMS	Input	JTAG TMS signal
3	GND	-	Ground
4	TCK	Input	JTAG TCK signal
5	GND	-	Ground
6	TDO	Output	JTAG TDO signal
7	NC	-	
8	TDI	Input	JTAG TDI signal
9	NC	-	
10	TRSTN	Input	JTAG target reset signal

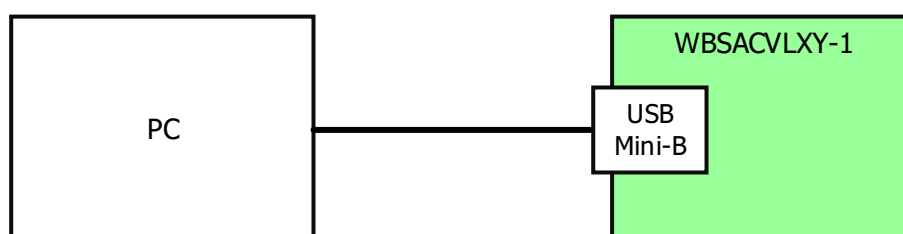
Software

- Device Drivers for FT232RQ:
FT232RQ USB-UART converter is built in this board. FT232RQ is made by Future Technology Devices International Limited. Download USB driver from following URL.
<http://www.ftdichip.com/>

Example of connection for evaluation

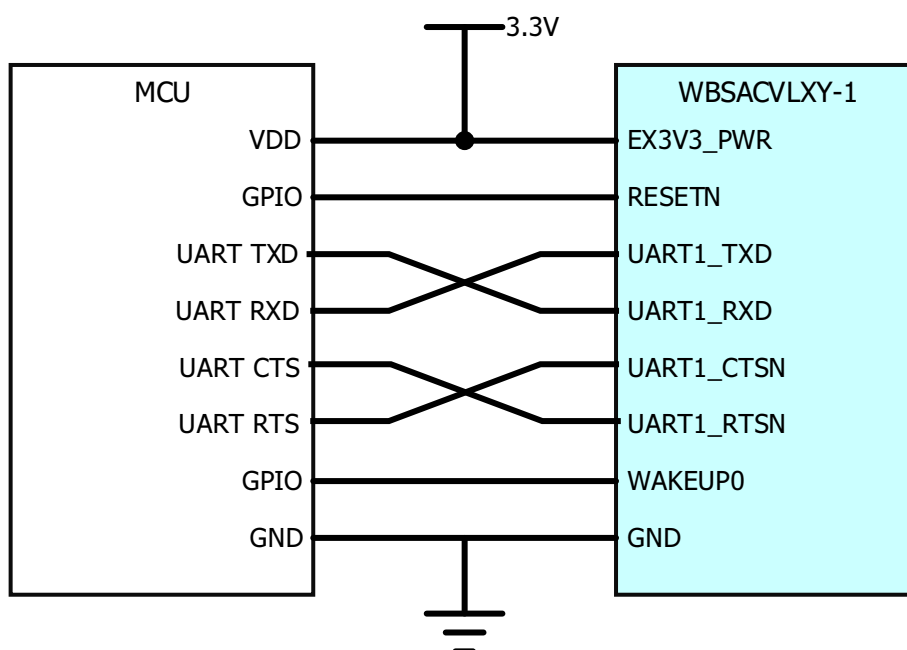
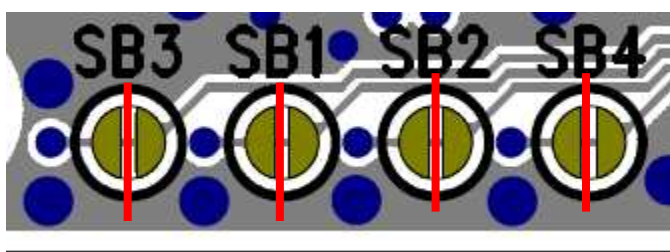
Case1. With PC

- Put jumper on J1 and J6 and connect USB cable
- Connect USB cable between PC and WBSACLVXY-1
- Run serial terminal software. Default baud rate of the module is 115.2kbps. Please configure baud rate of serial terminal software.

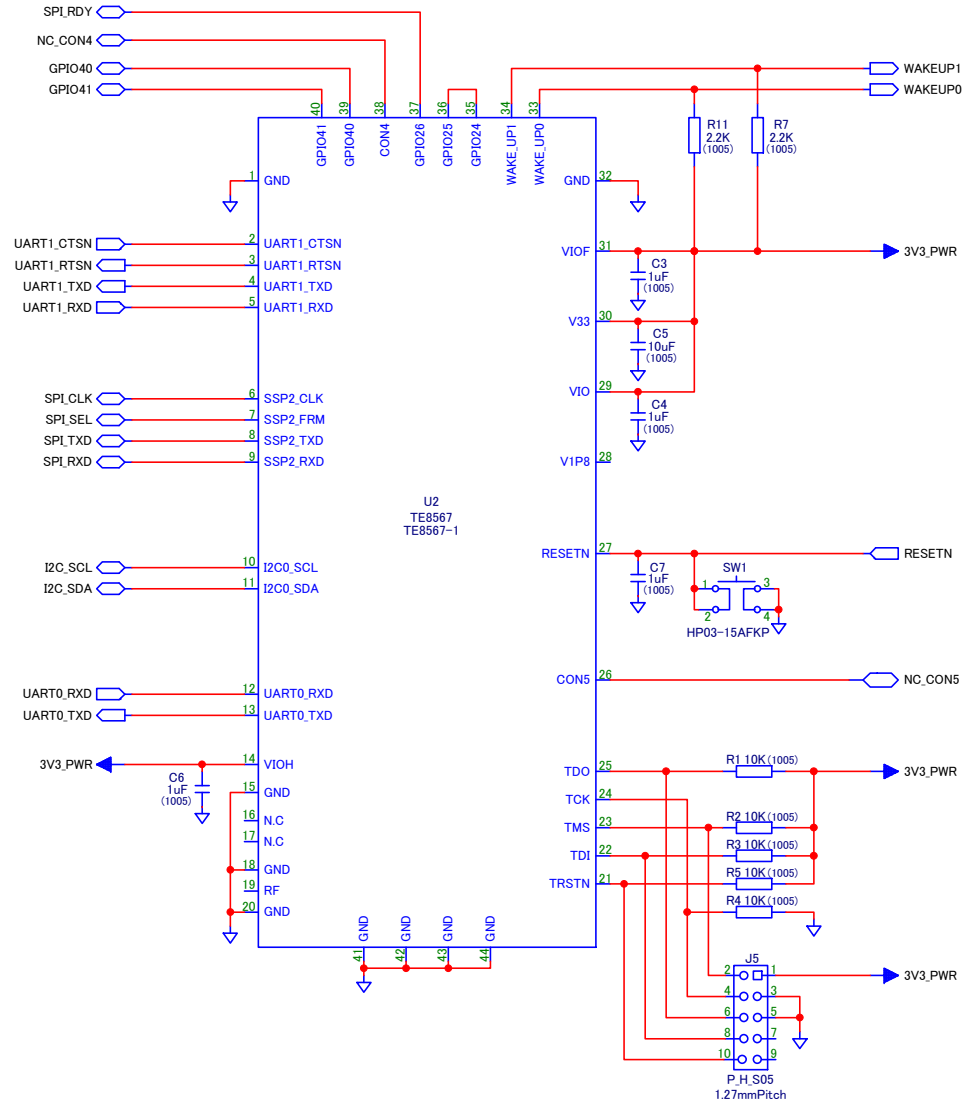
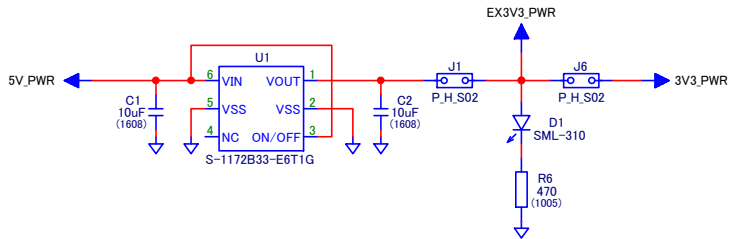
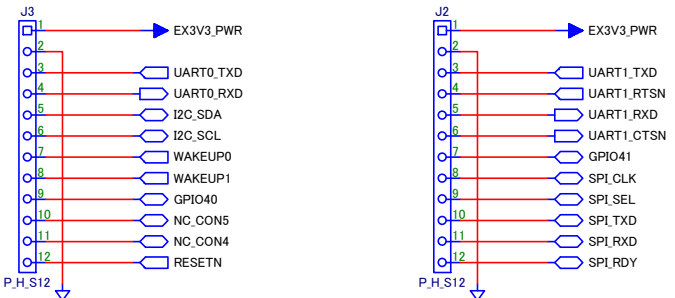
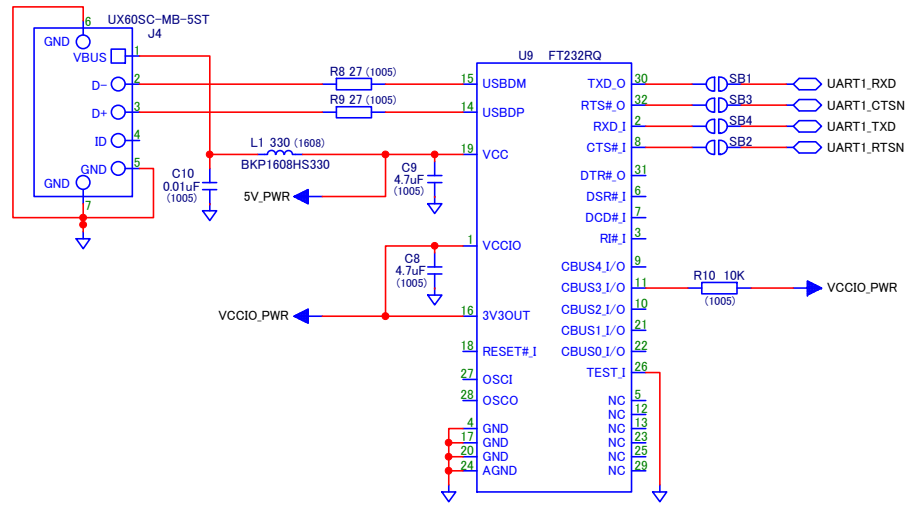


Case2. Using external interface (with other MCU)

- Cut the line between the land patterns of Solder Bridge SB1 – SB4 in order to disconnect the UART line of the module from FT232RQ.
- Put jumper on J6 only and supply power source (3.3V) to J2/J3 pin#1.
- **DO NOT** put jumper on J1 in this case. If do that, MCU and WBSACVLXY-1 may be broken.



REV	ECO	APPROVED	DESCRIPTION	DATE



APPROVED		Title Circuit schematic	Document No. HD-MC-BTE8669
CHECKED			
DRAWN	2015/12/09		
DESIGNED			