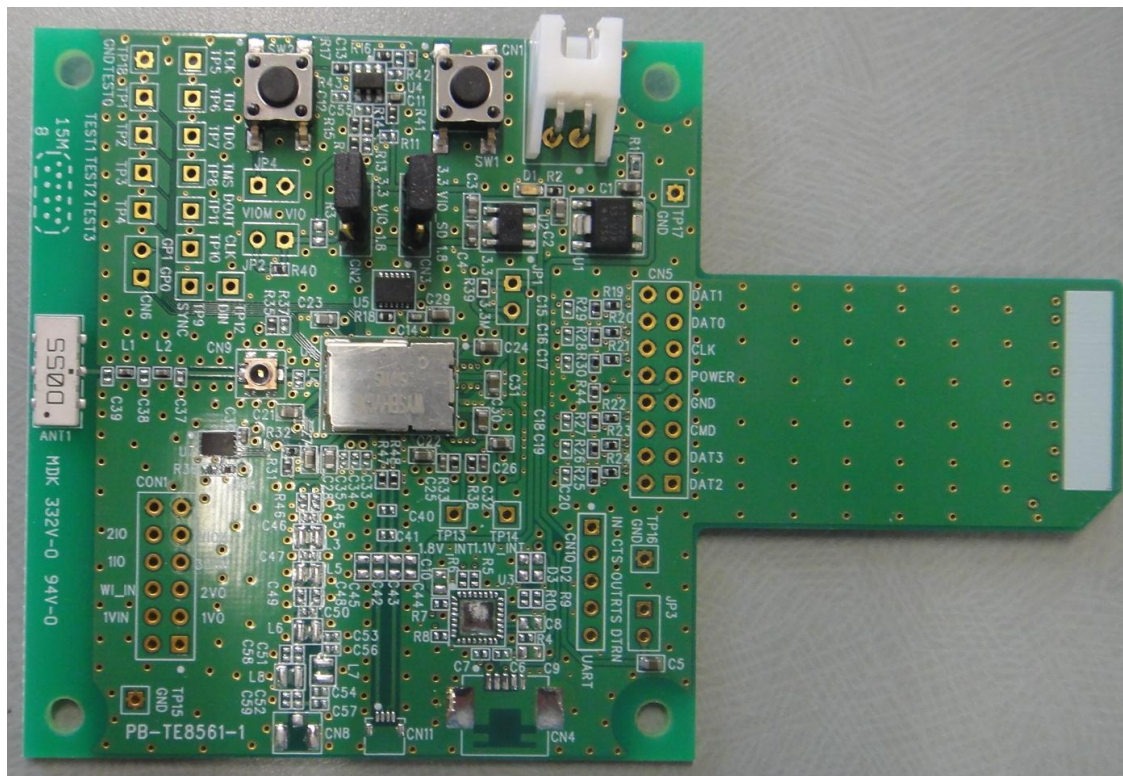


WBSBHVXG

Wireless LAN and Bluetooth[®] Module Evaluation Board

(For WYSBHVXG)

WBSBHVXG



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.

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ATTENTION: This module requires device drivers that are under Japan export control. Depending on the customer's country and application (e.g. weapons), Taiyo Yuden may not be able to provide these drivers to all customers. Please contact your local Taiyo Yuden sales office for additional information.

To contact your local sales office and for additional product information, please visit www.ty-top.com.

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Rev. Records

Jan.08.2016> Ver.1.0 Released

Mar.17.2016>Ver.1.01 Added descriptions to the second page

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Introduction

This evaluation board is developed for communication test of **Wireless LAN** and **Bluetooth®** module which TAIYO YUDEN develops and sells.

This evaluation board makes it possible to perform easily the communication test of **Wireless LAN** and **Bluetooth®** module of TAIYO YUDEN.

Conformity module

WYSBHVXG

Accessories

| | | |
|---|-----------------------------|---------|
| 1 | Evaluation Board (TE8561-1) | 1 piece |
| 2 | DC Power Cable | 1 piece |

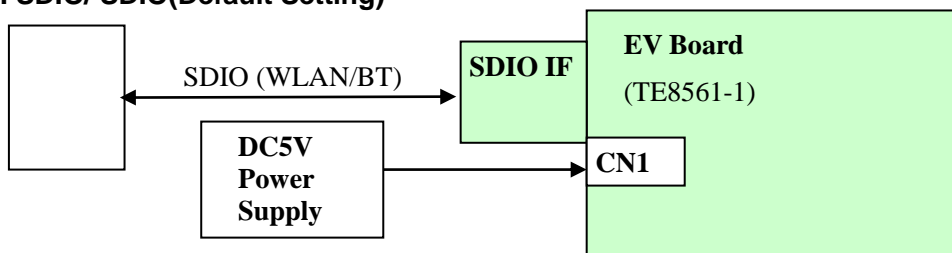
Recommendation operation environment

CPU: 1000MHz or higher

I/F: SDIO Interface

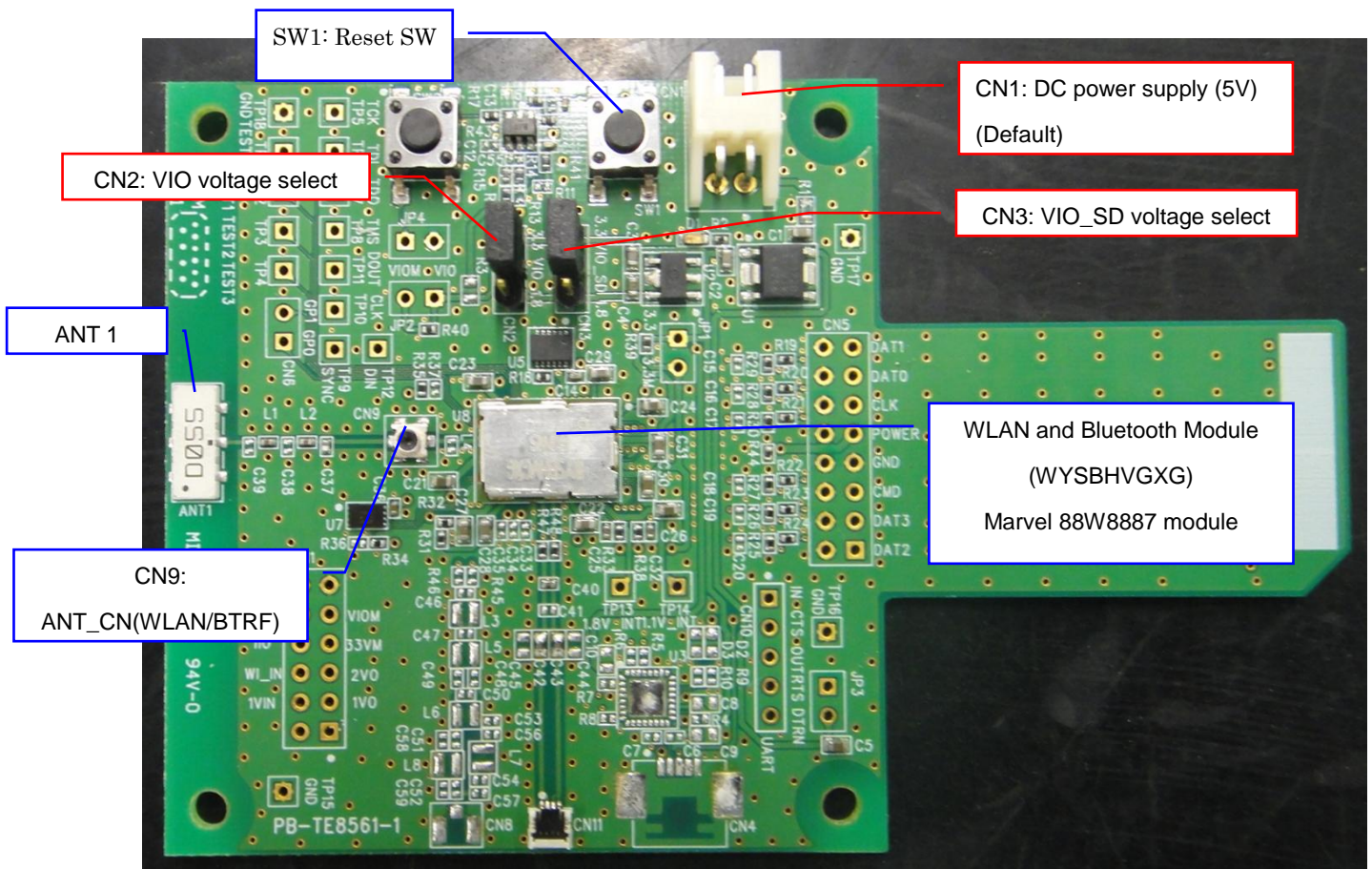
The example of connection

1. SDIO/ SDIO(Default Setting)



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Evaluation board layout



Pin description of evaluation board

TE8561-1

CN1: DC Power Supply

| No. | Pin name | Direction | Description |
|-----|----------|-----------|-------------|
| 1 | 5V | Input | 5.0V input. |
| 2 | GND | GND | Ground |

CN2: VIO Voltage Select (Default Setting: 1-2 short.)

| No. | Pin name | Direction | Description |
|-----|----------|-----------|----------------|
| 1 | 3.3V | Output | 3.3V output. |
| 2 | VIO | Input | Input for VIO. |
| 3 | 1.8V | Output | 1.8V output. |

CN3: VIO_SD Voltage Select (Default Setting: 1-2 short.)

| No. | Pin name | Direction | Description |
|-----|----------|-----------|-------------------|
| 1 | 3.3V | Output | 3.3V output. |
| 2 | VIO | Input | Input for VIO_SD. |
| 3 | 1.8V | Output | 1.8V output. |

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BOM of evaluation board

TE8561-1

| Ref Name | Description | Value | Parts name and standard | Supplier |
|----------|--------------------------------|----------|-------------------------|----------------------|
| ANT1 | Dual ANTENNA | 2.4/5GHz | AH104N2450D1 | TAIYO YUDEN |
| U1 | IC(LDO 3.3V) | | S-1172B33-E6T1G | SII or equivalent |
| U2 | IC(LDO1.8V) | | S-1170B18UC-OTDTF | SII or equivalent |
| U3 | N.M. | | | |
| U4 | IC (Reset voltage detector) | | TPS3808G01 | TI or equivalent |
| U5 | IC(32.768kHz clock) | | SG-3030LC | EPSON or equivalent |
| U7 | N.M | | | |
| U8 | Module | | WYSBHVXG | TAIYO YUDEN |
| SW1 | SWITCH | | HP03-15AFKP2 | Nikkai or equivalent |
| SW2 | SWITCH | | HP03-15AFKP2 | Nikkai or equivalent |
| CN1 | CONNECTOR | | S2B-XH-A | JST or equivalent |
| CN2 | CONNECTOR | | PIN_HEADER_S3 | |
| CN3 | CONNECTOR | | PIN_HEADER_S3 | |
| CN4 | N.M. | | | |
| CN5 | N.M. | | | |
| CN6 | N.M. | | | |
| CN8 | N.M. | | | |
| CN9 | RF CONNECTOR | | MM8430-2610 | MURATA |
| CN10 | N.M. | | | |
| CN11 | N.M. | | | |
| CON1 | N.M. | | | |
| JP1 | N.M. | | | |
| JP2 | N.M. | | | |
| JP3 | N.M. | | | |
| JP4 | N.M. | | | |
| C1 | CAPACITOR | 4.7uF | LMK107 BJ475KA | TAIYO YUDEN |
| C2 | CAPACITOR | 4.7uF | LMK107 BJ475KA | TAIYO YUDEN |
| C3 | CAPACITOR | 4.7uF | LMK107 BJ475KA | TAIYO YUDEN |
| C4 | CAPACITOR | 4.7uF | LMK107 BJ475KA | TAIYO YUDEN |
| C5 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C6 | N.M. | | | |
| C7 | N.M. | | | |
| C8 | N.M. | | | |
| C9 | N.M. | | | |
| C10 | N.M. | | | |
| C11 | CAPACITOR | 0.1uF | EMK105 BJ104KV | TAIYO YUDEN |
| C12 | N.M. | - | | |
| C13 | CAPACITOR | 0.1uF | EMK105 BJ104KV | TAIYO YUDEN |
| C14 | CAPACITOR | 0.1uF | EMK105 BJ104KV | TAIYO YUDEN |
| C15 | N.M. | | | |
| C16 | N.M. | | | |
| C17 | N.M. | | | |
| C18 | N.M. | | | |
| C19 | N.M. | | | |
| C20 | N.M. | | | |
| C21 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C22 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C23 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |

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| Ref Name | Description | Value | Parts name and standard | Supplier |
|----------|-------------|---------|-------------------------|--------------------|
| C24 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C25 | CAPACITOR. | 10pF | EMK105 CH100J | TAIYO YUDEN |
| C26 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C27 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C28 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C29 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C30 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C31 | CAPACITOR | 10uF | JMK107 BJ106MA | TAIYO YUDEN |
| C32 | CAPACITOR. | 10pF | EMK105 CH100J | TAIYO YUDEN |
| C33 | N.M. | | | |
| C34 | N.M. | | | |
| C35 | N.M. | | | |
| C36 | CAPACITOR | 0.01uF | EMK105 BJ103KV | TAIYO YUDEN t |
| C37 | INDUCTOR | 2.2nH | HK 1005 2N2S | TAIYO YUDEN |
| C38-C39 | N.M. | | | |
| C40 | N.M. | | | |
| C41 | N.M. | | | |
| C42 | N.M. | | | |
| C43 | N.M. | | | |
| C44-C59 | N.M. | | | |
| L1 | CAPACITOR | 0.6pF | EVK105 CH0R6BW | TAIYO YUDEN |
| L2 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| L3-L8 | N.M. | | | |
| R1 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R2 | RESISTOR | 47ohm | MCR01 MZS J 470 | ROHM or equivalent |
| R3 | N.M. | | | |
| R4 | N.M. | | | |
| R5 | N.M. | | | |
| R6 | N.M. | | | |
| R7 | N.M. | | | |
| R8 | N.M. | | | |
| R9 | N.M. | | | |
| R10 | N.M. | | | |
| R11 | N.M. | | | |
| R12 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R13 | N.M. | | | |
| R14 | RESISTOR | 300kohm | MCR01 MZS J 304 | ROHM or equivalent |
| R15 | RESISTOR | 100kohm | MCR01 MZS J 104 | ROHM or equivalent |
| R16 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R17 | N.M. | | | |
| R18 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R19 | RESISTOR. | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R20 | RESISTOR. | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R21 | RESISTOR. | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R22 | RESISTOR. | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R23 | RESISTOR. | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R24 | RESISTOR | 22ohm | MCR01 MZS J 220 | ROHM or equivalent |
| R25 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |
| R26 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |
| R27 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |
| R28 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |
| R29 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |

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| Ref Name | Description | Value | Parts name and standard | Supplier |
|----------|-------------|---------|-------------------------|--------------------|
| R30 | RESISTOR | 47kohm | MCR01 MZS J 473 | ROHM or equivalent |
| R31 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R32 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R33 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R34 | RESISTOR | 100kohm | MCR01 MZS J 104 | ROHM or equivalent |
| R35 | RESISTOR | 100kohm | MCR01 MZS J 104 | ROHM or equivalent |
| R36 | N.M. | | | |
| R37 | N.M. | | | |
| R38 | RESISTOR | 100kohm | MCR01 MZS J 104 | ROHM or equivalent |
| R39 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R40 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R41 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R42 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R43 | RESISTOR | 0ohm | MCR01 MZS J 000 | ROHM or equivalent |
| R44 | RESISTOR | 1kohm | MCR01 MZS J 102 | ROHM or equivalent |
| R45 | N.M. | | | |
| R46 | N.M. | | | |
| R47 | N.M. | | | |
| R48 | N.M. | | | |
| D1 | LED | | SML-310 | ROHM or equivalent |
| D2 | N.M. | | | |
| D3 | N.M. | | | |
| PCB | PCB | | PB-TE8561-1 | |