

RAK13002 WisBlock Adaptor Module Datasheet

Overview

Description

The RAK13002 is a WisBlock Core adaptor module that can be mounted to the IO slot of the WisBlock Base board. This module exposed all WisBlock Core signals such as I2C, SPI, UART, GPIO, and ADC to standard 2.54 mm pitch pin header for easy integration of external components and devices.

Features

- Supports two I2C interfaces
- Supports two UART interfaces
- Supports one SPI interface
- Supports up to six (6) GPIOs
- Supports two (2) ADC interfaces
- 3.3 V power supply interfaces
- Backup battery (super cap) can keep the RTC running for up to 7 days (tested in lab)
- Module size: 25X35 mm

Specifications

Overview

Mounting

The RAK13002 module can be mounted to the IO slot of the WisBlock Base board. Figure 1 shows the mounting mechanism of the RAK13002 on a WisBlock Base module.

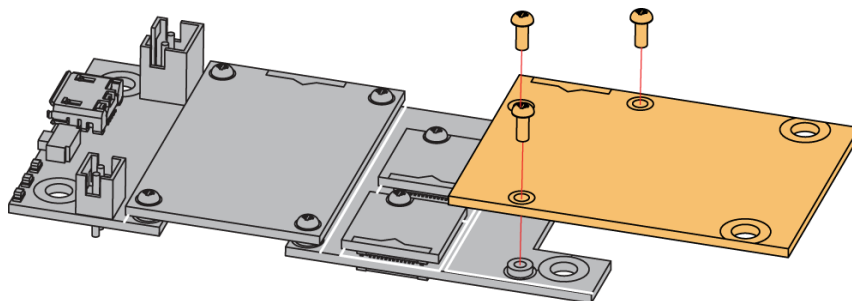


Figure 1: RAK13002 WisBlock Adaptor Module Mounting

Hardware

The hardware specification is categorized into four parts. It discusses the pinouts of the module and its corresponding functions and diagrams. It also covers the electrical and mechanical parameters that include the tabular data of the functionalities and standard values of the RAK13002 WisBlock Adaptor Module.

Pin Definition

The RAK13002 WisBlock Adaptor Module comprises a standard WisConnector connector. The WisConnector allows the RAK13002 module to be mounted to a WisBlock Base board. The pin order of the connector and the pinout definition is shown in Figure 2.

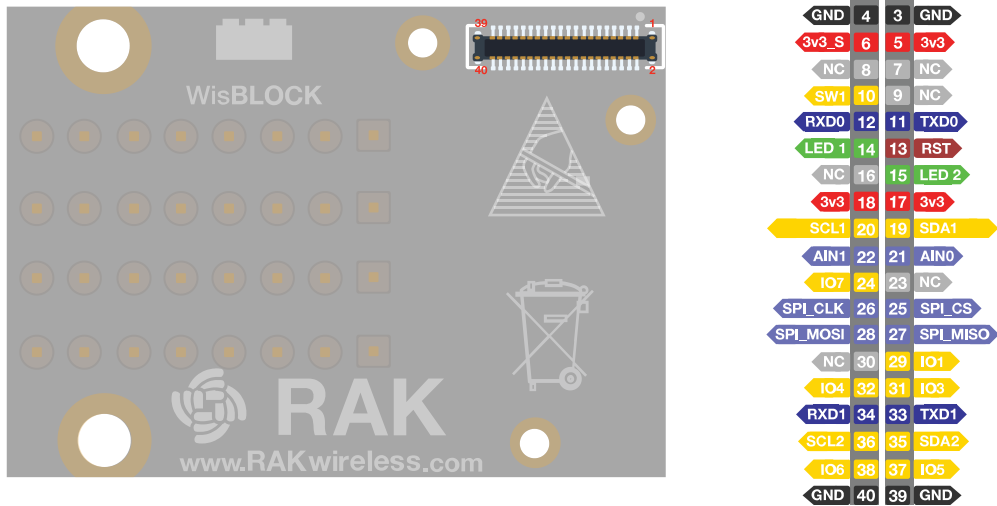


Figure 2: RAK13002 WisBlock Adaptor Module Pinout

Electrical Characteristics

Recommended Operating Conditions

Symbol	Description	Min.	Nom.	Max.	Unit
VCC	Power supply		3.3		V

Mechanical Characteristics

Board Dimensions

Figure 3 shows the dimensions and the mechanic drawing of the RAK13002 module.

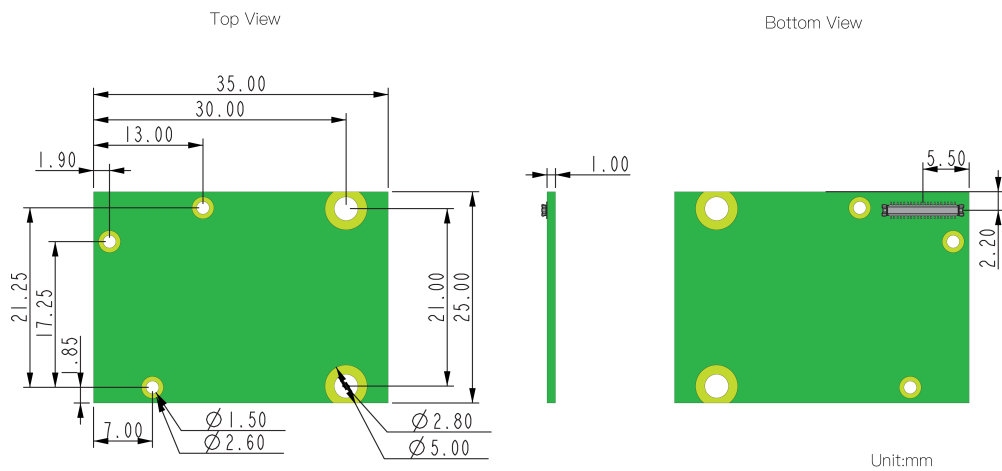


Figure 3: RAK13002 WisBlock Adaptor Module Mechanic Drawing

WisConnector PCB Layout

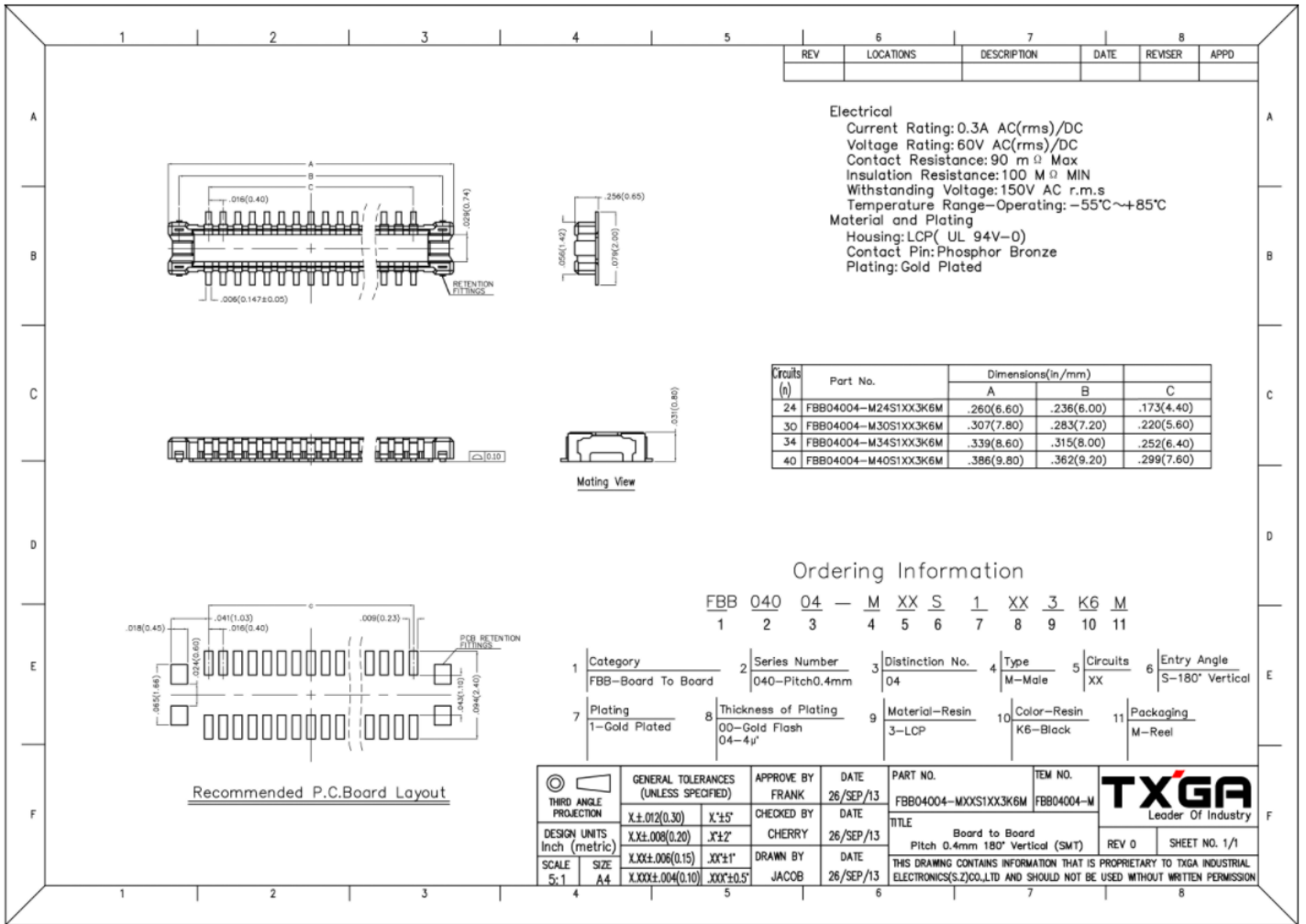


Figure 4: WisConnector PCB Footprint and Recommendations

Schematic Diagram Adaptor

Figure 5 shows the RAK13002 adaptor module schematic. VCC: 3.3 V power supply

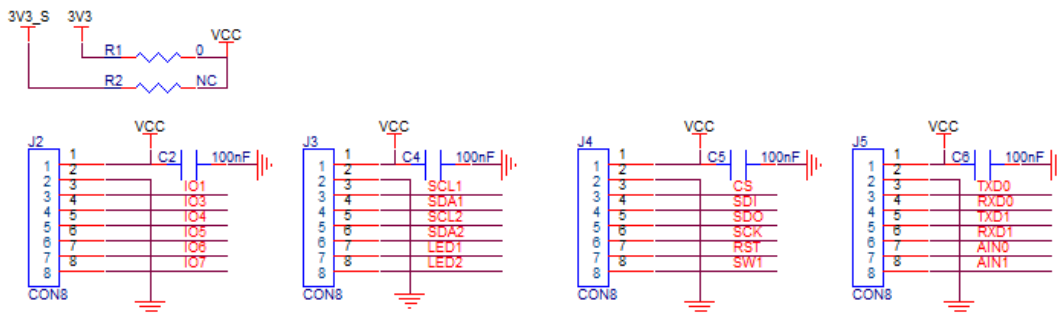


Figure 5: RAK13002 WisBlock Adaptor Schematic