

# HC06U EVB User Guide

**Bluetooth Module Series**

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## Safety Information

The following safety precautions must be observed during all phases of operation, such as usage, service or repair of any cellular or mobile terminal incorporating FG50V module. Manufacturers of cellular terminals should notify users and operating personnel of the following safety precautions by incorporating them into all product manuals. Otherwise, Quectel assumes no liability for customers' failure to comply with these precautions.



Full attention must be given to driving at all times in order to reduce the risk of an accident. Using a mobile while driving (even with a hands-free kit) causes distraction and can lead to an accident. Please comply with laws and regulations restricting the use of wireless devices while driving.



Switch off the cellular or mobile terminal before boarding an aircraft. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communication systems. If there is an Airplane Mode, it should be enabled prior to boarding an aircraft. Please consult the airline staff for more restrictions on the use of wireless devices on an aircraft.



Wireless devices may cause interference on sensitive medical equipment, so please be aware of the restrictions on the use of wireless devices when in hospitals, clinics or other healthcare facilities.



Cellular or mobile terminals operating over radio signal and cellular network cannot be guaranteed to connect in certain conditions, such as when the mobile bill is unpaid or the (U)SIM card is invalid. When emergency help is needed in such conditions, use emergency call if the device supports it. In order to make or receive a call, the cellular terminal or mobile must be switched on in a service area with adequate cellular signal strength. In an emergency, the device with emergency call function cannot be used as the only contact method considering network connection cannot be guaranteed under all circumstances.



The cellular terminal or mobile contains a transceiver. When it is ON, it receives and transmits radio frequency signals. RF interference can occur if it is used close to TV sets, radios, computers or other electric equipment.



In locations with explosive or potentially explosive atmospheres, obey all posted signs and turn off wireless devices such as mobile phone or other cellular terminals. Areas with explosive or potentially explosive atmospheres include refueling areas, below decks on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles such as grain, dust or metal powders.

# About the Document

## Revision History

Version	Date	Author	Description
-	2021-07-11	Elinor WANG	Creation of the document
1.0	2021-08-27	Elinor WANG	First official release

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# 1 Introduction

HC06U EVB is an auxiliary tool for engineers to develop applications based on HC06U. It can be used to test basic functionalities of HC06U. Since the physical development board is suitable for a variety of modules, this document only explains the interfaces and test points related to the HC06U.



## 2.2. HC06U EVB Component Placement

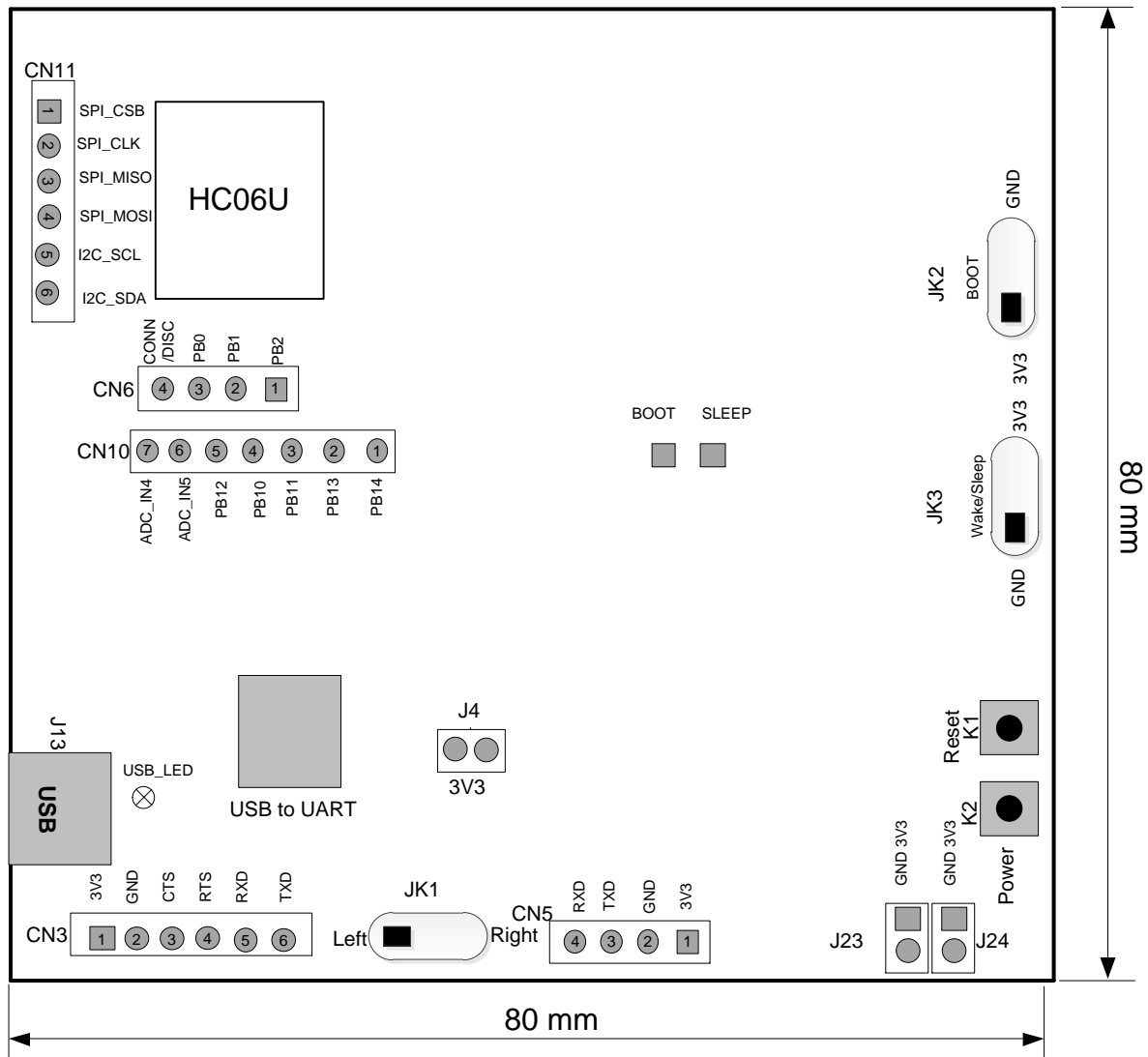


Figure 2: HC06U EVB Component Placement

**NOTE**

The component placement only shows the functions and test points related to the HC06U.

Table 1: HC06U EVB Interfaces

Interface	Reference Designator	Description
Power Supply	J13	USB interface Typical supply voltage: +5 V
Power Button	K2	VCC ON/OFF control
Reset	K1	HC06U reset button
Wake/Sleep	JK3	Sleep switch
BOOT	JK2	Programming mode switch
Status Indication LED	USB_LED	USB status indication
UART Switch	JK1	USB and external MCU UART communication switch
Test Points	CN3, CN5, CN6, CN10, CN11, J23, J24, BOOT, SLEEP	See <b>Chapter 3.7</b>

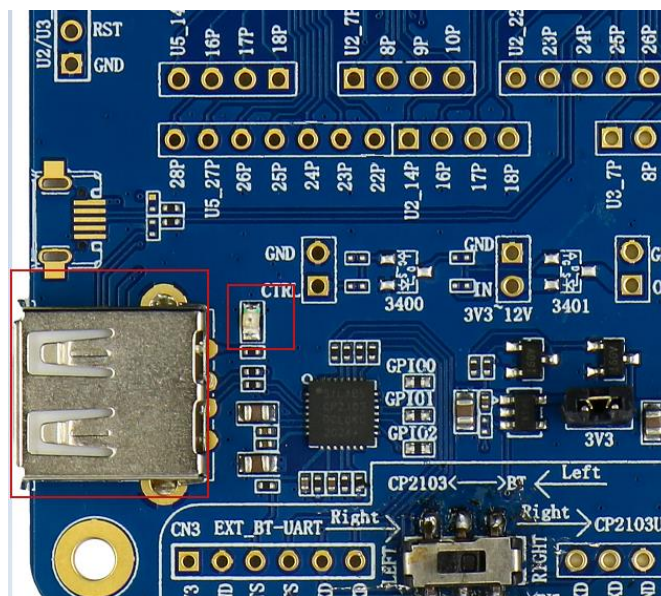
# 3 Interface Application

This chapter describes the HC06U EVB hardware interfaces:

- Power Supply
- Power Button
- Reset Button
- Sleep Switch
- Boot Switch
- UART Switch
- Test Points

## 3.1. Power Supply Interface (J13)

The HC06U EVB can be powered by USB interface (J13).



**Figure 3: USB Interface and USB Status Indication**

The following figure shows the HC06U EVB power supply schematic diagram. When using the USB to supply power to the module, J4 Pin 1 and Pin 2 need to be connected.

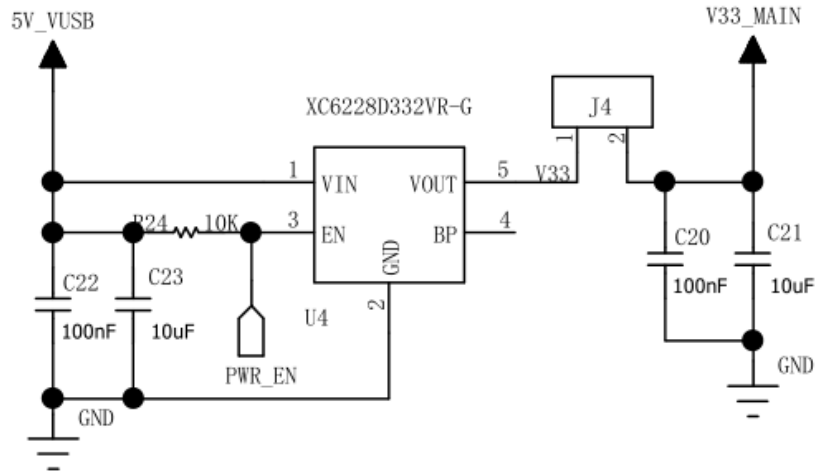


Figure 4: Power Supply Circuit

### 3.2. Power Button (K2)

HC06U EVB includes one power button (K2), as shown in the following figure.

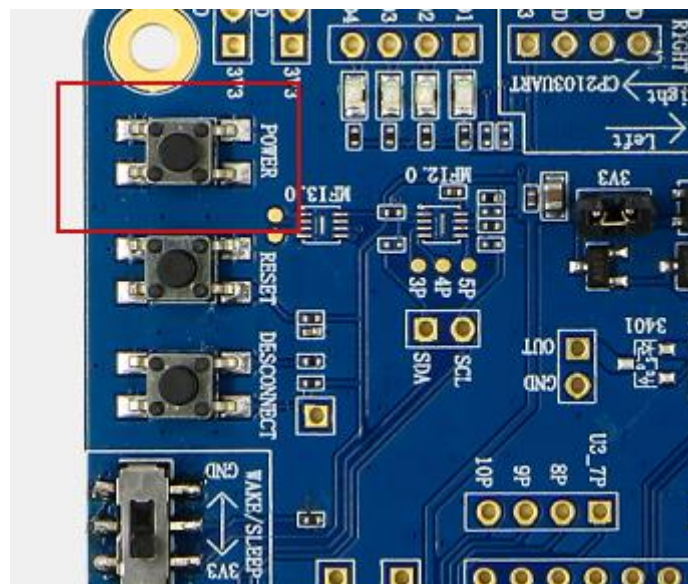
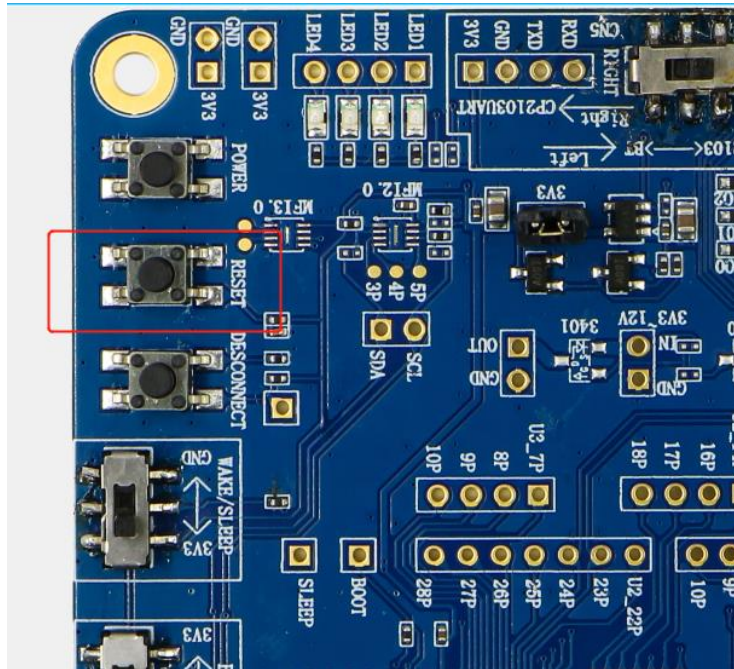


Figure 5: Power Button

When this button (K2) is pressed, power supply of the module will be disconnected. Release the button (K2) and the module will restore the power.

### 3.3. Reset Button (K1)

HC06U EVB includes one reset button (K1), as shown in the following figure.

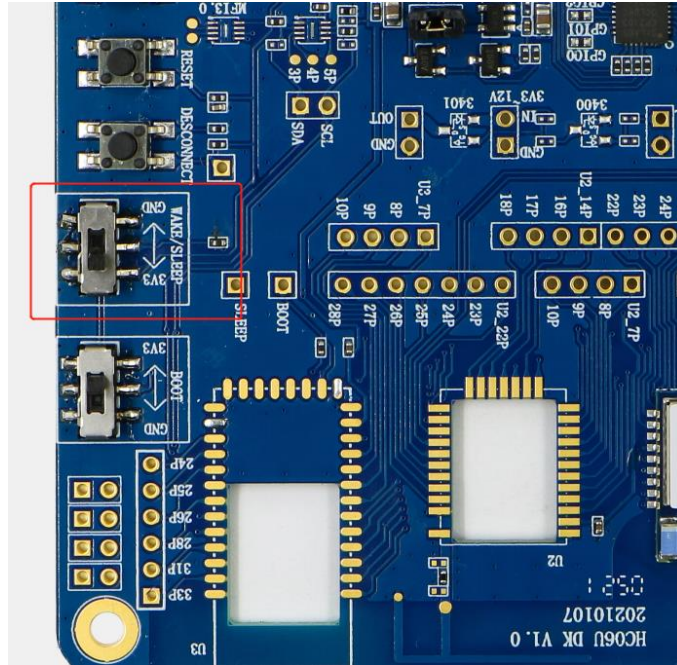


**Figure 6: Reset Button**

The button is directly connected to HC06U reset pin. HC06U will be reset when this button (K1) is pressed.

### 3.4. Sleep Switch (JK3)

HC06U EVB includes one sleep switch (JK3), as shown in the following figure.



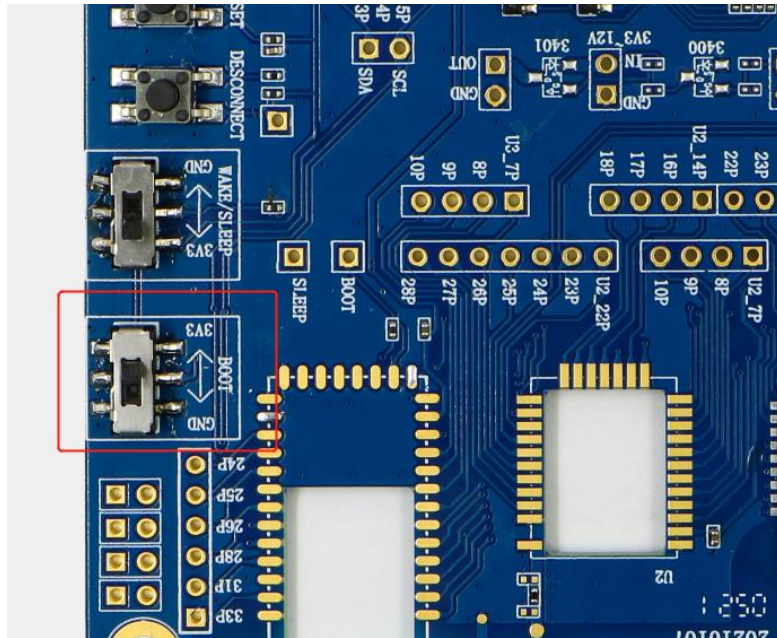
**Figure 7: Sleep Switch**

Slide this switch to 3V3 and then press the reset or power button to put HC06U into sleep mode. In contrast, slide this switch to GND and then press the reset or power button to put HC06U into normal mode.



### 3.5. Boot Switch (JK2)

HC06U EVB includes one boot switch (JK2), as shown in the following figure.

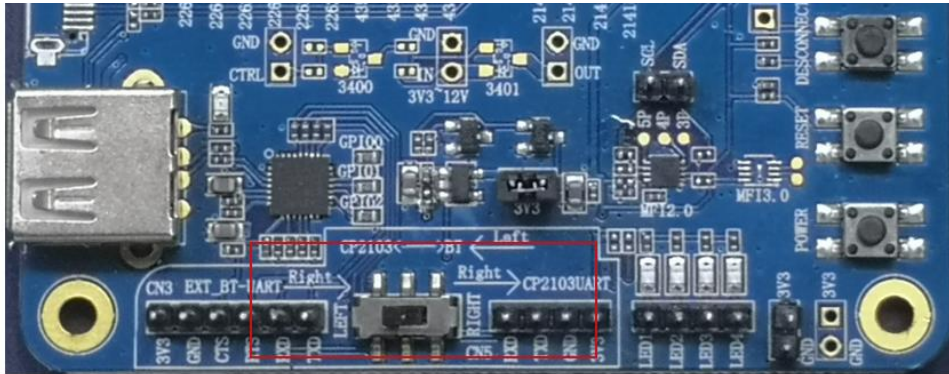


**Figure 8: Boot Switch**

Slide this switch to GND and then press the reset or power button to put HC06U into programming mode. Slide the boot switch to 3V3 to put HC06U into normal mode.

### 3.6. UART Switch (JK1)

HC06U EVB includes one UART switch (JK1), as shown in the following figure.



**Figure 9: UART Switch**

Slide this switch to the left side to establish communication between HC06U and the USB interface. Slide this switch to the right side to establish communication between HC06U and external MCU UART. CN3 and CN5 test points on both sides of the switch correspond to UART and power supply pin of MCU and USB interface respectively, which will not be described in next chapter about test points.

### 3.7. Test Points

This EVB includes multiple HC06U test points, as shown in the figure below.

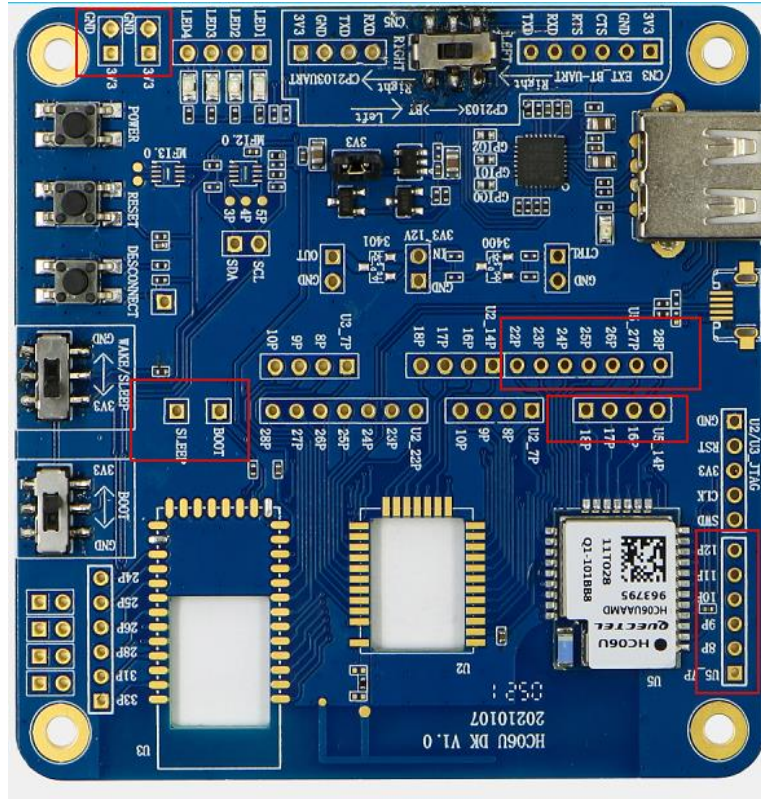


Figure 10: Test Points

The following figure shows the HC06U test point schematic diagram:

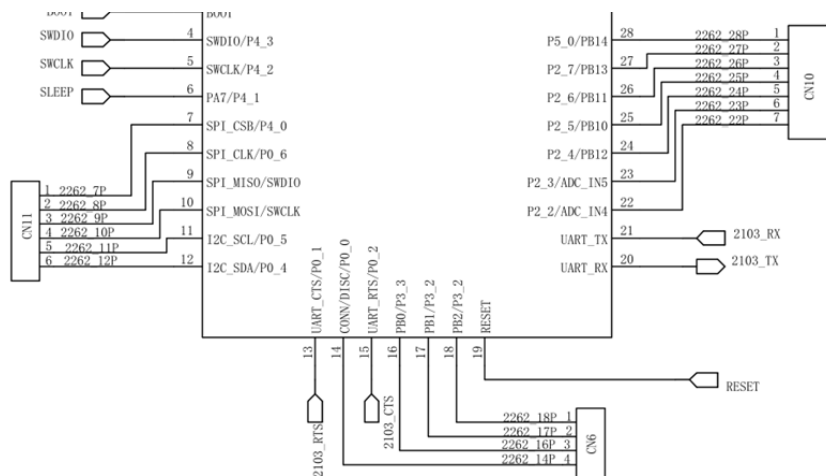


Figure 11: CN6, CN10, CN11 Schematic Diagram

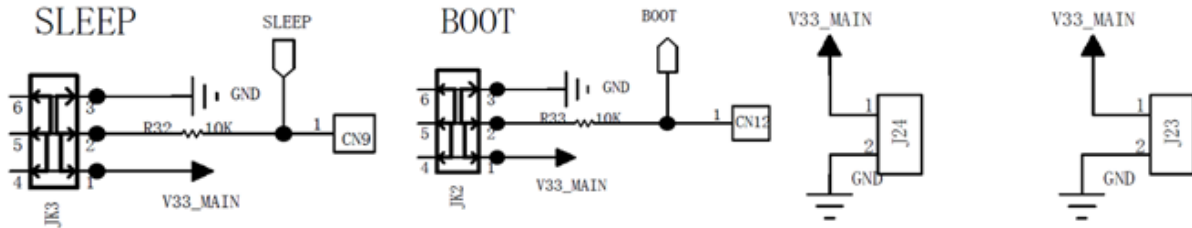


Figure 12: J23, J24, SLEEP, BOOT Schematic Diagram

# 4 Appendix References

**Table 2: Terms and Abbreviations**

Abbreviation	Description
CN	Connector
EVB	Evaluation Board
GND	Ground
LED	Light Emitting Diode
MCU	Microcontroller Unit
RF	Radio Frequency
UART	Universal Asynchronous Receiver & Transmitter
USB	Universal Serial Bus
VCC	Voltage Common Collector