

User's Manual

Brand Name: XenonBlue

Model No.: XBT40A

Introduction:

XBT40A is a Bluetooth low energy (BLE, BT4.0) module designed based on Nordic nRF51822 series.

FCC ID: 2ACORXBT40A

Feature:

1. Bluetooth specification version 4.0 (single mode)
2. Fully coverage of wireless applications
3. Dual Transmission Mode of BLE & RF 2.4G upon customer preference
4. Host interface: UART or I2C
5. Low power requirements: 5mA (4uA ULP standby)
6. Ultra-low peak, average and idle mode power consumption
7. Supply voltage: 1.8 to 3.6VDC
8. Operating temperature: -25 to +75 degrees C
9. Storage temperature: -40 to +85 degrees C
10. Miniature size: 23.0 x 10.2 x 2.5 mm
11. Module has embedded 16MHz and 32768Hz clock
12. All 31 GPIO pins of nRF51822 assigned

Applications:

Computer peripherals and I/O devices

1. Mouse
2. Keyboard
3. Multi-touch trackpad

Interactive entertainment devices

1. Remote control
2. 3D Glasses
3. Gaming controller

Personal Area Networks

1. Health/fitness sensor and monitor devices
2. Medical devices
3. Key-fobs + wrist watches

Remote control toys

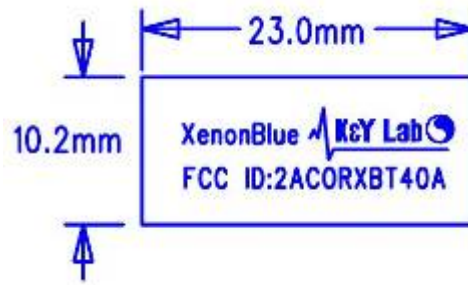
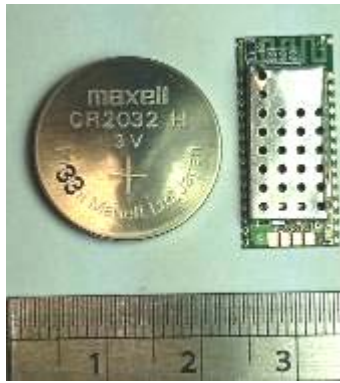
Operation Description:

XBT40A is a Bluetooth low energy (BLE, BT4.0) module and the bluetooth operating band is in the Industrial, Scientific and Medical (ISM) band from 2.400-2.4835 GHz from mobile as well as fixed devices by creation of Personal Area Networks with high security level. Several devices can be connected by using this technology. Originally modulation method used was Gaussian Frequency-Shift Keying (GFSK) scheme which was the only scheme of modulation available.

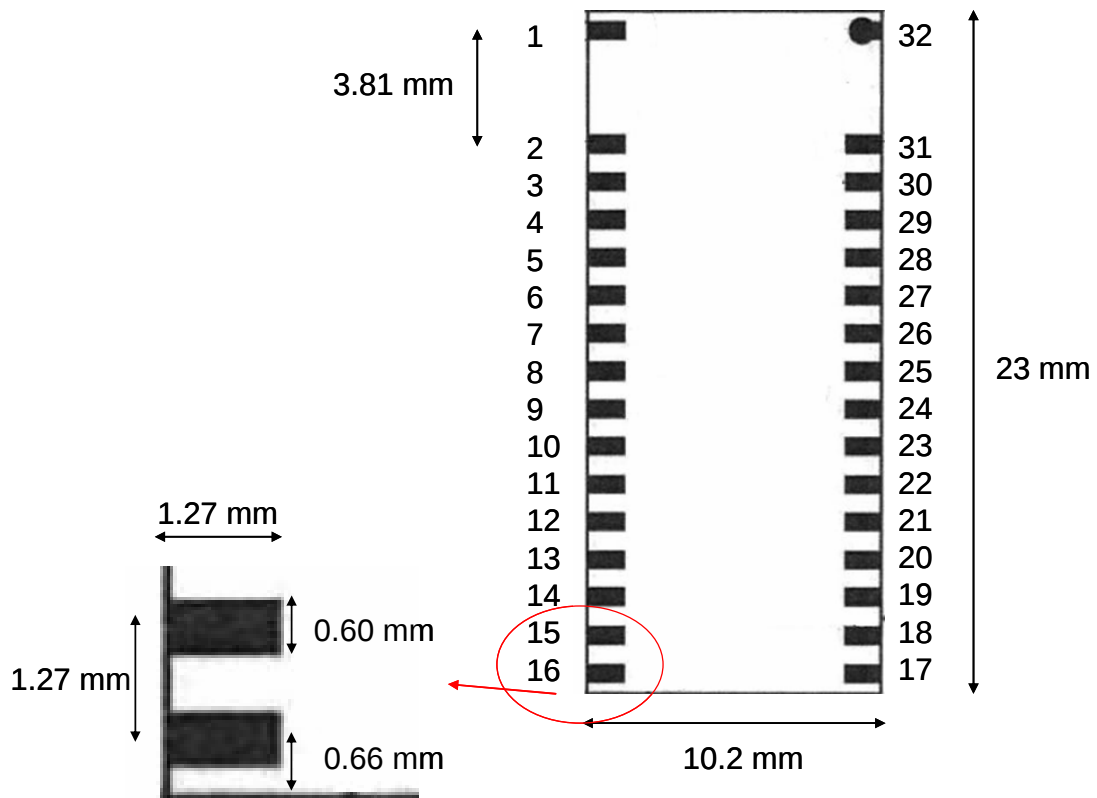
Specification:

Part Name	XenonBlue40A
Part Number	XBT40A
Category	Bluetooth Low Energy 4.0 RF Module
Type	Transceiver / Controller
Band	2.4 GHz, ISM band
CPU	16MHz ARM Cortex-M0 32bit processor
Flash	256kB
Ram	16kB
Multi Frequency	Yes
Interface	UART (CTS/RTS) Two-wire Master (I2C compatible)
Package-Case	SMT
Low Supply Voltage	1.8V
Typical Supply Voltage	3.0V
High Supply Voltage	3.6V
Transmit Current	5mA (4uA ULP standby)
Receive Current	5mA (4uA ULP standby)
Size – Width	10.2mm
Size – Length	23.0mm
Size – Height	2.5mm
RF Interface	Built-In Patterned Antenna
RF Shield	Yes
Pin Count	31 available
Pin Pitch	1.27mm
On-air compatibility	nRF24L series

Photo:



XBT40A module PIN Def



UART interface :

Baud rate	4800
Data bit	8
Parity	No
Start bit	1
Stop bit	1

PIN define :

PIN Number		PIN Number	
PIN 4	VCC	PIN 7	RTS
PIN 31	GND	PIN 20	CTS
PIN 23	RX		
PIN 24	TX		

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: 2ACORXBT40A ".

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end product, which integrates this module. Appropriate measurements (e.g. 15 B compliance) and if applicable additional equipment authorizations (e.g. Verification , Doc) of the host device to be addressed by the integrator/manufacture.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off

and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

LABEL OF PRODUCT:

FCC ID: 2ACORXBT40A

