

## ***Bluetooth***

### **Introduction**

The Bluetooth technology is a short range wireless technology, and it's the piconet network. The Bluetooth technology is defined and maintained by the Bluetooth Special Interest Group (SIG). The newest Bluetooth technology is Bluetooth 4.0, and it also calls Bluetooth low energy (LE). The Bluetooth LE has the following features like worldwide operation, robust, short range, low power and built-in most of mobile devices. The ICP DAS provides various Bluetooth LE products such as RS-232/RS-485 to Bluetooth LE and USB to Bluetooth LE converters.

#### **BLE-USB USB to Bluetooth 4.0 Converter**

The BLE-USB module is small-sized wireless Bluetooth low energy (LE) converter based on the Bluetooth 4.1 standard that allow USB interface to be converted to Bluetooth LE piconet network. The BLE-USB has two transmission modes – advertisement and connection mode. Users not only can send advertising packet in the advertisement mode but also can send connection packet in the connection mode. It supports different roles in each transmission mode. One is broadcaster and observer in advertisement mode, and the others is central and peripheral in connection mode. User can use AT command to setup the BLE-USB.

The AT command not only can set role of Bluetooth LE, but also it can set some connection parameters (e.g. RF power level, broadcast parameters and slave amount). The BLE-USB also provide slave security mechanism. The mechanism can obstruct illegal master, and the slave will ignore connection request from illegal master. In addition, ICPDAS provides software utility to easily configure and test the BLE-USB modules via USB.



## Applications

