The familiarity of the Zigbee protocol and wireless sensor network protocol

Wireless Sensor Network (WSN) system consist of many static nodes and dynamic nodes. WSN has self-organizing and cooperative capability. The sensor nodes mainly use broadcast communication paradigm and do not have global identification.

Zigbee is one of the standard that have a significant potential in recent years which is based on the IEEE 802.15.4 Standard and created by the Zigbee Alliance.

The characteristic of Zigbee include:

1. Low date rate

The bandwidth is from 20 kb/s to 250 kb/s, that means it can be only used in low rate application.

1. Ultra Low power

As the data sheet said, in low power standby mode, Zigbee can maintain working 1 year by using two AA batteries. This is one of the biggest advantages of Zigbee.

1. Low cost

Because of the low transmission rate, the protocol of Zigbee is very simple, so that it doesn’t need to spend a lot of money during the productive process.

1. High network capacity

Every Zigbee network can afford 255 devices, that is to say each Zigbee can communicate with 254 devices which may increase the scalability.

1. Flexible frequency range

There are three band for Zigbee utilization: 2.4GHz, 868MHz and 915MHz. Both of them are unlicensed.

1. Extreme low duty-cycle

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