Internet of Things Technology in Rugged tablet

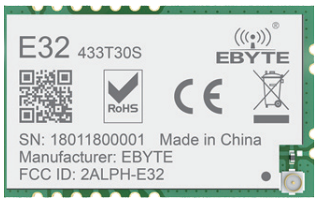
Technical background

LoRa technology is a standard technology for wireless connection launched by the International LoRa Alliance based on the LoRa protocol. Its appearance has changed the compromise between transmission distance and power consumption. It can not only realize long-distance transmission, but also has the advantages of low power consumption, low cost, high capacity, and high security.

It has become an indispensable part of IoT applications that require low power consumption, long distances, and a large number of connections.

Application

The final appearance of LoRa technology is LoRa network, namely LoRaWAN, which mainly includes three communication entities: LoRa terminal, LoRa gateway and LoRa server. LoRa terminal is a very common data transmission device in the Internet of Things industry today. We use the LoRa wireless module to apply LoRa technology to the rugged tablet terminal, and conduct two-way communication with the LoRa gateway. The LoRa gateway then communicates with the LoRa server through the TCP/IP network. In this way, the rugged tablet terminal achieves a longer data transmission distance with lower transmission power, and can be widely used in fields such as smart meter reading, smart security, smart buildings, access control management, and forest fire protection.



Advantage

1. Multiple transmission methods and diversified networking methods. The rugged tablet terminal with LoRa technology can realize single-point-to-single/multi-point transparent transmission, and single-point-to-single/multipoint directional transmission.

2. In smart security applications, the rugged tablet terminal with LoRa technology can communicate with smart security alarm detectors based on LoRa technology. The Rugged tablet can continuously send and receive signals to determine the status of the detector, and the detector can quickly respond and report when it encounters an alarm, which effectively solves the problems of easy interference, short transmission distance, and one-way communication.

3. In the field of access control management, a rugged tablet computer terminal with LoRa technology can be connected to multiple access control controls to achieve centralized management of all types of access control, and realize real-time access control, manual control, one-key locking/opening and other control modes, to know the running status and fault status of the access control system in time. It is not necessary to deploy multiple repeaters to complete the normal signal transmission like traditional communication technology.

In the field of forest fire protection, the rugged tablet terminal with LoRa technology can be used for mutual communication among forest fire prevention inspectors, combined with the GIS, GPS and other technologies of the forest fire prevention geographic information system to achieve rapid fire location, fire field information acquisition, Effective deployment of fire suppression measures.

Related device

EM-T16

EM-I16H

EM-Q15

EM-Q86