

ACTIVE RFID READER F2420



F2420 2.4G active reader is an active RFID reader that works in the 2.45GHz frequency band. It can realize omnidirectional and directional reading and writing functions when matched with omnidirectional/directional antennas. This product adopts external antenna installation method and can flexibly configure various omnidirectional and directional antennas. It has the characteristics of wide range, high recognition rate, powerful functions, high reliability, strong scalability, etc. Its reading distance can reach 5~350m.

F2420 is a new generation of high-performance 2.45G long-distance reader/writer, equipped with a new generation of 2.4G high-frequency transceiver chip developed by Nordic. The main control chip uses a new generation of high-performance ARM-COTEXM3 processor. It has functions such as multi-device communication, watchdog, heartbeat packet and real-time monitoring of device status information, and integrates communication interfaces such as Wiegand 26/34, RS232 and 100M network port.

The F2420 reader/writer adopts waterproof design, with a waterproof rating of up to IP67, suitable for outdoor use. The device is equipped with various communication interfaces for quick and easy connection with the host. The product adopts software fault tolerance and hardware anti-interference design, and can work continuously and stably for a long time in harsh working environments.

The F2420 reader/writer has a wide range of applications and can be used for personnel area positioning in hospitals, nursing homes, schools, factories and mines, enterprises, institutions, scientific research institutions, prisons and other units, as well as confidential information, valuables, storage items, circulation asset management and other applications.

Product advantages

- The reader supports communication interfaces such as Wiegand 26/34, RS232 and 100M Ethernet port;
- The reader supports automatic tag reading and command triggering to meet different user needs;
- It adopts multi-reader technology and supports multi-reader dense environment working mode;
- The reader antenna adopts external installation method, and can flexibly configure various omnidirectional and directional antennas to meet the needs of various application scenarios;
- The reading distance can be debugged by software to achieve perimeter application;
- It provides a powerful API user interface, which can be quickly integrated and connected with the user's existing information system;

Product Technical Parameters

Parameter	
working frequency	2.40 ~ 2.483G
Signal attenuation	Software adjustable: 0~63dbm (the larger the value, the greater the attenuation)
Receiving sensitivity	-95 dbm
Communication rate	1Mbit/s
Antenna interface	1 N-type female connector (dual channel optional)
Identification Angle	Omnidirectional/directional (depending on whether it is equipped with a directional antenna or an omnidirectional antenna)
Polarization mode	Vertical polarization
Communication Interface	
Communication Interface	RS232, 10/100M adaptive Ethernet interface Wiegand 26/34 (optional), RS-485 (customizable)
I/O Interface	2-way input interface, 4-way output interface (optional)
Expandable wireless module	802.11 module, full network 4G module
Firmware Upgrade	Support serial port upgrade
Serial communication parameters	Baud rate adjustable (default 230400bps)
Application software platform	Provide software development kit (SDK) and API
Tag operation	
Support tag operation	proprietary protocol
Support tag working mode	Active tags
Read distance	5 ~ 350m (Depends on the output power of the antenna and tag)
recognition speed	500 tags per second (ID number only)
Mechanical and electrical performance	
Size	270mm*200mm*80mm(L*W*H)
Weight	1.28kg
Overall Power Consumption	2W
Power	DC12V
Installation method	Installation of clamps
operation temperature	-25°C ~ 65°C
storage temperature	-30°C ~ 70°C
Working humidity	5% ~ 95% ~ (No condensation)
IP LEVER	IP67

Simple fault explanation and troubleshooting

Running light flashing prompt:

- 1) Start running for 800ms, light on, 700ms off;
- 2) The wired network connection is successful (or the WIFI network connection is successful, or the 4G network connection is successful), it lights up at 160ms and goes off at 140ms;
- 3) The flashing speed of MQTT connection status increases by 5 times on the basis of successful network connection.

Buzzer prompt:

- 1) WIFI/4G/wired network connection successful, buzzer sounds continuously for 3 times, with a time interval of approximately 50ms;
- 2) MQTT connection successful, buzzer sounds continuously for 3 times, with a time interval of approximately 20ms;
- 3) After a successful wired network connection, an abnormal disconnection occurs and the buzzer beeps continuously for 500ms intervals;
- 4) Parameter setting successful, buzzer beeps twice in a row with a time interval of approximately 50ms;
- 5) After restoring the system settings, the buzzer beeps continuously for 3 times, with a time interval of approximately 80ms;
- 6) Power on module self-test failed, with 2 consecutive sounds and a time interval of 800ms;
- 7) The self check of the power on module is successful, and the buzzer sounds once for 200ms;
- 8) The connection module is a Rodin module, with 3 consecutive sounds and a time interval of 100ms.