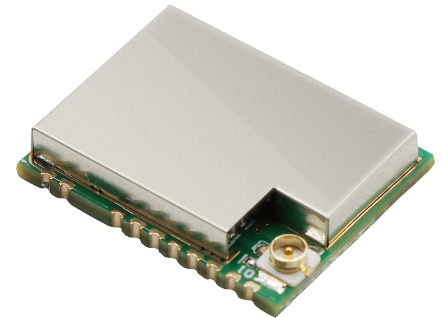


Radio Modem HX-DU1021D

Embedded Radio Modem for Wireless Data Communications

Harxon HX-DU1021D is a high performance mini size transceiver providing reliable and stable wireless data communications for lawn mowers and IoT applications, frequency range between 868/915MHz ISM band. It features small form factor, low power consumption, long range communication, excellent receiving performance and strong anti-interference capacity.



Adaptive Network Communication

For applications with insufficient communication coverage of the base station radio, a relay radio can be added to expand the coverage. HX-DU1021D can adaptively conduct network communication and switch between the communication coverages of different radios for the best communication effect.

Strong Anti-interference Performance

HX-DU1021D has intelligent identifying and avoiding interference function, it can automatically select the optimal working channel, thus improving the anti-interference performance of the radio modem.

Long Range Communication

The radio modem adopts advanced communication technology for superior receiving performance, which guarantees long range communication for mobile / remote data applications.

KEY FEATURES

- Support Air Baud Rate Switching: 19200bps, 9600bps
- Support Serial Port Baud Rate Switching: 115200bps, 38400bps, 19200bps, 9600bps
- Support Multi Power Switching
- Support 868/915MHz ISM Frequency
- Support Online Update
- Support 3.3-5.5V Wide Voltage Range
- Stamp Hole Design, Easy for Integration

Radio Modem HX-DU1021D



General Specification

| | |
|----------------------------|------------------------|
| Frequency Range | 863-870MHz; 902-928MHz |
| Operating Mode | Half-duplex |
| Modulation Type | CSS |
| Channels | 50(programmable) |
| Operation Voltage | 3.3-5.5V |
| Power Consumption(typical) | |
| High power | 400mW@5V DC |
| Receiver | 50mW@5V DC |
| Standby | 5mW@5V DC |

Structural Specification

| | |
|-----------------------------|---------------------------|
| Size | 17.5 (L)×14 (W)×3.5 (H)mm |
| Weight | About 2g |
| Antenna Interface | IPEX |
| Antenna Interface Impedance | 50ohm |
| Data Interface | 20Pin SMT |

Modem

| | |
|------------------|----------------------|
| Air Baud Rate | 9600bps / 19200bps |
| Serial Port Baud | 9600bps / 19200bps |
| | 38400bps / 115200bps |

Transmitter

| | |
|--------------------|-----------------------|
| RF Output Power | |
| High Power (100mW) | 20±0.7dBm@DC 3.3V |
| Low Power (50mW) | 17±1dBm@DC3.3V |
| Micro Power(25mW) | 14±1.2dBm@DC3.3V |
| Sensitivity | -119dBm@BER 10-5,9600 |

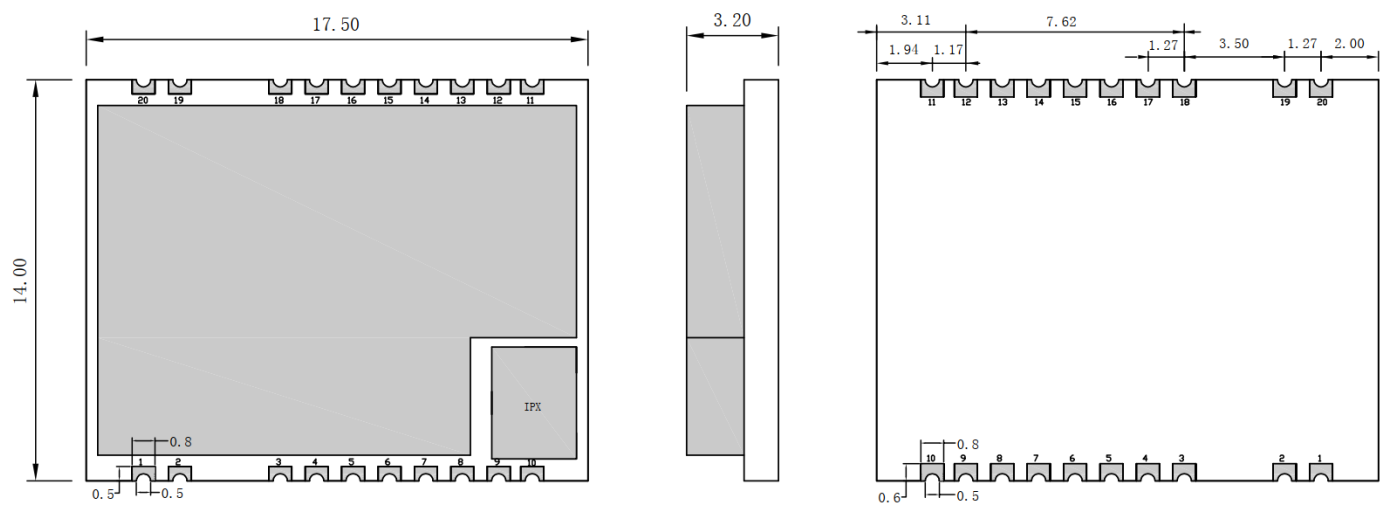
Operation Environment

| | |
|-----------------------|-----------|
| Operation Temperature | -40℃~+70℃ |
| Storage Temperature | -40℃~+85℃ |

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Version 1 Specifications subject to change without notice.
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Printed in China
January 2023

Structure Diagram(mm)



TOP VIEW

SIDE VIEW

BOTTOM VIEW

Undeclared Tolerance:±0.3mm

Radio Modem HX-DU1021D

Model Interface Pin Definition

| S/N | Name | Direction | Function |
|-----|--------|-----------|--|
| 1 | GND | - | Ground cord |
| 2 | GND | - | Ground cord |
| 3 | NRST | Input | Reset pin, low level reset |
| 4 | GND | - | Ground cord |
| 5 | GND | - | Ground cord |
| 6 | CONFIG | Input | Configuration pin, low level enters configuration mode, high level enters data transmission mode |
| 7 | GND | - | Ground cord |
| 8 | GND | - | Ground cord |
| 9 | ANT | - | When stamp hole 9 is used as the antenna, the IPEX connector should be removed and a 0402 should be welded to encapsulate 100PF capacitor or a 0402 to encapsulate 0R resistor |
| 10 | GND | - | Ground cord |
| 11 | VCC | - | Positive power, supply range: 2.5-5.5V DC, if over 5.5V, the radio might be damaged |
| 12 | GND | - | Power negative |
| 13 | TXD | Output | TTL serial output, connect to external RXD input pin |
| 14 | RXD | Output | TTL serial input, connect to external TXD output pin |
| 15 | GND | - | Ground cord |
| 16 | SWDIO | - | Simulation debugging pin |
| 17 | SWCLK | - | Simulation debugging pin |
| 18 | GND | - | Ground cord |
| 19 | GND | - | Ground cord |
| 20 | GND | - | Ground cord |