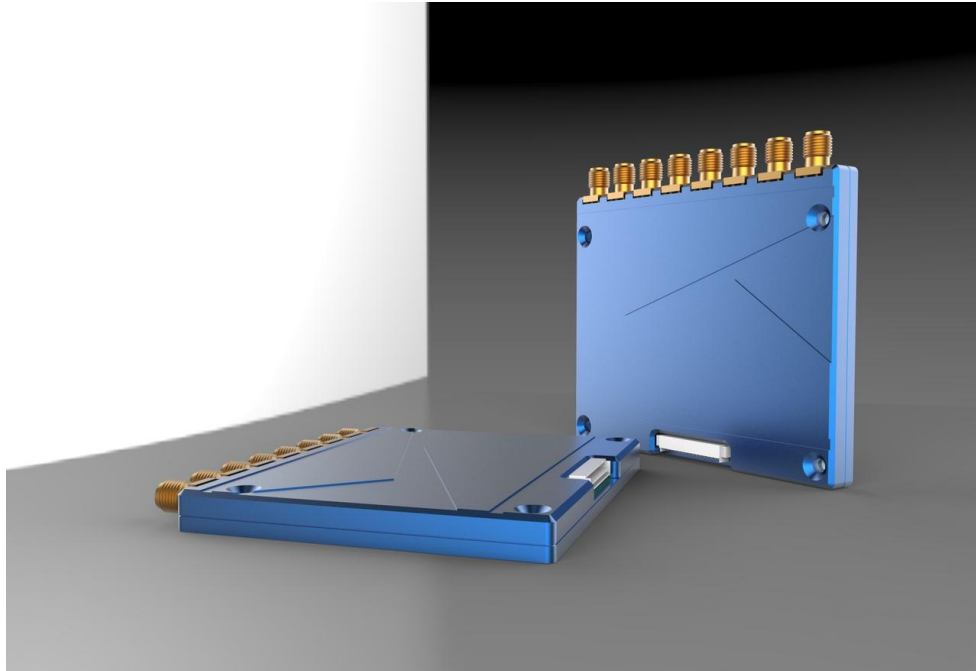# HZ580 8-port Long distance UHF RFID Module
# For fixed reader integration

## General Description

The HZ580 module is a miniaturized UHF RFID reader. The core component adopts Impinj Indy R2000 chip as the core platform. It supports ISO 18000-6C/6B, EPC C1G2, users can communicate with their own devices through the UART-TTL serial on the interface, and its wide power supply range (DC4.5V~6V) and configured GPIO interface (IO1-IO4, IO1/IO2 as input, IO3/IO4 as output) can provide users with more choices.

Due to the excellent tag reading distance and multi-antenna design of the module, it can be used as a design solution for small readers.

## Key Features

- ✓ Support protocol: ISO18000-6B/C EPC C1G2
- ✓ Working mode: fixed frequency/frequency hopping optional
- ✓ Adjustable RF output power,,1 dB step-by-step
- ✓ Support multi-antenna polling work or designated antenna work
- ✓ Support antenna detection function
- ✓ RSSI support: the strength of the signal can be sensed.
- ✓ Support tag data filtering
- ✓ hupport Anti-collision algorithm
- ✓ Support multiple tags inventory

## Typical Applications

- ✓ Split-type Fixed RFID Reader integration
- ✓ Integrated RFID Reader
- ✓ The reader which is designed based on this module can be applied to various wireless RFID application schemes such as article and logistics management, warehouse management, animal management, article anti-counterfeiting, electronic goods monitoring and manufacturing and processing, and production automation.
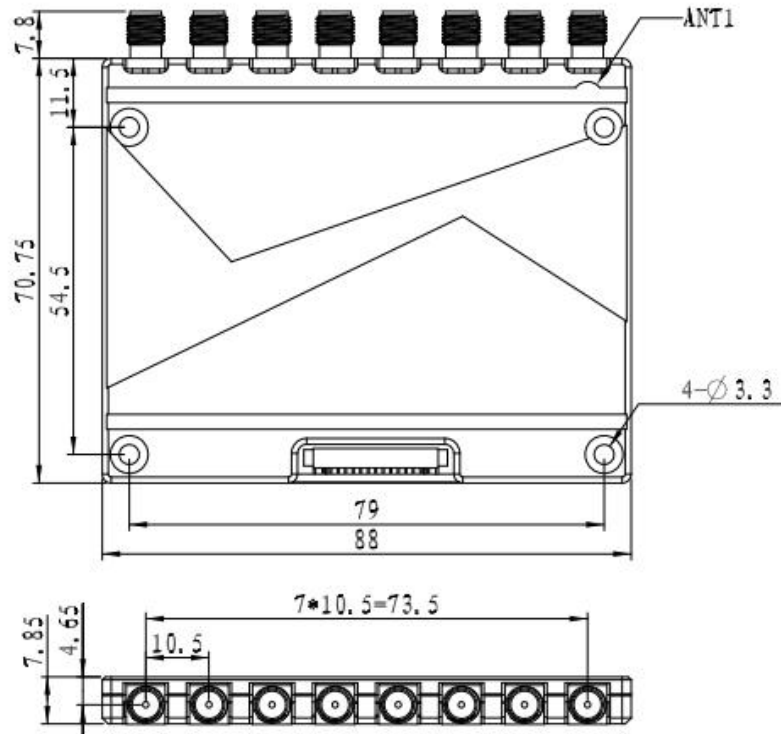
## Technical Parameters

| Operating Voltage | +4.5V ~ +6V |
|---|---|
| Standby Mode Current | < 20mA |
| Operating Current | 5V power supply, output RF power 33dBm, working peak current around 2000mA |
| Size | 78.55×88×7.85mm |
| Air Interface Protocol | EPC C1G2 / ISO 18000-6C, ISO 18000-6B |
| Frequency Range | 840MHz~960MHz<br>US, Canada and other regions following U.S. FCC<br>Europe and other regions following ETSI EN 302 208 with & without LBT regulations |
| Output Power | 0~33dBm |
| Output Power Precision | ±1dB |
| Receive Sensitivity | ≤-85dBm |
| Tag RSSI | supported |
| Antenna port detection | supported |
| Communication interface | TTL UART serial, Baud rate 115200bps |
| RF connector type | SMA |
| Interface cable type | 15P 1.25mm pitch cable |
| Heat Dissipation | Air cooling with external heat sink |
| Operating Temperature | －20℃~＋70℃ |
| Storage Temperature | －40℃~＋85℃ |
| Operating humidity | < 95% (＋25℃) |

**Note:**
- ◆ Heat dissipation design should be considered when working continuously for a long time with high output power.
- ◆ The power supply voltage should not exceed 6V, otherwise the internal circuit may be damaged.

## Interface Description





| PIN | Definition | Description |
|-----|-----------|-------------|
| 1 | GND | Both connected to ground |
| 2 | GND | |
| 3 | 4.5V-6V DC | Both connected to power |
| 4 | 4.5V-6V DC | |
| 5 | GPIO3 | output (3.3V) |
| 6 | GPIO4 | output (3.3V) |
| 7 | GPIO1 | input (3.3V) |
| 8 | BUZ | Buzzer driver (3.3V) |
| 9 | UART_RXD | TTL Level |
| 10 | UART_TXD | |
| 11 | NC | NC |
| 12 | NC | |
| 13 | GPIO2 | input（3.3V） |
| 14 | EN | High level enable |
| 15 | NC | NC |