About IDRO: IDRO Co., Ltd provides high performance UHF RFID reader and reader modules. Our UHF RFID readers are the state-of-the-art for all applications and fully compliant with the FCC rules and EPC Gen2 protocol.

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The IDRO Fixed Type RFID Reader IDRO900F offers one of a kind combination of high performance and low cost. The IDRO900F delivers the following benefits:

- Superior read range through well designed circuits that reaches up to 12 meters (depends on tags).
- Superior anti-collision performance that allows up to 200 tags per second.
- Small footprint and mono-static antenna makes installation easy.
- Simple system integration by using IDRO API, a library that simplifies protocol functions from the host system.
- Firmware upgradability through serial port that allows for future tag introductions and protocol enhancements.
- Broad compatibility support for broad vendor’s tags of ISO 18000-6C (EPC Gen. 2).
- Performance optimization achieved through power control (10 ~ 30 dBm) at multiple or dense reader environments.

### Applications

**Application Areas**

- Factory Automation Control / Conveyor Applications
- Item Management / Asset Tracking
- Vehicle security
- Access Control

**Reader Type**

- Stand-alone Type
- Tag Encoders
- Smart-Shelves

### Specification

- **Frequency**: 840MHz ~ 960MHz (Adjustable)
- **Host Communication**: Ethernet: 10/100Mbps, RS232C: 115.2 Kbps
- **RF Output Power**: Adjustable 10-30 dBm with 1 dB steps, Power Accuracy ±0.5 dBm
- **General Purpose Inputs/Outputs**: 2 inputs, 3 outputs;
- **Supply Voltage**: +9.0 VDC
- **Environment**: Operating Temperature: -20°C to 70°C
- **Regulatory Support**: FCC 15.247, ETSI EN 302-208 (CE), KCC (Korea)
- **Product Type**: Reader
- **Software**: API for C/C++, C#.NET
- **Reader@express Demo SW**

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The IDRO Fixed Type RFID Reader IDRO900V has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900V is an ideal solution for:

**Application Areas**

- Factory Automation Control / Conveyor Applications
- Item Management / Asset Tracking
- Vehicle security
- Access Control

**Reader Type**

- Stand-alone Type
- Tag Encoders
- Smart-Shelves

### Specification

- **Frequency**: 840MHz ~ 960MHz (Adjustable)
- **Host Communication**: Ethernet: 10/100Mbps, RS232C: 115.2 Kbps
- **RF Output Power**: 1 Watt max output power
- **Air InterFace Protocol**: EPC C1G2 / ISO 18000-6C
- **Architecture**: ARM Processor, Linux 2.6, 32 Mbytes RAM, 64 Mbytes Flash
- **Air Interface Protocols**: EPC C1G2 / ISO 18000-6C
- **Regulatory Support**: Certified by major bodies in the USA, Europe, Japan, China, and Korea
- **Product Type**: Reader
- **Software**: API for C/C++, C#.NET
- **Reader@express Demo SW**

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The IDRO Fixed Type RFID Reader IDRO900V offers one of a kind combination of high performance and low cost. The IDRO900V delivers the following benefits:

- Target selective characteristics with visible LED lights. Just one wanted tag or tag groups can be read using LED beam.
- Superior read range through well designed circuits that reaches up to 12 meters (depends on tags).
- Superior anti-collision performance that allows up to 200 tags per second.
- Small footprint and mono-static antenna makes installation easy.
- Simple system integration by using IDRO API, a library that simplifies protocol functions from the host system.
- Firmware upgradability through serial port that allows for future tag introductions and protocol enhancements.
- Broad compatibility support for broad vendor’s tags of ISO 18000-6C (EPC Gen. 2).

**Application Areas**

- Factory Automation Control / Conveyor Applications
- Item Management / Asset Tracking
- Vehicle security
- Access Control

**Reader Type**

- Stand-alone Type
- Tag Encoders
- Smart-Shelves

### Specification

- **Frequency**: 840MHz ~ 960MHz (Adjustable)
- **Host Communication**: Ethernet: 10/100Mbps, RS232C: 115.2 Kbps
- **RF Output Power**: Adjustable 10-30 dBm with 1 dB steps, Power Accuracy ±0.5 dBm
- **General Purpose Inputs/Outputs**: 2 inputs, 3 outputs;
- **Supply Voltage**: +9.0 VDC
- **Environment**: Operating Temperature: -20°C to 70°C
- **Regulatory Support**: Certified by major bodies in the USA, Europe, Japan, China, and Korea
- **Product Type**: Reader
- **Software**: API for C/C++, C#.NET
- **Reader@express Demo SW**

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The IDRO Fixed Type RFID Reader IDRO900V is an ideal solution for:

**Application Areas**

- Requirements for tag support, protocol and performance.

**Reader Type**

- Stand-alone Type
- Tag Encoders
- Smart-Shelves

### Specification

- **Frequency**: 840MHz ~ 960MHz (Adjustable)
- **Host Communication**: Ethernet: 10/100Mbps, RS232C: 115.2 Kbps
- **RF Output Power**: Adjustable 10-30 dBm with 1 dB steps, Power Accuracy ±0.5 dBm
- **General Purpose Inputs/Outputs**: 2 inputs, 3 outputs;
- **Supply Voltage**: +9.0 VDC
- **Environment**: Operating Temperature: -20°C to 70°C
- **Regulatory Support**: Certified by major bodies in the USA, Europe, Japan, China, and Korea
- **Product Type**: Reader
- **Software**: API for C/C++, C#.NET
- **Reader@express Demo SW**
**Module:**

**UHF RFID Reader**

**IDRO RFID**

**Applications**

Product Overview

The IDRO900MI-m offers one of a kind combination of medium performance, low cost, and compact size. The IDRO900MI-m delivers the following benefits:

- Medium read range through well designed circuits that reaches up to 3 meters.
- Medium anti-collision performance that allows up to 50 tags per second.
- Small size, with approximately 50% smaller footprint than most other 1 watt reader modules.
- Simple system integration by using IDRO API, a library that simplifies protocol functions from the host system.
- Firmware upgradability through serial port that allows for future tag introductions and protocol enhancements.
- Broad compatibility support for broad vendor’s tags of ISO 18000-6C(EPC Gen. 2) protocol.
- Performance optimization achieved through power control (0 ~ 30 dBm) at multiple or dense reader environments.

Applications

The IDRO900MI-m has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900MI-m is an ideal solution for:

- Animal Tracking
- Asset Tracking
- Item Management
- Access Control

**Specification**

- Frequency: 840MHz ~ 960MHz
- Host Communication: UART(TTL): 115.2 Kbps
- Physical Dimensions:
  - Length: 40.5mm (1.58inches)
  - Width: 35.8mm (1.42inches)
  - Height: 7.4mm (0.3inches)
  - Weight: 18.0g (0.66 oz)
- Supply Voltage: 4.0 V , (3.7V~4.2V)
- Scan Mode: 1.5 A @ 30 dBm
- Average Current Consumption: 1.5 A @ 30 dBm
- RF Output Power: Adjustable 0-30 dBm with 1 dB steps
- Power Accuracy: ±0.5 dBm
- Power On/Off control for shut down
- Operating Temperature: -10°C to 50°C
- Storage Temperature: -20°C to 70°C

**Software**

API for C/C++, C#.NET
IDRO Protocol
Reader@express Demo SW

**Reader Type**

- Handheld / Mobile Readers
- USB Readers
- Printers / Tag Encoders

**Reader**

- One Channel Fixed Type Readers
- Tag Encoders
- Smart-Shelves

**Development Kit**

The development kit for the IDRO Reader Embedded Antenna (IDRO900EA) includes all hardware and software development kit.

**Software**

API for C/C++, C#.NET
IDRO Protocol
Reader@express Demo SW

**Reader Type**

- Handheld / Mobile Readers
- USB Readers
- Printers / Tag Encoders

**Reader**

- One Channel Fixed Type Readers
- Tag Encoders
- Smart-Shelves

**Applications**

The IDRO Embedded Antenna Type RFID Reader IDRO900EA has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900EA is an ideal solution for:

- Car Parking Management
- Vehicle security
- Item Management
- Asset Tracking
- Animal Tracking
- Access Control

**Specification**

- Frequency: 840MHz ~ 960MHz
- Host Communication: RS232C: 9.6 Kbps
- Physical Dimensions:
  - Length: 260.3mm (10.24inches)
  - Width: 130.4mm (5.14inches)
  - Height: 40.0mm (1.58inches)
- Supply Voltage: 9.0 VDC
- Scan Mode: 1.3 A @ 30 dBm
- Average Current Consumption: 7.4 Watts
- Read Performance up to 100 tags/second
- 1 programmable GPIO pins
- 1 Watt max output power
- Global UHF Band Support, 840-960MHz
- Industry-leading performance
- Low power consumption
- Simple integration for fast time-to-market
- Designed for Item-level inventory / asset management applications
- Low Cost
- Industry-leading performance
- Low power consumption
- Simple integration for fast time-to-market
- Designed for Car Parking Management / Vehicle Security
- Industry-leading performance
- Low power consumption
- Simple integration for fast time-to-market
- Designed for Smart-Shelves

**Software**

API for C/C++, C#.NET
IDRO Protocol
Reader@express Demo SW

**Reader Type**

- Handheld / Mobile Readers
- USB Readers
- Printers / Tag Encoders

**Reader**

- One Channel Fixed Type Readers
- Tag Encoders
- Smart-Shelves
**IDRO900MA**

**Product Overview**

The IDRO900MA offers one of a kind combination of high performance, low cost, and compact size. The IDRO900MA delivers the following benefits:

- Superior read range through well designed circuits that reaches up to 6 meters.
- Superior anti-collision performance that allows up to 100 tags per second.
- Small size, with approximately 50% smaller footprint than most other 1 watt reader modules.
- Simple system integration by using IDRO API, a library that simplifies protocol functions from the host system.
- Firmware upgradability through serial port that allows for future tag introductions and protocol enhancements.
- Broad compatibility support for broad vendor’s tags of ISO 18000-6C(EPC Gen. 2) and ISO 18000-6B protocols.
- Performance optimization achieved through power control (13 ~ 30 dBm) at multiple or dense reader environments.

**Applications**

The IDRO900MA has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900MA is an ideal solution for:

- Access Control
- Animal Tracking
- Asset Tracking
- Item Management
- Smart-Shelves
- Tag Writer/Encoder
- One Channel Fixed Type Readers
- Printers / Tag Encoders
- USB Readers
- Handheld / Mobile Readers
- Reader Type

**Specification**

- **Frequency**: 840MHz ~ 960MHz
- **Host Communication**: UART(TTL): 115.2 Kbps
- **Physical Dimensions**:
  - Length: 39.0mm (1.536inches)
  - Width: 33.0mm (1.30inches)
  - Height: 15.0g (0.55 oz)
- **Environment**:
  - Operating Temperature: -20°C to 50°C
  - Storage Temperature: -20°C to 80°C
- **RF Output Power**: Adjustable 13-30 dBm with 1 dB steps
- **Power Accuracy**: ±0.5 dBm
- **Air Interface Protocols**: EPC C1G2 / ISO 18000-6C, ISO 18000-6B
- **Power Supply**: 5.0 VDC
- **Physical Drawings**: Available on request

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**IDRO900RW**

**Product Overview**

The IDRO900RW offers one-of-a-kind combination of medium performance and low cost. The IDRO900RW delivers the following benefits:

- Medium read range through well designed circuits that reaches up to 1 meters (depends on tags).
- Superior anti-collision performance that allows up to 20 tags per second.
- Compact design with simple and elegant features go really well with natural environments
- Simple system integration by using IDRO API, a library that simplifies protocol functions from the host system.
- Firmware upgradability through serial port that allows for future tag introductions and protocol enhancements.
- Broad compatibility support for broad vendor’s tags of ISO 18000-6C(EPC Gen. 2) and ISO 18000-6B protocols.
- Performance optimization achieved through power control (13 ~ 30 dBm) at multiple or dense reader environments.

**Applications**

The IDRO USB Writer/Reader IDRO900RW has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900RW is an ideal solution for:

- Tag Writer/Encoder
- Item Management
- Asset Tracking
- Animal Tracking
- Access Control

**Specification**

- **Frequency**: 840MHz ~ 960MHz
- **Host Communication**: RS232C: 115.2 Kbps
- **Physical Dimensions**:
  - Length: 97.0mm (3.82inches)
  - Width: 37.0mm (1.58inches)
  - Height: <350g (13 oz)
- **RF Output Power**: 1 Watt max output power
- **Power Accuracy**: ±0.5 dBm
- **Air Interface Protocols**: EPC C1G2 / ISO 18000-6C, ISO 18000-6B
- **Power Supply**: 5.0 VDC
- **Physical Drawings**: Available on request

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**Development Kit**

The development kit for the IDRO Module (IDRO900MA) includes all hardware and software components required to integrate UHF RFID technology quickly and easily into an application. The development kit for the IDRO UHF USB Writer (IDRO900RW) includes all hardware and software components required to integrate UHF RFID technology quickly and easily into an application.
Product Overview

IDRO Stand-alone type RFID Reader IDRO900S offers one of a kind combination of high performance, and compact size. The IDRO900S delivers the following benefits:

- **Superior read range** through well designed circuits that reaches up to 5 meters.
- **High anti-collision performance** that allows up to 100 tags per second.
- **Preventing reader collision** at the dense reader environments by using photo sensor. Sensor based operation helps reader to read tags well without reading failure.
- **Simple system integration** by using IDRO API, a library that simplifies protocol functions from the host system.
- **Firmware upgradability** through serial port that allows for future tag introductions and protocol enhancements.
- **Broad compatibility** support for broad vendor’s tags of ISO 18000-6C(EPC Gen. 2) protocol.
- **Performance optimization** achieved through power control (0 ~ 30 dBm) at multiple or dense reader environments.

Applications

The IDRO900S has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The IDRO900S is an ideal solution for:

**Application Areas**
- Process Management
- Production Management
- Pharmaceutical Industry
- Library Management
- RFID Dense Reader Environments

**Reader Type**
- Stand-alone Readers
- USB Readers
- Tag Encoders

Specification

<table>
<thead>
<tr>
<th>Frequency</th>
<th>840MHz ~ 960MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Communication</td>
<td>UART(TTL): 115.2 Kbps</td>
</tr>
<tr>
<td></td>
<td>8 data bits / No parity / 1 stop bit</td>
</tr>
<tr>
<td>Physical Dimension</td>
<td>Length: 137.4mm (5.41inches)</td>
</tr>
<tr>
<td></td>
<td>Width: 97.2mm (3.83inches)</td>
</tr>
<tr>
<td></td>
<td>Height: 31.5mm (1.24inches)</td>
</tr>
<tr>
<td>Environment</td>
<td>Storage Temperature: -20°C to 70°C</td>
</tr>
<tr>
<td></td>
<td>Operating Temperature: -10°C to 50°C</td>
</tr>
<tr>
<td>Regulatory Support</td>
<td>Planned*: FCC 15.247, RoHS, ETSI EN 302-208 (CE), China, Japan</td>
</tr>
<tr>
<td></td>
<td>Air Interface Protocols</td>
</tr>
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<td></td>
<td>EPC C1/G2 / ISO 18000-6C</td>
</tr>
<tr>
<td>RF Output Power</td>
<td>Adjustable 0-30 dBm with 1 dB steps</td>
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<tr>
<td></td>
<td>Power Accuracy: ±0.5 dBm</td>
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<tr>
<td></td>
<td>Average Current Consumption</td>
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<tr>
<td></td>
<td>Scan Mode: 1.5 A @ 30 dBm</td>
</tr>
<tr>
<td></td>
<td>Supply Voltage</td>
</tr>
<tr>
<td></td>
<td>5.0 V</td>
</tr>
<tr>
<td>Reader Operations</td>
<td>Two Operation Mode: Sensor based mode and normal operation mode</td>
</tr>
<tr>
<td></td>
<td>Sensor Operations</td>
</tr>
<tr>
<td></td>
<td>Detection range: 15cm (Adjustable)</td>
</tr>
<tr>
<td></td>
<td>Read Performance</td>
</tr>
<tr>
<td></td>
<td>Read range up to 5 meters for a single tag.</td>
</tr>
<tr>
<td></td>
<td>Anti-collision performance up to 100</td>
</tr>
</tbody>
</table>

Software

API for C/C++, C#.NET
IDRO Protocol
Reader@express Demo SW

About IDRO:
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