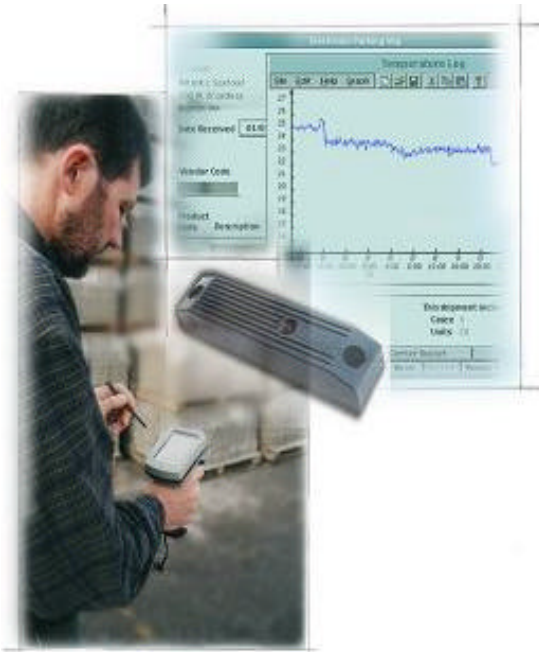


## Active UHF Tag

## i-Q Series

The i-Q series is IDENDEC SOLUTIONS' premier offering of Intelligent Long Range® (ILR®) active RFID tags. ILR® provides highly accurate, real-time data collection in wireless applications such as:



- Identification
- Tracking and tracing
- Localization of assets or personnel
- Temperature monitoring

Using advanced UHF radio frequency technology, i-Q tags transmit and receive data at distances of up to 100 meters (300 feet) from either a fixed interrogator or handheld device.

A unique feature of our tags is a highly sophisticated anti-collision handling algorithm that allows simultaneous communication with thousands of tags within the interrogator's read zone.

Tags in the i-Q series are available with expandable memory of up to 32 KB and an optional sensor for monitoring temperature. Also, the LED supports visual recognition, suitable for *pick-to-light* applications.

The i-Q tags withstand the abusive conditions of industrial work environments and are an ideal fit for high volume tracking of assets and personnel.

### Features Benefits

100-meter read/write range	Allows automated identification, tracking and tracing of assets and personnel.
8 KB memory (Option: 32 KB)	Stores user and process information as well as temperature data to provide real-time tracking and tracing. Can be used as an electronic packing slip or as an electronic shop traveler.
UHF operating frequencies	Allows low-power, long-range communication and high data transmission rates with minimal interference due to local conditions.
100-tags/sec. identification rate	Provides reliable identification of fast-moving objects.
2000-tag simultaneous identification	Provides high-speed data collection to facilitate warehousing and inventory-based applications.
Temperature logging (optional)	Measures and records the temperature of goods at programmable intervals.
LED	Provides visual identification of an addressed tag ( <i>pick-to-light</i> ).
5-year battery life time	Delivers long time maintenance-free operation, without battery replacement.
On-demand Communication	Eliminates RF flooding by using application-driven read/write operations.
Non-line-of-sight data transmission	Allows tags to be buried while transmitting for improved tracking/locating efficiency.
Low cost	Allows economical tracking of large quantities of assets using high-performance active technology.

## IDENTEC SOLUTIONS

IDENTEC SOLUTIONS provides innovative data-gathering solutions to reduce losses and increase profitability. Our technology is the next generation of long-range active RFID—we call it Intelligent Long Range® (ILR®).

Our product line offers a data collection solution that is wireless, automated, real-time and affordable. The benefits of using our technology include ease-of-use, seamless software integration with ODBC-based applications, scalable infrastructure and inexpensive hardware.

With ILR®, the technology becomes transparent and your assets become visible—they're able to report their whereabouts and identity—without human intervention and technical complications.

With ILR®, RFID technology is now simple and affordable.

To learn more about how ILR® technology can increase profitability for your business, contact IDENTEC SOLUTIONS or visit our website

[www.identecsolutions.com](http://www.identecsolutions.com)

In North America:  
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v.4.52 (05/03)

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:  
(1) This device may not cause harmful interference, and  
(2) This device must accept any interference received, including interference that may cause undesired operation.

## Technical Specifications

### Performance

Read rate	Up to 100 tags/s (only Identification Code)
Response time	Up to 35 tags/s @ 128 bit data reading < 150 ms (single tag)
Multiple tag handling	Up to 2,000 tags in the read zone

### Communication

Read range to i-PORT III	Up to 100 m (328 ft) @ free air
Write range to i-PORT III	Up to 100 m (328 ft) @ free air
Operating frequency	868 MHz (EC) or 915 MHz (NA) ISM Band
Data rate (download to tag)	115.2 kbits/s
Data rate (upload to reader)	115.2 kbits/s
Maximum transmission power	0.75 mW ERP
Standards / Certification	EN 300 220 (EC), FCC Part 15 (US), Industry Canada

### Electrical

Power source	Lithium battery (not replaceable)
Expected battery life	5 Years @ 600 times 128 bit readings/day
Battery monitoring	Yes

### Temperature logging (Option)

Number of samples	1,024 (i-Q8T) / 13,312 (i-Q32T)
Interval	User definable in intervals from 1 to 255 minutes
Accuracy	+/- 0.5°C (1°F) over a range of -20°C to +50°C (-4°F to +122°F) +/- 1°C (2°F) in the ranges of -40°C to -20°C (-40°F to -4°F) and +50°C to +70°C (+122°F to +158°F)
Resolution	0.25°C (0.5°F)

### Data

Data retention	>10 years without power
Write cycles	100,000 writes to a tag
Memory size	7,855 byte user definable (i-Q8) 32,431 byte user definable (i-Q32)
Identification code	48 bit fixed ID

### Environmental

Operating temperature	-40°C to +70°C (-40°F to +158°F)
Shock	50 G, 3 times DIN IEC 68-2-27 Multiple drops to concrete from 1 m (3 ft)
Vibration	3 G, 20 sine wave cycles, 5 Hz to 150 Hz, DIN IEC 68-2-6 5 G, noise 5 Hz to 1000 Hz, 30 minutes DIN IEC 68-2-64

### Physical

Dimensions	131 mm x 28 mm x 21 mm (5.2 in. x 1.1 in. x 0.85 in.)
Case Material	Plastic (Luran® S)
Mass	50 grams (1.75 ounces)
Enclosure rating	IP 65 — Protected against dust and low pressure jets of water.

**WARNING: Changes or modifications not expressly approved by manufacturer could void the user's authority to operate the equipment**

Contents subject to change without notice.

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