

Active UHF Tag i-Q Line



The i-Q line is the well-established generation of IDENDEC SOLUTIONS' Intelligent Long Range® (ILR®) active RFID tags. ILR® provides highly accurate, real-time data collection without human intervention in wireless applications such as:

- Identification
- Tracking and Tracing
- Localization and
- 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.

The unique, highly sophisticated anti-collision multi-tag- handling algorithm allows the communication to tags even when thousands of tags are within the interrogator's read zone.

Because of its very lowpower consumption, the tag can operate effectively for over 6 years.

Tags in the i-Q Line are available with expandable memory and an optional sensor for monitoring temperature.

Also, the optional LED supports visual recognition, such as, for example, for "pick-to-light" applications.

The i-Q tag line can withstand the abuse expected from work processes; the tags are very economical and an ideal fit for high volume tracking of assets and people.

Features

- 100 meter read/write range
- 8,000 byte memory (Option: 32,000)
- UHF operating frequencies
- 100 tag/sec. identification rate
- 2,000 tag simultaneous identification
- Temperature logging (Option)
- LED (Option)
- 6 year battery lifetime
- Communication on demand only
- Non-line-of-sight data transmission
- Low cost

Benefits

Allows automated identification, tracking and tracing of assets and people without human intervention.

Stores user and process information as well as temperature data onto the tag to provide real-time tracking and tracing. Can be used as an electronic packing slip or as an electronic shop traveler.

Allows low-power, long communication range and high data transmission rates with minimal interference due to local conditions.

Provides reliable identification of fast moving-objects.

Large numbers of tags can be identified virtually simultaneously.

Measures and logs the temperature of goods in definable intervals.

Provides visual identification of an addressed tag ("pick to light").

Delivers long-time maintenance-free operation, without battery replacement.

Eliminates RF flooding through software-controlled read/write operations.

Allows tags to be buried while transmitting for improved tracking/locating efficiency.

Economical tracking of large quantities of assets using high-performance active technology



IDEN TEC SOLUTIONS

IDEN TEC SOLUTIONS is a leading global supplier of innovative RFID systems (Radio Frequency Identification) with communication ranges of up to 100 meters.

With its unique Intelligent Long Range® (ILR®) technology, IDEN TEC SOLUTIONS offers innovative and economical solutions for automated data gathering, identification, tracking and localization of objects.

ILR® technology makes it possible to ensure that the right goods, in the right amounts, in the right condition, with the right information are located at the right place at the right time, leading to increased efficiency and quality improvements in Production, Logistics and Supply Chain Management.

To learn more about how ILR® technology can increase efficiency of your business, contact IDEN TEC SOLUTIONS or visit our website at www.identecsolutions.com.

In Europe:
+43 5577 87387-0, or
sales@identecsolutions.at

In North America:
1-877-IDEN TEC (toll free), or
sales@identecsolutions.com

Information in this document is subject to change without notice and becomes contractual only after written confirmation by IDEN TEC SOLUTIONS.

"IDEN TEC SOLUTIONS", "Intelligent Long Range", "ILR", "i-LINKS", "i-O", "i-D", "i-CARD", "i-PORT", "Solutions. It's in our name." and the stylized "i" are trademarks or registered trademarks of IDEN TEC SOLUTIONS, Inc. and/or IDEN TEC SOLUTIONS AG.

Copyright © 2003 by IDEN TEC SOLUTIONS.
All rights reserved.
Version 5.23

Technical Specifications

Performance

Read rate	Up to 100 tags/s (only Identification Code) Up to 35 tags/s @ 128 bit data reading
Max. response time	< 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 (300 ft) @ free air
Write range to i-PORT III	Up to 100 m (300 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	> 6 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 min
Accuracy	+/-0.5°C over a range of -20 to +50°C +/-1°F over a range of -4 to +122°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 to 150 Hz, DIN IEC 68-2-6 5 G, noise 5 to 1000 Hz, 30 min 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.)
Enclosure	Plastic (ASA / Luran® S)
Weight	50 g (1.75 ounces)
Enclosure rating	IP 65

www.identecsolutions.com

Europe:

Austria: IDEN TEC SOLUTIONS AG, Millennium Park 2, A-6890 Lustenau / Austria Tel: +43 5577 87387-0 Fax: +43 5577 87387-15

North America:

Canada: IDEN TEC SOLUTIONS, Inc., Suite 102 - 1860 Dayton Str., Kelowna / BC Canada V1Y 7W6 Tel: 250 860-6567 Fax: 250 860-6541