

# Fixed UHF Interrogator i-PORT III



The i-PORT III is the next generation of IDEN TEC SOLUTIONS' Intelligent Long Range® (ILR®) interrogator. ILR® provides highly accurate, real-time data collection with minimal human intervention in wireless applications such as:

- Identification
  - Tracking and Tracing and
  - Localization
- of assets or people.

Using advanced UHF radio frequency technology, the i-PORT III transmits and receives data at distances of up to 6 meters (20 ft) from an i-D tag or up to 100 meters (300 ft) from an i-Q tag.

The unique, highly sophisticated anti-collision multi-tag-handling algorithm allows communication to tags even when thousands of tags are within the interrogator's read zone. The i-PORT III allows the seamless integration of i-D and i-Q tag information to a host computer system. The result is real time information, where and when it is needed.

The i-PORT III operates with up to four antennas, which can be used concurrently. This means that a signal from a tag is received by all antennas exactly at the same time. This extraordinary feature allows the fast and reliable identification of tags. Additionally, the built-in signal strength measurement capability enables the localization of tags.

The i-PORT III comes with a software package which is based on an

industrially proofed Real Time Operating System (RTOS). The built-in software features allow various functions such as:

- communication with ILR® tags
- concurrent management of 4 parallel antennas, additional transmit-only antenna
- communication to host system via Ethernet interface
- integration of external devices (e.g. GSM, GPS, modem ...) via serial interface
- data processing
- I/O control
- configuration and settings via web interface

The i-PORT III includes an internal real-time clock to provide accurate time stamps for data captured from the tags. A maximum of 2,000 messages can be stored on the i-PORT III to prevent data loss.

The feature-rich i-PORT III, combined with other IDEN TEC SOLUTIONS ILR® system components, offers a leading-edge wireless, automated data collection tool that is easily integrated into advanced information systems.

## Features

- Multi-tag compatibility
- Concurrent antenna processing
- Additional transmission only antenna
- Concurrent signal strength measurement
- Adjustable output power
- 100 tag/s identification rate
- 2,000 tag simultaneous identification
- Real-time operating system (RTOS)
- Ethernet interface
- Serial interface
- 4 digital inputs and 4 relay outputs
- SNMP remote management
- Remote diagnostic and configuration

## Benefits

- Provides interrogation for both i-D tag and i-Q tag series.
- Receives tag responses simultaneously on all 4 antennas.
- Provides wide range wake-up capability for tags moving at high-speeds and for special tag localization tasks.
- Signal strength measured simultaneously on all 4 antennas can be used as parameters for position determination of tags.
- Read / write range is tunable up to 100 meters (i-Q tag).
- Provides reliable identification of fast-moving objects.
- Large numbers of tags can be identified virtually simultaneously.
- Meets industrial requirements for reliability and robustness.
- Integrates easily into existing infrastructures.
- Expandable to connect external devices, e.g. GSM, GPS, modems, etc.
- For external process synchronization and control, for light beams, switches, inductive loops, horns, signal lights, barriers....
- Provides remote management of hardware and software from a centralized location for web based maintenance.
- Monitors equipment for fast troubleshooting response time to minimize equipment down time.

Solutions. It's in our name.





## IDENTEC SOLUTIONS

IDENTEC 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, IDENTEC 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 IDENTEC SOLUTIONS or visit our website at [www.identecsolutions.com](http://www.identecsolutions.com).

In Europe:  
+43 5577 87387-0, or  
[sales@identecsolutions.at](mailto:sales@identecsolutions.at)

In North America:  
1-877-IDENTEC (toll free), or  
[sales@identecsolutions.com](mailto:sales@identecsolutions.com)

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

"IDENTEC 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 IDENTEC SOLUTIONS, Inc. and/or IDENTEC SOLUTIONS AG.

Copyright © 2003 by IDENTEC SOLUTIONS.  
All rights reserved.  
Version 5.23

## Technical Specifications

|                               |  |                 |
|-------------------------------|--|-----------------|
| <b>Compatibility</b>          | ILR® i-Q and i-D tags                                    |                 |
| <b>Performance</b>            | <b>i-D tags</b>  | <b>i-Q tags</b> |
| Read range (adjustable)       | 6 m (20 ft)  | 100 m (328 ft)  |
| Write range (adjustable)      | 6 m (20 ft)  | 100 m (328 ft)  |
| Max. response time            | < 10 ms  | < 150 ms        |
| Read rate – ID only           | 100 tags/s   | 100 tags/s      |
| Read rate – 128 bit data      | 35 tags/s  | 35 tags/s       |
| Multiple tag handling         | Up to 2,000 tags in the read zone                        |                 |
| <b>Communication</b>          |  |                 |
| Frequency                     | 868 MHz (EC) or 915 MHz (NA) ISM Band                    |                 |
| Certification                 | EN 300 220 (EC); FCC part 15 (US); Industry Canada       |                 |
| Number of antennas            | 5 (4 + 1)  |                 |
| Number of transmitters        | 5  |                 |
| Output power                  | Up to 23 dBm, digitally controlled (100 steps)           |                 |
| Number of receivers           | 4  |                 |
| Sensitivity                   | Up to -85 dBm, digitally controlled (100 steps)          |                 |
| Antenna control               | Concurrent processing                                    |                 |
| <b>CPU</b>                    |  |                 |
| Operating system              | RTOS (Real Time Operating System)                        |                 |
| Program memory                | 2 MB Flash, 8 MB DRAM                                    |                 |
| Data memory                   | 128 KB SRAM  |                 |
| Configuration memory          | 8 KB EEPROM  |                 |
| Time base                     | Real Time Clock (RTC) with battery-backup                |                 |
| <b>User Interfaces</b>        |  |                 |
| Ethernet interface            | 10 Mbit/s / 100 Mbit/s                                   |                 |
| Option ext. wireless LAN      | IEEE 802.11  |                 |
| Network protocol              | TCP/IP, FTP, Telnet, HTTP, SNMP, PPP                     |                 |
| Serial interface              | RS-232, 1.2 to 115.2 kbit/s                              |                 |
| I/O control                   | 4 digital inputs<br>4 relay contact outputs              |                 |
| Number of status indications  | 19 LEDs  |                 |
| <b>Electrical</b>             |  |                 |
| Input power                   | 10 V DC to 30 V DC                                       |                 |
| Power consumption             | 7.5 W maximum  |                 |
| Standards / Safety            | CE and EN 300 220  |                 |
| <b>Environmental</b>          |  |                 |
| Operating temperature         | 0°C to +50°C (32°F to +122°F)                            |                 |
| Option ext. temperature range | -30°C to +70°C (-22°F to +158°F)                         |                 |
| Storage temperature           | -40°C to +80°C (-40°F to +176°F)                         |                 |
| Humidity                      | 90% non-condensing                                       |                 |
| <b>Physical</b>               |  |                 |
| Dimensions                    | 211 mm x 190 mm x 58 mm<br>(8.3 in. x 7.5 in. x 2.3 in.) |                 |
| Enclosure                     | Anodized aluminium                                       |                 |
| Weight                        | 2.0 kg (4.4 lb)  |                 |
| Enclosure rating              | IP 64  |                 |

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

Europe:

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

North America:

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