IPICO SPORTS Shoe Tag

IPICO takes home 2009 Frost & Sullivan Technology Leadership of the Year Award for the North American RFID sports market. **See Press release**

A New Dimension of Sports Performance: Information

The right Information delivered to the right people at the right time can add value, opportunity and enjoyment to sports of all kinds.

IPICO's IP-X technology is making this happen and our IPICO SPORTS team is bringing IPICO's Sports Timekeeping solutions to the Active Sports, Wellness and Recreation markets.

IPICO Sports to be official timing system vendor for Road Runners Club of America

With IPICO's technology, race directors, spectators, athletes, coaches, sponsors and media now have unrivaled and often immediate access to unlimited information. They can pinpoint participants in a crowd, track split times and get instant race results. Without worrying about bunching, motion, bad weather or materials – problems that plague ordinary RFID solutions and can add to costs.

The IPICO Sports Timekeeping solution has been road-tested in major races like the Steamboat Classic and BolderBOULDER and London 10,000 Marathon with tens of thousands of participants**.**

TAG

ANTENNA

READER

Cycling and Nordic

Keeping track of cyclists throughout a race event is a difficult task. Riders race at high speeds, are often tightly bunched together, and are usually out of sight in just a few seconds. The exact state of a race is often unknown and it's difficult to track riders who have accidents or withdraw from the event.

IPICO's RFID technology allows real-time tracking of cyclists throughout the race from specific locations along the course. This data can be published as it happens on a computer, display board or through the Internet.

How It Works

IPICO The IPICO Sports data capture system is very simple. The Sportag™ contains a microchip and two antenna loops—one to "wake-up" the tag and the other to send its signal. When the tag comes into contact with the antenna mat, it wakes up and starts sending its unique signal again and again to the reader, which stores volumes of data to be managed and communicated.

Sport Time-Keeping requires reliable medium range reading of light-weight tags in large numbers, the ability to read many tags simultaneously as participants crowd past the finish line, and the use of robust weather-proof equipment that can operate in RF-unfriendly conditions. The IPICO Dual Frequency technology is ideally suited to this application, combining the benefits of low frequency signals for penetration through "lossy" substances, and the high data through-put usually associated with HF or UHF systems, so that it can provide timing accuracy and avoid tag data being lost due to over-congestion.

Our System

IPICO Sports offers the latest technology in timing and tracking solutions—from tags, mats, readers and software, to a variety of real-time communication options. But high-tech doesn't mean complex. The systems are simple to transport and set up and easy to use. And every system is supported by the IPICO Sports team, made up of experts in the active sports industry.
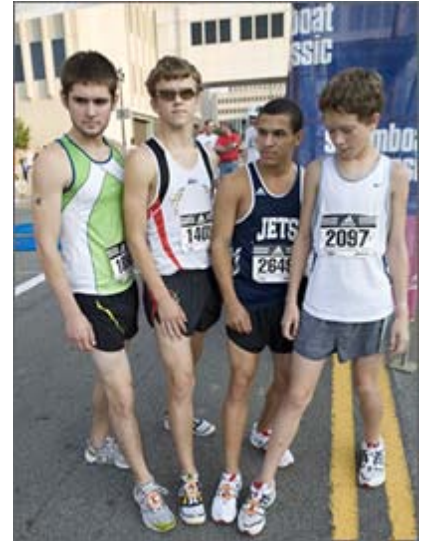
Data Capture

Our tags and readers offer performance advantages over alternative technologies when dealing with challenging environments. Capturing data is always a challenge; doing it in a race environment can be even more difficult. Tags and readers must perform while dealing with motion, distance, crowding, and a variety of materials and spectrums. IPICO Sports tracking and timing hardware is simple and easy to use, while offering performance advantages over alternative technologies when dealing with challenging environments. The IPICO IP-X™ Dual Frequency RFID platform overcomes the limitations experienced by conventional Reader-Talk-First protocols in these environments. We combine two technologies—Dual Frequency (DF) and the IP-X RFID air interface with passive tags—to create an unmatched low cost offering in the timekeeping market.

The benefits:

- DF can read tags in very high moisture environments. Because sports and moisture go hand in hand—either as part of the sporting event or simply in the human body—removing this obstacle is essential.
- DF is a combination of low frequency and high frequency—taking the best properties of both. That means passive tags are energized at long distances, while tag IDs are received at high speeds.
- The passive tags are energized at 125KHz, allowing a long range charge-up, and they backscatter their IDs at 6.8MHz, allowing for fast read rates.
- IP-X is a reliable anti-collision protocol, which allows high volumes of tags to be read simultaneously. Multiple readers can co-exist in close proximity without interfering with each other.
- Tags and readers on the IP-X platform are optimized to work together for maximum performance.
- Our IP-X non-modulating readers can share the same frequency band, enabling IPICO technology to operate at full potential in most countries with as little as 200 kHz to 2 MHz bandwidth—eliminating spectrum issues.

IPICO Sportags:

- Are customizable for volumes over 10,000.
- Can be disposable, eliminating the need for post-race chip retrieval and reconciliation—improving race flow at the finish and reducing staffing needs.
- Are compliant with USA, European, Australian and RSA spectrum allocations
- Offer a long read range of 0.6 m
- Deliver robust anti-collision protocol (up to 120 tags read simultaneously)
- Contain a factory programmed 64 bit ID number
- Deliver a high transmission rate and read rate
- Are passive; no battery required
- Perform in a termperature range from -40 to +85 degrees C

- Have four holes for easy lace-up
- Feature a 35x20 mm area to place race number label
- Are soft, flexible and waterproof

IPICO Sportag™ Datasheet

Antennas

Our Dual Frequency Sport Time-Keeping antennas, used together with our readers, provide a complete time-keeping solution.

Our mat antennas are robust, waterproof, and can even withstand being driven over by motor vehicles. They're portable, lightweight, and come complete with a carry bag. Mats are easy to set up and cannot be incorrectly connected.

IPICO Sports Mats:

- Comply with USA, European, Australian and RSA spectrum allocations when used with IPICO Sports readers.
- Are suitable for use with all IPICO Sports tags.
- Can be used in groups of up to eight with overlaps to ensure complete coverage.
- Can be custom branded for your event.
- Feature shielded loops to minimize pickup from interference sources like vehicle ignition and short-wave radio transmissions.

IPICO Antenna Datasheet

Readers

Sport time-keeping presents a host of challenges. It requires reliable medium range reading of tags in large numbers, the ability to read many tags simultaneously as participants crowd past the finish line and robust weather-proof equipment that can operate in radio frequency-unfriendly conditions.

IPICO Sports Dual Frequency readers are ideally suited to meet all these challenges. They combine the benefits of low frequency signals for penetration through substances, and the high data through-put usually associated with HF or UHF systems, to provide timing accuracy and avoid tag data being lost due to over-congestion.

Being able to operate independently is essential, so each reader is powered by an internal rechargeable battery, and contains a flash drive for storage of tag numbers and times. These can be uploaded to a computer, or remotely accessed if the reader is connected to a network. Four antenna mats can be connected, allowing an 8-meter timing line to be used. Tags and readers are optimized to work together for maximum performance.

IPICO Readers:

- Take advantage of Dual Frequency technology to reduce or eliminate signal loss and reader collision.
- Are compliant with USA, European, Australian, and RSA spectrum allocations.
- Can read up to 120 tags simultaneously.
- Are simple to use, using only one ON/OFF switch for all systems.
- Offer a Real Time Clock.
- Feature valid tag read and status indicators.
- Feature a battery management circuit that beeps on low voltage or incorrect input as well as a polarity, charge level indicator.
- Offer automatic antenna tuning, which can be manually invoked, to tune out environmental influences.
- Offer a range of up to 0.6m using the IPICO Sports Sportag.
- Store data on an internal flash drive (with battery backup).
- Have a storage capacity of greater than 400,000 tag reads.
- Offer an Ethernet port for computer connection; WiFi or RS485 are optional.

IPICO_RFID READER Datasheet

Data Management

We design customized software solutions that help you manage volumes of information and turn it into accurate, meaningful performance data. Collecting data is only the beginning; it's what you do with that data that makes a difference. IPICO Sports delivers information in a format that's the most meaningful to each audience—race directors, spectators, athletes, coaches, the media and more. Our software solutions are customized—so you get to choose the way your data is handled.

We'll help you:

- Manage volumes of information.
- Turn information into accurate, meaningful performance data.
- Present results in the format that is most useable to you and your variety of audiences.

Each athlete has a unique identification associated with his or her Sportag. Once data has been collected, our software pulls the timing information off the readers in the field and uses a number of filters to deliver searchable data—by name, split time, bib number, location, team and more.

Communication

IPICO Sports' turnkey timing and tracking solutions allow you to instantly communicate detailed results to spectators, the media and the athletes themselves. IPICO Sports' turnkey timing and tracking solutions not only collect and manage performance data, but also instantly communicate detailed results to spectators, the media and the athletes themselves. Our system offers more and better access to information in a variety of formats, including:

- Friendly interfaces via computer
- Display boards
- On-site kiosks
- Text messages to cell phones
- Web sites

Race announcers have immediate access to split times, up-to-the-minute team standings and other athlete information so they can provide a more enjoyable experience for spectators. Event planners can deliver instant results as participants cross the finish line. Or athletes can set up personal databases that hold results from all events timed and tracked by IPICO Sports.

Knowledge Capital

The leaders of IPICO Sports have years of experience in the active sports industry, with backgrounds in electronic design and manufacturing, telecommunications equipment, information technology and software development. Partnering with IPICO Sports gives you access to an unsurpassed wealth of knowledge. Technology developer IPICO and system integrator and solution architect-FALKEN Secure Networks Inc. are cutting-edge RFID solutions providers with operations around the world. And the leaders of IPICO Sports have years of experience in the active sports industry. They are race directors, commentators, athletes and race consultants with backgrounds in electronic design and manufacturing, telecommunications equipment, information technology and software development. Their expertise in all these areas allows IPICO Sports to offer integrated, customized, start-to-finish solutions.

On the wettest May calendar day in London history, IPICO Sports timing systems were used to time the inaugural London 10,000 sponsored by BUPA. The systems worked flawlessly to time over 6,100 runners at the Start, 5 KM Split and Finish in extremely adverse weather conditions on the loop course which will be utilized for the marathons at the 2012 London Olympic Games.

FALKEN Secure Networks(FSN)—Your partner for RFID automation

If you choose to pursue RFID implementation in your organization, here is the FALKEN Secure Networks commitment to you:

- FSN will provide solution architects to work with you to define system requirements for your particular installation. Multiple locations can be networked together for a central and real-time view and centralized management.
- FSN will do a RFID site survey to validate radio frequencies, tag types, system design and performance
- FSN will provide all necessary hardware and software to make the system work for you
- FSN will integrate the system with your existing enterprise management software
- FSN will provide documentation for the system, including operating procedures
- FSN will train your people
- FSN will provide warranty and continued system support

Contact Us

FALKEN Secure Networks (FSN) is the leading System Integrator and Solution Architect for advanced Active/Passive Unified RFID systems that leverage standards-based technologies. FSN integrates RF technologies for asset visibility, using EPC global standard RFID, Wi-Fi and Real-Time Location Systems (RTLS) for cost-effective design, and turn-key project implementation.

Contact FSN   at **905-880-4044**   or   sales@falkensecurenetworks.com