

## **Terminology Explained**

RFID -- Radio Frequency Identification

Tag or Chip- A “tag” is a passive RFID device containing a chip and antenna. A “chip” is the microchip inside a tag. Tag is the correct terminology to use when referencing any sports timing device used on the shoe. We call ours a Sportag.

### **How does it work?**

The system is very simple. Our 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. The IP-X™ Dual Frequency RFID Sportag overcomes the limitations experienced by conventional Reader-Talk-First sport timing systems. By combining two technologies—Dual Frequency (DF ) and the IP-X RFID interface with passive tags we are able to achieve unmatched performance. Great Results, Every Time!

Dual Frequency: 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.