

BEACON™



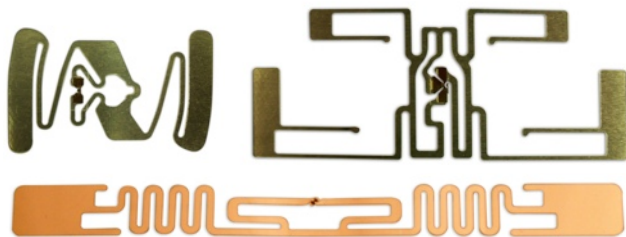
RFID & GPS Inventory Systems

In response to the ever-growing need to identify, track, and control an almost infinite variety of products, vehicles, and goods, BEACON INDUSTRIES has developed a unique and powerful inventory control system that combines the advantages of Radio Frequency Identification (RFID) processes with the worldwide availability of the Global Positioning System (GPS). Various embodiments of the BEACON INDUSTRIES RFID GPS Inventory Control System (BEACON RFID-GPS) allow for quick detection of almost every kind of inventory item and allow that item to be located and tracked throughout a wide range of monitored areas and conditions. The BEACON RFID-GPS System can accomplish virtually all those tasks through the use of a specially configured computer system equipped with dedicated software packages that allow end users to interface with the BEACON RFID-GPS System easily and quickly. The constant movement of items requires a powerful tracking and inventory control system to locate and identify products. The BEACON RFID-GPS System satisfies each of these critical needs.



1. RFID Tagging

All goods at item level, pallet level, container level, storage lot level, or geographic location level can be tagged with RFID tags. Upon entry of any monitored item into a monitored zone, the BEACON RFID-GPS System includes the RFID tagging of each monitored object that provides a unique identification of that monitored object.



2. Location of Items

Once RFID tagging of an item is completed, the BEACON RFID-GPS System is notified of the new item and the location of that item within any monitored area. The BEACON RFID-GPS System automatically updates the dedicated inventory control system that will store the identification of the item, the time the item was initially inventoried, and the location of that time. The BEACON RFID-GPS System is now ready to monitor each and every subsequent movement of that item into, out of, or within the monitored area.



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3. Movement Detection

Once an item to be monitored is entered into the BEACON RFID-GPS System, monitoring devices within the BEACON RFID-GPS System can automatically note the movement of that item within the monitored area. For example, wireless gateways disposed at critical positions within the monitored area sense and identify the RFID tag of any item within the monitored area that passes through the wireless gateway. In other embodiments of the BEACON RFID-GPS System, operators can use wireless handheld scanners that can communicate with the RFID tags of the items. The RFID information is combined with the GPS location of the tagged item to provide a complete identification of the item and the location of the item at the time the scanner is used to detect and read the RFID tag on the item.

5. Surveillance & Theft Protection

The proper use of RFID technologies in conjunction with the BEACON RFID-GPS System can help prevent thefts and improve security. In situations where an item is being removed from a truck, a warehouse, or a lot storage area without proper authorization for movement of that item, proper authorities can be quickly alerted so that remedial actions can be taken to prevent actions that can often result in theft or general waste of stored products. In other embodiments of the BEACON RFID-GPS System, the System can be programmed to work in concert with other systems. If a monitored item is removed without authorization, the BEACON RFID-GPS System may be configured to cooperate with barcode, RFID, GPS, cellular, wireless networks and work as a global solution such that stolen items can be detected in another location.

7. Electronic Proof of Delivery

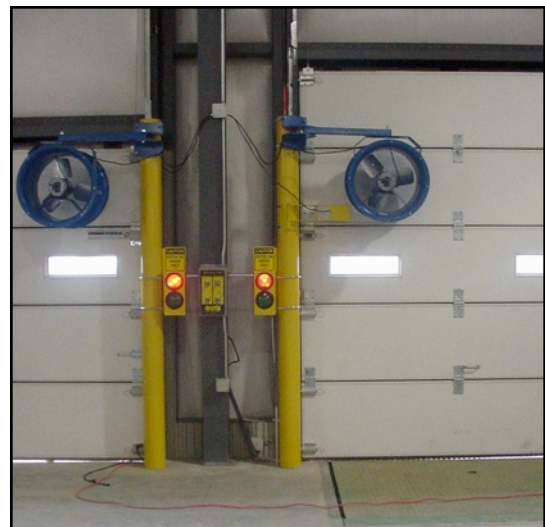
The BEACON RFID-GPS System can be configured to allow users to verify positive proof of delivery of a monitored item to intermediaries as well as the end customer. This function adds a critical level of verification to the audit trail that is being created by the real time transactions that are being recorded to be used by the auditors at a later date.

4. Inventory Audit Trail

The BEACON RFID-GPS System also provides the ability for collecting item movement information for tracking every event that occurs for a monitored item. For example, the information can include who handled the item, the location of the handling, the date and time of the handling, and the subsequent recipient and location of the item. Because the vast majority of this data is captured using mobile computers coupled with either fixed or mobile RFID readers, all the data is kept current and accurate with little or no data entry. This provides an accurate and reliable audit trail of all such events that ensures the overall inventory control system tracks and retains all critical information about any monitored item.

6. Visibility of Goods Flow/On-Time Delivery

Once RFID tagging of an item is completed, the BEACON RFID-GPS System is notified of the new item and the location of that item within any monitored area. The BEACON RFID-GPS System automatically updates the dedicated inventory control system that will store the identification of the item, the time the item was initially inventoried, and the location of that time. The BEACON RFID-GPS System is now ready to monitor each and every subsequent movement of that item into, out of, or within the monitored area.



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8. Real-Time Location & Item Location

One big problem in shipping different items into the field is that it is sometimes hard to locate pallets and cartons even at the local warehouse or storage lot. The BEACON RFID-GPS System can use a combination of RFID data, barcode data, and GPS data that can enable users to instantly locate items that may have been randomly stored in an area. The BEACON RFID-GPS System may also be configured to track product handling and environmental conditions in the Cold Chain where chronology, handling events, and temperature can be recorded and monitored for perishables.

10. Certifications

RFID and GPS technology evolve constantly. Therefore, it is critical that only certified experts are used to develop and employ RFID and GPS systems. The critical elements of the BEACON RFID-GPS System have all necessary RFID certifications that enable BEACON to develop solutions that utilize reliable RFID software and hardware. These certifications include:

- Alien Academy
- CompTia RFID+
- Intermec Honours Partner
- Motorola PartnerSelect Platform
- Motorola PartnerSelect Product
- Printronix RFID Certified Partner
- ScanSource RFID Edge
- Teklynx
- ThingMagic RFID Certified
- Zebra RFID Authorized Service Provider

11. Summary

The BEACON RFID-GPS System is a total end-to-end distribution center, lot management and tracking solution that includes the hardware, software, mobile computers, fixed scanners, handheld scanners, barcode label printers, wireless switches, RFID tags, RFID readers, (capable of working with active and passive tags), GPS and satellite tracking, integration services, hardware installation services, on-site operations and maintenance support. This unique combination of RFID and GPS devices with a computerized inventory control system can provide the user with tools that significantly enhance the ability to track any monitored item and to collect a wide variety of data related to that item – including inventory control information about a vehicle, a tool, a piece of equipment, a container, or even a person that may include:

- a history of the movements of the object;
- date the object moved from one location to another;
- time the object moved from one location to another;
- speed the object moved from one location to another;
- amount of time the object remained at a single location;
- date and time the object entered the zone to be monitored;
- date and time the object exited the zone to be monitored;
- association between the object and a second identification device; and
- predetermined correlation between the object and a second identification device.

Statements of work, deployment or corporate licenses available.

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