



Sidco Labeling Systems

BarCode Hardware, Software & Media

TECHNOLOGY NEWS

RFID (Radio Frequency Identification) Basics

What is RFID? Radio Frequency Identification. RFID is a non-line-of-sight solution comprising a microchip and an antenna coupled to form a tag (also known as a transponder), and an RF (radio frequency) reader (also known as an interrogator). RFID tags (Labels) can hold anywhere from 2 KB to 10 KB of data and operate in different frequencies. Why use RFID? Indirect line of sight, more efficient than bar codes and multiple reads at the same time. Also, RFID is able to save additional information to the tag at a later date.



Using Inventory Management as an example, RFID is a technology used to track assets (products) through the supply chain. Small tags (Labels) containing a unique identifier (electronic serial number) are placed on items, cartons or pallets. Then these tags communicate with a network of readers throughout the supply chain to identify location, order number, date, etc.

Tags can be passive or active and read-only or read-write. Passive tags can send data only after they have been energized from the RF signal sent by an RF reader. Active tags contain built-in batteries, which enable the tags to transmit RF signals without being activated by a reader. Tags also come with a variety of antennas, corresponding to the frequency the tag sends and receives.

The cost of RFID tags varies depending on the type of antenna the chip uses, whether the chip is active or passive and whether it is read-only or read-write capable, as well as how the tag is housed and the quantity that is purchased.

RFID readers can be used in a fixed position or as part of a mobile solution, depending on their application. The readers, which function much like WLAN (wireless

LAN) access points, are designed to detect the presence of tags within a certain vicinity. Readers do this by transmitting a signal, which "awakens"

the passive tags and elicits a response. After tags and readers confirm one another's presence, the two components authenticate one another (i.e. make sure the other is authorized to send and/or receive data). Next, data is shared back and forth, which may result in new information getting added to the read-write capable tags.

After data is gathered by the RFID reader, middleware is used to translate the data and import it to a backend application such as a WMS (warehouse management system), supply chain management solution, or an ERP (enterprise resource planning) solution.

Contact Sidco for additional RFID information from our technical team.

Pre-Print Services vs. In-House

To Print or not to Print? The answer depends on your application.

There are two efficient ways to produce bar code labels. You can purchase, from Sidco, printing hardware, software, ribbons and label stock and produce your labels in-house, or Sidco can preprint your labels for you.

We can supply labels with a variety of information on a multitude of label stocks. As an example, rolls of sequentially numbered labels printed on vinyl label stock. Opting to use preprinted bar code labels eliminates the need for label printing equipment, the staff to run the equipment, and the management required to assure a quality label. All bar codes preprinted by Sidco are assured to scan correctly.



Sidco is not limited to just preprinting bar codes. Other data such as a company logo, prices, special border or instructions, lot number, and other variable print can be included. Whether you need 500 or 100,000 labels, Sidco can customize and print to your specifications. Contact us for details.



Sidco - Labels For All Applications

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