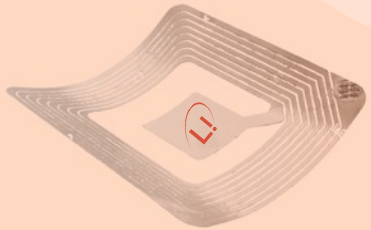
RFID 101

Labelink is a trusted North American RFID label convertor with full encoding services

- From small jewelry labels to large airport luggage tags, Labelink designs RFID solutions for all shapes and sizes.
- We help our customers create the perfect RFID solution without compromising performance and design.



400+ employees

10 plants

USA and Canada

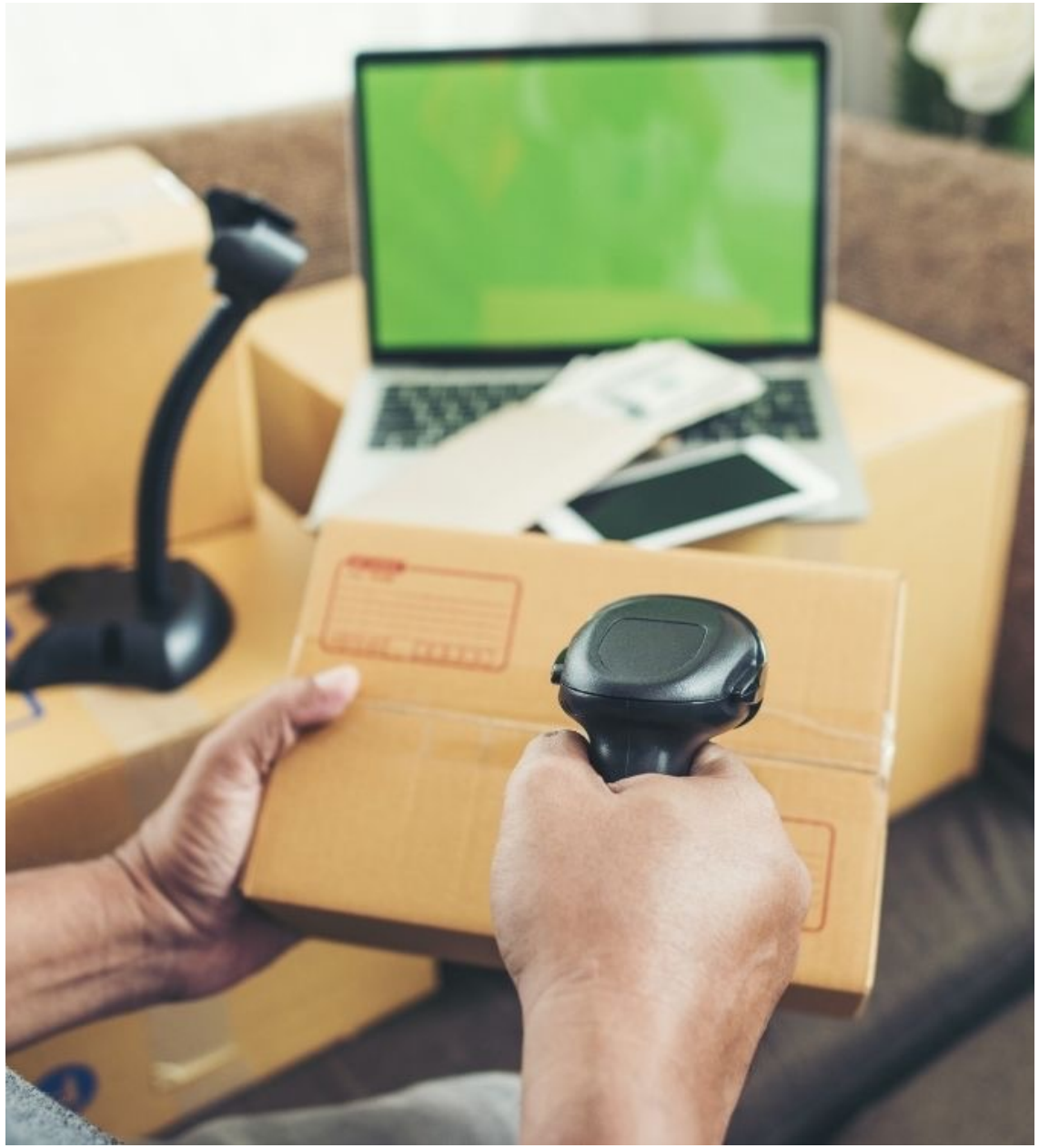
Create unique identities with RFID

RFID—Radio Frequency Identification—is a technology used to tag and track items, people, and even animals.

Like a barcode or magnetic strip, RFID stores information—but instead of needing a direct line of sight, RFID tags can be read wirelessly, quickly, and from a distance.

Strengthen your business with the power of RFID

- **Supply chain -** Reduce inventory errors. Save on labour costs due to speed. Eliminate risk of running out of stock. Get instant inventory counts.
- **Asset tracking -** Locate product and owner/user. Improve shipment or WIP verification. Improve information related to the movement of products or assets.
- **Security and brand protection -** Deter theft. Raise the alarm when a product has left a particular zone without authentication. Protect your product from counterfeiting.
- **Branding -** Create a unique user experience with NFC (Near Field Communication) technology, and allow users to connect to your brand instantly.

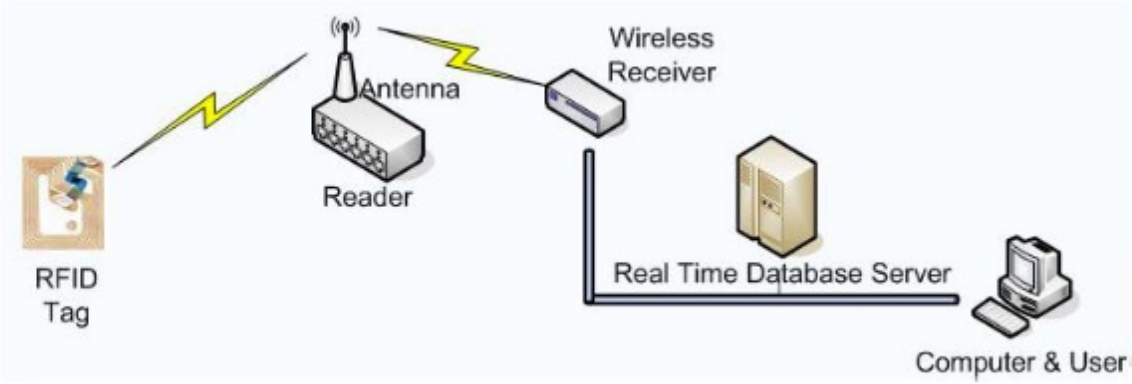


RFID 101 - the components

- A scanning antenna/reader
- A transceiver with a decoder to interpret the data
- A transponder —the RFID tag— that has been programmed with information.

RFID 101 - How does it work?

- The scanning antenna can be permanently affixed to a surface or could be handheld.
- When an RFID tag passes through the scanning field, it detects the activation signal from the antenna.
- That "wakes up" the RFID chip, and it transmits the information on its microchip to be picked up by the scanning antenna.



RFID 101 – Types and frequencies

- Passive RFID tags: Do not require batteries. They can be very small, are inexpensive and have a virtually unlimited life span.
- Frequencies: UHF far field, UHF near field and HF, NFC.
- Active RFID tags: Have their own power source. The reader can be much farther away and still receive the signal. Built to have up to a 10-year life span.

Advantages of RFID over barcode

Characteristics	RFID	Barcode
Line of Sight	Does not require a physical line of sight or contact between the reader/writer and the tagged item. The item can be stationary or in motion during the ID process.	Readers require a direct line of sight to the printed barcode.
Range	Reader can pull information from a tag at a distance up to 100 feet, with the right frequency.	Typically, no more than fifteen feet.
Reading speed	Typically, less than 100 milliseconds. Large numbers of tags can be read at once (ex. forty or more tags per second).	Barcode readers usually take a half-second or more to successfully complete a read (due to the direct line of sight requirement).
Ruggedness and Reusability	RFID tags can be implanted anywhere on or within the product itself or be protected (i.e. polyester film label) guaranteeing greater ruggedness and reusability.	Limited. Due to the direct line of sight requirement, the barcode must be exposed on the outside of the product, where it is subject to greater wear and tear.
Read/write Capability	The RFID reader can communicate with the tag and alter as much of the information as the tag design will allow.	No read/write capability. Cannot add to the information written on a printed barcode.

Unlock the Best in Class RFID Solution

Converting inlays and encoding RFID is demanding. Each application is unique and dozens of factors are taken into consideration by our highly experienced team:

- Product: labels or tags
- Size and design
- Inlay frequency: UHF, HF, NFC
- Environment: outdoor, indoor
- Surface property: where the label is applied
- Application process: manual/automated
- Business objectives
- Encoding work: serialization, proprietary number sequencing, etc.
- Printability: thermal transfer, direct thermal, flexographic, digital
- Integration partner
- And more...

Contact Us

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