

RFID: How it Works

the overview

Radio Frequency Identification (RFID) is a means of identifying a person or object with microchips and radio waves. Typically RFID systems use one of these frequencies: 125kHz, 13.56 MHz or 900MHz. Using RFID, identification can occur automatically and at a distance.



2 reader

RFID readers are usually connected to a personal computer and serve a similar purpose as a barcode scanner. They grab data from the tags, but only those that are compatible and within range. The main purpose of a RFID reader is to connect tag data to a computer database. Readers sometimes are battery-powered and can include a mini-computer to enable maximum mobility.



3 database

The computer database stores the tag data and often links it with other information to enhance its power. The computer also generally runs application software specifically designed to carry out other tasks related to the RFID system, like inventory or account management.



1 tag

The vast majority of RFID tags (also called transponders) consist of a silicon microchip attached to an antenna. The microchip stores data, like a unique serial number. The antenna "speaks" to readers and transmits data to them. The power of RFID is that this communication is wireless and requires no human labor or input. Two main categories of RFID tags are passive and active (see page 9 for more details).

