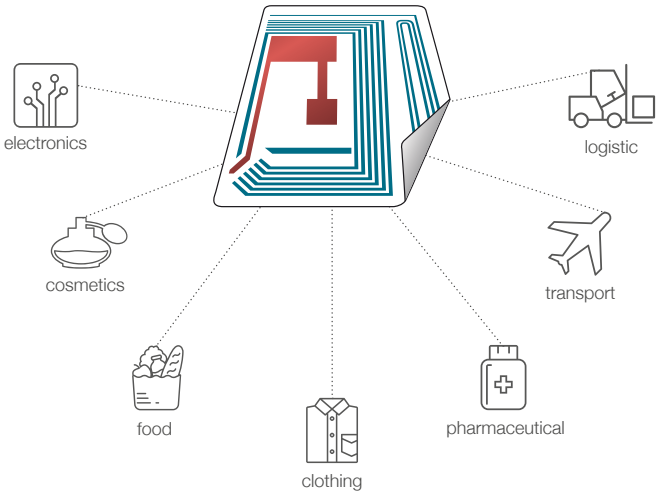
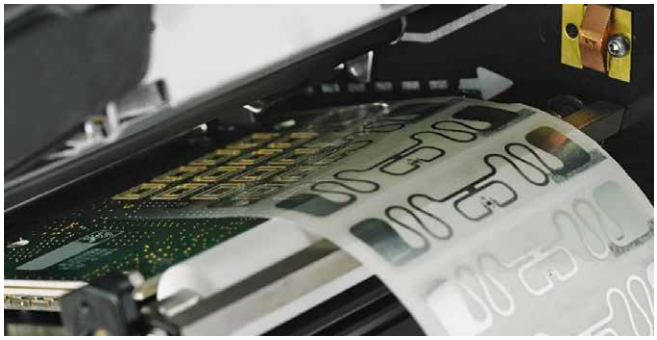
RADIOFREQUENCY RFID AND NFC TAGS

Labels made with Radio Frequency Identification (RFID) technology allow for the identification, storage, management, and tracking of goods' production flows at any time with speed and precision, without the need for visual or physical contact. The fundamental components of this system are the tags or transponders and the read/write devices with their respective antennas. Variable data can be electronically written into the transponder's memory and transmitted to the readers through a modulated radiofrequency signal captured by their antennas. The reading systems can be fixed or portable, depending on the intended use. RFID labels are designed for the logistic and production sectors, where quickly reading variable data (processing codes, types, models, dates, etc.) at any time, without having to orient the object to be read, becomes essential. Furthermore, it is important to note that tags can be read through certain non-conductive materials or even in dirty, dark, or outdoor environments.



Printers: Using radiofrequency technology, they allow reading and storing data in the internal chips (transponders) of RFID labels while simultaneously printing texts, barcodes, and graphic symbols using thermal transfer method.



NFC stands for Near Field Communication, and it is a specialization of RFID technology, with the difference that NFC is designed for wireless information exchange between devices placed at close proximity, usually a few centimeters apart. NFC technology is now integrated into many smartphones, opening up scenarios for truly innovative applications. Short-range communication is having a strong impact on daily habits; consider, for instance, the quick payments with credit cards, where simply bringing the card close to the reader without entering any code is sufficient. NFC technology is also bringing great innovations in access control and attendance monitoring. For example, in a construction site, all workers can clock in and out by simply bringing their NFC tag close to the smartphone of the site manager, thereby recording their daily work activity. Another example is the collection of work data by technicians in a machinery maintenance company; detecting the work activity of the technicians becomes effortless by bringing a smartphone close to the NFC tag attached to the machinery and including real-time reports of the work done, enabling immediate verification by the company's management system. RFID and NFC are revolutionary technologies for fast and secure data transmission within a company, eliminating the possibility of fraud, counterfeiting, and vandalism.







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