

*At the forefront of
RFID technology:
NEC provides future-
oriented applications
for your business.*



RFID Solutions by NEC

Identify and track objects the contactless way.
Innovation for your business success.

RFID – a key technology

Today, companies use this groundbreaking, future-oriented technology to control their business processes to a greater degree while improving on efficiency and productivity. RFID is emerging as the standard in processes and operations.

Radio Frequency Identification (RFID) enables contactless, conclusive identification of objects, allowing for automatic, real-time tracking of any given item in the logistics chain.

Pioneer in contactless data transmission

The hub of the new technology is a so-called transponder: a tiny computer chip containing an integrated antenna. Generally, this chip is integrated in a carrier object like a product label or plastic card. A numeric code stored in the chip encrypts the information and transmits it to its immediate surroundings via the antenna. At the same time, the coded information is also recorded in a central database. Use of the correct reader enables the individual code of any object to be received and compared to that stored in the central database. The result: every individual object is uniquely identifiable.

One example for a numbering scheme on the transponder is the **Electronic Product Code**, which identifies a product's manufacturer, version, serial number and product packaging unit.

Various types of transponders are used depending on the field of application. And depending on the application, low, high, or ultra-high frequency

ranges are used for communication between the transponder and reader.

Profit today from NEC RFID Solutions

As an innovation leader with over 30 years of experience in developing turnkey solutions, NEC's goal is to realize the unique advantages of RFID technology for you. We want to help you maximize the benefits of this innovative technology as you streamline your business processes and applications for future growth.

We have designed a number of concrete solutions that enable you to implement RFID and redefine your company's workflows and logistics processes. The core of NEC's RFID Solutions is its **RFID Manager/EPCIS** middleware, which opens up applications of the future that not only secure your processes but make them more transparent and comprehensible. The bottom line is NEC RFID Solutions will help make your business even more efficient and productive, thereby increasing your ROI.

RFID@NEC – NEC RFID Competency & Training Centre

RFID@NEC (located at Republic Polytechnic) is NEC's vehicle and showcase for generating new RFID applications and intellectual property to solve everyday problems for our target customers in South Asia.

The competency centre aims to drive RFID adoption in Singapore by providing easier means for testing the feasibility of concepts. RFID@NEC also provides end user compliance testing services in line with EPCglobal Standards.

Over the years, NEC has developed technical competence as well as implementation know-how in RFID applications and solutions. NEC has successfully developed and deployed RFID based solutions in Manufacturing, Retail, Logistics, Food Perishables and Security Applications.

At RFID@NEC, you can view a live showcase of various RFID technologies, including software and system integration platform, infrastructure, readers and RFID labels. We support customers with practical end-to-end solutions customized to their business needs, starting from the first consultation right through to implementation and maintenance of an RFID-supported process.

RFID@NEC also serves as a testbed for development of typical RFID solutions for specific industry sectors. RFID@NEC is also a training centre for customers, partners and RFID service personnel.



Visit by appointment only.
Contact: **(+65) 6379 2601** or
email: **rfid@ap.nec.com.sg**

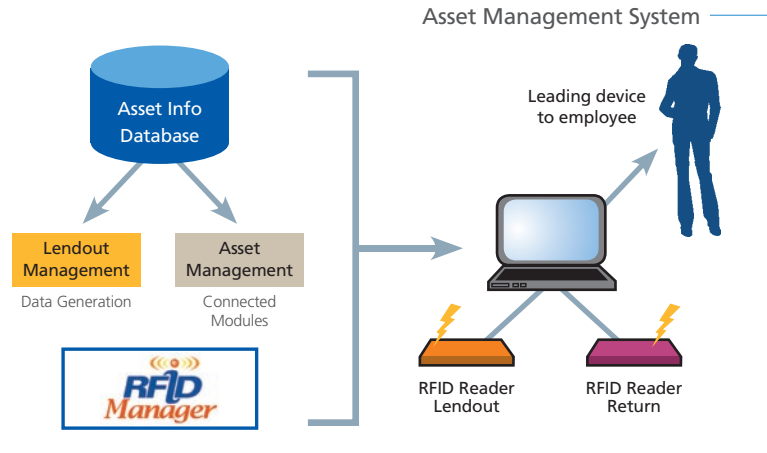
How NEC RFID Solutions can help you

Here are three practical examples of how we can help your business.

Application scenario "Asset Management"

This solution ensures that administrators always know the location of electronic devices such as telephones, PCs, laptops, measurement and testing instruments. Devices provided to employees are first outfitted with an RFID transponder. The individual code of every device is stored in a central database, thereby enabling responsible personnel to identify each asset using an RFID reader.

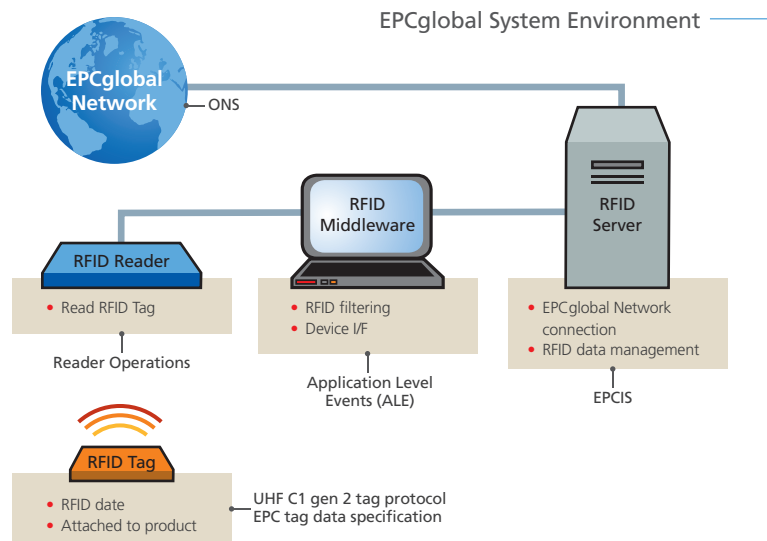
This optimizes asset availability and centralizes administration. The current status of a device can always be monitored; contactless tracking thus increases administration efficiency.



Application scenario "EPCglobal Network"

The Electronic Product Code (EPC) was developed to make worldwide supply chain processes between manufacturers, retailers and outlets even more seamless, efficient and faster. Here, too, NEC has the convincing solution for you. We provide the **complete** EPCglobal Network environment, with total harmonization of elementary technologies, especially with regard to RFID. In addition to the EPC code, RFID tags and RFID middleware, the EPCglobal Network – which uses ONS standards – is among the central components.

We are your partner for scalable, ongoing implementation, and we always guarantee the highest security and expandability – to protect your investment and future business growth.



Application scenario "Temperature Traceability"

NEC presents the RFID starter kit with integrated temperature recording. A temperature sensor is integrated in the transponder which precisely registers any temperature changes during the handling and transport of goods that could damage their product quality – an imperative for perishable foods. At the time of delivery, your customer can verify the temperature history of the goods by checking the tag.

Temperature-related logistics processes are seamlessly documented, thus fundamentally optimizing your supply chain's temperature management.

