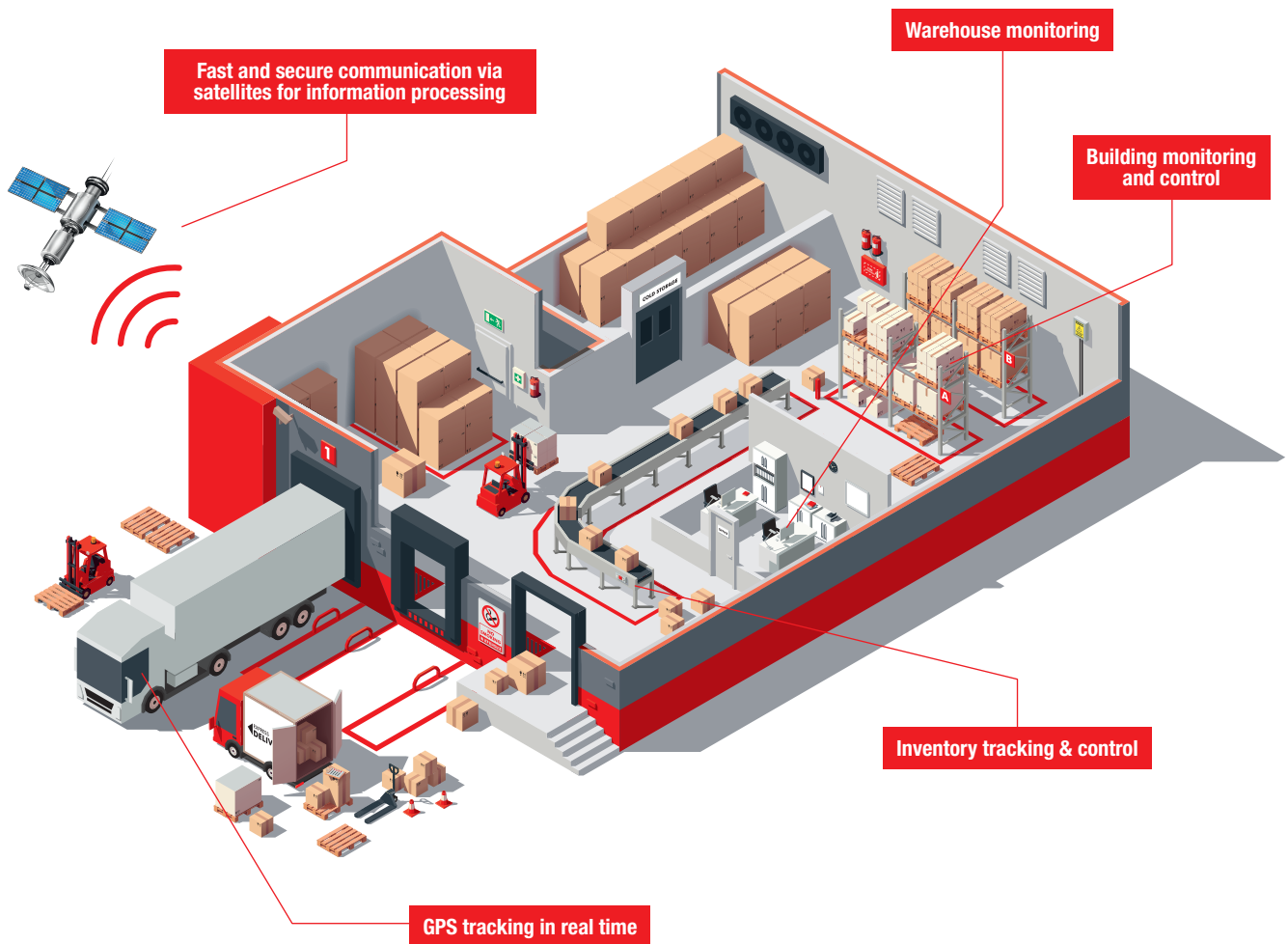# Internet of Things (IoT)

What is IoT?

Internet of things is a summarizing term for the next generation of smart devices that can transmit/receive data over a network autonomously. IoT devices and the data they generate, provide much needed connectivity for a range of new applications and have profound effects on our private and social life. Some of these applications include:

- Industrial automation
- Healthcare & fitness
- Home automation
- Smart cities & smart energy
- Smart farming / agriculture

Industry 4.0 or the Industrial IoT (IIoT) is the digitization of industrial assets and processes that connects products, machines, services, locations / sites to workers, managers, suppliers, and partners.

One of the applications of IoT is the tracking of goods and shipments in a warehouse. Having full knowledge of where everything is located at any moment, makes the warehouse much more efficient resulting in saving time and money.

Component Overview

The Würth Elektronik RF portfolio covers a wide variety of frequency ranges starting from KHz all the way up to several GHz bands. Here are some of the product series that can be easily integrated into your IoT device.
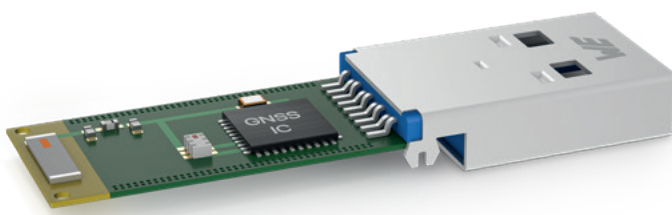
Antenna	Wire Wound Ceramic Inductor	Ceramic Multilayer Inductor	Quartz Oscillator
WE-MCA SMD multilayer chip antenna	**WE-KI** SMD RF wire wound ceramic Inductors	**WE-MK** Multilayer Ceramic SMT Inductor	**WE-SPXO** Simple Packaged Quartz Oscillator

Capacitor	Balun	Shielding Cabinets	Complete Solutions
WCAP-CSRF SMD RF multi-layer ceramic capacitors	**WE-BAL** Multilayer Chip Balun	**WE-SHC Seamless** High Frequency Shielding Cabinet	**Wireless Connectivity & Sensors** Radio modules, GNSS modules & sensors

Signal & Communications

See our complete portfolio:
www.we-online.com/rfcomponents

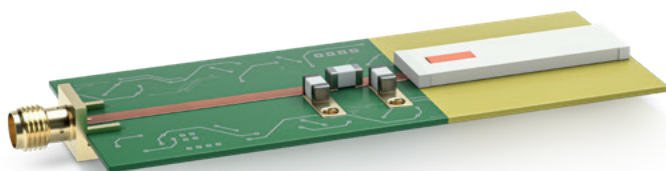## Application Example: Plug-and-Track GPS Device Based on the Latest GPS Technology

- Providing ultra-fast acquisition / reacquisition thanks to the exceptional efficiency of our antennas and the perfect matching circuit.
- Exceptional tracking sensitivity for tracking and navigation in difficult signal environments while using our filters and customized shielding solutions.

Get Your IoT Device Matched!

Antenna Matching Service
- Optimized antenna performance
- Customer support for antenna placement in design phase
- Smallest antennas with less ground clearance requirements

More information about Antenna Matching:
www.we-online.com/antennamatching

Application Note WE-MCA Multilayer Chip Antenna Placement & Matching:
www.we-online.com/ANP057