

PRESS RELEASE

Intelligent shelves for reordering automatically – RFID technology of Würth Industrie Service proving its worth for more than 10 years

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Würth Industrie Service/Bad Mergentheim. In 2008, the first pre-series models were tested for the customer projects in industrial Kanban and the solutions were deployed under the brand CPS®RFID shortly thereafter. On 9th September 2021, the RFID system family as well as the intelligent shelf iSHELF® of Würth Industrie Service GmbH & Co. KG celebrated the tenth anniversary. By now more than 10000 modules are used in industrial production for decentralised material supply.

There are multiple identification methods - barcode, RFID, NFC, to name a few. These auto-ID technologies are used in science, economy and trade to automatically identify different objects. All these systems have unique features for identification. Though it might sound complicated, the application is simple and common. Be it cash register at the bakery, petrol station or supermarket, auto-ID technologies are used everywhere. Here the scanner reads the barcode and thus identifies all the required data such as price and item description. The technology works the same way even in Kanban systems in the industry for ordering C-Parts using a barcode label and a standard scanner. This process is used since the 90s and has reached its limits over time. From 2008 onwards, Würth Industrie Service has been utilising RFID technology for automatically replenishing the C-Parts. In the meanwhile, the C-Parts partner offers more than 10 RFID module solutions in total: from application in the central Kanban storage location to direct supply at the work and assembly station.

An impervious chip with antenna called as RFID tag or RFID transponder forms the basis, which is attached to the respective object in the C-Parts section as label on Kanban bin, and can be moved freely with it. Each tag can be identified via a unique number for data security. An RFID system also consists of a reader for recording the transponder, and a transmitter for transferring the data and for automatically reordering the C-Parts for production. The major difference in the systems is in the passive or active RFID transponders. While the passive RFID transponders do not have their own power supply and gain

energy from energy field generated from the reader for sending the data, the active transponders have their own energy source, for e.g. a battery, which triggers the data transfer. Würth Industrie Service operates both the systems, but predominantly favours systems with passive RFID transponders, since they are maintenance-free and can be efficiently integrated in the customer infrastructure. These systems are available in 10 different variations. CPS®RFID system family includes, among others, the intelligent shelf iSHELF®, smart pallet box iBOX®/iBOX®flex, iGATE for bulk reading as well as the autonomous iPLACER® for workstation supply.

The advantages of RFID transponders along with reader with respect to barcode-supported systems are very clear: by using RFI technology within a Kanban system, the industry customers of Würth Industrie Service can rely on maximum possible supply security – without manual use of scanner which leaves scope for human error. The digital data transfer via RFID to the ERP system of Würth Industrie Service enables a quick and transparent information flow and a seamless project management. Delivery cycles can be reduced to minimum and the number of bins per item can be optimised. Moreover, the fluctuations in demands, especially peaks in demand and seasonal business can be analysed precisely on time and the disposition in the central storage of Würth Industrie Service can be continuously customised. As a result, it is possible to achieve maximum availability of the right item in the right quantity in the right place at the right time in the production.

Würth Industrie Service focusses on continuously developing RFID technology further, especially along with introducing more innovations – not only for C-Parts supply by the company itself, but also for internal material supply and customer's bin handling. By smartly combining the RFID system iPLACER® with holistic data and supplier management CPS®miSELF of Würth Industrie Service, all the intra-logistics processes can be easily mapped at the customer's location in the future - also for A and B-Parts. As a result, the customer can incorporate different items and suppliers independently and automatically trigger reorders via RFID module, that means also parts for which different purchasing processes apply in most cases. As a result, it is possible to get an overview of all the master data and the flow of goods associated with it at a glance as well as trigger the orders of all product groups accurately and in accordance with the demand. The development in RFID is therefore far from complete and will continue in different areas.

Photo material:



Captions:

Photo 1: iSHELF.jpg

Caption 1: The intelligent shelf iSHELF® for a seamless supply of material from Kanban storage

Photo source 1: Archives of Würth Industrie Service GmbH & Co. KG

Brief profile of Würth Industrie Service GmbH & Co. KG

Within the Würth Group, Würth Industrie Service GmbH & Co. KG is responsible for the supply of the industrial sector. Since its foundation in 1999, Würth Industrie Service is located at the Industriepark Würth in Bad Mergentheim, Germany with over 1.700 employees.

As a complete C-Parts provider, the company offers its customers a specialised product range of over 1,100,000 items: from screws, connection and fastening technology, tools to chemical-technical products and occupational safety. In addition to the extensive standard range, the strength of the company lies in its customer-specific, logistical and dispositive supply and service concepts as well as in special parts. Under the service brand "CPS® – C-Product Service", the company offers modular solutions, which are customised as per customer-specific requirements. Thereby, the consumption-based and demand-based systems significantly rationalise the processes for purchase, logistics and quality assurance and enable the procurement of small parts in a cost-optimised manner. Logistic and dispositive services such as shelving systems with scanners or a just-in-time supply using Kanban bin systems contribute significantly to increasing the productivity.