



WÜRTH

PROFESSIONAL SOLUTIONS

SMART SYSTEMS

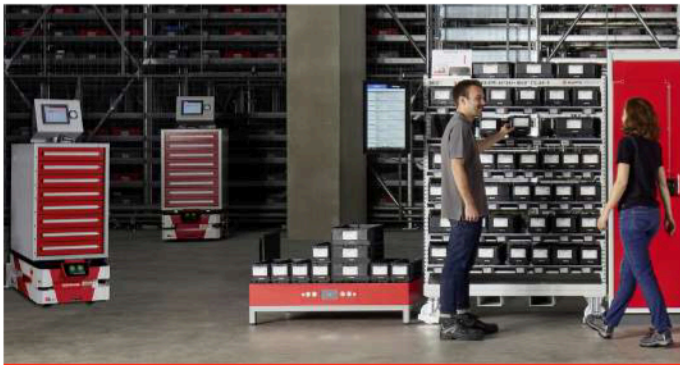
DECADES OF MASTERY | TRANSFORMATIONAL RESILIENCE



**INSPIRED BY TOMORROW,
IMPLEMENTED TODAY.**



THE FUTURE OF SUPPLY – THINKING ABOUT TOMORROW TODAY



Workplace of the future

Intelligent supply right to the workplace

In the workplace of the future, man and machine work hand in hand. In combination with the RFID module iPLACER® and other RFID systems as well as the digital rack label iDISPLAY and the iTERMINAL, the worker assistance systems assure certainty in the work processes and reduce complexity. Autonomous shuttles automatically bring items directly to the workstation, reduce walking distances and allow more time for value-adding activities.



CPS®miSELF

One system for all parts.

Regardless of whether used for processes in your procurement or in intralogistics: The web-based platform CPS®miSELF, offers you a transparent and quick overview of your inventory, goods movements, order status, storage locations, suppliers and much more. The result: one system for all parts – setting a course for the future of supply.

More than now. Solutions for tomorrow.

In the industry, assemblers and operators face a variety of challenges: unforeseeable events, increasing volatilities and shortage of resources, increasing demands of flexibility and productivity. How will working methods change in the future? How will the assembly workstation of tomorrow look like? Would it not be better to rely on fully automated systems, so that everything is there exactly when and where it is needed? Systems, which are connected, work hand in hand with people and are integrated with one another? Systems, which can react within seconds – even to unforeseeable events? Systems that are right where people need them?

The answers to these questions lie in the physical and digital logistics and system solutions for production materials and operating materials of Würth Industrie Service. On the one hand, the goal is to design lean and simple workflows and processes in the supply chain as far as possible. On the other hand, the focus is on man and his individual requirements: an ergonomic and precisely tailored work environment, supporting and simplifying of his tasks as well as an intelligent connection of the processes between man and machine.

EVERYTHING IN ITS PLACE!

Workplace of the future

With the increasing complexity of the processes in logistics and production, the challenges faced by modern workplaces are growing as well. It is important that all the required work equipment is available exactly where it is needed – in the shelf, at the storage location or directly on the assembly line. Thanks to our customised solutions, storage spaces, workstations and assembly areas can be integrated directly into the value chain and production supply. This creates an ergonomic workplace that is precisely adapted to the individual needs with intelligent supply solutions.

Intelligent. Connected. Secure. Unnecessary walking, time-consuming search for parts and manual recording of requirements are a thing of the past. Thanks to customised workstation design and C-Parts supply directly at the place of use, all the parts are available right where you need them. In addition, you benefit from lean processes and maximum parts availability thanks to automated, demand-oriented reordering.

MAXIMUM AVAILABILITY OF YOUR C-PARTS DIRECTLY AT THE PLACE OF USE

INCREASE IN PRODUCTIVITY BY ELIMINATING WALKING DISTANCES

REDUCTION IN SOURCES OF MANUAL ERROR

EARLY IDENTIFICATION OF DEMAND FLUCTUATIONS

LOW CAPITAL COMMITMENT

CAREFULLY TARGETED CONTROL OF GOODS FLOW

MORE FLEXIBILITY IN YOUR VALUE-ADDED CHAIN

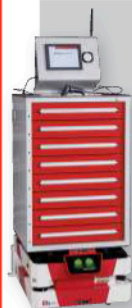
MAXIMUM TRANSPARENCY OF INVENTORY AND CONSUMPTION

YOU CAN CONCENTRATE FULLY ON YOUR CORE BUSINESS!

ERGONOMIC WORK EQUIPMENT

Additional solutions from our cooperation partners

Autonomous shuttles automatically bring items directly to the workstation, reduce walking distances and allow more time for value-adding activities.



Workplace supply with autonomous robots

We are currently working on a concept, in which AMRs (autonomous mobile robots) are used for a needs-based provisioning of materials directly at the workplace. Fully automated handling, without manual intervention, for maximum supply security.

Thanks to this pioneering technology, industrial companies can optimise their internal supply chain in the future and increase their manufacturing efficiency sustainably.



Workplace supply with mobile vending machines

Today's production environment requires flexible, reliable and automated solutions. The **ORSY®mat mobil** by Würth Industrie Service combines precisely these features – a mobile storage system that can be used wherever it is needed. In this innovative concept, Würth Industrie Service combines the tried and tested ORSY®mat vending machines with an Autonomous Mobile Robot (AMR) by Gessmann. Thanks to the fast and cost-efficient automation of internal transports, the vending machine can potentially supply materials right to the workstation. The special solution developed by the two partners is designed to optimise decentralised material dispensing, reduce the workload on employees while also achieving more efficiency, flexibility and security.

ONE SYSTEM FOR ALL PARTS.

Tried and tested systems. Digital management. Secure processes.

The foundation of **CPS®miSELF is a web-based platform** in combination with the use of RFID Kanban systems. Small parts like screws, washers and nuts are placed in a Kanban bin with a RFID tag. The RFID systems like the intelligent shelf iSHELF® record the data and transmit it to the web platform, where all information across all storage locations and suppliers is available at a glance. For bulky goods like pipes, finished gearboxes or entire vehicle seats, the data is transmitted by using, for example, order cards equipped with RFID tags in combination with the iPLACER®.

With this principle, reorders can be managed in an easy, transparent and secure way so that all the required parts are available to you in the right quantity, at the right time, at the right place.

**USE OF THE INNOVATIVE WÜRTH RFID SYSTEM TECHNOLOGY
ACROSS ALL SUPPLIERS AND PRODUCT GROUPS**

MAXIMUM STOCK REDUCTION AND UTILISATION OF SPACE

INVENTORY OVERVIEW IN REAL TIME

**MAXIMUM SUPPLY SECURITY THROUGH SIMPLE, AUTOMATED DEMAND
ASSESSMENT AND SUBSEQUENT MERCHANDISE PLANNING**

**ALL GOODS MOVEMENTS, CONSUMPTION ANALYSES
AND FORECASTS ARE AVAILABLE AT A GLANCE**

**FLEXIBLE APPLICATIONS IN PRODUCTION, INTRALOGISTICS,
MATERIALS MANAGEMENT, MAINTENANCE AND PROCUREMENT**

Transparency in the internal supply chain

CPS®miSELF is not meant only for the reordering of your required parts. By maintaining transparency about all kinds of goods movements, it also allows you to map the management of internal milk runs and workplace supply as well as complete asset management of components in the production process.

Increase in productivity through CPS®miSELF

Industrial companies can combine all goods movements on one platform with CPS®miSELF. The system offers you a real-time inventory overview, consumption analyses and forecasts along with the automated recording of requirements across all product groups and thus ensuring comprehensive supply security and enabling a wide range of options for increasing productivity in your production, intralogistics, materials management, maintenance and procurement. There are no limits to its possible individual applications!



Our key elements in modern materials management

THE INTELLIGENT SOLUTION FOR OPTIMUM KANBAN MANAGEMENT

Kanban process by Würth – Delivery reliability for your small parts

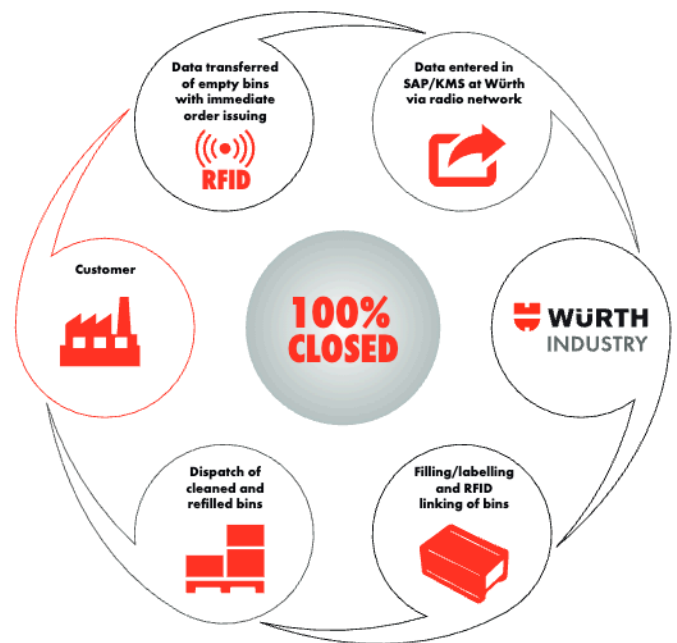
The material flow management takes place in the Kanban systems of Würth Industrie Service with the help of two bins - the Würth small load carriers W-KLT®2.0 (E-KLT). A Kanban label is used as an information carrier within the Kanban process in combination with various technologies to automatically control the production process. In the past, a handheld scanner was used to trigger demand, but today over 70 percent of the customers of Würth Industrie Service use RFID-supported system solutions as standard for automated reordering and other intelligent technologies may be used in the future. The Kanban system by Würth Industrie Service can be used for the direct materials like fasteners, fastening technology, DIN/standard parts along with the special and drawing parts as well as for indirect requirements.

Data management in the Kanban process

Every bin movement is recorded and documented so that information on the status in the Kanban system can be provided at any time. The basis for this is a specially developed Kanban Management Software, the specialised European Kanban logistics centre in Bad Mergentheim and the barcode-supported labels or RFID tags. Based on the data, all the C-Parts are planned close to consumption, inventory and storage technology are regularly optimised and statistical data is updated. All data can also be accessed by the customer via the information platform WIS portal. At the same time, a large number of special and drawing parts as well as specific product groups can be handled effectively. The employees of Würth Industrie Service plan a specific and cost-optimised solution by involving all specialist departments, implement the system together with the customer and provide support with the product standardisation of C-Parts.

Different types of optimal Kanban management

We implement the most suitable Kanban service solution for automatic replenishment at your site, tailored to your required items and to your individual work situation. We focus on maximum availability of the right item, in the right quantity, at the right place and at the right time. RFID technology has become an integral part of the efficient value-added chain of manufacturing companies. With RFID Kanban, you can completely automate your procurement and reordering process, manage inventory in a lean manner and identify the demand fluctuations early.

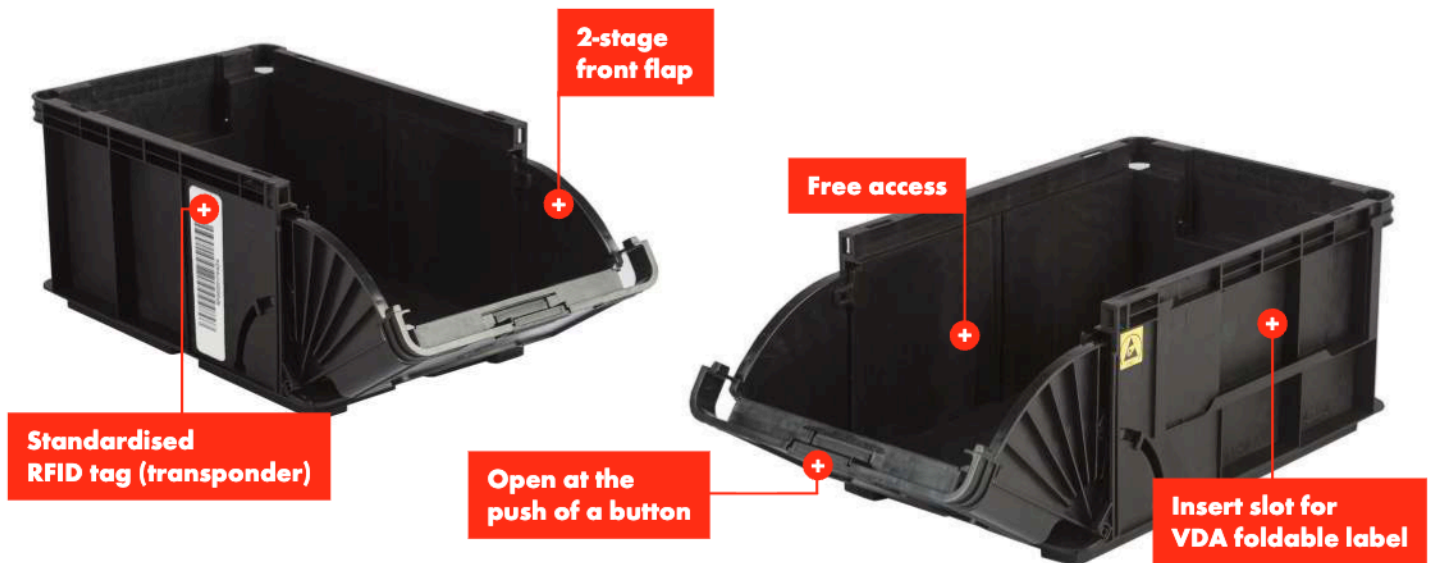


PATENTED AND SECURE.

SMART SYSTEM – COMBINED WITH THE PATENTED BIN W-KLT®2.0

A strong team.

Utilise the benefits of both of our innovations together for an optimised supply process! You can not only optimise your business processes, but you will also be able to use RFID to transmit your requirements multiple times a day. Your inventory is replenished even faster and in a completely automated manner.



Benefit from these advantages

- Unobstructed and optimised access area thanks to the wide front flap without crossbar
- 2-stage front flap for comfortable withdrawal
- Safe indicator function (flap open = bin in use)
- Up to 50% less rack and floor space required
- Up to 50% less soiling of the items
- Can be combined with the innovative RFID technology
- 7 different bin sizes from XS to XXL:
 - W-KLT®2.0 small load carrier in (VDA-compliant) sizes 2115, 3215, 4115, 4315
 - W-KLT®2.0 XS and S small-sized bins
 - W-KLT®2.0 XXL large-sized bins 6429
- With mechanism for VDA foldable label (from size 3215)

Efficient bin manufacturing

The focus is on the reusable Kanban bin itself. Polypropylene is the preferred recyclate for the body of the bin – depending on market availability. This keeps valuable items in circulation without compromising on the quality.

With the W-KLT®Clip, attach the bins directly to the workstation

The attachment clip for the Würth small load carrier makes the Würth small load carrier mobile! Made of durable aluminium, it supports up to 15 kg and thanks to the tilt angles of 0°/12.5°/25°, our patented bins W-KLT® and W-KLT®2.0 in sizes 2115 and 3215 can be flexibly and ergonomically attached to your workstations.

You can find out more about our workplace systems including the comprehensive range of bins here:

www.wuerth-industrie.com/workplace



CUSTOMISED SOLUTIONS



How does SMART SYSTEM work?

The starting point for replenishment via RFID is an impervious chip with an antenna - the **RFID tag or RFID transponder**. This is attached to the respective item in the C-Parts division as an adhesive label on the Kanban bins, 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 and active RFID transponders.

While the **passive RFID transponders** do not have their own power supply and gain energy from energy field generated by the reader for sending the data, the active transponders have their own energy source, for e.g. batteries, which triggers the data transfer. Würth Industrie Service operates both the systems, but prefers the systems with passive RFID transponders, since they are maintenance-free. In addition, the integration of systems with passive transponders is seamless and there is no need to make changes to customer processes.

All the information can be found at a glance on the bin label – completely transparent!

| | | | | | | |
|----------------------|---|------------------------|---|-------------------|--------------------------|----------------------|
| Customer logo | | | D-MGH-2659692 | | WÜRTH INDUSTRY | |
| Customer name | Customer | | | 0057 10 20 | | Würth item number |
| Storage location | Pre-assembly | | | 600 | | Bin filling quantity |
| Delivery note number | 1234567 29.08.2025 | Lot: 5647894564 | | E-KLT 3215 | | Bin size |
| Customer item number | 1000048 | | | | | Batch number |
| Parts description | Hex. screw 8.8-SW17-(A2K)-M10x20 DIN 933 | | Alternative storage location: Central warehouse | 0057 10 20 | | Item drawing |



The advantages of RFID

Transparent exchange of information

The RFID data transmission to the ERP system of Würth Industrie Service ensures quick information flow, efficient project processing and targeted control of the goods flow. The fully automatic reordering ensures maximum goods availability in the Kanban system.

Elimination of manual data recording

RFID transponders enable error-free, location and time-independent data retrieval over long distances – completely without manual scanning.

Maximum supply security

RFID in the Kanban system ensures highest availability of materials for the production and significantly reduces the procurement and process costs.

Detection of demand fluctuations

Peaks in demand and seasonal fluctuations are analysed with pinpoint accuracy so that scheduling in the central warehouse can be adjusted continuously. This ensures maximum item availability, minimises delivery cycles and optimises the number of bins.

**THE RFID TAG
ON THE KANBAN BIN**



FLEXIBLE SOLUTIONS FOR 24/7 TRANSPARENCY



iBOX® **Pallet box with RFID**

Order triggering by placing the bins in the intelligent pallet box. Also suitable for pallet handling with Kanban cards.

- Collection of empty bins in the pallet box
- High capacity of up to 192 bins



iBOX®flex **Pallet box with RFID in the rack**

Order triggering by placing the bins in the intelligent pallet box. Also suitable for pallet handling with Kanban cards.

- Collection of empty bins in the pallet box
- High capacity of up to 120 bins



iPLACER® **Flexible RFID module**

RFID module for recording requirements at the workstation, at the flow rack and at any location you want.

- Battery-operated module can be attached anywhere
- Automatically triggers reordering



iGATE **Bulk capture via RFID**

Simultaneous detection of multiple bins (bulk capture).

- Can be used as an ordering system or for logging customer-specific bins
- Possibility of incoming and outgoing goods inspection



iSHELF® Intelligent shelf

Orders are triggered by placing empty bins onto the intelligent shelves of your Kanban rack.

- Operation of multiple shelves
- No power connection required due to battery operation



iPALLET Open RFID pallet box

Recording of up to 160 RFID tags.

- Open system
- Permanent scanning of the surroundings for RFID tags
- Status display using a display

Our intelligent solutions for optimum Kanban management

We implement the most suitable Kanban service solution for automatic replenishment at your site, tailored to your required items and to your individual work situation and requirements.

All advantages in brief

- Maximum availability of your C-Parts in your manufacturing facility
- Transparent purchasing processes
- Reduced procurement costs
- Low capital commitment
- More flexibility in your value-added chain
- Carefully targeted control of goods flow
- Permanent traceability with the help of the WIS portal information platform
- Just-in-time supply from Bad Mergentheim – one of the most modern logistics centres in Europe
- Industrial product range with more than 1,400,000 items
- Personalised support from employees with industry know-how

THE INTELLIGENT PALLET BOX

IBOX®
IBOX® FLEX

**ERROR-FREE SCANNING
THROUGH A CLOSED SYSTEM**

**COLLECTION OF
EMPTY BINS IN
THE PALLET BOX**

**IBOX® FLEX
CONTAINS
A PULL-OUT
DRAWER**

**LOCATION
CAN BE FREELY
SELECTED WITH
THE IBOX®**

**HIGH
CAPACITY**

**ONE SYSTEM FOR
MULTIPLE SUPPLY ROUTES**

**LOCATION CAN BE
CHANGED AT ANY TIME**

**LESS SPACE
REQUIRED**

THE BOX WITH A COLOSSAL CAPACITY

Our iBOX® and iBOX®flex

Both systems have a high capacity to accommodate the bins. Up to 192 bins can be handled in the iBOX® and up to 120 in the iBOX®flex. At a separate storage location, the pallet box iBOX® is used to immediately transmit data of the C-Parts via RFID as soon as an empty bin is placed in it. Thus, it is possible to determine the requirements automatically. The iBOX®flex is a pallet box that is integrated into the shelves. On the one hand, it includes a pull-out drawer for all empty bins, which enables the foreman, logistician or assembler to handle them easily in production. On the other hand, both systems can be used for pallet Kanban: PAL cards with RFID tags are attached to the lid in the iBOX® and to the inside of the doors in the iBOX®flex. Both variants can therefore be operated by two supply concepts at the same time in production: two-bin Kanban and pallet Kanban.



THE SHELF FOR YOUR KANBAN RACKS

ISHelf®

**RAPID
CHANGEOVER**

**OPERATION
OF MULTIPLE
SHELVES**

**ELIMINATION
OF MANUAL
RECORDING**

**NO ADDITION-
AL SPACE RE-
QUIRED**

**VARIOUS
SHELF SIZES
(ISHelf® FLEX)**

**AUTOMATED
ORDER TRIGGERING**

BATTERY-OPERATED

**MAXIMUM
SPACE SAVING**

THAT'S HOW INTELLIGENT A SHELF CAN BE

Our iSHELF® (and iSHELF®flex)

This system is designed to automatically order your direct materials through an intelligent shelf. The shelf can be seamlessly integrated into your existing Kanban racks of Würth Industrie Service – the Kanban process thus remains unchanged. Since it is battery-operated, no power connection is necessary, and the shelf can be placed flexibly in the production area. Your Kanban bins are automatically equipped with an RFID tag by Würth Industrie Service. As soon as you remove an empty bin from the Kanban rack and place it on the intelligent shelf, an immediate data transfer is initiated. This triggers a reorder via ERP system of Würth Industrie Service and you receive the full bins in the next delivery cycle and refilling rhythm.



THE FLEXIBLE RFID MODULE

IPLACER®

**WIRELESS
SYSTEM**

**AUTONOMOUS,
INDEPENDENT
SYSTEM**

**FLEXIBLE
MOUNTING
OPTIONS**

**BATTERY
-OPERATED**

**FLEXIBLE
APPLICATION**

**FULLY-AUTOMATED
ORDER TRIGGERING**

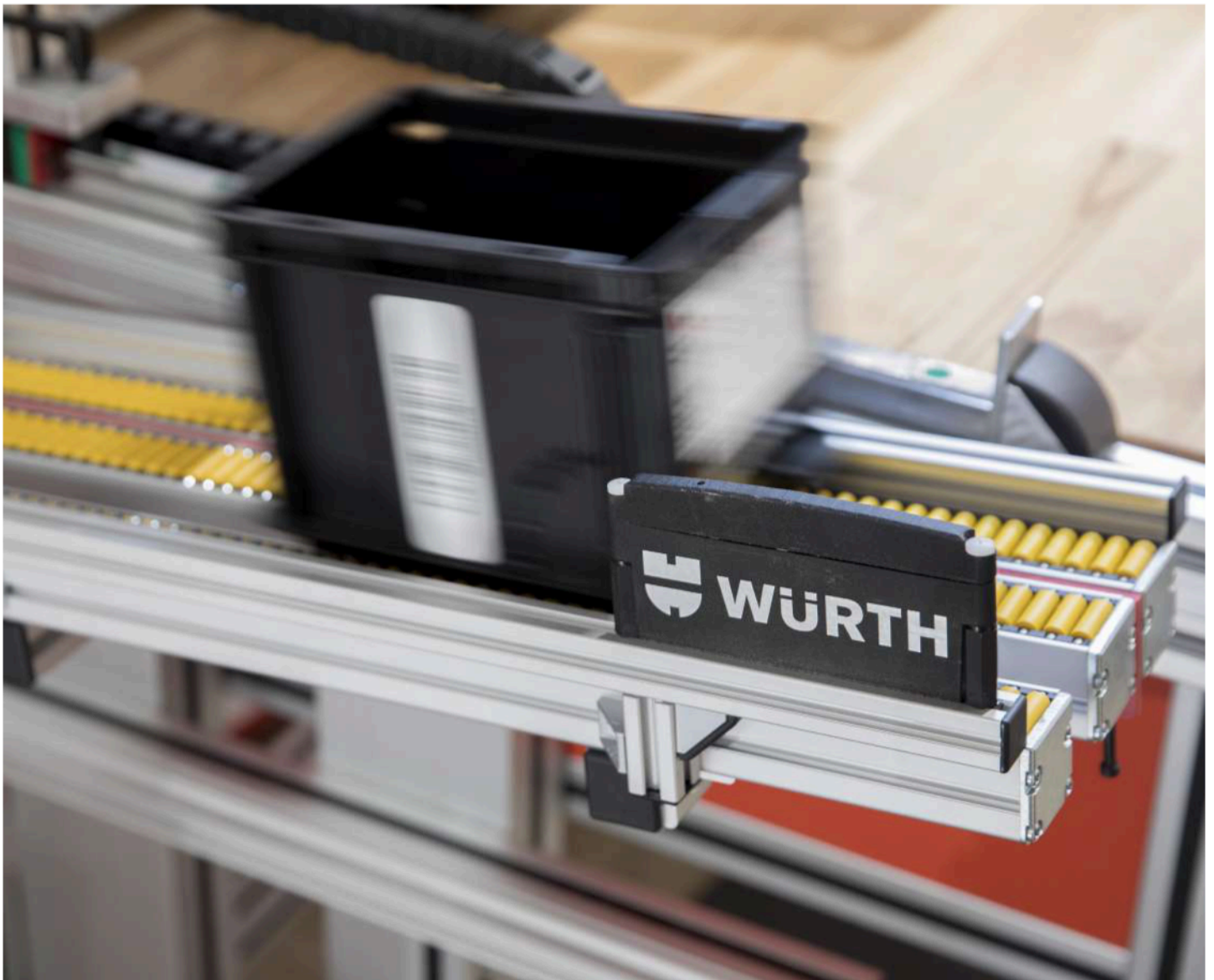
**TRANSPARENCY IN
THE GOODS FLOW**

**OPTIMUM USE
OF SPACE**

THE ORDERING SYSTEM – EXACTLY WHERE YOU NEED IT

Our iPLACER®

The iPLACER® ensures maximum flexibility in our RFID portfolio. The small, handy, battery-operated module with an integrated reader and transmitter unit can be mounted anywhere – in production, at the workstation, in assembly, in logistics or intralogistics – and it automatically reorders C-Parts directly at the workplace or at the flow rack, thus ensuring a lean and transparent material flow. The RFID technology is not only used as an ordering system, but also as a stock management system.



Our standards for RFID Kanban systems

IPLACER® – VERSATILE IN USE

1) iPLACER® WP – Ordering system directly at the workplace

In this application, the iPLACER® WP (Workplace) is installed directly at the workplace. An order is triggered automatically at the "drop-off point" when the empty bin passes through - thanks to the RFID tags, which are normally affixed to all the Würth small load carriers W-KLT® 2.0 or Würth small-sized bins W-KLT® 2.0 S. The bins are then collected in a box and emptied by a service employee during the next delivery cycle.



2) iPLACER® OP - Autonomous, independent ordering system

Owing to its compact form, the iPLACER® OP (Order Point) can be installed flexibly and easily moved to any location. Empty bins or Kanban cards with RFID tags are passed through the iPLACER® module and the orders are easily recorded. This means that the module can be used wherever and whenever you need it - in production, at the workplace, in assembly, in logistics and in maintenance.



3) iPLACER® FR – Replenishment in the flow rack

In addition to its function as an ordering system for fully automated data transfer, the iPLACER® FR (Flow Rack) is being used for the first time as an inventory management system. By attaching two iPLACER® modules to a flow rack, even to existing racks owned by the customers, incoming and outgoing goods, bookings, standing orders and order releases can be easily recorded without any manual efforts. This gives customers in production complete transparency of their inventory and intelligent replenishment. It is possible to notify requirements per rack and per location.



THE GATE FOR BULK READING

IGATE

**TIME SAVING
DURING DATA
RECORDING**

**COMPLETE DOC-
UMENTATION**

**RECORDING
OF 200 EMPTY
BINS**

**INTEGRATION
INTO LOGISTI-
CAL PROCESSES**

**FLEXIBILITY
TO USE**

**AUTOMATIC
REPLENISHMENT**

**USED AS AN
ORDERING SYSTEM**

**CONTROL OF
INCOMING AND
OUTGOING
GOODS**

EFFICIENT AND QUICK IDENTIFICATION OF GOODS

Our iGATE

RFID technology can be used not only to record requirements in a decentralised manner. The iGATE centrally records a large number of bins at once, whenever a material train passes through it. The iGATE enables identification and data transmission of more than 200 bins simultaneously. In addition to this bulk reading, you can use the iGate to log your own, customer-specific bins in use – for e.g. for incoming and outgoing goods inspection. It can be integrated into the logistical processes and offers the possibility to cover a multitude of processes.



THE RFID PALLET BOX

IPALLET

**PERMANENT SCANNING OF
THE SURROUNDINGS
FOR RFID TAGS**

**STATUS DISPLAY
USING A
DISPLAY**

**OPEN
SYSTEM**

**OPTION TO
FREELY SELECT
THE LOCATION**

**HIGH CAPACITY
TO ACCOMMO-
DATE UP TO 160
BINS**

**AUTOMATIC TRANSMIS-
SION OF REQUIREMENTS
VIA RFID TAGS**

**POSITION CAN BE
CHANGED AT ANY TIME**

**LESS SPACE
REQUIRED**

TRANSMISSION OF REQUIREMENTS BREAKS NEW GROUND

Our RFID pallet box

Compared to the RFID modules previously used, our pallet box iPALLET is not a closed system with a lid for automatically triggering an order; rather, it is an open system. The “pallet” constantly scans its surroundings and searches for new RFID tags for transmitting the requirements, which are then placed accordingly. A display combined with 4 LEDs shows the status within the Kanban supply. The “pallet” has a capacity to accommodate 160 RFID tags, which corresponds to a maximum of ten bin levels.



OUR DIGITALISATION EDGE IN RFID KANBAN SYSTEMS



iTERMINAL with iDISPLAY

The digital interaction point

The screen shows all the information about the Kanban rack at a glance.

- Enables all item and bin information to be accessed directly in production
- Supports in searching for items (Search-by-Light) and picking operations (Pick-by-Light) together with the digital rack display iDISPLAY



iDISPLAYpush

Reorder at the push of a button

Simple transmission of requirement at the push of a button at a flexible place of use.

- Unwired, freely placeable
- Pressed = ordered
- Helpful visual support through LED signals
- Up to 12 pages available for recording
- Suitable for pallet Kanban



iSCALE

Reordering using sensors

iSCALE is a sensor-controlled scale, which is directly connected to a Kanban bin.

- Power supply via battery pack, thus operation without cable possible
- Storage management with weighing technology



iSCALEpal

Pallet Kanban with weighing technology

iSCALEpal is a sensor-controlled pallet scale that continuously monitors the weight.

- Power supply via battery pack, allowing also cable-free operation
- Storage management with weighing technology

Automate today, benefit tomorrow.

By 2030, we at Würth Industrie Service intend to automate 80 % of our internal processes. Digital systems, robotics and AI, which extend to the workplace, play a decisive role in this.



iDISPLAYrack

The multifunctional rack label

The multifunctional rack label iDISPLAY displays all the latest item information directly at the storage location from the ERP system of Würth Industrie Service.

- Works completely independently at the storage location (battery-operated)
- Used for complete digitalisation at the storage location in production.
- Allows reordering at the push of a button via the iDISPLAYpush function at bin level (triggering an empty message)
- Changes in master data are updated automatically
- The information searched for is called up via two display pages – navigation is simple and intuitive
- Offers a Pick-by-Light function together with the iTERMINAL
- Helpful visual support through LED signals
- Up to 12 pages available for recording
- Manual error minimisation, maximum productivity and transparency

Statement from a medium-sized company with two iTERMINALs in use

“ We use the iTERMINAL at various storage locations to support our picking processes. The terminals are mainly used for Search-by-Light and Pick-by-Light operations. [...]”

Together with the electronic rack label iDISPLAY, an interactive and guided picking process is guaranteed, which significantly increases productivity. The iTERMINAL helps us to significantly reduce picking times and sustainably improve our efficiency. [...]

All the benefits of iTERMINAL

- Overview of all items at the storage area
- Search by customer item number, supplier item number, barcode and item details possible
- Display of all the storage spaces of an item (primary as well as secondary)
- Automatic data transfer
- Error reduction (as manual processes are eliminated)
- Integrated barcode scanner
- Resource-saving system (printed item or pick lists no longer required)
- No integration into the customer's infrastructure required
- Application available in different languages

**DIGITAL.
REAL.
TRANSPARENT.**



SYSTEMS CONNECTED WITH EACH OTHER: I-TERMINAL & I-DISPLAY

Because digitalisation means progress

As a comprehensive C-Parts partner, Würth Industrie Service places a great value on continuously developing its tried and tested systems. In cooperation with the Fraunhofer Institute, Institute for Material Flow and Logistics IML, the iDISPLAY and the iTERMINAL were developed as part of the "Enterprise Lab".

Digitalisation is becoming reality through the **iDISPLAY, a multi-functional rack label**, and **iTERMINAL, a digital interaction point** at the storage location in production. A printed rack label can be replaced by a digital rack label – the iDISPLAYrack – in the future, which operates completely autonomously at the storage location.

Unimaginable yesterday, real today, smart tomorrow

With the extended functions of iDISPLAY, the C-Parts partner is setting the course for a digitalised world at the storage location in production. That too, in a perfectly organised manner with minimal effort and also in a smart way.



TRANSPARENT RACK SPACE MANAGEMENT

Would you like to know what is in the storage location?

The bin and item information on the iDISPLAY means you always know whether they are in the right place. Or you receive information on which other storage locations the item is still located.

Are you looking for one or more items?

Using the iTERMINAL, you can select the desired item or create a picking list. The LEDs on the iDISPLAY light up thanks to the integrated Pick-by-Light function. This allows you to optimise your routes and almost completely eliminate picking errors.

Certainty even in the event of a fault?

Errors (incorrect delivery) can be reported directly using the interaction on the iDISPLAY. All the concerned items are directly marked as blocked in the iDISPLAY via batch tracking.

Do you need an additional delivery for peak demand?

You have the option to place the order directly via iDISPLAYpush. The delivery date is displayed on both the iTERMINAL and the iDISPLAY.

THE DIGITAL INTERACTION POINT

ITERMINAL

**OVERVIEW OF ALL ITEMS AT
THE STORAGE AREA**

**DISPLAY OF ALL
THE STORAGE
LOCATIONS OF
AN ITEM**

**INTEGRATED
BARCODE
READER**

**RESOURCE-
SAVING
SYSTEM**

**AUTOMATIC
DATA
TRANSFER**

**ERROR
MINIMISATION**

**NO INTEGRATION INTO THE CUSTOMER'S
INFRASTRUCTURE REQUIRED**

**EFFICIENT
& SMART**

FOR DIRECT INTERACTION AT THE KANBAN RACK

Our iTERMINAL – Faster. More precise. More efficient. Our digital edge in the Kanban rack

Kanban racks are real productivity boosters in parts supply. However, when hundreds of items are stored close together, finding the right bin often takes longer than necessary – including the risk of picking errors. With iTERMINAL, we bring transparency and speed to this process! The digital information board enables all item and bin information to be accessed directly in production, and supports item searches and picking operations. This reduces the workload for employees, reduces errors, and accelerates processes. A real booster for the production supply!

iTERMINAL: One system with three functions

EASY ITEM SEARCH

1) iTERMINAL for item search

Simply enter the item you are looking for in the search bar or scan the item barcode and the iTERMINAL will display all the information about the item and its storage location within seconds.

The following information is displayed:

- Item description
- Customer item number
- Picture
- Types of bins
- Filling quantity
- Storage areas & storage locations

2) Search-by-Light – iTERMINAL combined with iDISPLAY

The item search is also supported by the digital rack display iDISPLAY, where the iDISPLAY lights up at the position on the Kanban rack where the item you are looking for is located.

This makes item searches even faster!

SEARCH-BY-LIGHT

PICK-BY-LIGHT

3) Pick-by-Light with iTERMINAL and iDISPLAY

The two systems not only support simple item searches, but also order picking. The order is selected and the picking process can be started by manually entering the order description or number or by scanning the barcode. The integrated LED on the iDISPLAY indicates which items are required for the picking process. The iTERMINAL also displays all picking information:

- Status
- Description
- Transmission date
- Number of items
- Number of positions

Orders can be transferred to our system via REST-API or as a .csv file via FTP.

ORDER AT THE PUSH OF A BUTTON

IDISPLAY

**MULTI-FUNCTIONAL
DIGITAL RACK LABEL**

**SUITABLE FOR
BULKY
PRODUCTS
(IDISPLAYPUSH)**

**FREELY
PLACEABLE**

WIRELESS

**FOUR
FUNCTIONS
IN ONE**

**OFFERS SPEED
AND EFFICIENCY**

**USED AS AN
ORDERING SYSTEM**

**PRESSED
= ORDERED**

THE DIGITAL RACK LABEL WITH ADDED VALUE

Our iDISPLAY – Rack label with added value: More efficiency and transparency in your production

With iDISPLAY, Würth Industrie Service presents an innovative solution that replaces classic rack labels with digital displays. In this way, you have all the important inventory and order information directly on the rack – fast, precise and always up-to-date. Item numbers, fill levels, availability and storage locations are shown on the display in real time, and the data is automatically updated and synchronised thanks to the seamless connection to your ERP system. This makes manual input a thing of the past and the iDISPLAY a real booster for your production supply.

iDISPLAY: One label with four functions



1) iDISPLAYrack – Item information at a glance

Every iDISPLAY is directly connected to the ERP system of Würth Industrie Service, and delivers real-time data like the item number, filling quantity, storage location, inventory and filling status. Any changes in the master data are updated automatically. iDISPLAY replaces the paper label on the Kanban rack and ensures speedy retrieval of information by navigating through two display pages.



2) iDISPLAYpush – Reordering at the push of a button

With the Push function, the iDISPLAY allows order triggering directly at bin level within seconds at the push of a button. Once a notification about empty bin is triggered, the current status is displayed until the filling is complete, which means that a new order can only be placed after this. By making all the data digitally available at any time, manual errors can be minimised, thus allowing the customers to rely on maximum productivity and transparency.



3) iDISPLAY & iTERMINAL – Search-by-Light

iDISPLAY can reach its maximum potential when combined with the digital information board iTERMINAL. Together, these two systems can help you to find the required item within seconds:

1. Start search – Enter the item number in the search field or scan the barcode
2. Visualise – The LED on the corresponding iDISPLAY of the rack location lights up immediately.
3. Withdraw the item – This eliminates long search routes, thus saving significant time.

Thus, the two systems combined reduce the search time significantly and ensure higher productivity in the production workflows.



4) iDISPLAY & iTERMINAL – Pick-by-Light

Thanks to the connected systems, the iTERMINAL facilitates not only the item search, but also picking using the "Pick-by-Light" function. With the help of the LED signal, the iDISPLAY shows the exact location and quantity to be withdrawn. Up to six picks per item can be shown simultaneously and navigated through. By connecting to the ERP system, pick lists can be retrieved on the iTERMINAL, making it possible to pick the items using the iDISPLAYs, eliminating manual intervention completely.

SENSOR-CONTROLLED ORDERING

**ISCALE
ISCALEPAL**

**STORAGE MANAGEMENT
WITH WEIGHING
TECHNOLOGY**

**VERSATILE
APPLICATIONS**

**JUST IN PLACE:
MATERIAL
SUPPLY DIRECTLY
AT THE PLACE**

**AUTOMATED
INVENTORY
CHECK AND
REORDERING**

**REDUCTION
IN STORAGE
SPACES**

**LOW CAPITAL
COMMITMENT**

**IDENTIFICATION OF
DEMAND FLUCTUATIONS**

**MAXIMUM
SUPPLY
SECURITY**

GRAM FOR GRAM FOR MORE PRODUCTIVITY IN PARTS SUPPLY

Our iSCALE and iSCALEpal

Both scale systems send an automatic notification of requirements once the weight goes below the defined value.

iSCALE is a sensor-controlled scale, which is directly connected to a Kanban bin.

iSCALEpal provides the same technology for pallets and can accommodate up to 64 bins. You can reduce your process costs and benefit from an increase in productivity in your supply chain through demand-oriented and automated reordering.

More flexibility through decentralised material supply

The autonomous scale system provides maximum flexibility and supplies material directly at the place of use. It is used, for example, on the assembly line or at the assembly workplace and ensures time-saving, lean material flow. Furthermore, the system can also be used in conventional Kanban rack in place of RFID technology. iSCALE is particularly suitable for manufacturing companies that have irregular requirements of direct materials. The scale system is available for the VDA-compliant bin sizes 2115, 4115 and 4215 of Würth Industrie Service.



iSCALE: Functioning of the scale system

iSCALE is a sensor-controlled scale, which is directly connected to a Kanban bin. The sensors continuously monitor the weight of the small parts stored in the bin. As soon as the weight falls below the previously defined value, the intelligent system automatically initiates a reorder by directly sending the requirement to the ERP system of Würth Industrie Service via radio technology.



iSCALEpal: Pallet Kanban with weighing system

Like iSCALE, it is a sensor-controlled scale that is directly connected to the Kanban bins and ensures an almost independent, logistical storage management for C-Parts, the innovative pallet scale system iSCALEpal is also based on precise weighing cells. The Euro pallet is equipped with a sensor-controlled scale underneath, which continuously checks the weight on the pallet directly at the customer's location, compares it with the known item weight, and transfers it to the ERP system of the C-Parts supplier via an encrypted interface.







 **WÜRTH**
PROFESSIONAL SOLUTIONS

SMART SYSTEM

Radio Frequency IDentification

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