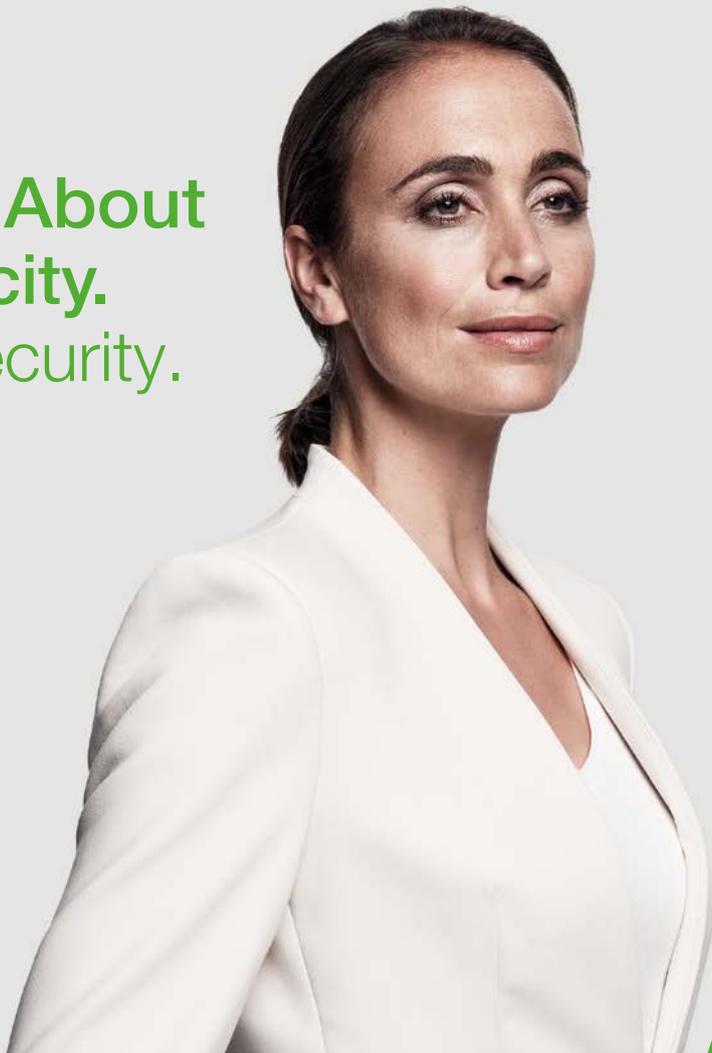


It's All About  
Simplicity.  
And Security.



KeTop T15x Safe Wireless  
The new control philosophy

**KEBA**<sup>®</sup>  
Automation by innovation.

## The new control philosophy

# New solutions for new challenges

In an era of digitalisation and smart factories, manufacturers need to design their machines and systems to be as efficient and flexible as possible in order to stand out on the market. The classic machine, series-produced in high volumes, is a thing of the past.

What is needed is a highly flexible

## Human Machine Interface (HMI) solution for individualised machines.

This is the point where machines are perceived as intuitive, effective and well thought-out.

## Taking on the future together

With our decades of experience in the development and creation of high-end HMI solutions for robotics and series machine construction, we understand the challenges our customers face and are equipped to accompany them through the entire development process - from concept to series production.

Our KeTop series stands for a unique range of mobile and stationary control terminals and visualisation software for the straightforward implementation of a multitude of visualisation and control tasks.

## KeTop T15x Safe Wireless

The KeTop T15x Safe wireless terminal is an expansion to our product family, featuring a wireless HMI solution that delivers complete flexibility in monitoring and controlling production processes without compromising the safety of the service technician/machine operator.

Safety functions ensured by wireless technology open up far-reaching application opportunities that of course comply with the necessary security standards.

Wireless technology paired with technical features such as multi-touch and haptic feedback using control elements and vibration enables completely new control concepts and previously unimagined innovation potential for machine builders.



- // flexible
- // safe
- // reliable
- // convenient
- // easy to integrate

## Maximum flexibility in monitoring and control

# Putting the machine operator first

The service technician/machine operator is always kept up-to-date with the latest information by the terminal that has been personally assigned to them and the option of permanent network access - regardless of whether they are currently at their workplace or are on the move in the plant.

If a problem occurs on a machine, a response is provided as quickly as possible. Machine downtimes are reduced to an absolute minimum as a result.

## A possible use case scenario

### The process

- A machine signals a problem on all mobile operator terminals available in the plant.
- The operator that is available the soonest uses their terminal to confirm acceptance of the service job.  
All the other operators can continue their work undisturbed.
- The employees in the spare parts store, who also received the error message, immediately start preparing the required parts.
- On the way to the machine, the operator can pick up the parts already prepared at the spare parts store to be replaced on the machine.
- The machine can quickly resume operation.

## Two separate radio links for robust and reliable communications



Data is transmitted between the hand-held terminal and the base station using two separate radio connections. This ensures high availability and a short reaction time.

Even if the WiFi network is busy handling high volumes of traffic, there is no need to compromise on the emergency stop reaction time.

## Visualisation data

Non-safety-related data such as data for the visualisation system is transmitted between the hand-held terminal and the connection box using WiFi.

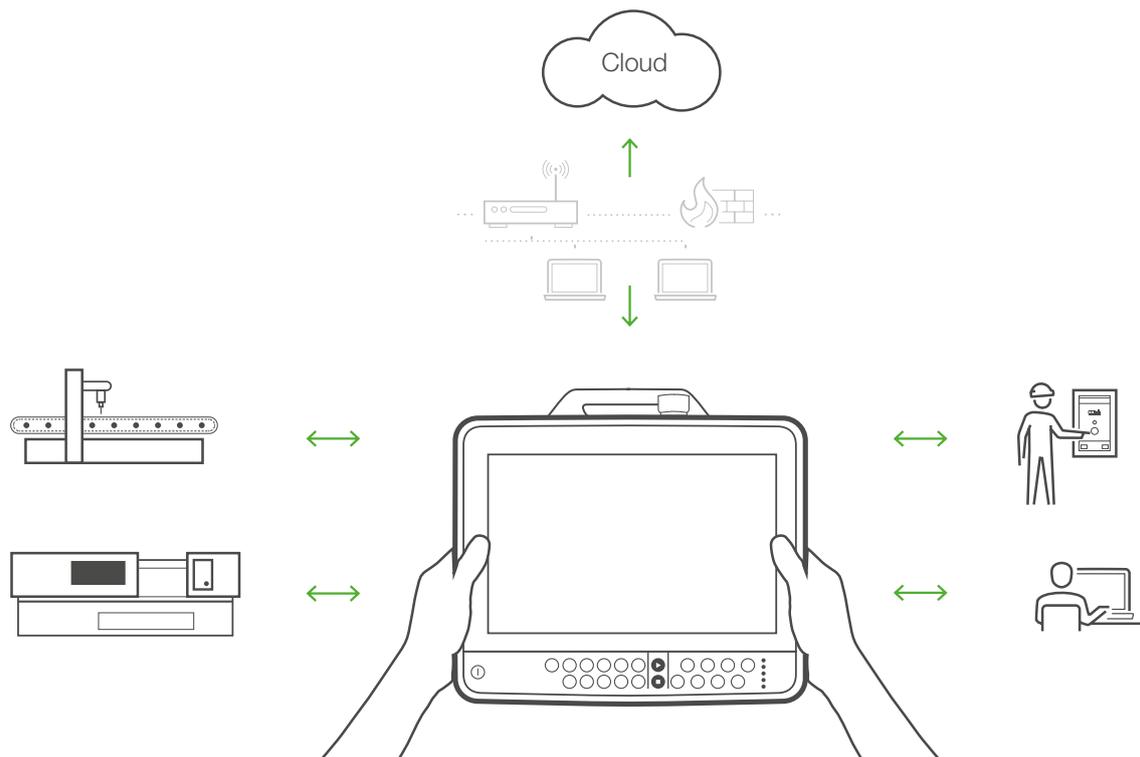
A large bandwidth is guaranteed while at the same time accepting certain delays inherent to WiFi systems.

## Safety data is exchanged by Bluetooth

Thanks to Bluetooth, safety functions are uninterrupted and highly available for every application with sufficiently short reaction times.



Frequency hopping technology skips channels that are currently busy. This prevents an emergency stop being triggered by unexpected bandwidth demand.



## KeTop T15x Safe Wireless

# Highlights



### One terminal for two modes

The mobile wireless KeTop T15x Safe Wireless terminal in combination with the CB410 base station is used not only for operating individual machines in machine mode, but can also display information relating to all the machines in a plant in factory mode.

By approaching the base station of the machine, the connection is initiated quickly and contact-free, and disconnected again as soon as you are further away. (pair/disconnect)



### More efficiency

A machine operator can control multiple machines in a plant using their assigned KeTop Safe Wireless. As a result, the number of terminals can be reduced, and flexibility in the work process is increased, since there is no need to plug and unplug. Wireless technology eliminates cable breakage, cable tangles and general cable damage.



### Fast keys

When the operator moves components, they need to be controlled almost instantaneously – using fast keys. This ensures delay-free axis movements for the applications and start/stop commands, even if delays exist in the WiFi connection.



### **The highest flexibility**

The KeTop Safe Wireless terminal can be implemented regardless of which control system is used. For this purpose, the CB410 base station offers discrete safety outputs for emergency stop and enabling switches. As a meta solution without field bus integration, Industrial Ethernet is the primary interface for data communication.

Being able to remove the base station and the hand-held terminal from the charging station provides additional flexibility.

Maximum flexibility is also guaranteed for creating applications thanks to Windows 10 IoT Enterprise. It is possible to continue using existing visualisation applications or to use KEBA's user-friendly, powerful visualisation software.



### **High performance and convenient operation**

The Intel Celereon DualCore processor and a generously-sized battery that ensures a running time of at least two hours between charges deliver long-term and smooth performance. Weighing only approx. 1,400 g, nothing stands in the way of fatigue-free and convenient operation.

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