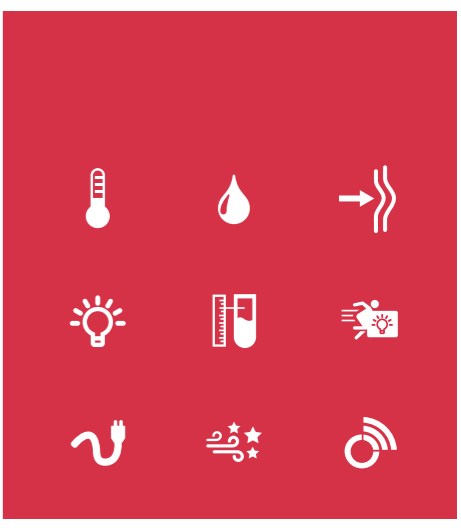


CREATING MEASUREMENT SOLUTIONS



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kiro multi



### The wireless data logger for the 4th industrial revolution

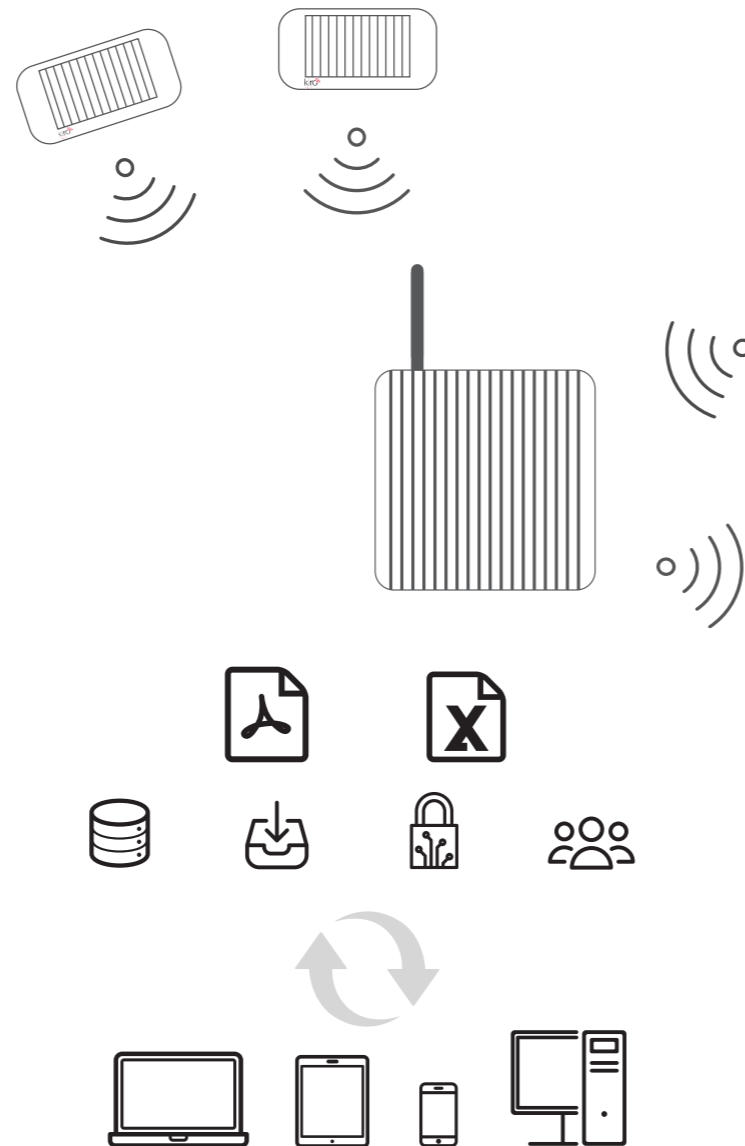
Big data, smart manufacturing and digitization. These terms are on everyone's lips today. But what do they mean? Essentially they are all about generating added value from information. While a few years ago the big issues were just-in-time and later just-in-sequence supply of production lines, today we are talking about coordinating entire production chains between companies.

Such demanding projects still (and will always) require a source of information. This is what sensor technology is about. When is a workpiece finished? What is the temperature in the drying process? What is the moisture in the tool storage area? Only on the basis of such information more complex matters can be calculated. For example the optimum duration of the freezing process of frozen food, the remaining life cycles of a tool or the ratio of fuel and oxygen in a combustion engine. Without the recording of measured values, modern processes can no longer be developed and implemented.

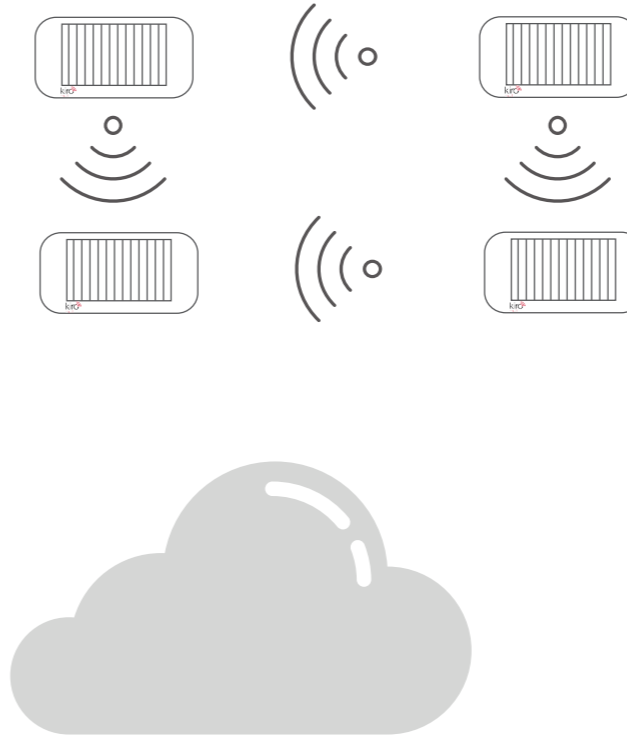
In most cases, however, production plants, machines or buildings have long reached their maximum service life and such sensor technology has to be retrofitted. For larger bus systems this usually implies that no cabling must be done. Each transducer requires a supply line and usually also power supply which entails further cable installation.

B+B Thermo-Technik has addressed these problems and has developed the kiro multi system that allows for such a bus system without the installation of cables.

### Star topology



### Mesh topology



### Data logger for your measurement application

- Measuring temperature, humidity, pressure, brightness, air quality and much more
- Three sensors per device, further sensors by optional M8 ports
- Replacement for bus systems due to I/O module
- Transfer of measured values in a network to a central location and from there to the cloud
- Cloud serves as adaptable platform to create own applications
- Detailed reporting and alarm function by mail and text message
- Easy export of data as \*.xls, \*.csv, etc. for further processing
- Easy plug-and-play installation without cables
- Extremely low power consumption by proprietary radio technology - powered by endiio - on 868 MHz-ISM band
- Energy self-sufficient by solar cell
- battery charge of sensor nodes without solar cell up to two years
- Recognition of efficiency of solar cell by integrated brightness sensor (self-analysis)
- Micro-USB-port at sensor nodes for easy recharging by power bank or power supply
- Wall mount lockable and to some extent inclinable by set screw



- 100 % secure**  
 By using a cloud the servers are stationed in Germany, hosted by a german provider, the cloud offers a top security standard with best performance.
- 100 % reliable**  
 Regular automatic backups ensure permanent availability of your data.
- 100 % controllable**  
 Set up and designate your sensors, determine their location and configure the users with their variable rights.
- 100 % simple**  
 With just a few clicks, export your data as a PDF report, for further processing as an msExcel® file or .csv file.
- 100 % informative**  
 Receive automatic reports from the different sources, with the appropriate events and diagrams.
- 100 % scalable**  
 The sky's the limit. The kiro multi gateway can manage several 1.000 sensor nodes.
- 100 % accessible**  
 Because of internal configuration of the sensor nodes the wireless network sets up automatically. Every sensor node can serve as repeater. Therefore the network is possible as star and also mesh network.
- 100 % self-sufficient**  
 If the incidence of light is sufficient, the sensor nodes are complete energy self-sufficient. The built-in energy storage provides the sensor node up to 2 years with energy, also without the help of the solar cell.
- 100 % tested**  
 Quality, processes, system and application support, fully validated, tested and transparent  
 Optional DIN EN ISO/IEC 9001 and 17025 calibrations