

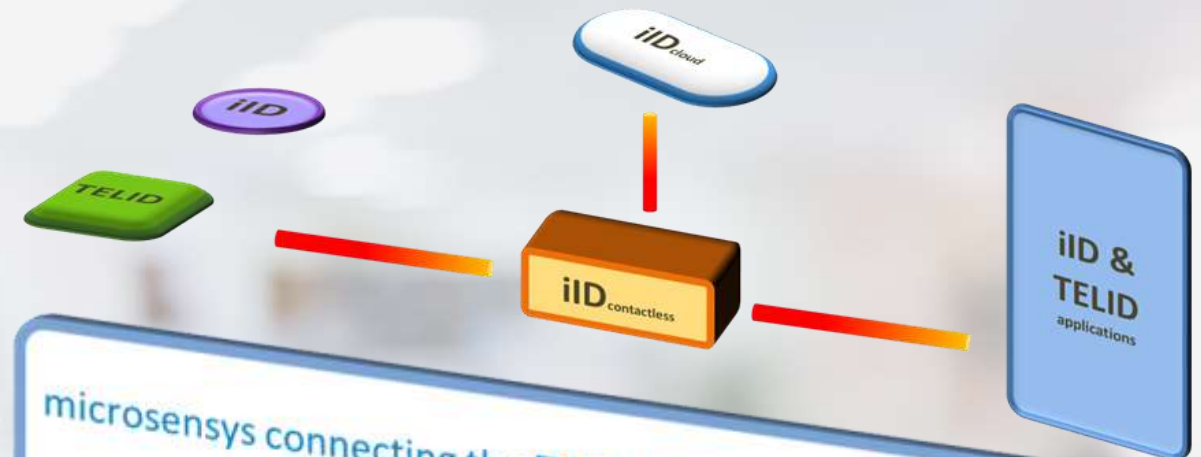


**RFID** temperature monitoring

**Sensor Data Logger TELID®3T**



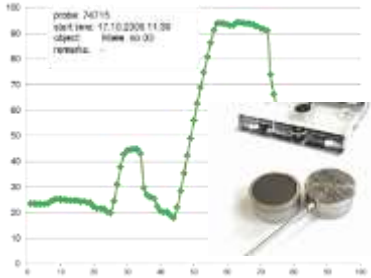

**for medical, pharmaceutical,  
healthcare and analytics**

# *microsensys* - your partner for wireless identification and sensors



microsensys connecting the **REAL WORLD of THINGS**  
with the **VIRTUAL WORLD of DATA**  
RFID technology is our mission and passion.  
We are continuously looking for stunning innovative solutions.

# Classification of microsensys Product Groups

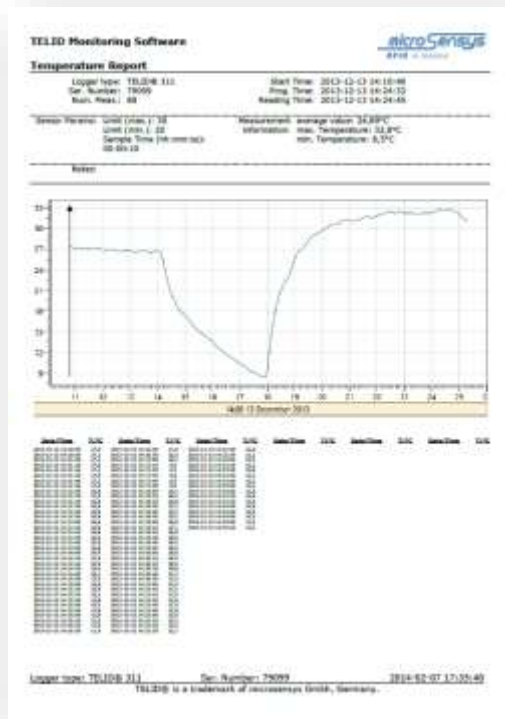
	RFID-Transponder	Passive TELID®200 and TELID®400 RFID-Sensor-TAGs	Semi-Passive TELID®300 RFID Data Logger	Active components
Function	Identification, Data storage	Identification, Data storage, sensing	Identification, Data storage, sensor monitoring	Identification, sensing
Technology	HF, UHF	HF, UHF	HF	BLE, LoRa, 5G, ...
Operation	Batteryless	Batteryless, sensor measurement while scanning	Battery assisted, continuous or event-based measurement	Battery-support for sensor measurement and data transmission
Properties	Maintenance free	Maintenance free, short range or medium range	Long life, battery assisted measurement, short range passive data transmission	Medium life time, long range communication
Example				

# Identify • Measure • Evaluate

**TELID<sup>®</sup>3T** product line combines wireless identification with sensor applications.

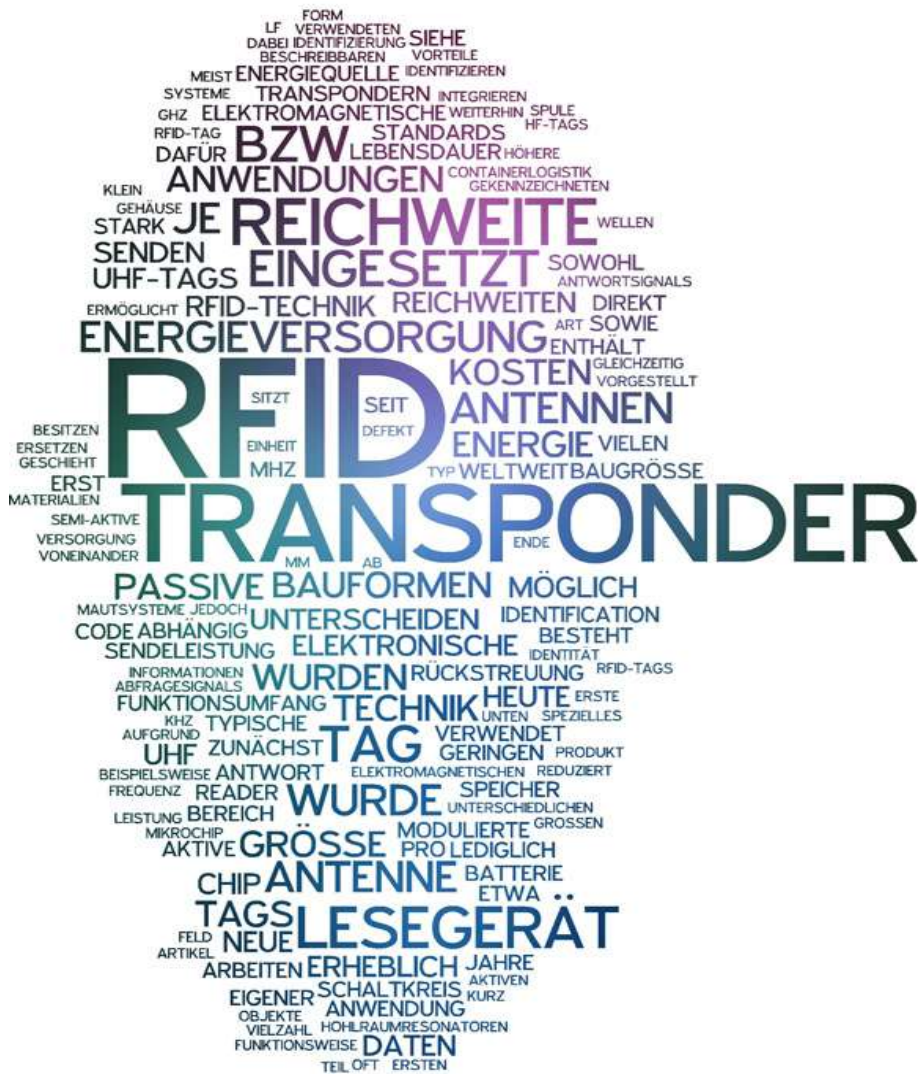
This document describes the system solution of RFID temperature data logger **TELID<sup>®</sup>3T** with its wireless interface, diverse application possibilities and its special advantages. The extra equipment that you need, **iID<sup>®</sup>contactless** reader and **TELID<sup>®</sup>soft**, works very simple and is practical to use in transport and logistic, medical or industrial processes.

**TELID<sup>®</sup>** technology from **microSensys** improves the quality management and brings efficiency & safety in cleaning and disinfection process.



UID: EB AB 2F 01 0B 00 12 E0  
 Max./Min. Temperature: 85,5°C  
 Delivery Note: BAH 40873 IL

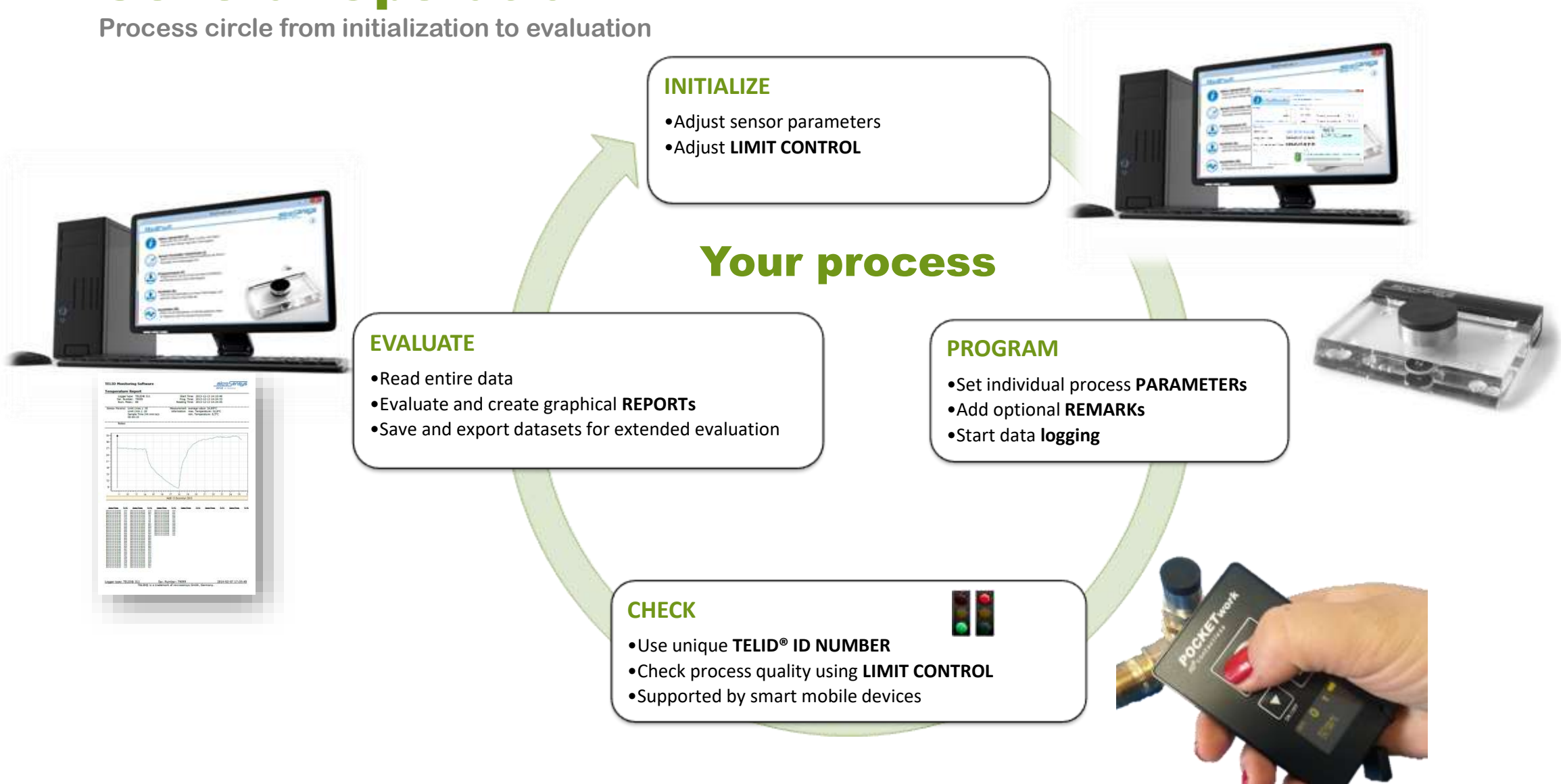
# The Advantages of the TELID<sup>®</sup>3T System



- innovative technology formed in years of experience and leadership in the RFID and wireless sensor industry
- increasing the safety and quality of your process
- long lifecycle based on newest low energy technologies
- large memory capacity
- contactless data communication
- flexible using with programming and evaluation utility for the set up of all operating parameters
- hermetically encapsulated sensor
- useable in extreme wide temperature range
- manufacturer independent thermal process validation
- data security with authentication and password protection
- calibration service

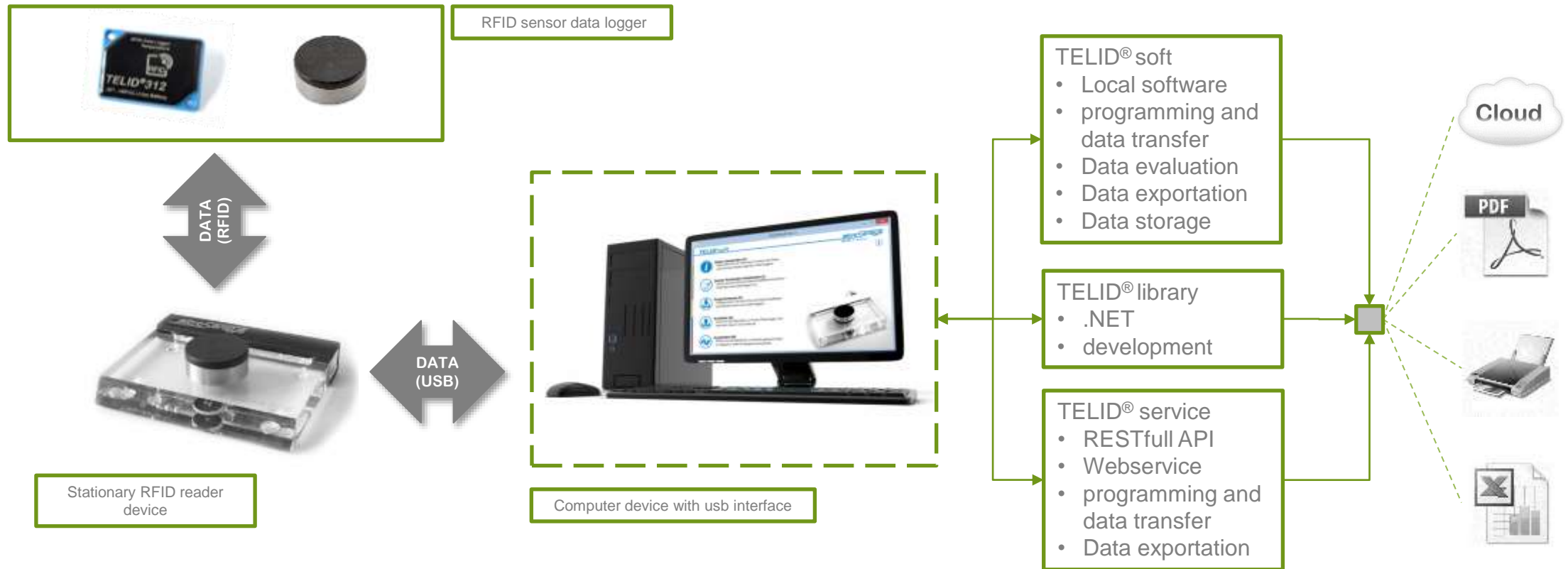
# General Operation

Process circle from initialization to evaluation



# System Overview Stationary – RFID sensor data loggers

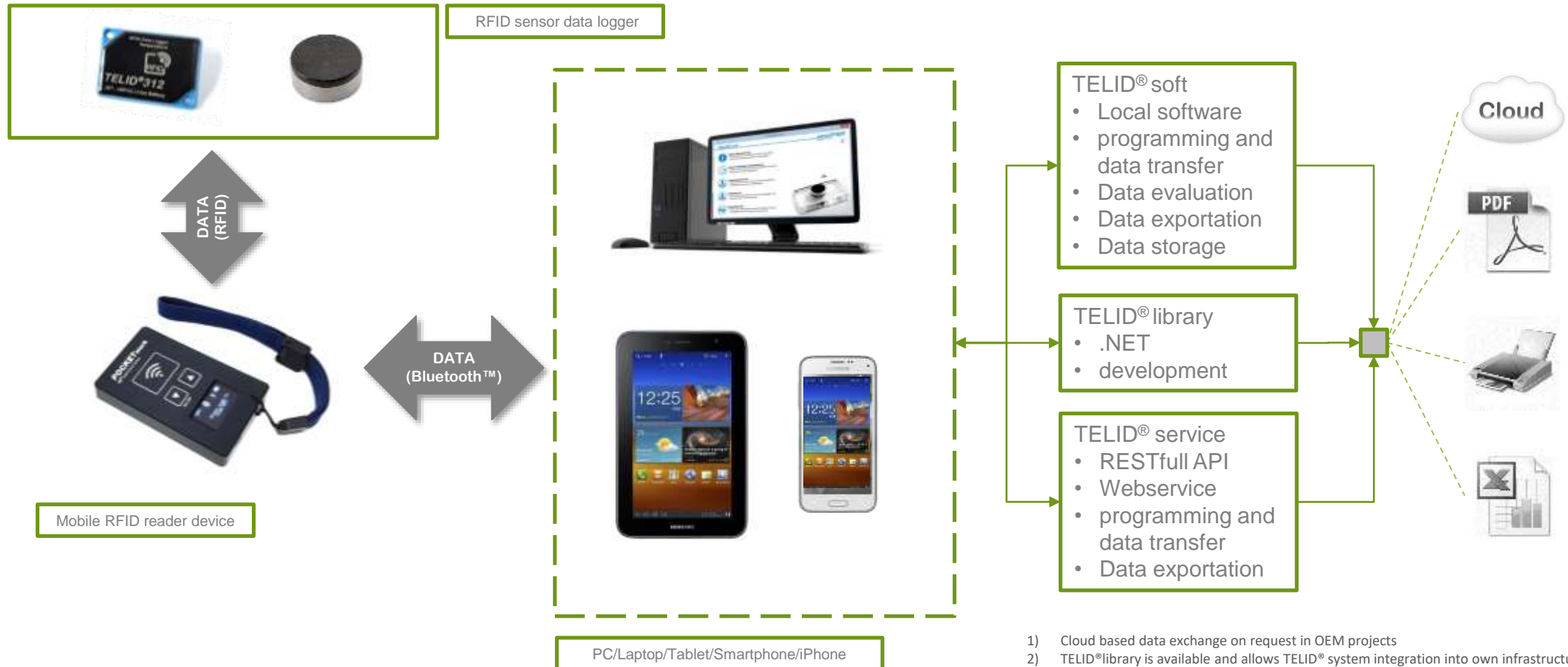
TELID<sup>®</sup>3T solution comes with different kind of data loggers, read/write devices and TELID<sup>®</sup>soft or TELID<sup>®</sup>service developed for different operation systems. TELID<sup>®</sup>bundle unites all the components in one.



1) Cloud based data exchange on request in OEM projects  
 2) TELID<sup>®</sup>library is available and allows TELID<sup>®</sup> system integration into own infrastructure

# System Overview Mobile – RFID sensor data loggers

TELID®3T solution comes with different kind of data loggers, read/write devices and TELID®soft or TELID®service developed for different operation systems. TELID®bundle unites all the components in one.



- 1) Cloud based data exchange on request in OEM projects
- 2) TELID®library is available and allows TELID® system integration into own infrastructure



# System Overview Mobile – NFC sensor data loggers

TELID®3T NFC is built on TELID®312.nfc data logger & TELID®soft and can be used with microsensys read/write devices or **android smart phones** with NFC communication.









1) Cloud based data exchange on request in OEM projects

2) TELID®library is available for Android and Windows and allows TELID® system integration into own infrastructure

# Technical Information– TELID®311, 314, 343

TELID® Type Product Code	Picture	Application Field	Compatible Readers	Technical
<b>311</b>  14.311.484.06		<b>Disinfecting, washing and drying processes</b> <u>+100°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm environmental condition: working temp. up to +100°C samples: up to 8000 sample time: 10s ... 256min
<b>343.HTK</b>  14.343.439.103		<b>Disinfecting and washing processes</b> <u>+100°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: G¼" fitting, SW22, max length 48mm pressure range: 0 Bar .. 3Bar / 100Bar environmental condition: working temp. up to +100°C samples: up to 8000 sample time: 1min ... 59min
<b>311.ac</b>  14.311.489.00		<b>Steam sterilization autoclave</b> <u>+135°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm environmental condition: working temp. up to +140°C absolute pressure up to 5bar samples: up to 8000 sample time: 1s ... 59min
<b>314.ac</b>  14.314.499.01 14.314.499.05 14.314.499.07		<b>Steam sterilization autoclave</b> <u>+135°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm external sensor: pin length 15, 50 and 100mm environmental condition: working temp. up to +140°C absolute pressure up to 5bar samples: up to 8000 sample time: 1s ... 59min

# Technical Information– TELID®311, 314

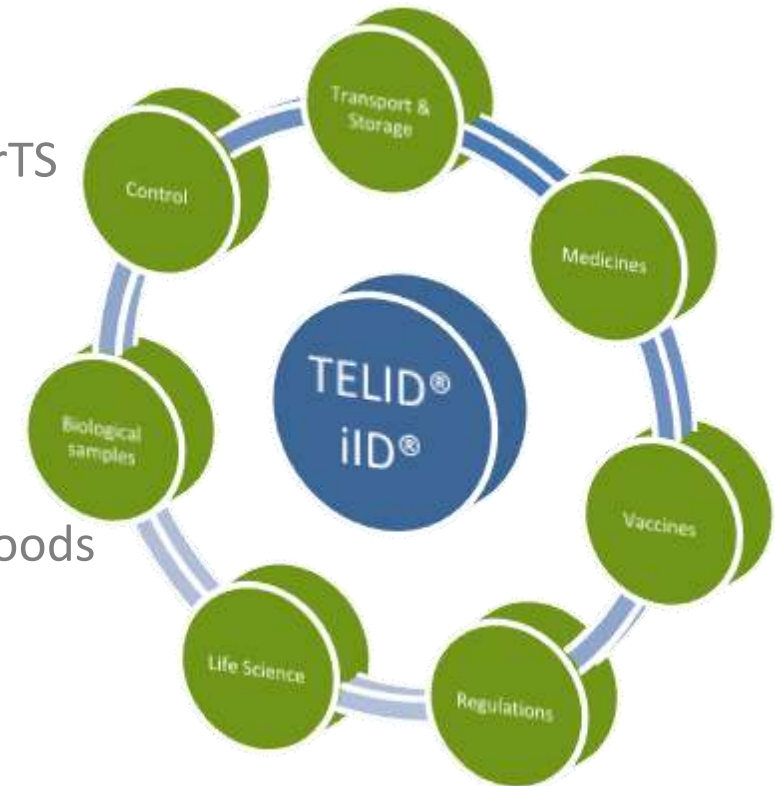
TELID® Type Product Code	Picture	Application Field	Compatible Readers	Technical
<b>311.co</b>  14.311.485.00		<b>Cryo and Deep-Frozen goods</b> <u>-75°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm environmental condition: working temp. -75 ... +85°C samples: up to 8000 sample time: 1min ... 256min
<b>311.cr</b>  14.311.487.00		<b>Cryo and Deep-Frozen goods</b> <u>-79°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm environmental condition: working temp. -79 ... +85°C absolute pressure up to 5bar samples: up to 8000 sample time: 1s ... 59min
<b>314.cr</b>  14.314.497.05		<b>Cryo and Deep-Frozen goods</b> <u>-79°C</u>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: D27mm, thickness 12mm external sensor: pin length 50mm environmental condition: working temp. -79 ... +85°C absolute pressure up to 5bar samples: up to 8000 sample time: 1s ... 59min

# Technical Information– TELID®312, 3x2.nfc

TELID® Type Product Code	Picture	Application Fields	Compatible Readers	Technical
<b>312</b>  <b>14.311.484.04</b>		<b>Medical or food transport and logistic</b>	iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD	dimensions: 54 x 40mm <sup>2</sup> , thickness 4.5mm environmental condition: working temp. up to +80°C sample time: 10s ... 256min samples: 8000
<b>312.nfc</b>  <b>14.312.714.00</b>			iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD Android device with NFC	dimensions: 54 x 40mm <sup>2</sup> , thickness 4.5mm environmental condition: working temp. up to +60°C sample time: 10s ... 18h samples: approx. 8000
<b>332.nfc</b>  <b>14.332.714.00</b>			iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD Android device with NFC	dimensions: 54 x 40mm <sup>2</sup> , thickness 4.5mm environmental condition: working temp. up to +60°C sample time: 10s ... 18h samples: approx. 6000
<b>392.nfc</b>  <b>14.392.714.10</b>			iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD Android device with NFC	dimensions: 54 x 40mm <sup>2</sup> , thickness 4.5mm environmental condition: working temp. up to +60°C sample time: 10s ... 18h samples: approx. 4000
<b>392.nfc*</b>  <b>14.392.714.01</b>			iID®DESKTOPsmart iID®POCKETwork iID®M30 HEAD Android device with NFC	dimensions: 54 x 40mm <sup>2</sup> , thickness 4.5mm environmental condition: working temp. up to +60°C sample time: 10s ... 18h samples: approx. 4000

# Application Descriptions

- Temperature Monitoring of washing processes according to CLC / FprTS
- Temperature Monitoring in autoclaves
- Temperature Monitoring for disinfectors
- Temperature Monitoring for sensitive pharmaceutical and medical goods
- Temperature Monitoring for cold chain transport and storage



# Temperature Monitoring of washing processes according to CLC / FprTS

TELID®311 is the only one data logger, which fulfills the newest terms for the determination of temperature inside the laundry load. Quality and safety factors will be increased by capturing of the temperature profile during the complete washing and drying cycle.



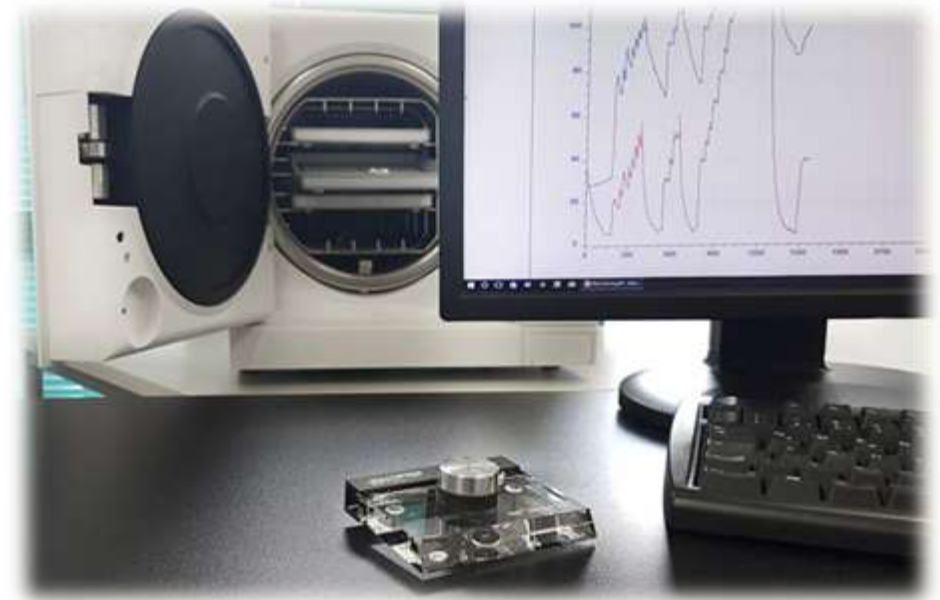
TELID®311



Offering complete  
temperature monitoring in washing and  
finishing process

# Temperature Monitoring in autoclaves

TELID<sup>®</sup>311.ac and TELID<sup>®</sup>314.ac are giving clear and exact temperature profile about the complete steam sterilization cycle. Furthermore, the user receive an independent verification of the process. Both data logger will be used directly in the chamber. While the ac. measures and stores the ambient temperature in the chamber, the .ace monitors it in the small, hard to reach cavities in objects as surgical instrument, prostheses etc.



TELID<sup>®</sup>311.ac  
TELID<sup>®</sup>314.ac



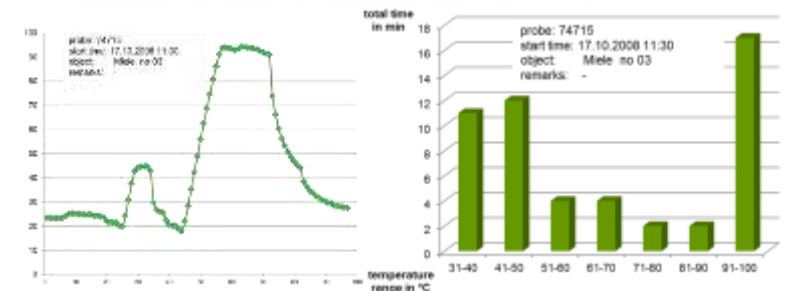
**Increasing quality management  
during steam sterilization process  
in autoclave**

# Temperature Monitoring for Disinfectors

TELID® data loggers have a big area of applications. Especially TELID®311.ac and TELID®343HTK are applied for medical disinfectors. While 311.ac is capturing the temperature in the washing chamber, the 343HTK is monitoring the temperature and pressure of the disinfector's individual waterjets. These two data loggers makes the independent validation of the process easier.



TELID®311.ac, 314.ac  TELID®343.HTK 



**Providing full benefits in temperature & pressure monitoring during washing and disinfection process.**



# Temperature Monitoring for sensitive pharmaceutical and medical goods

For the medical branch, cold chain storage process is very important. In order to achieve the temperature constant surveillance in maintaining and preserving the perishable good (e.g. medicines, blood bags) quality, an optimal temperature monitoring is essential. The use of sensor data loggers is an effective solution.



TELID®311



TELID®312



temperature monitoring in  
cold chain storages and on transport  
processes

# Temperature Monitoring for the cold chain

Extra control of your goods during their transport from point A to B. TELID®31x.cr data logger allows an independently process monitoring due transport and storage of goods in areas such as:

- vaccine, IVF, stem cell, blood products and tissue
- food and nutritional products

The temperature range until  $-79^{\circ}\text{C}$  allows a wide range of protocols to ensure the correct conditions for your goods.



TELID®311.cr  
TELID®314.cr



Increasing quality management and safety  
of sensitive goods by low temperatures

# Programming and Evaluation Utility - TELID®soft

TELID3T data loggers in combination with RFID reader iID®DESKTOPsmart and user-friendly software TELID®soft is a complete solution for controlling and evaluating of temperature profiles. Different iID® programming devices are available with USB/RS232 or Bluetooth™ connection and are supported by TELID®soft. Individual parameters as A0, individual creation of records and reports and many other features are included in the cost-free software.

Reading out the data and setting up sensor values with the iID®contactless reader devices is comfortable and fast

- + getting familiar with the hardware and software easily
- + setting up your individual parameters to optimize and increase your process
- + profiling evaluation with integrated tools and compatibility with other known tools



# TELID®3T Bundles

Consists of following items:

## TELID®311 Temperature Bundle V03

recommended application:  
temperature range up to +100°C

- 2 x TELID®311
- 1 x iID®DESKTOPsmart
- USB stick with TELID®soft
- TELID®Documentation (PDF-file)
- 1 x Alu Etui storage box

## TELID®311ac Temperature Bundle V04

recommended application:  
temperature range up to +140°C,  
autoclaving processes

- 2 x TELID®311.ac
- 1 x iID®DESKTOPsmart
- USB stick with TELID®soft
- TELID®Documentation (PDF-file)
- 1 x Alu Etui storage box

## TELID®311cr Temperature Bundle V05

recommended application:  
temperature range up to -79°C,  
cryogenic processes

- 1 x TELID®311.cr
- 1 x TELID®314.cr (50mm)
- 1 x iID®DESKTOPsmart
- USB stick with TELID®soft
- TELID®Documentation (PDF-file)
- 1 x Alu Etui storage box

## TELID®314ac Temperature Bundle V06

recommended application:  
temperature range up to +140°C,  
autoclaving processes

- 2 x TELID®314.ac (50mm)
- 1 x iID®DESKTOPsmart
- USB stick with TELID®soft
- TELID®Documentation (PDF-file)
- 1 x Alu Etui storage box



# TELID®3x2.nfc Starter Kit

Consists of following items:

## TELID®3x2.nfc Starter Kit Sensor NFC Starter Kit – Temperature, Pressure, Humidity

- 1 x TELID®312.nfc
- 1 x TELID®332.nfc
- 1 x TELID®392.nfc
- 1 x iID®DESKTOPsmart
- USB stick with TELID®soft
- TELID®Documentation (PDF-file)
- 1 x Alu Etui storage box



## Questions?

please contact [info@microsensys.de](mailto:info@microsensys.de)

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