ILD® contactless
wireless mobile RFID interfaces

identify • measure • collect • analyze
### iID® contactless mobile devices
for each kind of application

<table>
<thead>
<tr>
<th>iID® wearablel</th>
<th>iID® POCKETwork</th>
<th>iID® PENmotion</th>
<th>iID® PENsolid</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Wearable Device" /></td>
<td><img src="image2" alt="Pocketwork Device" /></td>
<td><img src="image3" alt="Penmotion Device" /></td>
<td><img src="image4" alt="Pensolid Device" /></td>
</tr>
<tr>
<td>Wearable device with Bluetooth™ LE interface and QI charge, ON/OF button, motion and gesture sensors.</td>
<td>Mobile device with Bluetooth™ and USB interface, OLED display, trigger buttons and clock/memory.</td>
<td>EOL</td>
<td>Mobile device with Bluetooth™ and USB interface, LEDs and trigger buttons.</td>
</tr>
</tbody>
</table>

All devices support contactless identification using iID® transponders as well as sensing using TELID® sensor transponders.
Technical overview
## Technical overview – general parameters

<table>
<thead>
<tr>
<th>Feature</th>
<th>iID® POCKETwork</th>
<th>iID® PENsolid</th>
<th>iID® wearable</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>HF, HFcc (stump) UHF mid range</td>
<td>UHFcc HFcc (mic3 up to chipcard) UHF mid range (monopol)</td>
<td>UHFcc UHF mid range</td>
</tr>
<tr>
<td>Ruggedness</td>
<td>medium (IP54, 1m)</td>
<td>high (IP65)</td>
<td>high (IP65)</td>
</tr>
<tr>
<td>Interface</td>
<td>Bluetooth 2.0 SPP/HID, micro USB</td>
<td>Bluetooth 2.0 SPP/HID, micro USB</td>
<td>Bluetooth low energy (BLE) 4.0, QI charge</td>
</tr>
<tr>
<td>Output</td>
<td>OLED display, Buzzer</td>
<td>4 x sign lights (LED), Buzzer</td>
<td>4 x sign lights (LED), vibration</td>
</tr>
<tr>
<td>Trigger</td>
<td>Trigger key, up/down keys</td>
<td>Scan button, ON/OFF button</td>
<td>ON/OFF button, motion sensor, gesture</td>
</tr>
<tr>
<td>WakeUp</td>
<td>Button, RF WakeUp</td>
<td>Button, RF WakeUp</td>
<td>Button</td>
</tr>
<tr>
<td>Operation Modes</td>
<td>DOC, SPC, MPC</td>
<td>DOC, SPC</td>
<td>DOC, SPC</td>
</tr>
<tr>
<td>Accesoires</td>
<td>micro USB cable</td>
<td>micro USB cable</td>
<td>QI charge device</td>
</tr>
<tr>
<td>Additionals</td>
<td>hand strap</td>
<td>hand strap, touch screen support</td>
<td>watch strap, clothing holder</td>
</tr>
<tr>
<td>Price</td>
<td>medium high</td>
<td>medium high</td>
<td>medium high</td>
</tr>
</tbody>
</table>
## Technical overview – electronic & platform

<table>
<thead>
<tr>
<th>Feature</th>
<th>iID® POCKETwork</th>
<th>iID® PENsolid</th>
<th>iID® wearable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic HF</td>
<td>.700</td>
<td>.700</td>
<td>-</td>
</tr>
<tr>
<td>Electronic UHF</td>
<td>T80 v2</td>
<td>T80 v2</td>
<td>T80 v2</td>
</tr>
<tr>
<td>Electronic LEGIC™</td>
<td>SM4500</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Windows 32/64 support</td>
<td>● (iID® driver engine or keyboard mode)</td>
<td>● (iID® driver engine or keyboard mode)</td>
<td>-</td>
</tr>
<tr>
<td>Windows Phone/RT support</td>
<td>● (HID keyboard mode)</td>
<td>● (HID keyboard mode)</td>
<td>-</td>
</tr>
<tr>
<td>Android platform support</td>
<td>● (iID® Android package or keyboard mode)</td>
<td>● (iID® Android package or keyboard mode)</td>
<td>● iID® driver engine Android</td>
</tr>
<tr>
<td>iOS support</td>
<td>● (HID keyboard mode)</td>
<td>● (HID keyboard mode)</td>
<td>● iID® driver engine iOS (on request)</td>
</tr>
<tr>
<td>space line (firmware update, scripting support)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
## TAG compatibility

<table>
<thead>
<tr>
<th>Feature</th>
<th>iiD® POCKETwork HF</th>
<th>iiD® POCKETwork LEGIC™</th>
<th>iiD® POCKETwork UHFcc</th>
<th>iiD® POCKETwork UHF</th>
<th>iiD® PENsolid HF</th>
<th>iiD® PENsolid UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF - miniaturized transponders</td>
<td>(⚫) not recommended</td>
<td>(⚫) not recommended</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>UHF - miniaturized transponders</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td>(⚫) not recommended</td>
<td>-</td>
<td>●</td>
</tr>
<tr>
<td>HF - ISO14443 (NFC, mifare), ISO15693</td>
<td>●</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>HF - TELID® iiID-L</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>HF – LEGIC™</td>
<td>-</td>
<td>●</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UHF transponders</td>
<td>-</td>
<td>-</td>
<td>●</td>
<td>●</td>
<td>-</td>
<td>●</td>
</tr>
</tbody>
</table>

### Ordering information

<table>
<thead>
<tr>
<th>Feature</th>
<th>iiD® POCKETwork HF</th>
<th>iiD® POCKETwork LEGIC™</th>
<th>iiD® POCKETwork UHFcc</th>
<th>iiD® POCKETwork UHF</th>
<th>iiD® PENsolid HF</th>
<th>iiD® PENsolid UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>72.62.720.00</td>
<td>72.62.525.00</td>
<td>41.12.820.00</td>
<td>41.22.820.00</td>
<td>73.72.750.00</td>
<td>43.72.850.00</td>
</tr>
</tbody>
</table>

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iID® contactless mobile readers
Mobile RFID processes with *iID®PENsolid*

**Application / features**

- RFID read/write unit for mobile Data Capture
- Touch screen support for capacitive displays
- DOC or SPC mode supported
- Compact form factor
- Bluetooth™ class 2 SPP and HID interface
- USB micro interface (Data, configuration and charge)
- two programable buttons
- LED visualization of
  - *RFID communication*
  - *Bluetooth™ connectivity*
  - *Rechargeable battery state*
- Integrated buzzer
- support for Android, iOS* and Microsoft Windows/Windows Phone

*using Bluetooth HID keyboard profile*
**iID® PENsolid – More than just a pen**

- **Integrated Bluetooth™ HID functionality**
  - Easy connection as a wireless keyboard on any mobile device with the platforms Windows, Android, or iOS.

- **4 different LEDs** show current status of the PEN:
  - **Bright blue LED**: Bluetooth connection
  - **Orange LED**: State of battery.
  - **Red and green LEDs**: RFID status ok or fail
  - **Buzzer**: Additional acoustic signal.

- **Specially completed tip** allows it to be used as an input device for touchscreens.

- **Forward RF antenna** for targeted and selective communication with miniaturized UHF transponders (HF up from 06/2015).

- **Integrated RTC and 2MB flash memory** for storing read data plus additional E²PROM memory for storing the configuration and execution scripts (on request).

- **Internal battery** is rechargeable via the Micro-USB interface.

- **Press SCAN button** to read transponder data.

---

**iID® PENsolid**

RFID Bluetooth reader device available as UHF* and HF** version:

*supporting ISO 18000-6C and TELID® UHF sensor transponders

**supporting ISO14443, ISO15693 and TELID® HF sensor transponders

Communicates via a Bluetooth to a HOST (Smart Phone, Tablet ...)

**Sturdy, lightweight** RFID reader with protection class IP65 and resistant plastic housing.

For usage in harsh industrial environments with the latest mobile devices.
Data Capture with *iID®POCKETwork* v2

Application / features

- POCKET reader for mobile Data Capture
- Stand alone (SPC) or in connection with an HOST (DOC)
- Casing Size appr. 86 x 54 x 10 mm³
- Bluetooth™ class 2 SPP and HID interface
- USB micro interface (Data, configuration, time sync and charge)
- three programable buttons
- OLED with 96 x 64 Matrix-Display
- Integrated 2 MB Flash-Memory for storage of collected data
  - *iID® MPC DATAload for PC data transfer*
- Buzzer with adjustable frequencies
- support for Android, iOS* and Microsoft Windows/Windows Phone

- Programable Menu for choosing functions like:
  - display/store Productcode / UID of transponders
  - display/store temperature of TELID® sensor in °C
  - display/store switch open / close using TELID® sensor functionality

*using Bluetooth HID keyboard*
**iID® POCKETwork** – for smart mobile data capture

- **Integrated Bluetooth™ SPP and HID functionality**
  - Easy connection as a wireless keyboard on any mobile device with the platforms Windows, Android or iOS
- **Directional RF antennae**
  - For targeted and selective communication with HF or UHF transponders
- **OLED display**
  - To show current device status:
    - Battery level
    - Operation mode
    - RFID activity
    - Bluetooth connectivity
  - And user notification
- **FUNCTION buttons**
  - To navigate through menus
- **Press SCAN button**
  - To read transponder/sensor data
- **Integrated RTC and 2MB flash memory**
  - For RFID/sensor data storage plus additional E²PROM configuration memory
- **Integrated BUZZER**
  - For user notification

**iID® POCKETwork**

*RFID Bluetooth reader device*

- Available as **UHFcc**, **UHF** and **HF** version

  - *Supporting ISO 18000-6C and TELID® UHF sensor transponders*
  - *Supporting ISO14443, ISO15693 and TELID® HF sensor transponders*

  - Communicates via a **Bluetooth** to a HOST (Smart Phone, Tablet …) and via **USB** to PC

- **Sturdy, lightweight**
  - RFID data collector with protection class and resistant plastic housing

  - For usage in medium harsh industrial environments with the latest mobile devices
Smart logistic processes with iID® wearable

Application / features

- UHF RFID read/write unit for smart Data Capture
- TELID® sensor support
- DOC or SPC mode supported
- Compact form factor
- Bluetooth™ low energy with SPP communication
- Wireless battery charge (Qi standard)
- LED visualization of
  - RFID communication
  - Bluetooth™ connectivity
  - Rechargeable battery state
- Integrated vibration alarm
- support for Android, WearOS, iOS and Microsoft Windows/Windows Phone
iID® wearable – scanning while wearing

4 different LEDs show device status:
- **bright blue LED** Bluetooth connection
- **orange LED** state of battery.
- **red and green LEDs** RFID status ok or fail
- **Vibration alarm** for additional feedback.

- **integrated Bluetooth™ low energy** easy connection on any mobile device with the platforms Windows, Android, WearOS or iOS

- **directional RF antennae** for targeted and selective communication with UHF transponders

- **internal battery** is rechargeable via wireless charging (Qi)

- **Wrist band** (optional) for easy and secure operation

- **ON/OFF key**

**iID® wearable**

*RFID Bluetooth reader device* available as **UHF** version

*supporting ISO 18000-6C and TELID® UHF sensor transponders

communicates via **Bluetooth Low energy** to a HOST (Smart Phone, Tablet …)

**sturdy, lightweight** RFID reader with protection class **IP65** and resistant plastic housing

for usage in **harsh industrial environments** with the latest mobile devices

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iID® COLLECTit! mobile

- **Wireless RFID interface**
  - Bluetooth™ connected or integrated iID® contactless RFID reader

- **Mobile device (smartphone or tablet)**
  - iID® PENsolid, iID® contactless module
  - iID® driver engine for Windows / Android or HID interface
  - Data transport by wide area networks

- **Local area network (Wifi) or WAN (GSM)**

- **internet**
  - iID® COLLECTit! Cloud

- **TAG or sensor (TELID®231 humidity transponder)**

- **Data evaluation**

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iID® COLLECTit! basic

Wireless RFID interface  →  USB or Bluetooth interface to personal computer  →  Local data storage  →  Cloud or data evaluation

iID® MPC data storage of ID, measurement data, time stamp  →  iID® MPC data collector / iID® MPC data converter

TAG or sensor (TELID®243 pressure transponder)  →  iID® POCKETwork  →  iID® MPC software for PC  →  Data export to CSV or XML  →  Data evaluation

Local storage XML data files

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Setup
**iID® software tools**

For initial setup and reader configuration

For evaluation and simple transponder and sensor interaction
## Reader operation modes

<table>
<thead>
<tr>
<th>Mode</th>
<th>Target</th>
<th>Host communication</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOC</td>
<td>• read/write applications • full host based reader &amp; transponder control</td>
<td>• bi-directional protocol based serial host communication • iiD® driver engine, iiD® interface protocol</td>
<td>• host based transponder search • limited reader trigger support</td>
</tr>
<tr>
<td>Direct online communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPC</td>
<td>• scan applications, reader based transponder control</td>
<td>• uni-directional serial communication • keyboard / HID emulation</td>
<td>• script based trigger • LED and display control • mainly used for HID profile based scan applications</td>
</tr>
<tr>
<td>Script programmed communication - SCANNER mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPC</td>
<td>• data collector applications</td>
<td>• iiD® MPC library • iiD® MPC DataLoad for data download</td>
<td>• script based data collection on device for later PC download • available for MPC enabled devices with RTC and non-volatile memory (iiD® POCKETwork)</td>
</tr>
<tr>
<td>Memory packet communication</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Operation –
iID® POCKETwork datacollector bundle
Introduction

iID® POCKETwork DATAcollector bundle

• is a system solution for mobile RFID based data capture

• may be used for
  ▪ Mobile maintenance processes
  ▪ Faster inventory control
  ▪ Inspection supervision

• can be extended by additional ID & sensor transponders

• comes with MPC DATAload software for data download and export to third party software
**Application**

- **Collect/Inspect**
  - Visit object to be collected/inspected

- **Capture**
  - Scan object transponder/measure sensor transponder

- **Save**
  - Data will be saved to POCKETwork internal memory including time stamp and status information

- **Evaluate**
  - Select OKAY, MARK, UNKARK on POCKETwork menu

---

**Stick transponders/sensor transponders to objects to be collected/inspected**

**Sign**

**Connect device to PC, download data to PC for further evaluation**
Setup

iID® POCKETwork:
- Connect device to your PC/laptop using USB cable
- install USB driver if requested (provided by Windows update)
- See device quick start guide:
  http://microsensys.de/downloads/Additional%20Content/QuickStartGuides_A4/QSG-iID%20POCKETwork%20v2-001E.pdf

iID® transponder sample package:
- Stick transponders to the objects to be collected/inspected
- Note, that transponders of type “special” are to be used in metal environment

iID® MPC software:
- install iID® MPC software:
  http://microsensys.de/downloads/CDContent/Install/iID%c2%ae%20POCKET/Setup%20iID%c2%ae%20MPC%20Software.msi
- See quick start guide:
  http://microsensys.de/downloads/CDContent/Documents/iID%c2%ae%20SPC/Quick-iID%20MPC%2001D.pdf
Questions?
Please contact info@microsenssys.de

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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.