# Inventory Management System

Every company updates its inventory list once a year to compare and control the virtual and actual asset status. This extensive, sometimes very tiresome and redundant operation involves counting, recording and checking of assets that can last for days, depending on the amount and number of company assets.

After that follows data input acquired from the inventory list and processing of that data, all towards realization of our final goal - to compare the actual asset status with the status provided by your accountant.

SDD ITG developed Inventory Management System based on RFID technology that provides faster and more reliable actual inventory insight. Using the fore-mentioned system, Inventory management comes down to elegant and reliable object identification marked with special RFID tags (smart stickers) that are read with handheld RFID readers.



When the tag is in readers range a unique tag ID is read, that is incorporated into the tag, this unique ID is assigned to the object which has the tag glued onto it. Inventory data is automatically updated and inventory list is generated without additional data input.

Handheld reader is light and easy to use. Furthermore, navigating the software is simplified and user interface is designed to be used without touch pen. The software is user friendly and provides fast insert, update and delete inventory asset functions.

Software supports multiple users, location definitions and category management. Generated inventory list is compatible and easily transferred to accounting software implemented into your company.

SDD ITG offers a complete solution which includes software, hardware and system customization that meets your specific needs, system implementation and user training as technical support during and after the warranty period.

*We also offer barcode inventory management, contact us for more info.*

# Inventory Management System

## Technical characteristics

Inventory Management System is developed by SDD ITG team is based on Radio Frequency Identification Technology (RFID).

System presents a complete solution for efficient and reliable inventory assets management.

It consists of:

- Handheld RFID reader
- Smart stickers that are placed on inventory assets
- Specialized Application software

The basis of the handheld RFID reader is contactless, short and medium range, RFID reader, specially designed for mobile devices. Reader supports contactless smart transponder family according to ISO 18000-6C standard. The device is easy to use. The reader has an antenna which it uses to detect compatible chips implemented in RFID chip carrier, in this case, smart card stickers. Operating frequency is 860-925 MHz. Implemented technology guarantees reliability.

Smart self-adhesive stickers are simply placed onto the inventory object. The stickers are made from non-tear material and are long lasting. Stickers come in various shapes and sizes, which are chosen based on what will they be used on.

The basis of the smart sticker is RFID chip that has its own memory. Each of these stickers memory contains a unique, read-only, serial ID number. The sticker is easy to install, and is readable on any surface. Read proximity is usually 10 cm to over 1m, depending on the size of the sticker, surface on which the sticker is placed and RFID reader power (adjustable through software).

Software features simple and intuitive user interface. Software supports adding, updating and deleting of inventory items. Existing inventory lists used by accounting software can be used to create inventory lists in Inventory Management Software and vice versa, Inventory Management Software can export the list in a compatible format, to be used by various software.

Examples of UHF RFID tags we offer are given in the next table.

# Inventory Management System

| Product | Micro II | Nanoˣ II | Picoˣ II / Picoˣ II Plus | Pico-On Plus | Dash-On XS | Dot-On XS |
|---|---|---|---|---|---|---|
| Operating frequency | 902-928 MHz (US) 866-868 MHz (EU) | 902-928 MHz (US) 866-868 MHz (EU) | 902-928 MHz (US) 866-868 MHz (EU) | 902-928 MHz (US) 866-868 MHz (EU) | 902-928 MHz (US) 866-868 MHz (EU) | 902-928 MHz (US) 866-868 MHz (EU) |
| IC type | Alien Higgs-3 | Alien Higgs-3 | Alien Higgs-3 | Alien Higgs-3 | Alien Higgs-3 | Alien Higgs-3 |
| Memory configuration | 96 EPC bits, extendable to 480 bits (512 bit user memory) | 96 EPC bits, extendable to 480 bits (512 bit user memory) | 96 EPC bits, extendable to 480 bits (512 bit user memory) | 96 EPC bits, extendable to 480 bits (512 bit user memory) | 96 EPC bits, extendable to 480 bits (512 bit user memory) | 96 EPC bits, extendable to 480 bits (512 bit user memory) |
| Read range on metal | Up to 33 ft (10 m) | Up to 20 ft (6 m) | Up to 6.6 ft (2 m); 10 ft (3 m) for Picoˣ II Plus | Up to 10 ft (3 m) | Up to 6.6 ft (2 m) | Up to 5 ft (1.5 m) |
| Read range off metal | Limited | Limited | Limited | Limited | Limited | Limited |
| Case material | Engineering grade nylon polymer | Engineering grade nylon polymer | Engineering grade nylon polymer | Ceramic | Ceramic | Ceramic |
| Mounting system | Rivet hole, ø 0.12 in (3.2 mm); adhesive (optional) | High performance adhesive | High performance adhesive | High performance adhesive | High performance adhesive | High performance adhesive |
| Operating temperature | -22°F to +185°F (-30°C to +85°C) | -22°F to +185°F (-30°C to +85°C) | -22°F to +185°F (-30°C to +85°C) | -22°F to +185°F (-30°C to +85°C) | -22°F to +185°F (-30°C to +85°C) | -22°F to +185°F (-30°C to +85°C) |
| Application temperature | -40°F to +482°F (-40°C to +250°C) | -40°F to +302°F (-40°C to +150°C) | -40°F to +302°F (-40°C to +150°C) | -40°F to +302°F (-40°C to +150°C) | -40°F to +302°F (-40°C to +150°C) | -40°F to +302°F (-40°C to +150°C) |
| Compression strength | 181 psi (1259 kPa) | 166.8 psi (1150 kPa) | 174 psi (1200 kPa) | 170 psi (1176 kPa) | 790 psi (5447kPa) | 790 psi (5447kPa) |
| IP classification | IP68 | IP68 | IP68 | IP68 | IP68 | IP68 |
| Dimensions | 2.01 x 1.43 x 0.30 in (51 x 36.3 x 7.5 mm) | 1.25 x 0.51 x 0.19 in (31.7 x 12.8 x 4.8 mm) | 0.70 x 0.43 x 0.19 in (17.7 x 10.9 x 4.8 mm) | 0.47 x 0.28 x 0.12 in (12 x 7 x 3 mm) | 0.48 x 0.12 x 0.09 in (12.3 x 3 x 2.2 mm) | ø 0.24 x 0.1 in (ø 6 x 2.5 mm) |
| Weight | 0.92 oz (26 g) | 0.18 oz (5 g) | 0.07 oz (2 g) | 0.05 oz (1.4 g) | 0.016 oz (0.44 g) | 0.012 oz (0.34 g) |
| Sample applications | Bulk container tracking, vehicle tracking, post-paint oven baking, autoclave | Tool tracking, WIP conveying equipment, IT/telecom management, instrument tracking, weapons tracking | Tool tracking, weapon tracking, medical device management, instrument tracking | Tool tracking, electronic device management, instrument tracking | Instrument tracking, tool tracking, medical device management, source tagging | Instrument tracking, tool tracking, medical device management, source tagging |