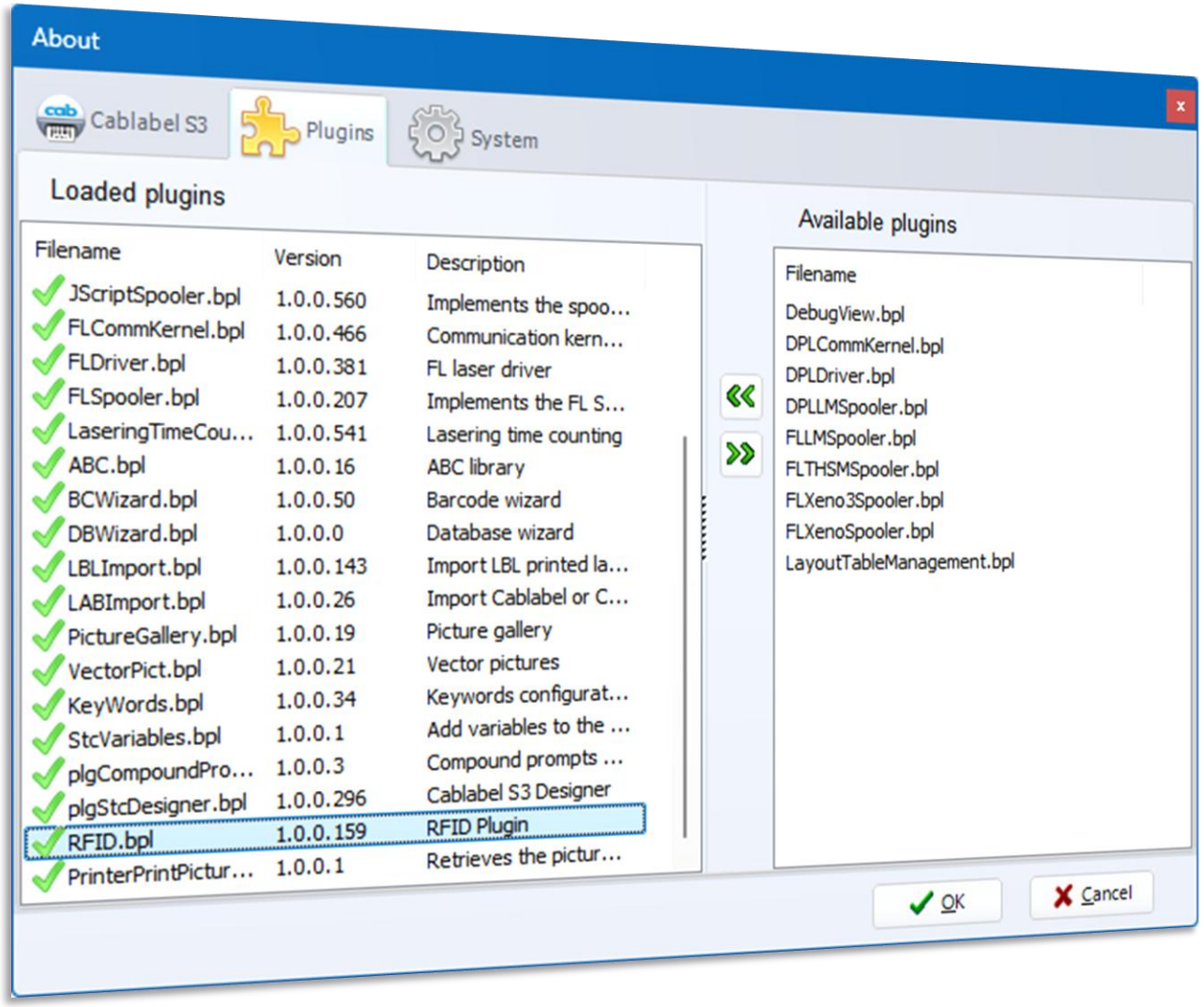
cablabel S3 RFID

cablabel and RFID

- Which printers are available and which settings have to be made
- "What features does the software offer?

cablabel S3 RFID

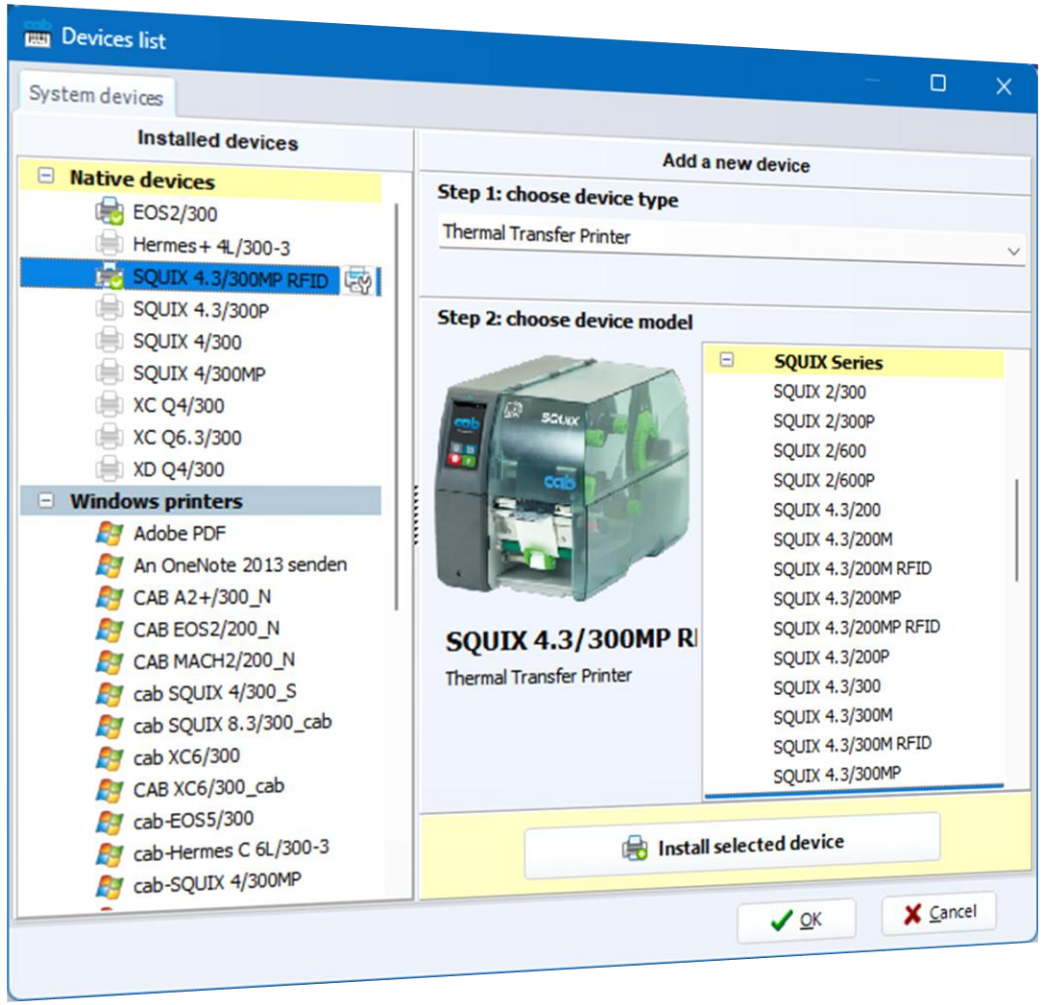
Requirement



Enable plug-in RFID.

cablabel S3 RFID

Installation and configuration of the RFID printer

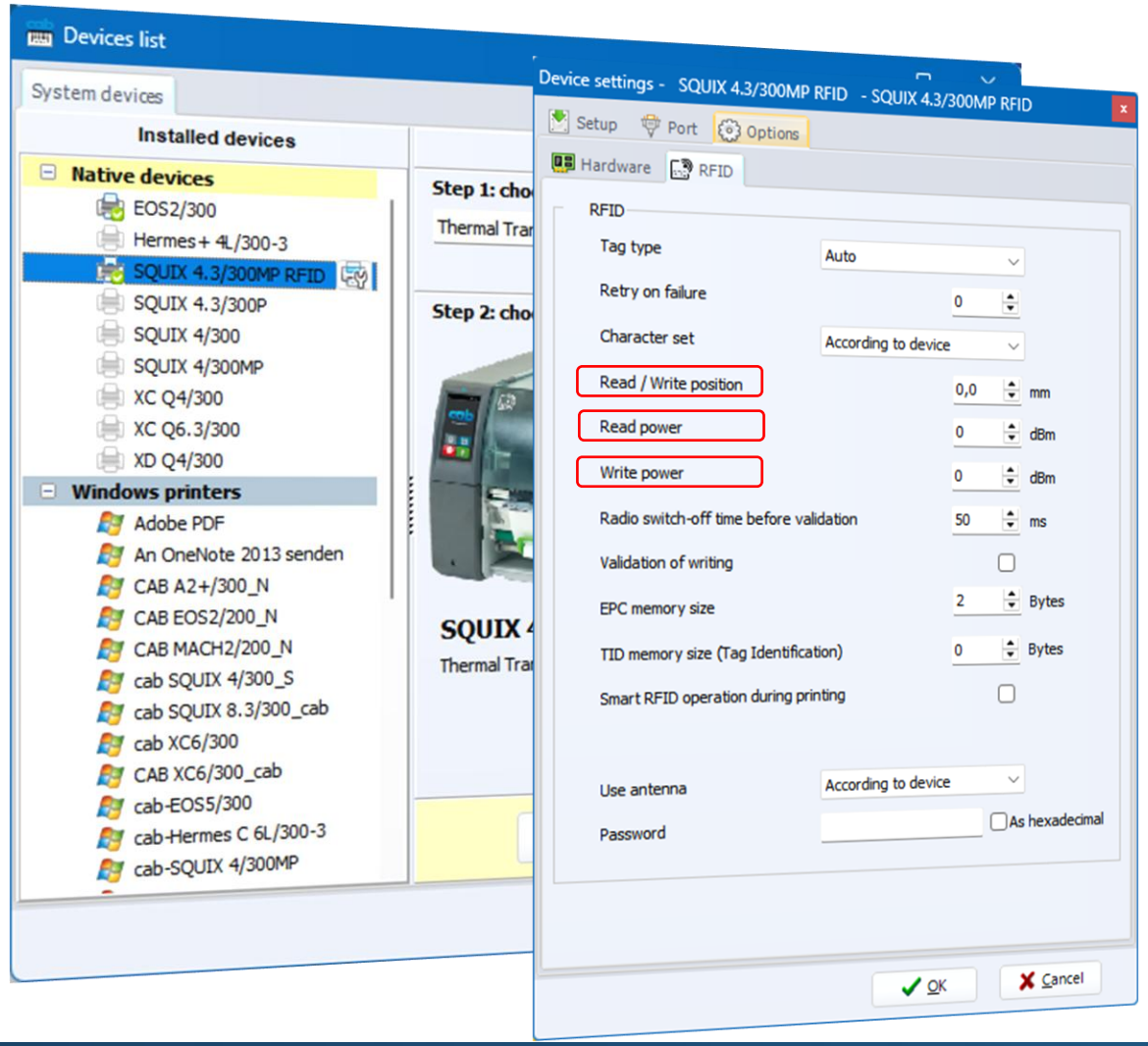


Available: SQUIX M(P) RFID
Hermes Q (L/R) RFID
XDQ 300 RFID

Planned: PXQ RFID

cab offers only UHF printers !

Installation and configuration of the RFID printer



The "Read/Write Position", "Read Power", and "Write Power" can be retrieved and configured after the tag teach-in process.

If the values remain at 0, the printer's default values are used automatically.

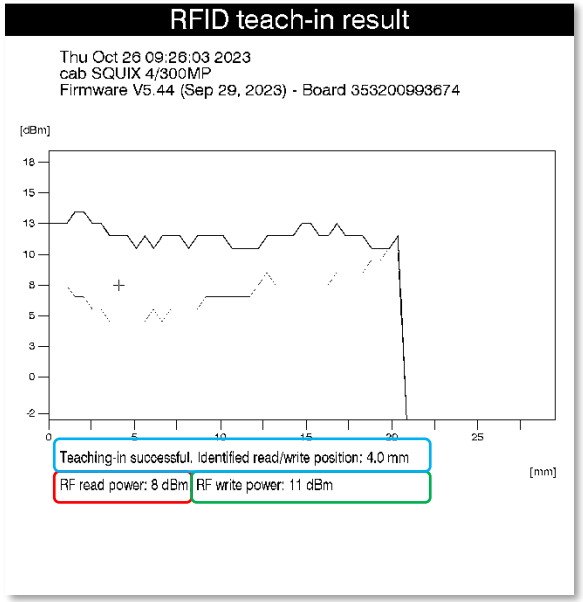
EPC memory size, TID memory size, etc. can be found in the tag's datasheet.

Installation and configuration of the RFID printer

Teach-in Tag / Extended Teach-in

"Determines the optimal read/write performance and positioning for RFID handling of the inserted tags.

"ATTENTION: During teach-in, the tag will be written to and can no longer be used!



PNG of the last printed label:
192.168.xxx.xxx/cgi-bin/bitmap

cablabel S3 RFID

Installation and configuration of the RFID printer

The remaining specifications can be

Attention !!

1 character has 8 bits normally (1 byte)
This means :

96 bits : 8 = 12 characters
128 bits : 8 = 16 characters

PRODUCT DATASHEET
Confidex Carrier PRO™

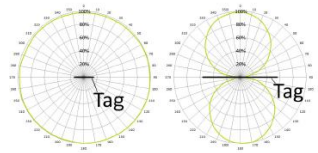
Special washable label for returnable plastic containers with great performance even when being close to challenging materials.

ELECTRICAL SPECIFICATION

Device type
Class 1 Generation 2 passive UHF RFID transponder
Air interface protocol
EPCGlobal Class1 Gen2 ISO 18000-6C
Operational frequency
Global 860-960MHz
IC type
Impinj Monza 4QT™
Impinj Monza 4E™ (upon special request)
Memory configuration
With Monza 4QT: EPC 128 bit; User 512 bit; TID 96 bit
With Monza 4E: EPC 496 bit; User 128 bit; TID 96 bit
Read range (2W ERP)*
EU on plastic up to 12,5 m / 41 ft
EU on cardboard up to 11 m / 36 ft
US on plastic up to 12 m / 39 ft
US on cardboard up to 10,5 m / 34 ft
Applicable surface materials*
Non-metallic surfaces. Works well also on boxes where content varies from fruits, vegetables or other groceries to liquid bottles and utilities.

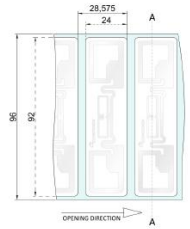
* Read ranges are theoretical values that are calculated for non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power according to ETSI EN 302 208 (2W ERP). EU = 865 - 868 MHz, US = 902 - 928 MHz. Different surface materials may have an effect on performance.

RADIATION PATTERNS



MECHANICAL SPECIFICATION

Tag materials
Printable white PET, resin ribbon is recommended
Background adhesive
High performance acrylic adhesive specifically for low surface energy plastics
Weight
0,8 g
Delivery format
2000 pcs on reel
Pitch on reel
28,575 mm / 1,125"
Reel core inner diameter
76 mm / 3"
Tag dimensions
92 x 24 x 0,2 mm / 3.62 x 0.94 x 0.01 in



ENVIRONMENTAL RESISTANCE

Operating temperature
-35°C to +85°C / -31°F to +185°F
Ambient temperature
-35°C to +90°C / -31°F to +194°F
Water resistance
Good, tested 5 hours in 1m deep water
Washing resistance
Good, tested 80 cycles with water at 17
Chemical resistance
No physical or performance changes in:
- 168h Salt water (salinity 10%) exposure
- 168h NaOH (10%, pH 13) exposure
- 168h Sulfuric acid (10%, pH 2) exposure
- 168h Motor oil exposure
- 30min Acetone exposure
Storage condition
1 year in +20°C / 50% RH (shelf life for adhesive)
Expected lifetime
Years in normal operating conditions

Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, product's final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.

1/2

01-2013
contact@confidex.com www.confidex.com

CONFIDEX

User - 32(64) bits
Unique TID - 48 bits

Memory configuration
With Monza 4QT: EPC 128 bit; User 512 bit; TID 96 bit
With Monza 4E: EPC 496 bit; User 128 bit; TID 96 bit

Omni-ID®

Visit www.omni-id.com to learn more about the complete line of Omni-ID RFID products.

Omni-ID® IQ 150

The IQ 150 Ultrathin labels are designed for on metal tag functionality, within a small, low profile, easy to deploy label. Optimized for thermal barcode printers, the Omni-ID IQ 150 enables low cost and hassle-free RFID deployment. The Ultrathin labels redefine the standard for repeatability for on and off metal tagging applications demanding a very small low profile tag.

tion and excellent thermal barcode
Omni-ID IQ 150 label is ideal
nt of indoor asset management

laboratory asset tracking
oad signs
ent

ifications

White synthetic label	
55.0 x 12.5 x 1.2	
2.17 x 0.49 x 0.05	
0.25	

the maximum. Batch to batch variation could be within 0.2mm tolerance.

Dimensions stated in mm
Supply format = 1000 labels per roll

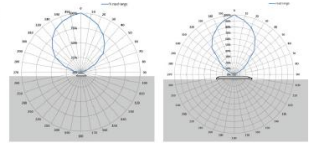
RF Specifications

Protocol	EPC Class 1 Gen2v2
Frequency Range (MHz)	866-868 (EU) 902-928 (US)
Fixed Reader[1]	Up to 1.6
Handheld Reader[1]	Up to 1.0
Material Compatibility	Optimized for all materials
IC Type	Monza R6-P
Memory[2,3]	EPC - 128(96) bits User - 32(64) bits Unique TID - 48 bits

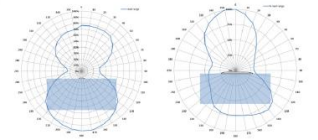
[1]Quoted performance achieved using standard testing methodology on Aluminium test plates. Read range is dependent on multiple factors such as; RFID reader transmit power and receiver sensitivity, asset material and environment. Please see the Omni-ID On Metal Labels User Guide for detail.
[2] EPC and User memory are reprogrammable. UTID is locked at point of manufacture by IC manufacturer.

Radiation Patterns

On Metal



Off Metal



PAGE 1 OF 2

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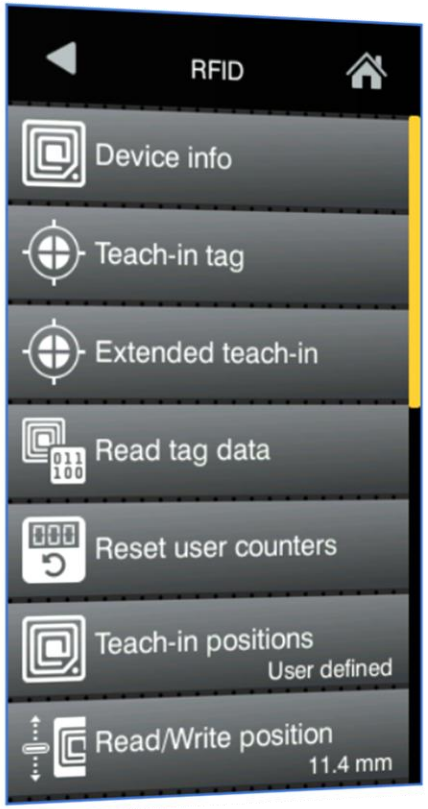
Installation and configuration of the RFID printer



Device info
Hardware and software revisions of the RFID module
Total and user counters for the read and write cycles and RFID error messages

Teach-in tag
Determines the optimal read/write position, read power, and write power for RFID access to the inserted tags. **ATTENTION: The tag will be encoded during teach-in and cannot be reused!**

Extended teach-in
Determines the optimal read/write position, read power, and write power for RFID access to the inserted tags.
Determines optimal values through multiple measurements.

Read tag data
Reads RFID tag data in hexadecimal representation." "Selectable memory banks: EPC, TID, and USER

Reset user counters
Resets the user counters in the Device Info section.

Installation and configuration of the RFID printer

Read/Write position
Position determined by teach-in. Manually adjustable (0...60.0 mm). -

RF read power
Result from the teach-in tag function. Manually adjustable (-2...17 dBm). -

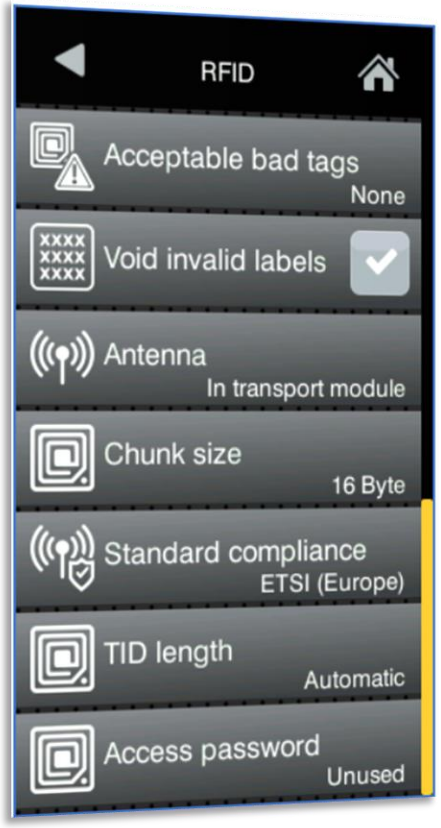
RF write power
Result from the teach-in tag function. Manually adjustable (-2...17 dBm). -

Acceptable bad tags
Maximum number of RFID errors allowed before the print job is interrupted.

Void invalid labels
Marks labels with bad tags as invalid

Antenna
Antenna selection
Transport module: Antenna in transport module for standard and high-sensitivity RFID tags
Printhead: Antenna on printhead for on-metal RFID tags

Installation and configuration of the RFID printer



Chunk size
"Data to be written is divided into multiple packets. Range: 4-16 bytes in 2-byte increments

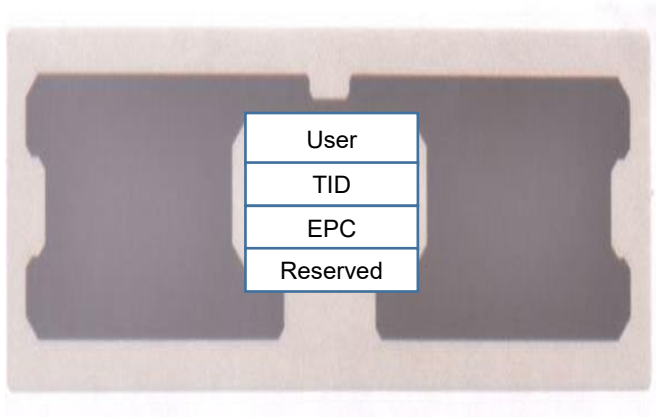
Standard compliance
ETSI (Europe): 865 – 867 MHz" „
FCC (North America): 902 - 928 MHz"
Automatic: Corresponds to the Country setting – FCC for USA, Mexico, Latin America, China, Taiwan, Thailand; ETSI for other countries

TID length
Length of the TID to be read.
Automatic: The device identifies the TID length automatically. **2-12 bytes:** Fixed TID length

Access password
Password for teach-in of write-protected tags

RFID Tag - the different memory areas

- **USER**
  The USER memory is an additional memory bank on some RFID tags, separate from EPC memory. It enables storage of custom data such as product descriptions, manufacturing dates, batch numbers, or other relevant information.

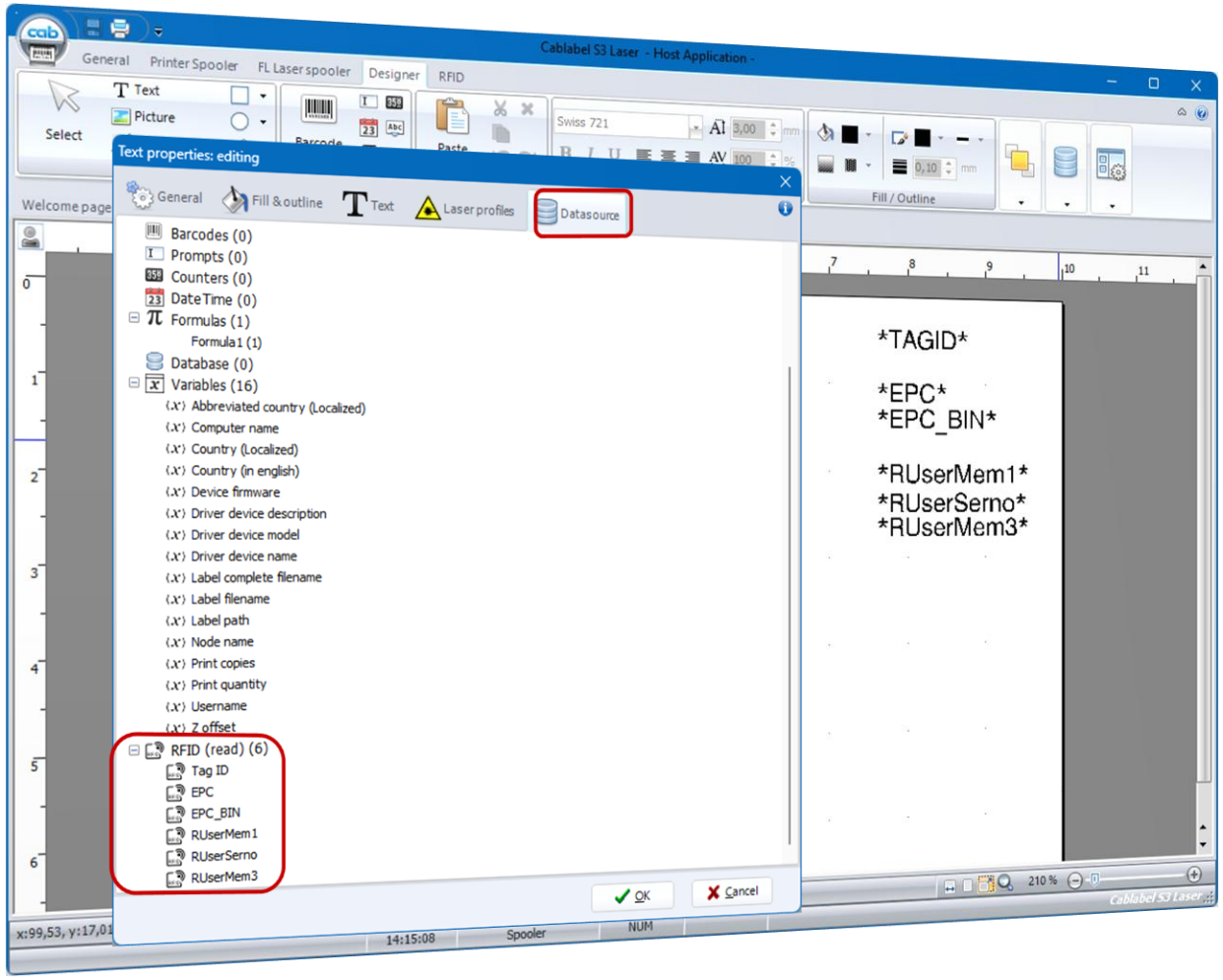


- **TID**
  TID (Tag ID) is a unique, unchangeable serial number assigned to the RFID chip during manufacturing:

- **EPC** (*Electronic Product Code)*
  EPC memory: read and write.
  Free or GS1 standardized content.
  From 96 to 496 bits.

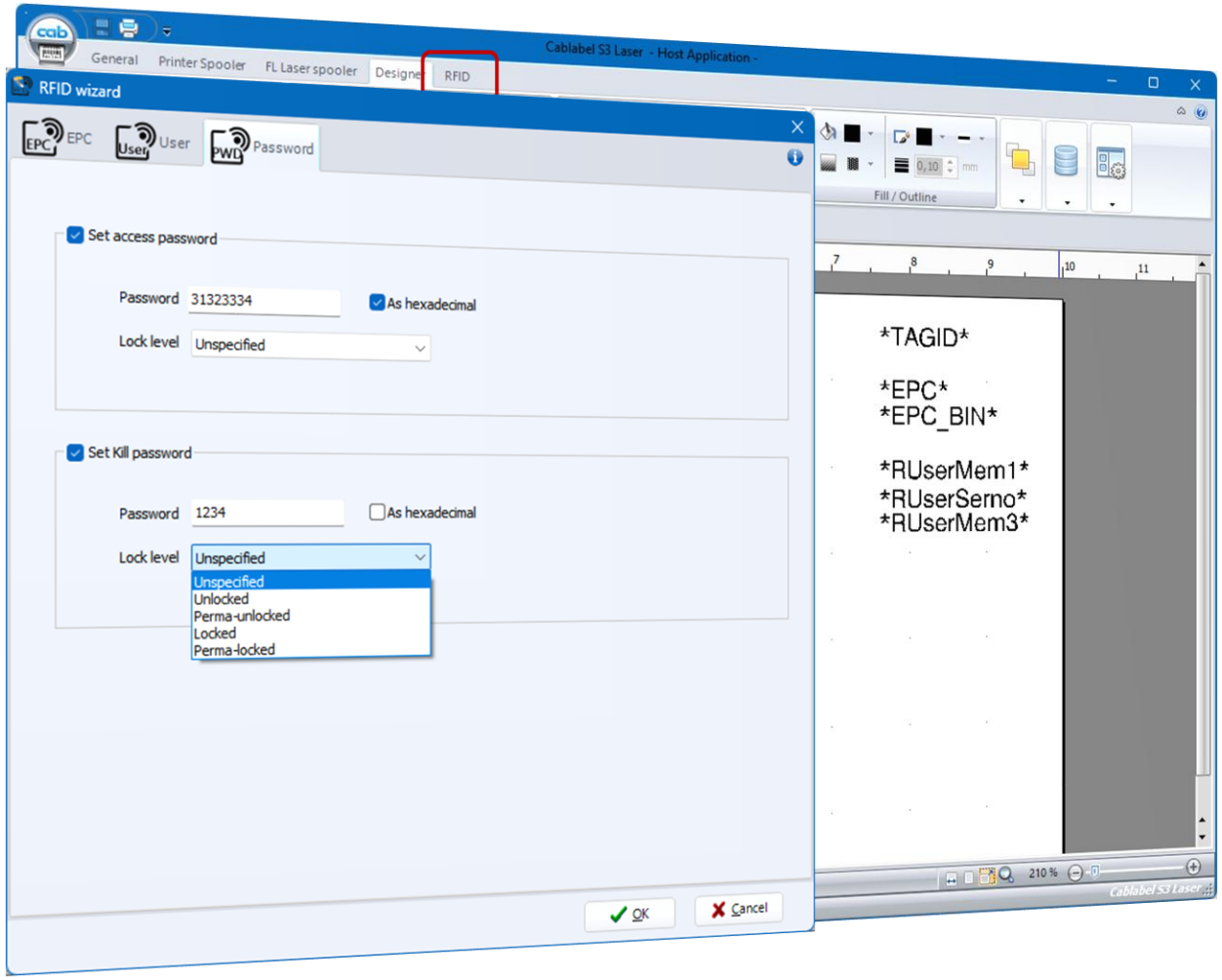
- **Reserved**
  The reserved memory area stores the tag's access and kill passwords. Applying the 32-bit kill password permanently deactivates the tag, making it unresponsive.

RFID values reading and printing



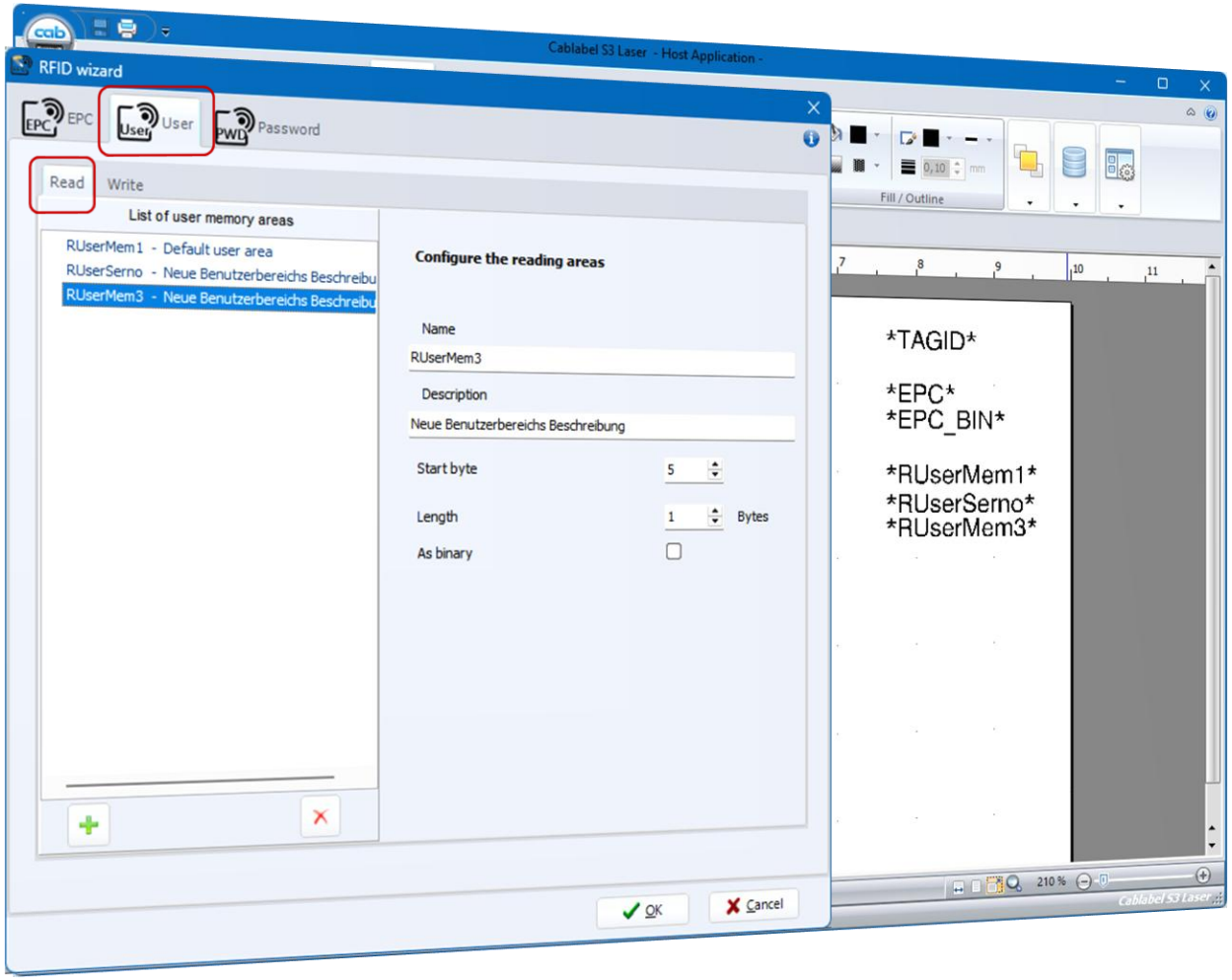
The values from the Tag can be read via the variables Tag ID , EPC, EPC_Bin and RUserMem.

RFID Assistant - Password



The Password tab allows setting access and kill passwords to protect RFID tags against unauthorized:
-Data writing
-Password reading
-Barrier level modification
Passwords are stored in the reserved memory area, which has its own lock level.

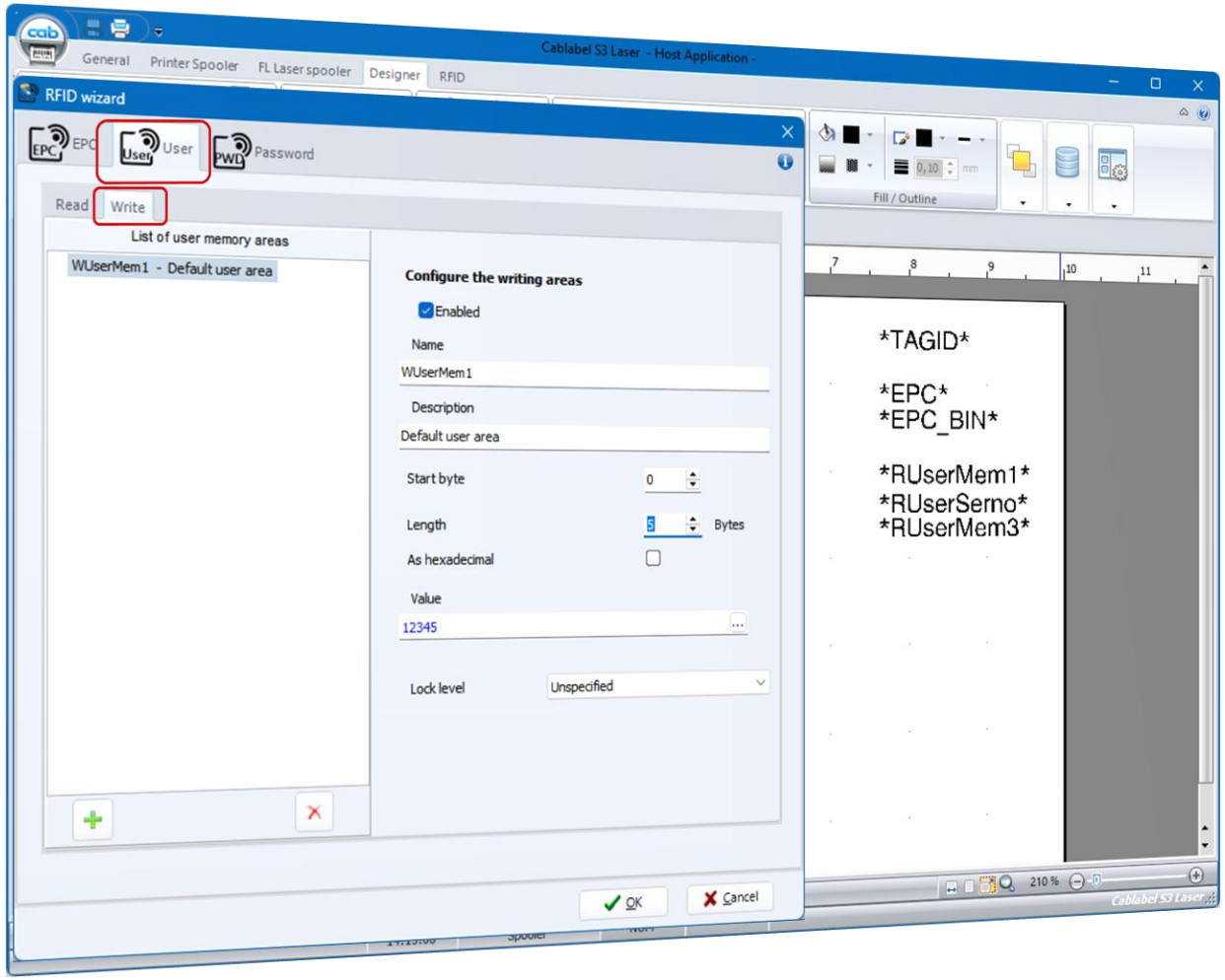
RFID Assistant – User Area



Configuration of the user memory (User) for reading and writing.

The different reading and writing areas can be defined.

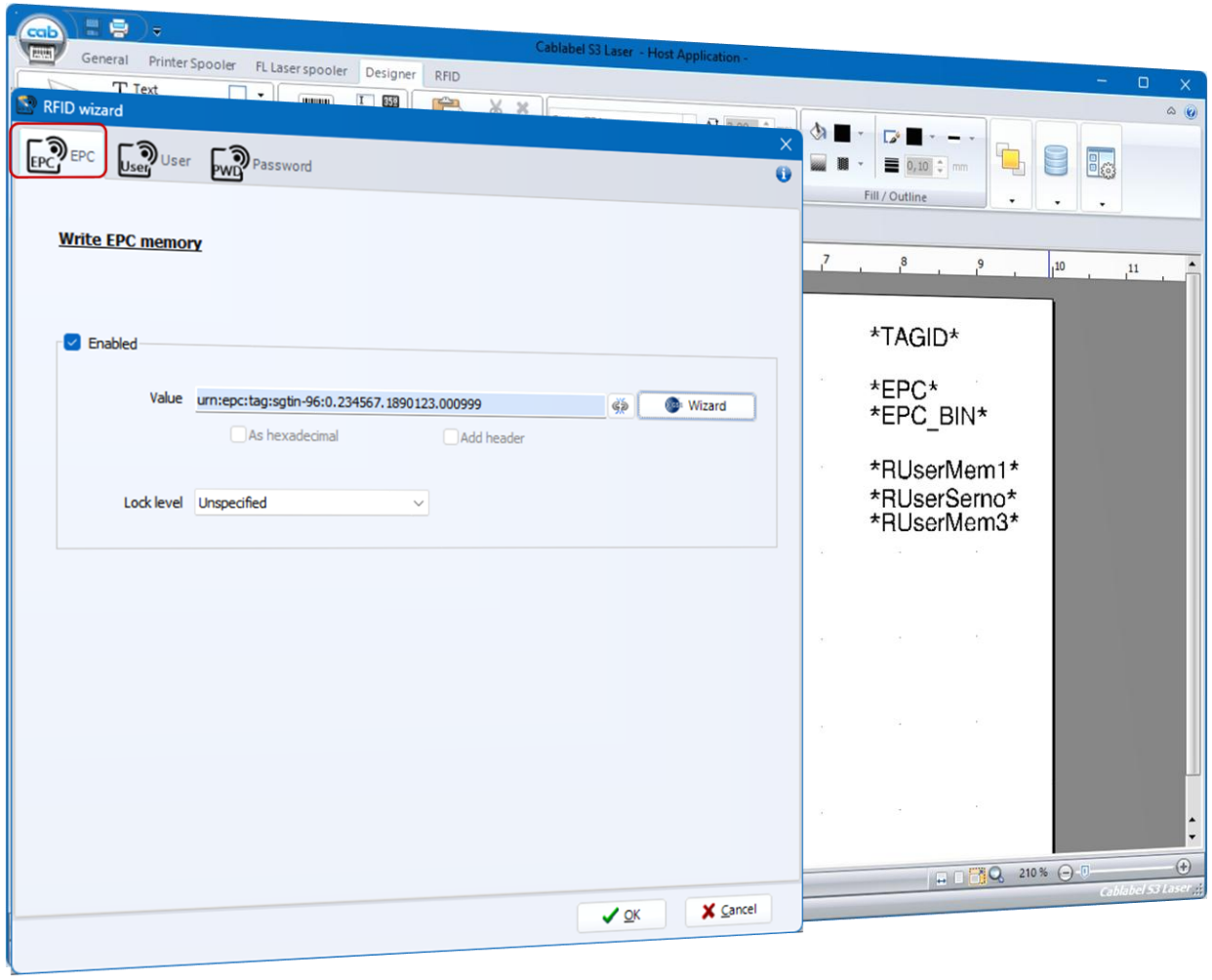
RFID Assistant – User Area



Configuration of the USER memory (User bank) for read and write operations.

Different memory regions for reading and writing can be individually defined.

RFID Assistant – EPC Area



Configures and writes data to the EPC memory bank.

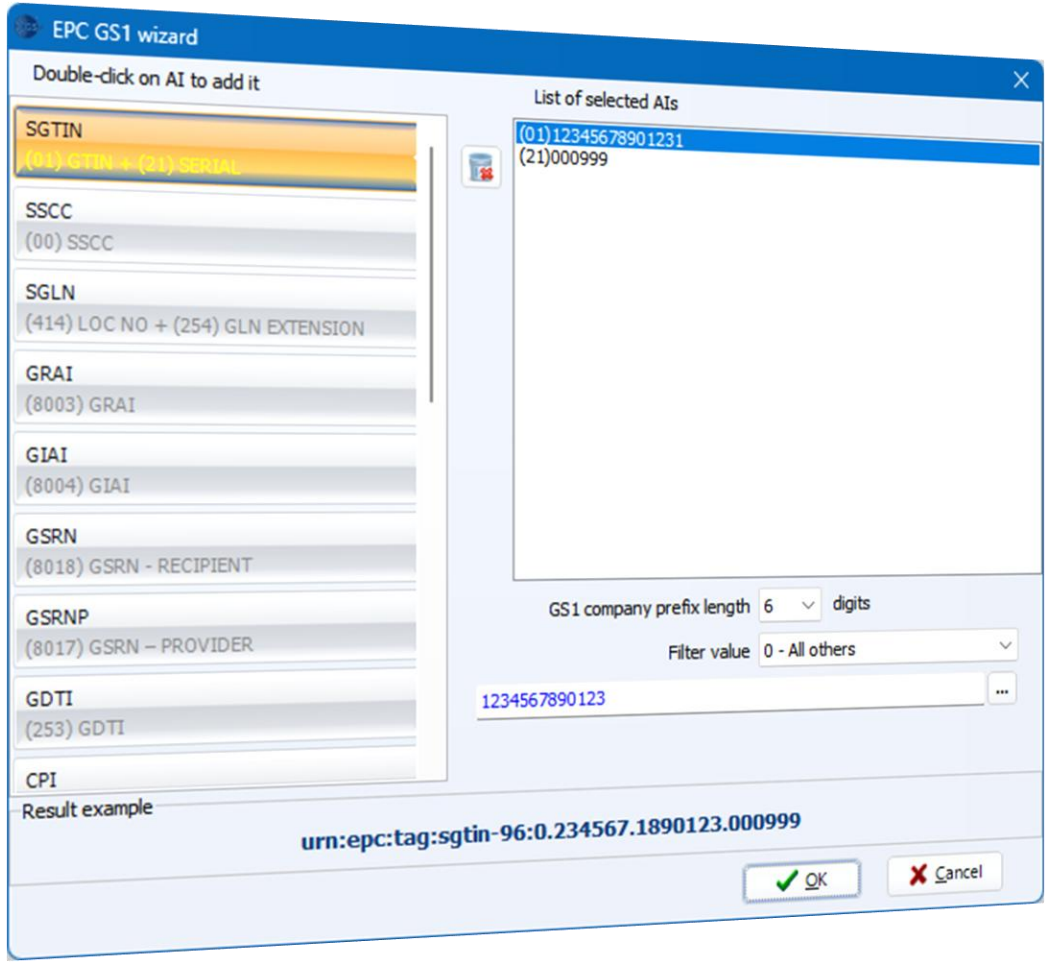
☒ Enabled
Enables/disables the "EPC Write Memory" function Allows value input and selection of EPC content.

☒ As hexadecimal
Value is entered in hexadecimal format.

☒ Add header
Adds a header defining the EPC content format (GS1, ISO, etc.). This option requires "As hexadecimal" to be enabled, since header values contain non-printable characters.

RFID Assistant – EPC Area GS1 Assistant

RFID Assistant –EPC GS1 Assistant



- EPC GS1 content creation with wizard support (similar to barcode wizard)

End