

## iID® module Q10.700

### HF-RFID read/write module

- supports all commonly used transponders
- ultra-compact design engineered to deliver maximum integration flexibility in space-constrained environments
- I<sup>2</sup>C and RS232 (TTL) interfaces paired with an intuitive command architecture for effortless MCU connectivity
- integrated on-board antenna and support for external antennas

The iID® module Q10 combines an ultra-compact footprint with low-power operation to deliver fast, reliable communication with multiple RFID transponders and sensor tags. Optimized for seamless mechanical integration and simple software adoption, it enables rapid deployment across diverse platforms. The iID® module Q10 provides a robust and flexible RFID solution for demanding applications in logistics, industrial automation, access control, and asset management.



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This data sheet is subject to change.  
Picture may differ from original product.  
Dokument4

#### Basics:

RFID read / write module featuring I<sup>2</sup>C or RS232-TTL interfaces for MCU integration

#### Contactless Interface:

Standards:

ISO-based 13.56 MHz RFID system iID®3000  
ISO15693, ISO14443 A/B, ISO18000-3, NFC Forum Tag Type 1/2/4/5

Chip Type / Compliance:

I-CODE®, NTAG®, my-D®, EM chip types,  
NXP MIFARE®Classic/Ultralight/(DESFire), mic<sup>3</sup>-TAG, TELID®200, TELID®300

Communication Distance:

0 ... 25 mm, depending on transponder type and environmental conditions

#### RF Security Features:

Lock:

supported

Password:

lock feature supported  
read / write password supported

#### HOST interface:

RS232-TTL Baud Rate:

microcontroller compatible I<sup>2</sup>C or RS232 interface with TTL logic levels  
57.6 kbps

Power Supply:

3.3V or 5 V ± 5 %, low noise

Current Consumption:

IDLE max. 20mA

RF active max. 200mA

Connector:

solder pad or stranded wire

#### Mechanical / Environmental:

Dimensions:

33.5 mm x 17.0mm x 4 mm

Mounting:

3 mounting holes for M1.6 screws, diameter 1.7 mm

Storage Temperature:

-25 °C ... +85 °C

Operating Temperature:

-20 °C ... +70 °C

IP-Protection Class:

-

#### Operation:

Operation Modes:

DOC or SPC

Software Interface:

iID® 3000 PRO driver engine

Software Documentation:

iID® 3000 PRO protocol documentation<sup>1</sup>

Supported Commands:

for commands related to module parameterization and RF communication,  
refer to latest iID® 3000 PRO protocol documentation<sup>1</sup>

Software:

iID® DEMOsoft for PC x86/x64

#### Accessories:

I<sup>2</sup>C Interface:

for easy commissioning and testing  
evaluation board with USB interface<sup>1</sup>

RS232-TTL:

USB dongle for PC connection<sup>1</sup>

<sup>1</sup>) available upon request

## Ordering Information:

| Features                                |                      |                            | Product Code        |
|---|----------------------|----------------------------|---------------------|
| I <sup>2</sup> C interface <sup>2</sup> | 3.3 V supply voltage | stranded wire <sup>3</sup> | <b>23.38.710.10</b> |
|   |                      | solder pad                 | <b>23.38.710.11</b> |
|   | 5 V supply voltage   | stranded wire <sup>3</sup> | <b>23.38.710.20</b> |
|   |                      | solder pad                 | <b>23.38.710.21</b> |
| RS232-TTL interface                     | 3.3 V supply voltage | stranded wire <sup>3</sup> | <b>23.36.710.10</b> |
|   |                      | solder pad                 | <b>23.36.710.11</b> |
|   | 5 V supply voltage   | stranded wire <sup>3</sup> | <b>23.36.710.20</b> |
|   |                      | solder pad                 | <b>23.36.710.21</b> |

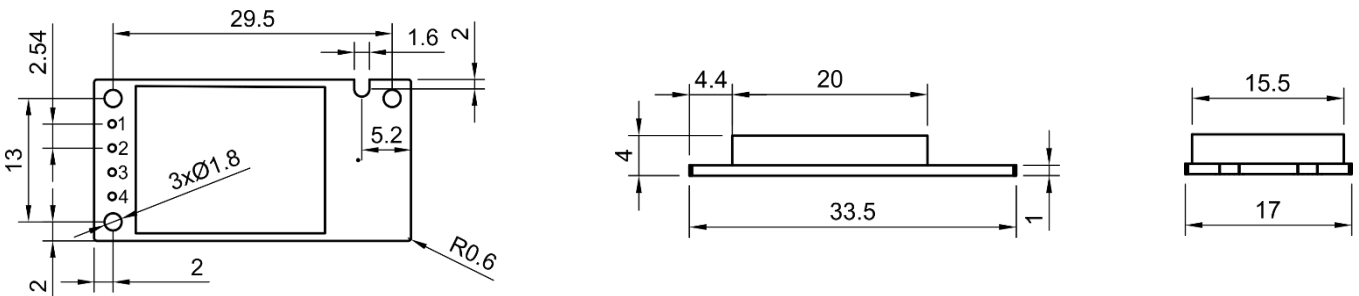
<sup>2)</sup> The I<sup>2</sup>C interface requires external pull-up resistors for proper operation.

<sup>3)</sup> individual stranded flexible wires with tinned open ends and color-coded insulation; length: 100 mm+/-5%

## Electrical Characteristics:

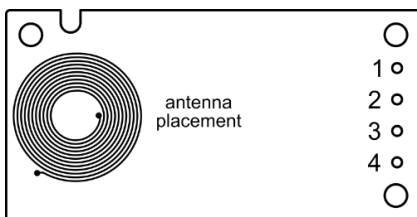
| Supply current | 3.3 V supply voltage | 5 V supply voltage |
|----------------|----------------------|--------------------|
| Idle state     | typ. 17 mA           | typ. 19 mA         |
| RF active      | typ. 120 mA          | typ. 160 mA        |

## Dimensions:



all dimensions in mm

## Application Information:



| Pin | I <sup>2</sup> C interface | RS232-TTL | Colour |
|-----|----------------------------|-----------|--------|
| 1   | VDD                        | VDD       | red    |
| 2   | SDA                        | TX        | blue   |
| 3   | SCL                        | RX        | white  |
| 4   | GND                        | GND       | black  |

## Performance Characteristics:

| Transponder type                | Communication distance |
|---------------------------------|------------------------|
| Qmini TAG 1.8                   | typ. 4 mm              |
| MINI-TAG 4.5 special (in metal) | typ. 5 mm              |
| D6-TAG                          | typ. 11 mm             |
| Label D11special                | typ. 16 mm             |
| D14 V6special-TAG               | typ. 25 mm             |
| TELID2xx.m                      | typ. 13 mm             |