

TWN4 USB FRONT READER

MULTI-FREQUENCY RFID READER FOR LF, HF, NFC AND BLE



TWN4 USB Front Reader
(exemplary illustrations)

The devices of the TWN4 USB Front Reader family are an excellent solution for any RFID-based applications that require a direct and simple connection per USB. All readers are available with an NXP or LEGIC frontend and support RFID, NFC and Bluetooth Low Energy (BLE) technologies. In addition, the patented USB connector on the rear side can be turned to 90°, which enables a quick and easy installation into any host system equipped with a USB port. Thanks to their compact form and enhanced read/write performance, the readers are particularly appropriate as a secure printing solution, but also for Single-Sign on and healthcare applications.

Key features of the TWN4 USB Front Reader include a USB hub on the front side that can be deactivated via device driver, a powerful SDK for writing apps that are executed directly on the reader and an integrated BLE module. Additionally, the reader can read more than 60 RFID technologies from low (LF) and high frequency (HF) bands, including NFC. This gives the option to select as many of the technologies required instead of being forced to select just a few ones.

Special features:

- + Possibility to read more than 60 RFID technologies
- + Two RFID frequencies (125 kHz/13.56 MHz) with NFC and BLE support
- + Patented USB connector on the rear side can be rotated to 90°
- + USB hub “pass through” on the front side can be deactivated via device driver
- + Powerful SDK for writing apps which are executed directly on the reader
- + Firmware update in the field possible
- + Available with custom inlay and packaging as “ready to sell from stock”
- + Supports transparent data exchange between reader and RFID media
- + CCID and PC/SC 2.01



Elevator



EV Chargers



Access



Shop POS



Fitness
Equipment



Ticket POS



PC Log-on



Document
Management



Driver ID



Vending



Parking



Gaming



Locker Locks



Time
Attendance



Industrial
PC

TECHNICAL DATA

| | |
|------------------------|---|
| FREQUENCIES | 125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE) |
| ANTENNAS | Integrated |
| HOUSING | Material: ABS UL94-V0 Color: black |
| DIMENSIONS (L X W X H) | Approx. 60 x 39 x 16.50 mm / 2.36 x 1.54 x 0.65 inch |
| POWER | USB: 4.3 V – 5.5 V PS2 classified power source according to IEC 62368-1, short-circuit current < 8 A |
| CURRENT CONSUMPTION | RF field on: 250 mA typically + 16 mA (BLE) |
| TEMPERATURE RANGE | Operating: 0 °C up to +65 °C (+32 °F up to +149 °F) Storage: -40 °C up to +70 °C (-40 °F up to +158 °F) |
| RELATIVE HUMIDITY | 5% to 95% non-condensing |
| READ/WRITE DISTANCE | LF and HF: up to 45 mm / 1.77 inch, depending on environment and transponder |
| OPERATING MODES (USB) | USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01 |
| BLUETOOTH LOW ENERGY | BLE version 4.1 (upgradable to 4.2) |
| MTBF | 500,000 hours |
| WEIGHT | Approx. 22 g / 0.78 oz |
| OS SUPPORT | Windows 7 (32-/64-bit) and higher versions, Linux, Android ¹⁾ , iOS ¹⁾ , MAC OS X ¹⁾ |
| PERIPHERAL INTERFACES | USB (male), type A USB (female), type A 1 SAM slot |
| TRANSMISSION SPEED | Host: USB full speed (12 Mbit/s), USB hub: USB Hi-Speed up to 40 Mbit/s, HF Air: up to 848 kbit/s, BLE Air: up to 100 kbit/s |
| CERTIFICATION NAME | TWN4 USB Front Reader |
| CERTIFICATIONS | Non-exhaustive list ²⁾ : CE/RED, FCC, IC, REACH and RoHS-III compliant |
| ORDER CODES | T4FK-FBFRLM7 Kit including reader with standard configuration T4FK-FBFRLM7-P Kit including reader with P option T4FK-FBFRLM7-PI Kit including reader with PI options |

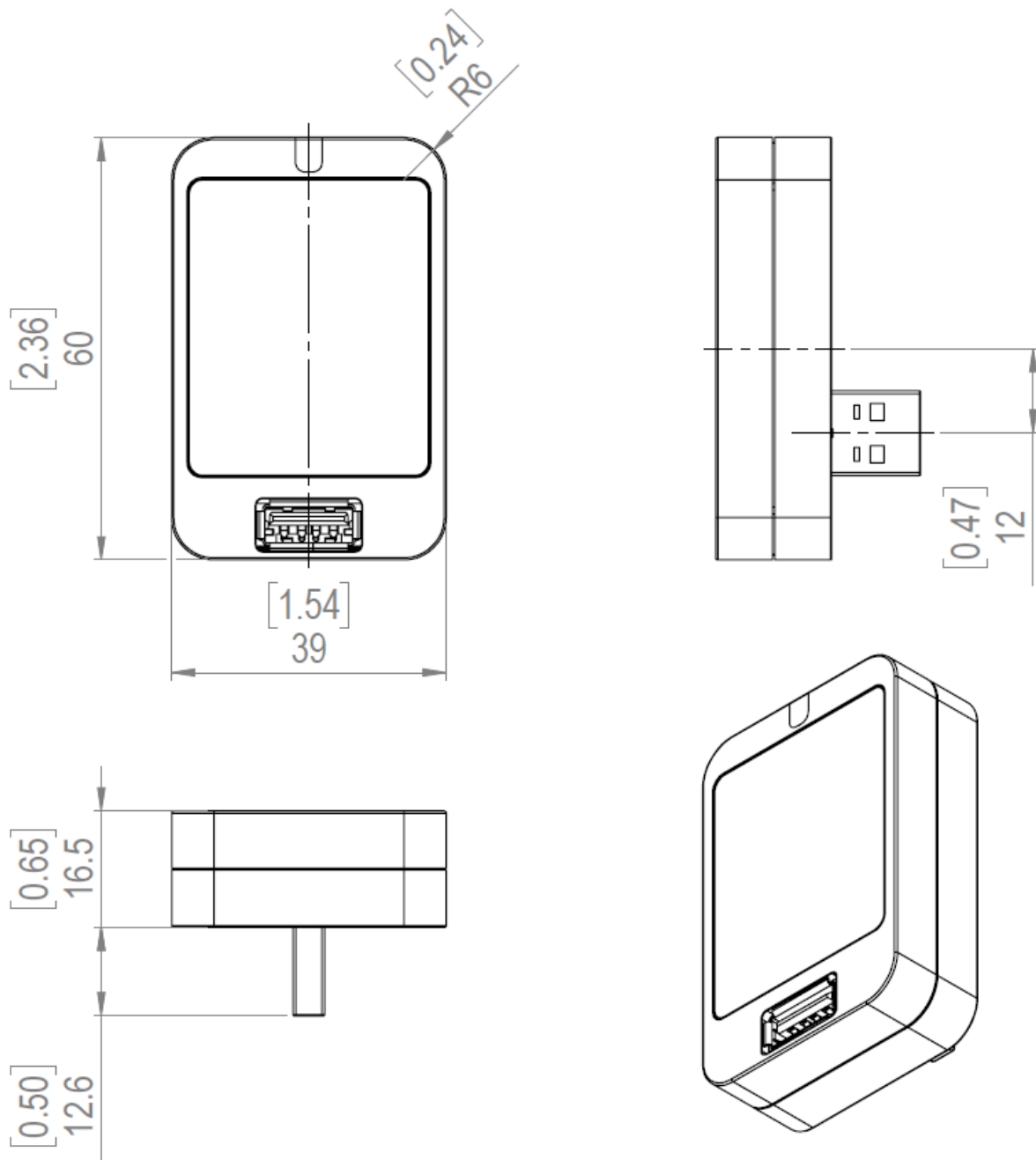
¹⁾On request ²⁾The product has been certified for a use in many countries and regions. Contact your Sales representative for detailed information about all certifications and approvals granted to the product.

SUPPORTED TRANSPONDERS¹⁾

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|---|---|
| <p>SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ</p> | <p><u>ISO 14443A:</u> LEGIC Advant²⁾, NTAG2xx, MIFARE Classic, MIFARE Classic EV1³⁾, MIFARE DESFire EV1, MIFARE DESFire EV2⁴⁾, MIFARE DESFire EV3⁴⁾, MIFARE DESFire Light⁴⁾, MIFARE Mini, MIFARE Plus S, MIFARE Plus X, MIFARE Smart MX⁵⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1³⁾, SLE44R35⁵⁾, SLE66Rxx (my-d move)⁵⁾, Topaz</p> <p><u>ISO 14443B:</u> Calypso⁵⁾, Calypso Innovatron protocol⁵⁾, CEPAS⁵⁾, CTS, Pico Pass²⁾, SRI4K, SRI512, SRIX4K, SRT512</p> <p><u>ISO 15693:</u> EM4x33⁵⁾, EM4x35⁵⁾, ICODE SLI, LEGIC Advant²⁾, M24LR16/64, Pico Pass²⁾, SRF55Vxx (my-d vicinity)⁵⁾, Tag-it</p> <p><u>ISO 18092 / ECMA-340:</u> NFC Forum Tag 1-5, Sony FeliCa⁶⁾</p> <p><u>LEAF Identity:</u> LEAF⁷⁾</p> |
| <p>SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ⁸⁾</p> | <p>AWID, Cardax⁹⁾, CASI-RUSCO, Deister⁹⁾, EM4050, EM4100, EM4102, EM4150, EM4200¹⁰⁾, EM4305, EM4450, EM4550, HITAG 1¹¹⁾, HITAG 2¹¹⁾, HITAG S¹¹⁾, ICT, IDTECK, ISONAS, Keri, Miro, Nedap⁹⁾, Pyramid, Q5, T5557, T5567, T5577, TITAN (EM4050), UltraProx, UNIQUE, ZODIAC</p> |
| <p>SUPPORTED TRANSPONDERS (P OPTION)</p> | <p>All standard transponders, G-Prox⁹⁾, HID 1326 Prox II, HID 1336 DuoProx II, HID 1346 ProxKey III, HID 1386 ISO Prox II, HID 1391 Micro Prox, HID Prox, Indala, ioProx, Nexwatch</p> |
| <p>SUPPORTED TRANSPONDERS (PI OPTIONS)¹²⁾</p> | <p>All standard transponders¹³⁾, all P option transponders, HID MIFARE Classic SE, HID MIFARE DESFire SE, HID SEOS, HID iCLASS Legacy/SR/SE</p> |

¹⁾Unless otherwise agreed with ELATEC, the product is delivered with a standard firmware version that might be older than the latest firmware developed by ELATEC. This firmware version can be changed using the ELATEC AppBlaster tool. Please note that the information given in this document regarding the transponder technologies supported by the product is based on the latest firmware version. ²⁾UID only ³⁾r/w enhanced security features on request ⁴⁾Supported as part of the EV1 downward compatibility ⁵⁾r/w in transparent data exchange mode ⁶⁾UID + r/w public area ⁷⁾AV2 only, requires one free SAM slot for MIFARE SAM AV2 card ⁸⁾125 kHz technologies require a Russian local test and import license from the ministry of Trade and Industry (MINPROMTORC). This license has to be in place before ELATEC can accept any order to be shipped to Russia. ⁹⁾Hash value only ¹⁰⁾Only emulation of 4100, 4102 ¹¹⁾Without encryption ¹²⁾Requires one free SAM slot for HID iCLASS SE processor ¹³⁾The reader is equipped with one SAM slot only and cannot support LEAF and the PI options at the same time.

TECHNICAL DRAWINGS



All measures in mm [inch]

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