

TWN4 MULTITECH

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



TWN4 MultiTech
(exemplary illustration)

ELATEC TWN4 family of RFID readers and modules allows users to read and write to almost any 125 kHz and 13.56 MHz tags and/or labels. It supports all major transponders from various suppliers like ATMEL, EM, ST, NXP, TI, HID, LEGIC, etc. and ISO standards like ISO 14443A/B (T=CL), ISO 15693 and ISO 18092 / ECMA-340 (NFC). The new generation is a direct enhancement to the successful TWN3 family as it comes in the same mechanical dimensions (OEM PCB and desktop housing). The readers support host communication via USB or RS-232.

Special features:

- + Possibility to read more than 60 RFID technologies
- + Powerful SDK for writing apps which are executed directly on the reader
- + Firmware update in the field possible
- + On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Supports transparent data exchange between reader and RFID media
- + Two on-board SAM sockets (Secure Access Module)
- + CCID and PC/SC 2.01
- + Dedicated expansion bus for connection of LCD, mass storage, etc.
- + 2 GPIOs
- + Supports quick (re)configuration over network and over wireless interface with TWN4 Config Card
- + TWN4 Upgrade Card for P and PI options available on request



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) | |
| ANTENNAS | Integrated | |
| HOUSING | Material: ABS UL94-V0 Color: black or white | |
| DIMENSIONS (L X W X H) | Approx. 88.00 x 56.00 x 18.50 mm / 3.46 x 2.20 x 0.73 inch | |
| POWER | USB: 4.3 V – 5.5 V RS-232: requires 5 V external power supply PS2 classified power source according to IEC 62368-1, short-circuit current < 8 A | |
| CURRENT CONSUMPTION | RF field on: 120 mA typically / Sleep: 500 µA typ. | |
| TEMPERATURE RANGE | Operating: -25 °C up to +70 °C (-13 °F up to +158 °F) Storage: -40 °C up to +75 °C (-40 °F up to +167 °F) | |
| RELATIVE HUMIDITY | 5% to 95% non-condensing | |
| READ/WRITE DISTANCE | Up to 100 mm / 4 inch, depending on environment and transponder | |
| OPERATING MODES (USB) | USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01 | |
| MTBF | 500,000 hours | |
| WEIGHT | Approx. 120 g / 4.23 oz (with cable) | |
| OS SUPPORT | Windows 7 (32-/64-bit) and higher versions, Linux, Android ¹⁾ , iOS ¹⁾ , MAC OS X ¹⁾ | |
| PERIPHERAL INTERFACES | USB, RS-232, 2 SAM slots | |
| TRANSMISSION SPEED | USB full speed (12 Mbit/s), RS-232: up to 115,200 baud, HF Air: up to 848 kbit/s | |
| CERTIFICATION NAME | TWN4 MultiTech | |
| CERTIFICATIONS | Non-exhaustive list ²⁾ : CE/RED, FCC, IC, REACH and RoHS-III compliant | |
| ORDER CODES | T4DT-FB2BEL | Reader in standard configuration, USB cable, black housing |
| | T4DT-FB2WEL | Reader in standard configuration, USB cable, white housing |
| | T4DT-FR2BEL | Reader in standard configuration, RS-232 cable, black housing |
| | T4DT-FR2WEL | Reader in standard configuration, RS-232 cable, white housing |
| | T4DT-FB2BEL-P | Reader with P option, USB cable, black housing |
| | T4DT-FB2WEL-P | Reader with P option, USB cable, white housing |
| | T4DT-FR2BEL-P | Reader with P option, RS-232 cable, black housing |
| | T4DT-FR2WEL-P | Reader with P option, RS-232 cable, white housing |
| | T4DT-FB2BEL-PI | Reader with PI options, USB cable, black housing |
| | T4DT-FB2WEL-PI | Reader with PI options, USB cable, white housing |
| | T4DT-FR2BEL-PI | Reader with PI options, RS-232 cable, black housing |
| | T4DT-FR2WEL-PI | Reader with PI options, RS-232 cable, white housing |

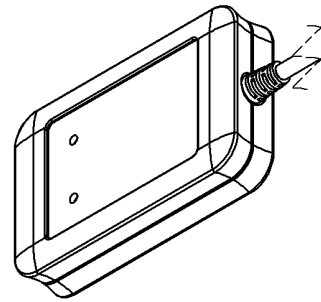
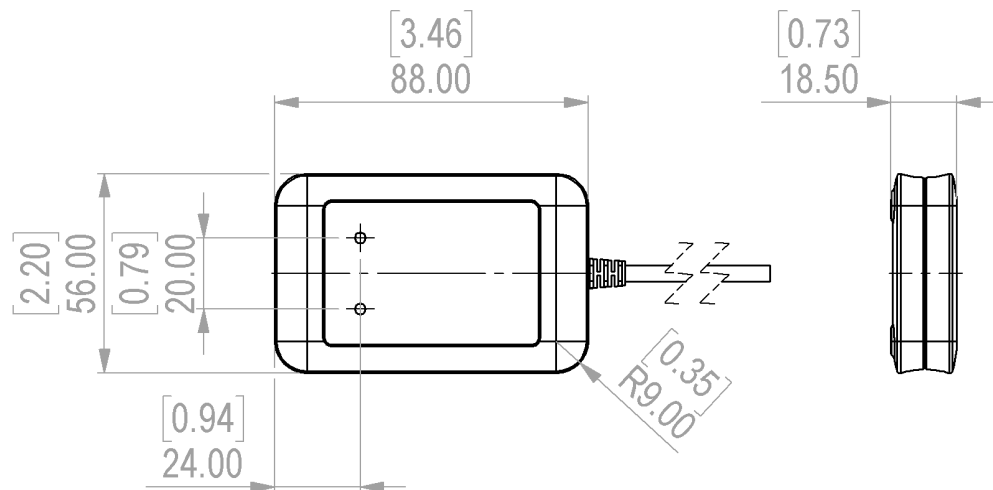
¹⁾On request ²⁾The product has been certified for a use in many countries and regions. Contact your Sales representative for detailed information about all certifications and approvals granted to the product.

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 transponders, 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.

TECHNICAL DRAWINGS



All measures in mm [inch]

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