

# TWN4 MULTITECH 2 LF HF

## PROGRAMMABLE RFID READER/WRITER FOR LF/HF/NFC



TWN4 MultiTech 2 LF HF  
(inlay customizable)

ELATEC's TWN4 family of RFID readers and writers 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 etc. and ISO standards like ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / ECMA-340 (NFC).

The TWN4 MultiTech 2 LF HF reader has integrated RFID (LF & HF) and NFC, which is supported by mobile phones with Android version 4.3 or greater. The app on the reader communicates with the NFC module with easy commands.

### Special features:

- + 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
- + Direct chip-commands support
- + Two on-board SAM sockets (Secure Access Module)
- + CCID and PC/SC 2.01
- + 4 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
- + 3D construction data (STEP) 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

|   |  |
|---|--|
| FREQUENCY   | 125 kHz (LF) / 13.56 MHz (HF)  |
| ANTENNA(S)  | Integrated   |
| HOUSING   | Material: ABS UL94-V0, color: black or white   |
| DIMENSIONS (L X W X H)                                  | 88 mm x 56 mm x 18 mm / 3.5 inch x 2.2 inch x 0.7 inch   |
| POWER   | 4.3 V - 5.5 V via USB; via generic interface (X1) 3.3 V ± 5%; RS-232 requires 5 V external power supply<br>Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A  |
| POWER OUTPUT  | 125 kHz: -10.01 dbμA/m @ 10 m<br>13.56 MHz: -2.25 dbμA/m @ 10 m  |
| MODULATION  | ASK / ASK  |
| CURRENT CONSUMPTION                                     | RF field on: 120 mA typically / Sleep: 500 μA typ. / Cyclic Operation: TBD   |
| TEMPERATURE RANGE                                       | Operating: -25 °C up to +70 °C (-13 °F up to +158 °F)<br>Storage: -45 °C up to +75 °C (-49 °F up to +167 °F)   |
| RELATIVE HUMIDITY                                       | 5% to 95% non-condensing   |
| READ- / WRITE DISTANCE                                  | LF and HF: 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. 117 g / 4.13 oz (with cable)   |
| SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ             | <u>ISO14443A:</u><br>LEGIC Advant <sup>1)</sup> , MIFARE Classic EV1 <sup>2)</sup> , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 <sup>3)</sup> , MIFARE DESFire Light <sup>4)</sup> , MIFARE Plus S, X, MIFARE Pro X <sup>5)</sup> , MIFARE Smart MX <sup>5)</sup> , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1 <sup>2)</sup> , NTAG2xx, SLE44R35 <sup>5)</sup> , SLE66Rxx (my-d move) <sup>5)</sup> , Topaz<br><u>ISO18092 ECMA-340:</u><br>NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa <sup>6)</sup> , NFC Active and passive communication mode<br><u>ISO14443B:</u><br>Calypso <sup>5)</sup> , Calypso Innovatron protocol <sup>5)</sup> , CEPAS <sup>5)</sup> , HID iCLASS <sup>1)</sup> , Moneo <sup>5)</sup> , Pico Pass <sup>7)</sup> , SRI4K, SRIX4K, SRI512, SRT512<br><u>ISO15693:</u><br>EM4x33 <sup>5)</sup> , EM4x35 <sup>5)</sup> , HID iCLASS <sup>1)</sup> , HID iCLASS SE/SR <sup>1)</sup> , ICODE SLI, LEGIC Advant <sup>1)</sup> , M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity) <sup>5)</sup> , Tag-it, PicoPass <sup>7)</sup> |
| SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>8)</sup> | AWID, Cardax <sup>9)</sup> , CASI-RUSCO, Deister <sup>9)</sup> , EM4100, 4102, 4200 <sup>10)</sup> , EM4050, 4150, 4450, 4550, EM4305 <sup>11)</sup> , FDX-B <sup>12)</sup> , EM4105 <sup>12)</sup> , UltraProx <sup>12)</sup> , HITAG 1 <sup>13)</sup> , HITAG 2 <sup>13)</sup> , HITAG S <sup>13)</sup> , ICT <sup>4)</sup> , IDTECK, Isonas, Keri, Miro, Nedap <sup>9)</sup> , PAC <sup>4)</sup> , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX <sup>12)</sup> , TITAN (EM4050), UNIQUE, ZODIAC  |
| SUPPORTED TRANSPONDERS (OPTION P)                       | All Standard Transponders, Cotag, G-Prox <sup>9)</sup> , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch   |
| SUPPORTED TRANSPONDERS (OPTION PI)                      | Requires TWN4 SIO Card, All Standard Transponders, All Option P Transponders, HID iCLASS, HID iCLASS SE/SR/Elite, HID iCLASS SEOS (Facility Code/PAC) <sup>14)</sup>   |
| OS SUPPORT  | Windows Embedded CE <sup>4)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>4)</sup> , iOS <sup>4)</sup> , MAC OS X <sup>4)</sup>  |
| PERIPHERAL INTERFACES                                   | USB, RS-232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I <sup>2</sup> C, 4 GPIOs, Clock/Data, Wiegand  |
| TRANSMISSION SPEED                                      | Host: USB Full speed (12 Mbit/s), RS-232: up to 115,200 baud, HF Air: up to 848 kbit/s   |
| CERTIFICATION NAME                                      | TWN4 MultiTech 2 LF HF   |
| CERTIFICATION(S)  | CE/RED, FCC, IC, REACH and RoHS-III compliant, and many more <sup>15)</sup>  |

<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>EV2/EV3 supported as part of the EV1 downward compatibility <sup>4)</sup>On request <sup>5)</sup>r/w in direct chip command mode <sup>6)</sup>UID + r/w public area <sup>7)</sup>UID only, read/write on request <sup>8)</sup>125 kHz technology requires 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 <sup>9)</sup>Hash value only <sup>10)</sup>Only emulation of 4100, 4102 <sup>11)</sup>From FW V4.05 <sup>12)</sup>134.2 kHz only <sup>13)</sup>Without encryption <sup>14)</sup>UID + PAC (Facility Code), r/w on request <sup>15)</sup>More information on request

|                 |                        |                        |
|-----------------|------------------------|------------------------|
| ORDER CODE(S)   | T4BT-FB2BEL6           | USB BLACK              |
|                 | T4BT-FB2WEL6           | USB WHITE              |
|                 | T4BT-FR2BEL6           | RS-232 BLACK           |
|                 | T4BT-FR2WEL6           | RS-232 WHITE           |
|                 | T4BT-FB2BEL6-P         | USB OPTION P BLACK     |
|                 | T4BT-FB2WEL6-P         | USB OPTION P WHITE     |
|                 | T4BT-FR2BEL6-P         | RS-232 OPTION P BLACK  |
|                 | T4BT-FR2WEL6-P         | RS-232 OPTION P WHITE  |
|                 | T4BT-FB2BEL6-PI        | USB OPTION PI BLACK    |
|                 | T4BT-FB2WEL6-PI        | USB OPTION PI WHITE    |
|                 | T4BT-FR2BEL6-PI        | RS-232 OPTION PI BLACK |
| T4BT-FR2WEL6-PI | RS-232 OPTION PI WHITE |                        |

## ACCESSORIES

|              |         |                                      |
|--------------|---------|--------------------------------------|
| HOLDER(S)    | HKSI-B  | Snap-In Holder black                 |
|              | HKSI-W  | Snap-In Holder white                 |
|              | HKBR-B  | Bracket Holder black                 |
|              | HKBR-W  | Bracket Holder white                 |
| POWER SUPPLY | PWA-EU3 | Power Supply (EU)                    |
|              | PWA-US3 | Power Supply (US)                    |
|              | PWA-UK3 | Power Supply (UK)                    |
|              | PWA-JP3 | Power Supply (JP)                    |
| CABLES       | CAB-B2  | USB cable type A 200 cm / 78.74 inch |
|              | CAB-B3  | USB cable type A 12 cm / 4.72 inch   |
|              | CAB-B4  | USB cable type A 45 cm / 17.72 inch  |
|              | CAB-B7  | USB cable type A 120 cm / 47.24 inch |
|              | CAB-M1  | USB cable mini 12 cm / 4.72 inch     |
|              | CAB-M2  | USB cable mini 25 cm / 9.84 inch     |
|              | CAB-R2  | RS-232 cable 200 cm / 78.74 inch     |

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