

# TWN4 MULTITECH 2 HF

## 13.56 MHZ CONTACTLESS READER/WRITER WITH NFC SUPPORT



PCB version



Desktop version

Elatec's TWN4 MultiTech 2 HF reader/writer allows users to read and write to almost any 13.56 MHz tags and/or labels. It supports all major transponder technologies from various suppliers like ATMEL, EM, ST, NXP, TI etc. and ISO standards like ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC). The latter is supported by mobile phones with Android version 4.3 or greater.

The reader provides a powerful API which enables system integrators and solution providers to develop complex applications which can be run directly on the reader.

Furthermore these applications as well as custom configurations can be applied wireless to the reader without plugging it out from the current infrastructure. This can be achieved by using a TWN4 Configuration Card and is a time saving feature in large projects.

### Special features:

- + Powerful SDK for writing Apps which are executed directly on the reader
- + Firmware update in the field possible
- + Onboard 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Direct chip-commands support
- + One onboard SAM socket (Secure Access Module)
- + Support of wireless reader configuration via TWN4 Configuration Card
- + CCID and PC/SC 2.01
- + 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                          | 13.56 MHz (HF)   |
| ANTENNA                            | Integrated   |
| HOUSING                            | Material: ABS UL94-V0, color: black or white   |
| DIMENSIONS (L X W X H)             | Desktop Reader: 88 mm x 56 mm x 18 mm / 3.5 inch x 2.2 inch x 0.7 inch<br>OEM Board: 76 mm x 49 mm x 9 mm / 3.0 inch x 1.9 inch x 0.35 inch  |
| POWER SUPPLY                       | 4.3 V - 5.5 V via USB or RS-232; RS-232 requires 5 V external power supply; via connector CNB 3.3 V +/- 5%   |
| CURRENT CONSUMPTION                | RF field on: 120 mA typically  |
| TEMPERATURE RANGE                  | Operating Desktop: -25°C up to +70°C / -13°F up to 158°F<br>Storage Desktop: -25°C up to +75°C / -13°F up to 167°F<br>Operating OEM: -25°C up to +80°C / -13°F up to 176°F<br>Storage OEM: -45°C up to +85°C / -49°F up to 185°F   |
| RELATIVE HUMIDITY                  | 5% to 95% non-condensing   |
| READ-/WRITE DISTANCE               | Up to 100 mm / 4 inch, depending on environment and transponder  |
| TRANSMISSION SPEED                 | Host: USB Full speed (12 Mbit/s), RS-232 up to 115.200 baud; Air: up to 848 kbit/s   |
| MODES OF OPERATION                 | USB keyboard emulation – USB virtual COM port – Transparent (support for direct chip commands)<br>CCID / PC/SC 2.01  |
| MTBF                               | 500,000 hours  |
| WEIGHT                             | PCB approx. 10 g (no cable)<br>Desktop approx. 115 g (with cable)  |
| SUPPORTED TRANSPONDERS (STANDARD)  | <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>2)</sup> , MIFARE Plus S, X, MIFARE Pro X <sup>3)</sup> , MIFARE Smart MX <sup>3)</sup> , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass <sup>3)</sup> , SLE44R35, SLE66Rxx (my-d move) <sup>3)</sup> , Topaz<br><u>ISO14443B:</u><br>Calypso <sup>3)</sup> , Calypso Innovatron protocol <sup>3)</sup> , CEPAS <sup>3)</sup> , HID iCLASS SE/SEOS/SR <sup>1)</sup> , Moneo <sup>3)</sup> , Pico Pass <sup>4)</sup> , SRI4K, SRIX4K, SRI512, SRT512<br><u>ISO18092 ECMA-340:</u><br>NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa <sup>5)</sup> , NFC Active and passive communication mode<br><u>ISO15693:</u><br>EM4x33 <sup>3)</sup> , EM4x35 <sup>3)</sup> , HID iCLASS SE/SEOS/SR <sup>1)</sup> , ICODE SLI, LEGIC Advant <sup>1)</sup> , M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity) <sup>3)</sup> , Tag-it, PicoPass <sup>4)</sup> |
| SUPPORTED TRANSPONDERS (VERSION I) | All standard transponders, HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC) <sup>6)</sup> , Elite   |
| PERIPHERAL INTERFACES              | USB, RS232, TTL serial (logic level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C <sup>7)</sup> , 4 GPIOs, Clock/Data <sup>8)</sup> , Wiegand <sup>8)</sup> , 1-Wire <sup>7)</sup>   |
| OS SUPPORT                         | Windows XP, Vista, Embedded CE <sup>7)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>7)</sup> , iOS <sup>7)</sup> , MAC OS X <sup>7)</sup>   |
| CERTIFICATIONS                     | RoHS-II compliant, CE, FCC, IC, ACA, ACMA  |
| ORDER CODE(S)                      | T4BO-F2: OEM Board<br>T4BT-FB2BEL2: USB Black<br>T4BT-FB2WEL2: USB White<br>T4BT-FR2BEL2: RS232 Black<br>T4BT-FR2WEL2: RS232 White<br>T4BO-F2-I: OEM Board Version I<br>T4BO-FB2BEL2-I: Version I USB Black  |

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|  | T4BT-FB2WEL2-I: Version I USB White<br>T4BO-FR2BEL2-I: Version I RS232 Black<br>T4BT-FR2WEL2-I: Version I RS232 White<br>Standard cable length: 2 meters / 78 inch |
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<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>r/w in direct chip command mode <sup>4)</sup>UID only, read/write on request <sup>5)</sup>UID + r/w public area <sup>6)</sup>UID + PAC (CSN & Facility Code), r/w on request <sup>7)</sup>On request <sup>8)</sup>External interface required

## ACCESSORIES

|              |  |
|--------------|--|
| HOLDER       | HKSI-B: Snap-In Holder black<br>HKSI-W: Snap-In Holder white<br>HKBR-B: Bracket Holder black<br>HKBR-W: Bracket Holder white   |
| POWER SUPPLY | PWA-EU: Power Supply (EU)<br>PWA-US: Power Supply (US)<br>PWA-UK: Power Supply (UK)<br>PWA-AU: Power Supply (AU)<br>PWA-JP: Power Supply (JP)  |
| CABLES       | CAB-B2: USB cable type A 200 cm / 78.74 inch<br>CAB-B3: USB cable type A 12 cm / 4.72 inch<br>CAB-B4: USB cable type A 45 cm / 17.72 inch<br>CAB-B7: USB cable type A 120 cm / 47.24 inch<br>CAB-M1: USB cable mini 12 cm / 4.72 inch<br>CAB-M2: USB cable mini 25 cm / 9.84 inch<br>CAB-R2: RS232 cable 200 cm / 78.74 inch |