

# TWN4 MULTITECH 2 HF

## 13.56 MHZ CONTACTLESS READER/WRITER WITH NFC SUPPORT



TWN4 MultiTech 2 HF  
PCB top view



Desktop version  
(inlay customizable)

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)
- + CCID and PC/SC 2.01
- + 4 GPIOs
- + 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 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	Desktop, Operating: -25 °C up to +70 °C (-13 °F up to +158 °F) Desktop, Storage: -45 °C up to +75 °C (-49 °F up to +167 °F) PCB, Operating: -25 °C up to +80 °C (-13 °F up to +176 °F) PCB, Storage: -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 – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	PCB approx. 10 g (no cable) Desktop approx. 115 g (with cable)
SUPPORTED TRANSPONDERS (STANDARD)	<u>ISO14443A:</u> LEGIC Advant <sup>1)</sup> , MIFARE Classic 1k & 4k 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 <u>ISO14443B:</u> Calypso <sup>3)</sup> , Calypso Innovatron protocol <sup>3)</sup> , CEPAS <sup>3)</sup> , HID iCLASS <sup>1)</sup> , Moneo <sup>3)</sup> , Pico Pass <sup>4)</sup> , SRI4K, SRIX4K, SRI512, SRT512 <u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa <sup>5)</sup> , NFC Active and passive communication mode <u>ISO15693:</u> EM4x33 <sup>3)</sup> , EM4x35 <sup>3)</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>3)</sup> , Tag-it, PicoPass <sup>4)</sup>
SUPPORTED TRANSPONDERS (VERSION I)	Requires external TWN4 SIO Card, All Standard Transponder, HID iCLASS, HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC) <sup>6)</sup> , HID iCLASS Elite & SE Elite
PERIPHERAL INTERFACES	USB, RS232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I <sup>2</sup> C, 4 GPIOs, Clock/Data, Wiegand, 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
ORDER CODE(S)	T4BO-F2 OEM Board T4BT-FB2BEL2 USB Black T4BT-FB2WEL2 USB White T4BT-FR2BEL2 RS232 Black T4BT-FR2WEL2 RS232 White T4BO-F2-I OEM Board Version I T4BO-FB2BEL2-I Version I USB Black T4BT-FB2WEL2-I Version I USB White

	T4BO-FR2BEL2-I	Version I RS232 Black
	T4BT-FR2WEL2-I	Version I RS232 White

<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

## ACCESSORIES

HOLDER	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-EU: Power Supply (EU) PWA-US: Power Supply (US) PWA-UK: Power Supply (UK) PWA-AU: Power Supply (AU) PWA-JP: 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: RS232 cable 200 cm / 78.74 inch