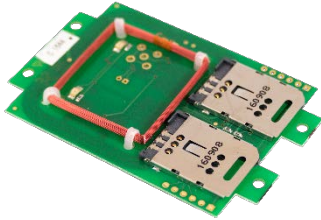


# TWN4 MULTITECH

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



TWN4 MultiTech  
PCB top view



Desktop version  
(inlay customizable)

Elatec's TWN4 family of transponder readers and writers allows users to read and write to almost any 125 kHz, 134.2 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 ISO14443A/B (T=CL), ISO15693, ISO18092 / 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 reader supports host communication via USB or RS-232.

### 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
- + two onboard 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 centralized (re)configuration over network and over wireless interface with TWN4 CONFIG Card
- + 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/134.2 kHz (LF) / 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 14 mm / 3.0 inch x 1.9 inch x 0.6 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 / Sleep: 500 µA typ. / Cyclic Operation: TBD
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	Approx. 20 g (without housing)
SUPPORTED TRANSPONDERS (STANDARD)	<p><u>ISO14443A:</u> LEGIC Advant<sup>1)</sup>, MIFARE Classic 1k &amp; 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</p> <p><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</p> <p><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</p> <p><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, SRF55Vxx (my-d vicinity)<sup>3)</sup>, Tag-it, PicoPass<sup>4)</sup></p> <p><u>125 kHz, 134.2 kHz:</u> AWID, Cardax, CASI-RUSCO, Deister<sup>6)</sup>, EM4100, 4102, 4200<sup>7)</sup>, EM4050, 4150, 4450, 4550, EM4305<sup>8)</sup>, FDX-B, EM4105, HITAG 1<sup>9)</sup>, HITAG 2<sup>9)</sup>, HITAG S<sup>9)</sup>, ICT<sup>8)</sup>, IDTECK, Isonas<sup>8)</sup>, Keri, Miro, Nedap<sup>6)</sup>, PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC</p>
SUPPORTED TRANSPONDERS (VERSION P)	All Standard Transponder, Cotag, G-Prox <sup>6)</sup> , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
SUPPORTED TRANSPONDERS (VERSION PI)	Requires external TWN4 SIO Card, All Standard Transponder, All Version P Transponder, HID iCLASS <sup>10)</sup> , HID iCLASS SE/SR/SEOS(CSN and Facility Code/PAC) <sup>10)</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, 2 GPIOs, CAN <sup>8)</sup> , Clock/Data, Wiegand, 1-Wire <sup>8)</sup>
OS SUPPORT	Windows XP, Vista, Embedded CE <sup>8)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>8)</sup> , iOS <sup>8)</sup> , MAC OS X <sup>8)</sup>
CERTIFICATIONS	RoHS-II compliant, CE, FCC, RED, IC, ACA, MIC, KCC, ANATEL, CFT, ICASA, EAC, India, Israel, Thailand, Venezuela

ORDER CODE(S)	T4DO-F	OEM Board
	T4DT-FB2BEL	USB Black
	T4DT-FB2WEL	USB White
	T4DT-FR2BEL	RS232 Black
	T4DT-FR2WEL	RS232 White
	T4DO-F-P	OEM Board Version P
	T4DT-FB2BEL-P	USB Version P Black
	T4DT-FB2WEL-P	USB Version P White
	T4DT-FR2BEL-P	RS232 Version P Black
	T4DT-FR2WEL-P	RS232 Version P White
	T4DO-F-PI	OEM Board Version PI
	T4DT-FB2BEL-PI	USB Version PI Black
	T4DT-FB2WEL-PI	USB Version PI White
	T4DT-FR2BEL-PI	RS232 Version PI Black
T4DT-FR2WEL-PI	RS232 Version PI 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>Hash value only <sup>7)</sup>Only emulation of 4100, 4102 <sup>8)</sup>On request <sup>9)</sup>Without encryption <sup>10)</sup>UID + PAC (CSN & Facility Code), r/w 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
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

## DRAWINGS / PIN OUT

Refer to document DS\_TWN4 Pinout & Cables