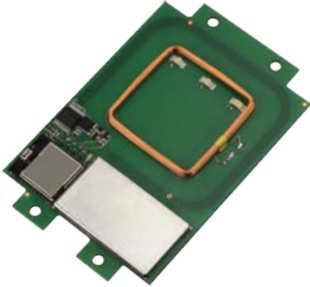


# TWN4 MULTITECH 2 BLE

125/134.2 kHz, 13.56 MHz contactless Reader/Writer  
with NFC and Bluetooth Low Energy support



TWN4 MultiTech 2 BLE  
PCB Top View



TWN4 MultiTech 2 BLE  
PCB Bottom View



TWN4 MultiTech 2 BLE  
Desktop Top View

Elatec's family of TWN4 transponder readers/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 etc. and ISO standards like ISO14443A, ISO14443B, ISO15693, ISO18092 / ECMA-340 (NFC).



The new TWN4 MultiTech 2 BLE reader has integrated RFID (LF & HF) and Bluetooth Low Energy (BLE), which is supported by mobile phones Android version 4.3 or greater, iPhone 4S or greater and PCs with Windows (new Bluetooth hardware integrated). The app on the reader communicates with the BLE module with easy commands and has direct enhancement to the GATT structure, which gives you the flexibility to write your custom apps.

## Special Features:

- Powerful SDK for writing Apps which are executed directly on the reader
- In-field programmable
- 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
- Bluetooth V4.1, upgradeable to V4.2, API, flexible GATT structure up to 8 connections simultaneous, AES128 supported
- 3D model (STEP) on request

Technical Data			
Frequency	125/134.2 kHz (LF) / 13.56 MHz (HF) / 2402 MHz – 2480 MHz (BT)		
Housing	Material: ABS UL94-V0, colour: 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 0.4 inch		
Power Supply	4.3 V..5.5 V via USB or RS232; RS232 requires 5 V external power supply; via connector CNB 3.3 V +/- 5%		
Current Consumption	Depending on activated antenna: 120 mA (RF Field on) + 16 mA (BT) typically / Sleep: 500 µA typ. / Cyclic Operation: TBD		
Temperature Range	OEM PCB	Operating: -25°C up to +80°C (-13°F up to +176°F) Storage: -45°C up to +85°C (-49°F up to +185°F)	Desktop Operating: -25°C up to +70°C (-13°F up to +158°F) Storage: -45°C up to +75°C (-49°F up to +167°F)
Read- / Write Distance	LF and HF: Up to 100 mm / 4 inch (depending on transponder) / BT: up to several meters/feet (configurable, up to +8 dBm power)		
HOST Interface	USB, RS232, TTL serial (logical level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C, 4 GPIOs		
OS Support	Windows XP, Vista, Embedded CE <sup>1)</sup> , 7(32-/64-bit), 8, 8.1,10, Linux, Android, iOS <sup>1)</sup> , MAC OS X <sup>1)</sup>		
Transmission Speed	Host: USB: full speed (12 Mbit) RS232: up to 115.200 baud	HF Air: up to 848 kbit/s	BT Air: up to 100 kbit/s
Modes of Operation	<ul style="list-style-type: none"> <li>USB keyboard emulation – USB virtual COM port – Transparent (direct chip-commands support)</li> <li>CCID and PC/SC 2.01</li> </ul>		
Relative Humidity	5% to 95% non-condensing		
Supported Transponders (LF & HF)	<p><b>Standard</b></p> <ul style="list-style-type: none"> <li>125 kHz / 134.2 kHz: 4100, 4102, 4200<sup>7)</sup>, 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, Deister, HITAG 1<sup>8)</sup>, HITAG 2<sup>8)</sup>, HITAG S<sup>8)</sup>, Keri, Miro, Pyramid, TIRIS/HDX, UNIQUE, FDX-B, Q5, TITAN, T55x7, ZODIAC<sup>1)</sup>, Cardax<sup>9)</sup>, Nedap<sup>9)</sup></li> <li>13.56 MHz / ISO14443A: MIFARE Classic, Classic 1k &amp; 4k EV1<sup>4)</sup>, MIFARE Mini, MIFARE DESFire EV1, MIFARE Plus S&amp;X, MIFARE Pro X<sup>5)</sup>, SmartMX<sup>5)</sup>, MIFARE Ultralight, MIFARE Ultralight EV1, MIFARE Ultralight C, SLE44R35, SLE66Rxx (my-d move), PayPass<sup>5)</sup>, NTAG2XX, LEGIC Advant<sup>2)</sup></li> <li>13.56 MHz / ISO14443B: Calypso<sup>5)</sup> incl. Innovatron radio protocol 14443B<sup>3)</sup>, CEPAS<sup>5)</sup>, HID iCLASS<sup>2)</sup>, Moneo<sup>5)</sup>, PicoPass<sup>2)</sup>, SRI512, SRT512, SRI4K, SRIX4K</li> <li>13.56 MHz / ISO15693: EM4x33<sup>5)</sup>, EM4x35<sup>5)</sup>, HID iCLASS, ICODE SLI, M24LR16/64, Tag-it, SRF55Vxx (my-d vicinity)<sup>5)</sup>, PicoPass<sup>2)</sup></li> <li>13.56 MHz / ISO18092 / NFC: NFCIP-1: Active and passive communication mode, Peer-to-Peer, NFC Forum Tag Type 1<sup>1)</sup>, NFC Forum Tag Type 2-5, Sony FeliCa<sup>6)</sup></li> </ul> <p><b>Version P</b> Standard+Cotag, G-Prox<sup>9)</sup>, HID (Prox, Prox II, Duo Prox II, ISO Prox II, Micro Prox, ProxKey III), NexWatch (Honeywell), Indala, ioProx</p> <p><b>Version PI</b> Version P + HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC)<sup>10)</sup></p>		
Bluetooth Low Energy	Bluetooth V4.1, software upgradable to V4.2; API; standards as GAP, SM, L2CAP, ATT; predefined GATT structure; up to 8 connections; AES128 supported		
Certifications	RoHS-II compliant, CE, FCC, Australia, IC		
MTBF	500,000 hours		
Weight	Approx. 20 g (without housing)		
Order Code	<b>Standard</b>	<b>Version P</b>	<b>Version PI</b>
OEM Board	T4BO-F7	T4BO-F7-P	T4BO-F7-PI
USB black / white	T4BT-FB2BEL7 / T4BT-FB2WEL7	T4BT-FB2BEL7-P / T4BT-FB2WEL7-P	T4BT-FB2BEL7-PI / T4BT-FB2WEL7-PI
RS232 black / white	T4BT-FR2BEL7 / T4BT-FR2WEL7	T4BT-FR2BEL7-P / T4BT-FR2WEL7-P	T4BT-FR2BEL7-PI / T4BT-FR2WEL7-PI

<sup>1)</sup>On request only <sup>2)</sup>UID only <sup>3)</sup>UID only, read/write on request <sup>4)</sup>r/w enhanced security features on request <sup>5)</sup>r/w in direct chip command mode <sup>6)</sup>UID + r/w public area <sup>7)</sup>Only emulation of 4100,4102 <sup>8)</sup>Without encryption mode <sup>9)</sup>Hash value only <sup>10)</sup>UID + PAC (CSN & Facility Code), read/write on request

Accessories					
Order Code	Snap-in holder HKSI-B - black HKSI-W - white		Bracket holder HKBR-B - black HKBR-W - white		CAB-B2 - USB cable 200 cm/78.74 inch CAB-B3 - USB cable 12 cm/4.72 inch CAB-B4 - USB cable 45 cm/17.72 inch CAB-B7 - USB cable 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
Order Code	PWA-EU - Power Supply (EU) PWA-AUS - Power Supply (AU)	PWA-US - Power Supply (US) PWA-UK - Power Supply (UK)			

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