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 ATME, 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
- 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 CNE 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
- Desktop Reader: Operating: -25°C up to +70°C (-13°F up to +176°F)
  - Storage: -45°C up to +75°C (-49°F up to +167°F)
- OEM Board: 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)

### 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), I²C, 4 GPIOs

### OS Support
- Windows XP, Vista, Embedded CE1), 7(32-/64-bit), 8, 8.1,10, Linux, Android, iOS1), MAC OS X1)

### 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
- USB keyboard emulation – USB virtual COM port – Transparent (direct chip-commands support)
- CCID and PC/SC 2.01

### Relative Humidity
- 5% to 95% non-condensing

### Supported Transponders (LF & HF)

#### LF Standard
- 125 kHz / 134.2 kHz: 4100, 4102, 42007), 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, Deister, HITAG 1B, HITAG 2B, Keri, Miro, Pyramid, TIRIS/HDX, UNIQUE, FDX-B, Q5, TITAN, T55x7, SLE44R35, SLE66Rxx (my-d move), PayPass5), Ntag2XX, LEGIC Advant2)
- 13.56 MHz / ISO14443B: Calypso5) incl. Innovatron protocol 14443B, CEPI, HID iCLASS2), Moneo5), PicoPass5), SRI512, SRT512, SRI4K
- 13.56 MHz / ISO15693: EM4x33, EM4x35, HID iCLASS (my-d), Tag-it, SRF55Vxx (my-d vicinity), PicoPass5)
- 13.56 MHz / ISO18092: NFC: NFCIP-1: Active and passive communication mode, Peer-to-Peer, NFC Forum
- Tag Type 1, NFC Forum Tag Type 2-5, Sony FeliCa6)

#### Version P
- Standard+Cotag, G-Prox5), HID (Prox, Prox II, Duo Prox II, ISO Prox II, Micro Prox, ProxKey III), NexWatch (Honeywell), Indala, ioProx

#### Version PI
- Version P + HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC)

### 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

#### OEM Board
- USB black / white: T4BO-F7
- RS232 black / white: T4BT-FB2BEL7 / T4BT-FB2WEL7 / T4BT-FR2BEL7 / T4BT-FR2WEL7

#### Order Code
- T4BO-F7-P: T4BT-FB2BEL7-P / T4BT-FB2WEL7-P / T4BT-FR2BEL7-P / T4BT-FR2WEL7-P

### Accessories

#### Order Code
- Snap-in holder: HKSI-B - black
- Bracket holder: HKBR-B - black
- CAB-B2 - USB cable 200 cm/78.74 inch
- CAB-M1 - USB cable mini 12 cm/4.72 inch
- PWA-EU - Power Supply (EU)
- PWA-US - Power Supply (US)
- PWA-UK - Power Supply (UK)
- CAB-B4 - USB cable 45 cm/17.2 inch
- CAB-M2 - USB cable mini 25 cm/9.84 inch
- CAB-R2 - RS232 cable 200 cm/78.74 inch
- HKSI-W - white
- HKBR-W - white
- PWA-AUS - Power Supply (AU)
- PWA-UK - Power Supply (UK)
- PWA-US - Power Supply (US)

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

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