TWN4 MULTITECH LEGIC 45
PROGRAMMABLE RFID READER/WRITER FOR LF/HF

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:
+ supports initialization of segments
+ high-level command library for cash / value handling, e.g. electronic purse
+ 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 (re)configuration over network and over wireless interface with TWN4 CONFIG Card
+ TWN4 Upgrade Card for P option available on request
+ 3D construction data (STEP) available on request
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: 140 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

OPERATING MODES (USB) 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) ISO14443A:
- ISO14443B:
  - Calypso(2), CEPAS(3), HID iCLASS(3), Moneo(2), Pico Pass(3)
  - ISO18092 ECMA-340:
    - NFC Peer-to-Peer, Sony FeliCa(4), NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4
- ISO15693:
  - EM4x33(2), EM4x35(2), HID iCLASS(3), HID iCLASS SE/SE+</3>,ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)(3), Tag-it, PicoPass(3)
- LEGIC Prime:
  - LEGIC Prime
  - 125 kHz, 134.2 kHz:
    - AWID, Cardax, CASI-RUSCO, Deister(6), EM4100, 4102, 4200(6), EM4050, 4150, 4450, 4550, EM4305(7), FDX-B, EM4105, HITAG 1(8), HITAG 2(8), HITAG S(8), ICT(7), IDTECK, Isonas(7), Keri, Miro, Nedap(7), PAC, Pyramid, Q5, T5557, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC

SUPPORTED TRANSPONDERS (VERSION P) All Standard Transponders, Cotag, G-Prox(8), HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch

OS SUPPORT Windows XP, Vista, Embedded CE(7), 7 (32-/64-bit), 8, 8.1, 10, Linux, Android(7), iOS(7), MAC OS X(7)

PERIPHERAL INTERFACES USB, RS232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I2C, 2 GPIOs, Clock/Data, Wiegand, 1-Wire(7)

CERTIFICATION NAME TWN4 LEGIC NFC

CERTIFICATION(S) CE/RED, ENACOM, RoHS-II compliant

ORDER CODE(S) T4DO-B-5 OEM Board
T4DT-BB2BEL-5 USB Black
T4DT-BB2WEL-5 USB White
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T4DT-BR2BEL-5</td>
<td>RS232 Black</td>
</tr>
<tr>
<td>T4DT-BR2WEL-5</td>
<td>RS232 White</td>
</tr>
<tr>
<td>T4DC-B-5P</td>
<td>OEM Board Version P</td>
</tr>
<tr>
<td>T4DT-BB2BEL-5P</td>
<td>USB Version P Black</td>
</tr>
<tr>
<td>T4DT-BB2WEL-5P</td>
<td>USB Version P White</td>
</tr>
<tr>
<td>T4DT-BR2BEL-5P</td>
<td>RS232 Version P Black</td>
</tr>
<tr>
<td>T4DT-BR2WEL-5P</td>
<td>RS232 Version P White</td>
</tr>
</tbody>
</table>

1) *r/w enhanced security features on request*  
2) *r/w in direct chip command mode*  
3) *UID only*  
4) *UID + r/w public area*  
5) *Hash value only*  
6) *Only emulation of 4100, 4102*  
7) *On request*  
8) *Without encryption*

**ACCESSORIES**

**HOLDER(S)**
- 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)

**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