

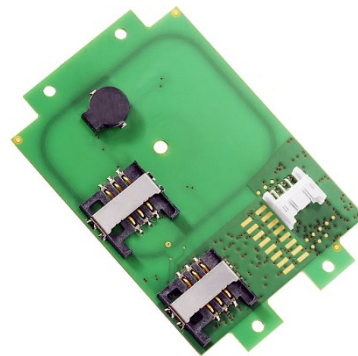
# TWN4 MULTITECH 2 LEGIC M LF HF

(SM-4200/4500 FRONTEND)

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



TWN4 MultiTech 2 LEGIC M LF HF  
PCB top view (exemplary)



TWN4 MultiTech 2 LEGIC M LF HF  
PCB bottom view (exemplary)

ELATEC TWN4 family of RFID readers and writers allows users to read and write to almost any 125 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 ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / ECMA-340 (NFC).

The TWN4 MultiTech 2 LEGIC M LF HF reader module has integrated RFID (LF & HF) and NFC, which is supported by mobile phones with Android version 4.3 or greater. The app on the reader communicates with the NFC module with easy commands.

### Special features:

- + Powerful SDK for writing apps which are executed directly on the reader
- + Firmware update in the field possible
- + 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
- + 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



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 (LF) / 13.56 MHz (HF)   |
| ANTENNA(S)  | Integrated  |
| DIMENSIONS (L X W X H)                                  | 76 mm x 49 mm x 9 mm / 3.0 inch x 1.9 inch x 0.4 inch   |
| POWER   | 4.3 V - 5.5 V via USB<br>3.3 V ± 5% via generic interface (X1)<br>RS-232 requires 5 V external power supply<br>Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A   |
| CURRENT CONSUMPTION                                     | RF field on: 140 mA typically   |
| TEMPERATURE RANGE                                       | Operating: -25 °C up to +80 °C (-13 °F up to +176 °F)<br>Storage: -40 °C up to +85 °C (-40 °F up to +185 °F)  |
| RELATIVE HUMIDITY                                       | 5% to 95% non-condensing  |
| READ / WRITE DISTANCE                                   | LF and HF: Up to 100 mm / 4 inch, depending on environment and transponder  |
| OPERATING MODES (USB)                                   | USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01   |
| MTBF  | 500,000 hours   |
| WEIGHT  | Approx. 12 g / 0.43 oz (without cable)  |
| SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ             | <u>ISO 14443A:</u><br>HID iCLASS DESFire <sup>1)</sup> , HID iCLASS MIFARE Classic <sup>1)</sup> , HID iCLASS SEOS <sup>1)</sup> , LEGIC Advant, NTAG2xx, MIFARE Classic, MIFARE Classic EV1 <sup>2)</sup> , MIFARE DESFire EV1, MIFARE DESFire EV2/EV3 <sup>3)</sup> , MIFARE DESFire Light <sup>4)</sup> , MIFARE Mini, MIFARE Plus S/X, MIFARE Smart MX <sup>5)</sup> , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1 <sup>2)</sup> , SLE44R35 <sup>5)</sup> , SLE66Rxx (my-d move) <sup>5)</sup><br><u>ISO 14443B:</u><br>Calypso <sup>5)</sup> , CEPAS <sup>5)</sup> , HID iCLASS <sup>1)</sup> , Pico Pass <sup>1)</sup><br><u>ISO 15693:</u><br>EM4x33 <sup>5)</sup> , EM4x35 <sup>5)</sup> , HID iCLASS <sup>1)</sup> , HID iCLASS SE/SR/Elite <sup>1)</sup> , ICODE SLI, LEGIC Advant, M24LR16/64, PicoPass <sup>1)</sup> , SRF55Vxx (my-d vicinity) <sup>5)</sup> , Tag-it<br><u>ISO 18092 / ECMA-340:</u><br>NFC Forum Tag 1-5 <sup>6)</sup> , Sony FeliCa <sup>7)</sup><br><u>LEGIC Prime:</u><br>LEGIC Prime |
| SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>8)</sup> | AWID, Cardax <sup>9)</sup> , CASI-RUSCO, Deister <sup>9)</sup> , EM4050, EM4100, EM4102, EM4150, EM4200 <sup>10)</sup> , EM4305, EM4450, EM4550, HITAG 1 <sup>11)</sup> , HITAG 2 <sup>11)</sup> , HITAG S <sup>11)</sup> , ICT <sup>4)</sup> , IDTECK, ISONAS, Keri, Miro, Nedap <sup>9)</sup> , Pyramid, Q5, T5557, T5567, T5577, TITAN (EM4050), UNIQUE, ZODIAC  |
| SUPPORTED TRANSPONDERS (P OPTION)                       | All standard transponders, G-Prox <sup>9)</sup> , HID 1326 Prox II, HID 1336 DuoProx II, HID 1346 ProxKey III, HID 1386 ISO Prox II, HID 1391 Micro Prox, HID Prox, Indala, ioProx, Nexwatch  |
| SUPPORTED TRANSPONDERS (PI OPTION)                      | Requires TWN4 SIO Card, all standard transponders, all P option transponders, Calypso Innovatron protocol <sup>5)</sup> , CTS, HID iCLASS, HID iCLASS DESFire/Elite/MIFARE Classic/SE/SEOS/SR, MB89R118/119, NFC Forum Tag 1-5, Pico Pass <sup>12)</sup> , SRI4K, SRI512, SRIX4K, SRT512, Topaz   |
| OS SUPPORT  | Windows 7 (32-/64-bit), 8, 8.1, 10, 11, Linux, Android <sup>4)</sup> , iOS <sup>4)</sup> , MAC OS X <sup>4)</sup>   |
| PERIPHERAL INTERFACES                                   | USB, RS-232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I <sup>2</sup> C, 4 GPIOs  |
| TRANSMISSION SPEED                                      | Host: USB Full speed (12 Mbit/s), RS-232: up to 115,200 baud, HF Air: up to 848 kbit/s  |
| CERTIFICATION NAME                                      | TWN4 MultiTech 2 LEGIC M LF HF  |
| CERTIFICATION(S)  | CE/RED, FCC, IC, REACH and RoHS-III compliant   |

<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>supported as part of the EV1 downward compatibility <sup>4)</sup>On request <sup>5)</sup>r/w in direct chip command mode

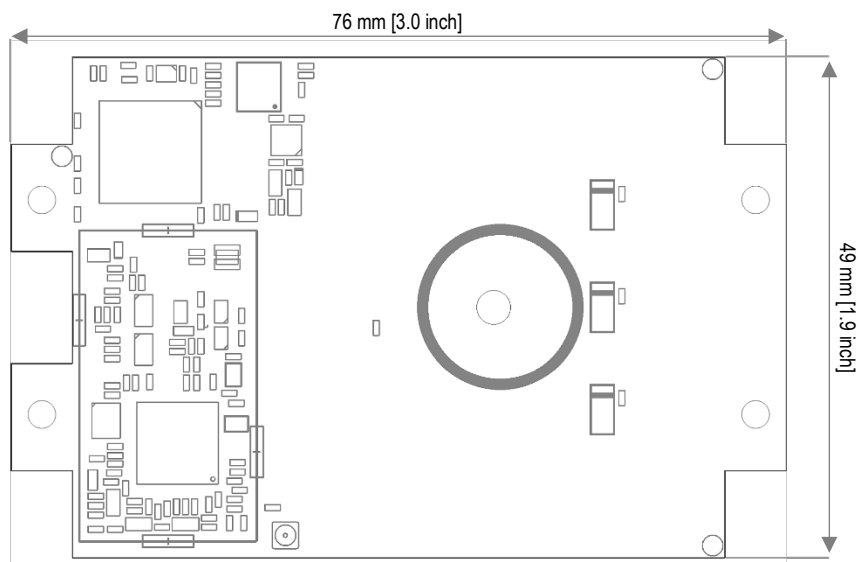
<sup>6)</sup>NFC Forum Tag 1 not supported <sup>7)</sup>UID + r/w public area <sup>8)</sup>125 kHz technology requires a Russian local test and import license from the ministry of Trade and Industry (MINPROMTORC). This license has to be in place before Elatec can accept any order to be shipped to Russia <sup>9)</sup>Hash value only <sup>10)</sup>Only emulation of 4100, 4102 <sup>11)</sup>Without encryption <sup>12)</sup>UID only, read/write on request

|               |  |                      |
|---------------|--|----------------------|
| ORDER CODE(S) | <b>Reader modules with LEGIC SM-4200</b> |                      |
|               | T4BO-B6                                  | OEM board            |
|               | T4BO-B6-P                                | OEM board, P option  |
|               | T4BO-B6-PI                               | OEM board, PI option |
|               | <b>Reader modules with LEGIC SM-4500</b> |                      |
|               | T4BO-B6-5                                | OEM board            |
| T4BO-B6-5P    | OEM board, P option                      |                      |
| T4BO-B6-5PI   | OEM board, PI option                     |                      |

## ACCESSORIES

|              |         |                   |
|--------------|---------|-------------------|
| POWER SUPPLY | PWA-EU3 | Power Supply (EU) |
|              | PWA-US3 | Power Supply (US) |
|              | PWA-UK3 | Power Supply (UK) |
|              | PWA-JP3 | Power Supply (JP) |

## DRAWING



All measures in mm [inch]

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