

# TWN4 MULTITECH 3 M LEGIC BLE

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



TWN4 MultiTech 3 M LEGIC BLE  
PCB top view\*



TWN4 MultiTech 3 M LEGIC BLE  
PCB bottom view\*

\*Product images may show product variants or additional components that are not available.

The TWN4 MultiTech 3 M LEGIC BLE integrates RFID (125 kHz and 13.56 MHz), NFC and Bluetooth Low Energy capabilities into a compact but powerful reader. Its reduced size combined with optimized read/write performance makes it the perfect reader for all applications where small size and full performance matters, e.g. print solutions, healthcare applications, driver identification, POS integration and much more. Furthermore, the TWN4 MultiTech 3 M LEGIC BLE provides access to most common host interfaces such as USB, serial (TTL) or I<sup>2</sup>C which are readily accessible through an on-board connector.

The TWN4 MultiTech 3 M LEGIC BLE allows users to read and write almost all common worldwide 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 etc. and ISO standards like LEGIC Advant, LEGIC Prime, ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

### 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
- + One on-board SAM socket (Secure Access Module)
- + CCID and PC/SC 2.01
- + 3 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) / 2.4 GHz (BLE)
ANTENNA	Integrated
DIMENSIONS (L X W X H)	50 mm x 35 mm x 7 mm, maximum diameter < 55 mm / 1.97 inch x 1.38 inch x 0.28 inch, maximum diameter < 2.17 inch
POWER SUPPLY	4.3 V - 5.5 V via micro USB; via generic interface (X2) 3.3 V +/- 5% Limited power source according to IEC 60950-1 or PS2 classified IEC 62368-1, short-circuit current < 8 A
CURRENT CONSUMPTION	RF field on: 200 mA typically + 16 mA (BT) / Sleep: 500 µA typ.
TEMPERATURE RANGE	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)
RELATIVE HUMIDITY	5% to 95% non-condensing
READ- / WRITE DISTANCE	LF and HF: Up to 100 mm / 4 inch, depending on environment and transponder / BT: up to several meters/feet (configurable, up to +8 dBm power)
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
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
MTBF	500,000 hours
WEIGHT	Approx. 9 g (0.32 oz)
COMPATIBLE PIN HEADER	PTT-112-01-L-D or TMM-112-03-F-D by Samtec
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	<u>ISO14443A:</u> LEGIC Advant, MIFARE Classic EV1 <sup>1)</sup> , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 <sup>2)</sup> , MIFARE DESFire Light <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 <sup>1)</sup> , NTAG2xx, PayPass <sup>3)</sup> , SLE44R35 <sup>3)</sup> , SLE66Rxx (my-d move) <sup>3)</sup> <u>ISO14443B:</u> Calypso <sup>3)</sup> , CEPAS <sup>3)</sup> , HID iCLASS <sup>4)</sup> , Moneo <sup>3)</sup> , Pico Pass <sup>4)</sup> <u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5 <sup>5)</sup> , Sony FeliCa <sup>6)</sup> , NFC Active and passive communication mode <u>ISO15693:</u> EM4x33 <sup>3)</sup> , EM4x35 <sup>3)</sup> , HID iCLASS <sup>4)</sup> , HID iCLASS SE/SR <sup>4)</sup> , ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity) <sup>3)</sup> , Tag-it, PicoPass <sup>4)</sup> <u>LEGIC Prime:</u> LEGIC Prime
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>7)</sup>	AWID, Cardax, CASI-RUSCO, Deister <sup>8)</sup> , EM4100, 4102, 4200 <sup>9)</sup> , EM4050, 4150, 4450, 4550, EM4305 <sup>10)</sup> , FDX-B <sup>10)</sup> , EM4105 <sup>10)</sup> , HITAG 1 <sup>11)</sup> , HITAG 2 <sup>11)</sup> , HITAG S <sup>11)</sup> , ICT <sup>10)</sup> , IDTECK, Isonas, Keri, Miro, Nedap <sup>8)</sup> , PAC <sup>10)</sup> , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX <sup>10)</sup> , TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox <sup>8)</sup> , 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 <sup>10)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>10)</sup> , iOS <sup>10)</sup> , MAC OS X <sup>10)</sup>
PERIPHERAL INTERFACES	USB, RS-232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I <sup>2</sup> C, SPI, 3 GPIOs, Clock/Data, Wiegand, Bluetooth Low Energy (BLE)
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), RS-232: up to 115.200 baud, HF Air: up to 848 kbit/s, BT Air: up to 100 kbit/s
CERTIFICATION NAME	TWN4 MultiTech 3 M LEGIC BLE
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant
ORDER CODE(S)	T430-B7C0                      OEM Board T430-B7C0-P                    OEM Board Option P

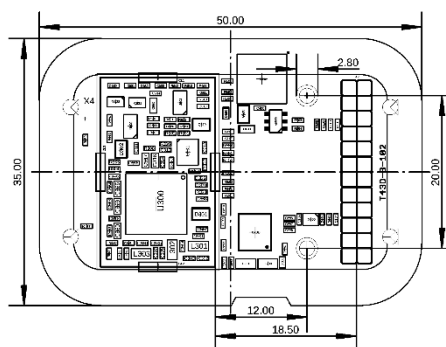
<sup>1)</sup>r/w enhanced security features on request <sup>2)</sup>In preparation <sup>3)</sup>r/w in direct chip command mode <sup>4)</sup>UID only <sup>5)</sup>NFC Forum Tag 1 not supported <sup>6)</sup>UID + r/w public area <sup>7)</sup>125 kHz technology requires a Russian local test and import 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>8)</sup>Hash value only <sup>9)</sup>Only emulation of 4100, 4102 <sup>10)</sup>On request <sup>11)</sup>Without encryption

## ACCESSORIES

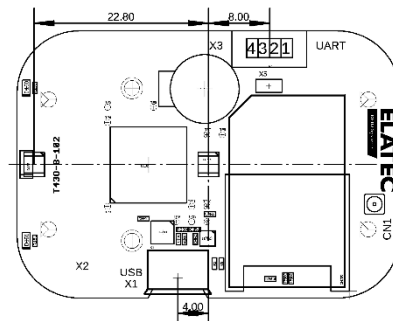
CABLES	CAB-BS1:	Cable, Slim CC, Micro USB/Mini USB male bent, 10cm / 3.93 inch
	CAB-BS2:	Cable, Slim CC, Micro USB/Mini USB female, 10cm / 3.93 inch
	CAB-BS3:	Cable, Slim CC, Micro USB/USB A male, 12cm / 4.72 inch
	CAB-BS4:	Cable, Slim CC, Micro USB/USB A male, 45cm / 17.7 inch
	CAB-BS5:	Cable, Slim CC, Micro USB/USB A male, 120cm / 47.2 inch
	CAB-BS6:	Cable, Slim CC, Micro USB/USB A male, 200cm / 72.74 inch
	CAB-BS7:	Cable, Slim CC, Micro USB/Mini USB male, 60cm / 23.62 inch

## DRAWING / CONNECTOR ASSIGNMENT

Dimensions Top



Dimensions Bottom



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