

TWN4 MULTITECH 3 BLE

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



TWN4 MultiTech 3 BLE PCB top view



TWN4 MultiTech 3 BLE PCB bottom view

The TWN4 MultiTech 3 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, driver identification, POS integration and many more. Furthermore, the TWN4 MultiTech 3 BLE provides access to most common host interfaces such as USB, serial (TTL) or I²C which are readily accessible through an on-board connector.

The TWN4 MultiTech 3 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 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
- + Onboard 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Direct chip-commands support
- + One onboard 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 and PI options available on request
- + 3D construction data (STEP) available on request



TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)
ANTENNA	Integrated
DIMENSIONS (L X W X H)	OEM Board (compact reader): 50 mm x 35 mm x 7 mm, maximum diameter < 55 mm.
POWER SUPPLY	4.3 V - 5.5 V via USB; via generic interface (X2) 3.3 V +/- 5%
CURRENT CONSUMPTION	RF field on: 120 mA typically + 16 mA (BT) / Sleep: 500 µA typ. / Cyclic Operation: TBD
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 51 mm / 2 inch, depending on environment and transponder / BT: n/a
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
COMPATIBLE PIN HEADER	PTT-112-01-L-D or TMM-112-03-F-D by Samtec
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	<p><u>ISO14443A:</u> LEGIC Advant¹⁾, MIFARE Classic EV1²⁾, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2²⁾, MIFARE DESFire Light³⁾, MIFARE Plus S, X, MIFARE Pro X⁴⁾, MIFARE Smart MX⁴⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass⁴⁾, SLE44R35, SLE66Rxx (my-d move)⁴⁾, Topaz</p> <p><u>ISO14443B:</u> Calypso⁴⁾, Calypso Innovatron protocol⁴⁾, CEPAS⁴⁾, HID iCLASS¹⁾, Moneo⁴⁾, Pico Pass⁵⁾, SRI4K, SRIX4K, SRI512, SRT512</p> <p><u>ISO14443B:</u> Calypso⁴⁾, Calypso Innovatron protocol⁴⁾, CEPAS⁴⁾, HID iCLASS¹⁾, Moneo⁴⁾, Pico Pass⁵⁾, SRI4K, SRIX4K, SRI512, SRT512</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa⁶⁾, NFC Active and passive communication mode</p> <p><u>ISO15693:</u> EM4x33⁴⁾, EM4x35⁴⁾, HID iCLASS¹⁾, HID iCLASS SE/SR¹⁾, ICODE SLI, LEGIC Advant¹⁾, M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)⁴⁾, Tag-it, PicoPass⁵⁾</p>
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ ⁷⁾	AWID, Cardax, CASI-RUSCO, Deister ⁸⁾ , EM4100, 4102, 4200 ⁹⁾ , EM4050, 4150, 4450, 4550, EM4305 ¹⁰⁾ , EM4105, HITAG 1 ¹¹⁾ , HITAG 2 ¹¹⁾ , HITAG S ¹¹⁾ , ICT ¹⁰⁾ , IDTECK, Isonas ¹⁰⁾ , Keri, Miro, Nedap ⁸⁾ , Pyramid, Q5, T5557, T5567, T5577, TITAN (EM4050), UNIQUE
SUPPORTED TRANSPONDERS (OPTION 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
SUPPORTED TRANSPONDERS (OPTION PI)	Requires TWN4 SIO Card, All Standard Transponders, All Option P Transponders, HID iCLASS, HID iCLASS SE/SR/Elite, HID iCLASS SEOS (Facility Code/PAC) ¹²⁾
OS SUPPORT	Windows XP, Vista, Embedded CE ¹⁰⁾ , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android ¹⁰⁾ , iOS ¹⁰⁾ , MAC OS X ¹⁰⁾
PERIPHERAL INTERFACES	USB, RS232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I ² C, SPI, 3 GPIOs, CAN ¹⁰⁾ , 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 BLE
CERTIFICATION(S)	CE/RED, FCC Single Modular Approval, IC, REACH and RoHS-III compliant and many more

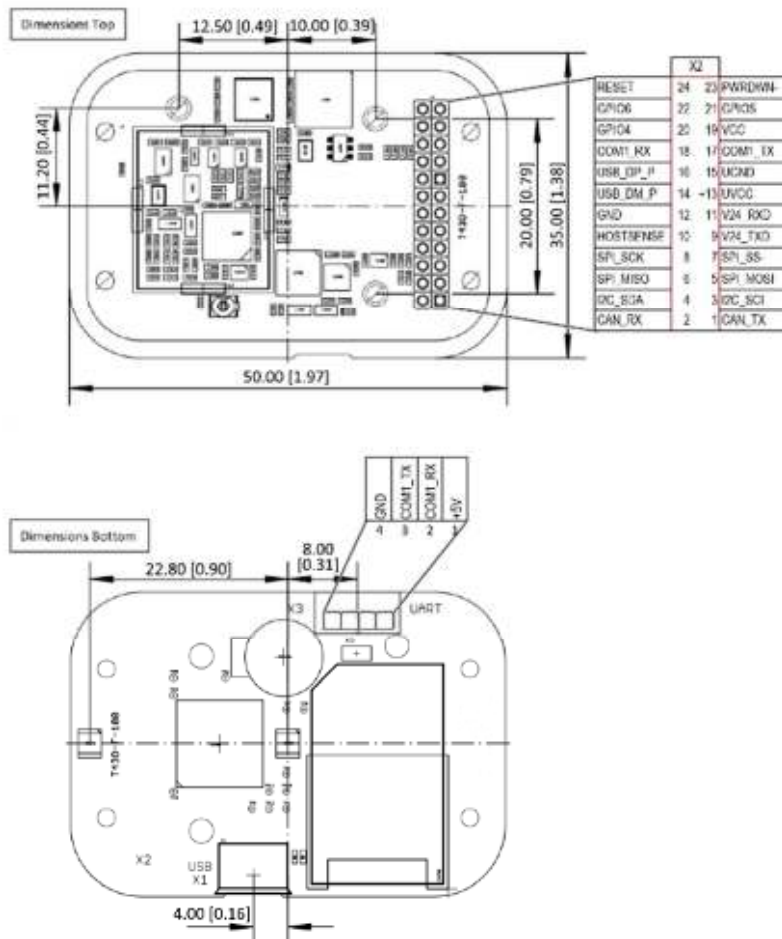
ORDER CODE(S)	T430-F7C0	OEM BOARD
	T430-F7C0-P	OEM BOARD OPTION P
	T430-F7C0-PI	OEM BOARD OPTION PI

¹UID only ²r/w enhanced security features on request ³In preparation ⁴r/w in direct chip command mode ⁵UID only, read/write on request ⁶UID + r/w public area ⁷125 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 ⁸Hash value only ⁹Only emulation of 4100, 4102 ¹⁰On request ¹¹Without encryption ¹²r/w on request

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



All dimensions in mm [inch]

ELATEC GmbH
 Zeppelinstr. 1
 82178 Puchheim • Germany
 P +49 89 552 9961 0 • F +49 89 552 9961 129
 E-Mail: info-rfid@elatec.com
 Website: elatec.com

ELATEC USA Inc.
 4203 SW High Meadows Ave
 Palm City • FL 34990 • USA
 P +1 772 210 2263 • F +1 772 382 3749
 E-Mail: americas-info@elatec.com
 Website: elatec.com

ELATEC Technology (Shenzhen) LLC
 No. 716 Industrial Bank Tower
 Futian District • Shenzhen • China
 P/F +86 755 2394 6014
 E-Mail: apac-info@elatec.com
 Website: elatec.com

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