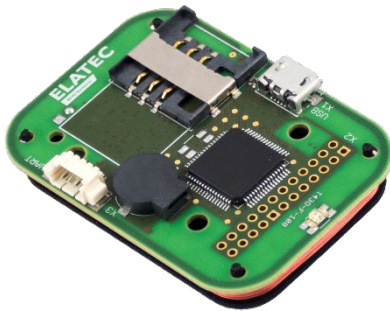


TWN4 MULTITECH 3 M BLE

TWN4 MultiTech 3 M

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



PCB top view



PCB bottom view

TWN4 MultiTech 3 M 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, TWN4 MultiTech 3 M BLE provides access to most common host interfaces such as USB, serial (TTL) or I²C which are readily accessible through an on-board connector.

TWN4 MultiTech 3 M 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 ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / 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 and PI options 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(S)	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	4.3 V - 5.5 V via USB; via generic interface (X2) 3.3 V ± 5% 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: 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 100 mm / 4 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 / 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 ¹⁾ , MIFARE Classic EV1 ²⁾ , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 ³⁾ , MIFARE DESFire Light ⁴⁾ , MIFARE Plus S, X, MIFARE Pro X ⁵⁾ , MIFARE Smart MX ⁵⁾ , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1 ²⁾ , NTAG2xx, SLE44R35 ⁵⁾ , SLE66Rxx (my-d move) ⁵⁾ , Topaz <u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa ⁶⁾ , NFC Active and passive communication mode <u>ISO14443B:</u> Calypso ⁵⁾ , Calypso Innovatron protocol ⁵⁾ , CEPAS ⁵⁾ , HID iCLASS ¹⁾ , Moneo ⁵⁾ , Pico Pass ⁷⁾ , SRI4K, SRIX4K, SRI512, SRT512 <u>ISO15693:</u> EM4x33 ⁵⁾ , EM4x35 ⁵⁾ , HID iCLASS ¹⁾ , HID iCLASS SE/SR ¹⁾ , ICODE SLI, LEGIC Advant ¹⁾ , M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity) ⁵⁾ , Tag-it, PicoPass ⁷⁾
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ ⁸⁾	AWID, Cardax, CASI-RUSCO, Deister ⁹⁾ , EM4100, 4102, 4200 ¹⁰⁾ , EM4050, 4150, 4450, 4550, EM4305 ¹¹⁾ , FDX-B ¹²⁾ , EM4105 ¹²⁾ , UltraProx ¹²⁾ , HITAG 1 ¹³⁾ , HITAG 2 ¹³⁾ , HITAG S ¹³⁾ , ICT ⁴⁾ , IDTECK, Isonas, Keri, Miro, Nedap ⁹⁾ , PAC ⁴⁾ , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX ¹²⁾ , TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox ⁹⁾ , 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) ¹⁴⁾
OS SUPPORT	Windows Embedded CE ⁴⁾ , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android ⁴⁾ , iOS ⁴⁾ , MAC OS X ⁴⁾
PERIPHERAL INTERFACES	USB, RS-232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I ² 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
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant, and many more

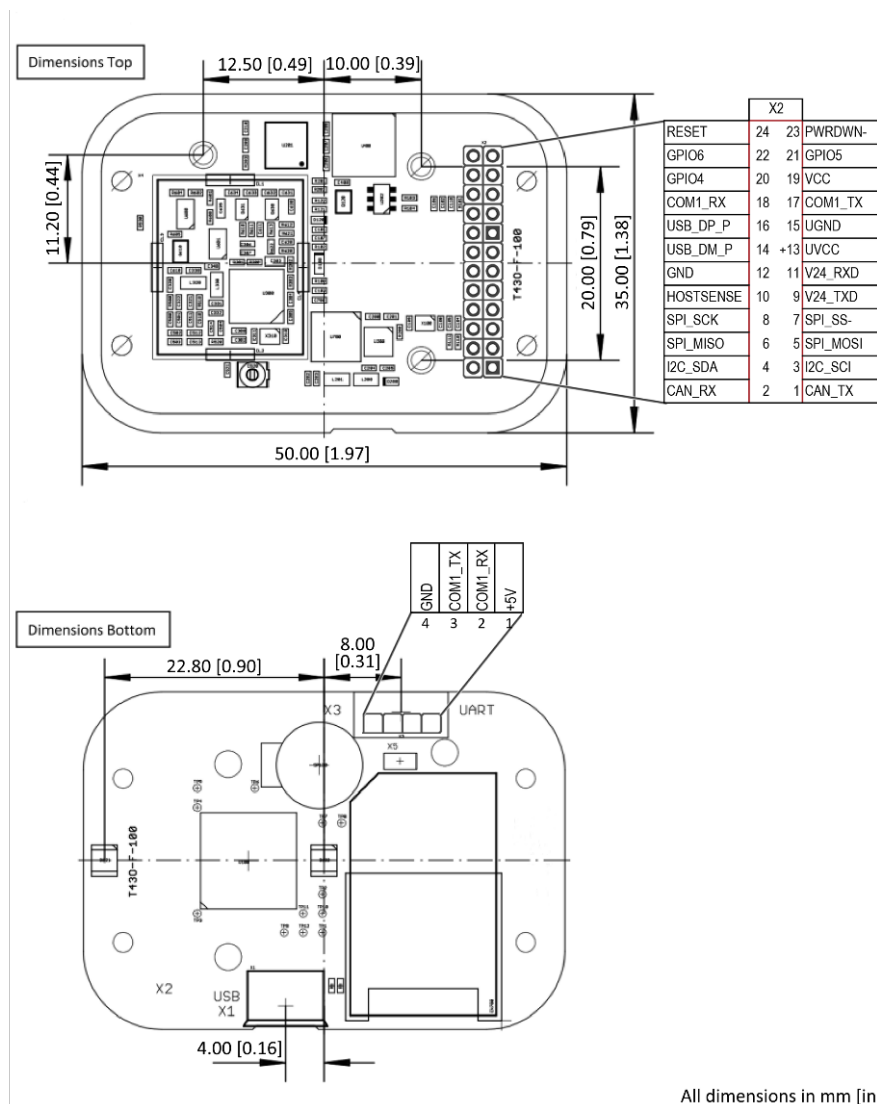
¹⁾UID only ²⁾r/w enhanced security features on request ³⁾EV2/EV3 supported as part of the EV1 downward compatibility ⁴⁾On request ⁵⁾r/w in direct chip command mode ⁶⁾UID + r/w public area ⁷⁾UID only, read/write on request ⁸⁾125 kHz technology requires a Russian local test and import license from the ministry of Trade and Industry (MINPROMTORC). This license has to be in place before Elatec can accept any order to be shipped to Russia ⁹⁾Hash value only ¹⁰⁾Only emulation of 4100, 4102 ¹¹⁾From FW V4.05 ¹²⁾134.2 kHz only ¹³⁾Without encryption ¹⁴⁾UID + PAC (Facility Code), r/w on request

ORDER CODES	T430-F7C0	OEM board
	T430-F7C0-P	OEM board, option P
	T430-F7C0-PI	OEM board, option PI

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



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