

# TWN4 MULTITECH 3 M

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



TWN4 MultiTech 3 M  
PCB top view



TWN4 MultiTech 3 M  
PCB bottom view

TWN4 MultiTech 3 M integrates RFID (125 kHz and 13.56 MHz) and NFC 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 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.

TWN4 MultiTech 3 M 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

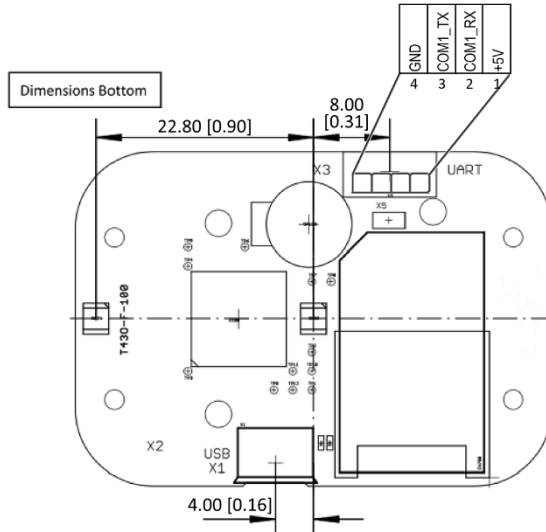
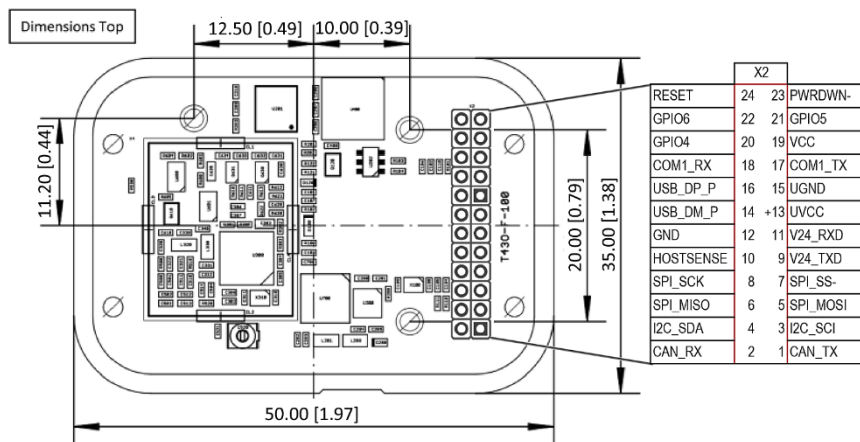
FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)						
ANTENNA(S)	Integrated						
DIMENSIONS (L X W X H)	50 mm x 35 mm x 7 mm, maximum diameter < 55 mm / 1.97 inch x 1.38 inch x 0.28 inch, maximum diameter < 2.17 inch						
POWER SUPPLY	4.3 V - 5.5 V via USB; via generic interface (X2) 3.3 V +/- 5% Limited power 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 / 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 76 mm / 3 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. 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	<p><u>ISO14443A:</u> LEGIC Advant<sup>1)</sup>, MIFARE Classic EV1<sup>2)</sup>, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2<sup>3)</sup>, MIFARE DESFire Light<sup>4)</sup>, MIFARE Plus S, X, MIFARE Pro X<sup>5)</sup>, MIFARE Smart MX<sup>5)</sup>, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1<sup>2)</sup>, NTAG2xx, SLE44R35<sup>5)</sup>, SLE66Rxx (my-d move)<sup>5)</sup>, Topaz</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa<sup>6)</sup>, NFC Active and passive communication mode</p> <p><u>ISO14443B:</u> Calypso<sup>5)</sup>, Calypso Innovatron protocol<sup>5)</sup>, CEPAS<sup>5)</sup>, HID iCLASS<sup>1)</sup>, Moneo<sup>5)</sup>, Pico Pass<sup>7)</sup>, SRI4K, SRIX4K, SRI512, SRT512</p> <p><u>ISO15693:</u> EM4x33<sup>5)</sup>, EM4x35<sup>5)</sup>, HID iCLASS<sup>1)</sup>, HID iCLASS SE/SR<sup>1)</sup>, ICODE SLI, LEGIC Advant<sup>1)</sup>, M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)<sup>5)</sup>, Tag-it, PicoPass<sup>7)</sup></p>						
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>8)</sup>	AWID, Cardax, CASI-RUSCO, Deister <sup>9)</sup> , EM4100, 4102, 4200 <sup>10)</sup> , EM4050, 4150, 4450, 4550, EM4305 <sup>11)</sup> , FDX-B <sup>12)</sup> , EM4105 <sup>12)</sup> , UltraProx <sup>12)</sup> , HITAG 1 <sup>13)</sup> , HITAG 2 <sup>13)</sup> , HITAG S <sup>13)</sup> , ICT <sup>4)</sup> , IDTECK, Isonas, Keri, Miro, Nedap <sup>9)</sup> , PAC <sup>4)</sup> , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX <sup>12)</sup> , TITAN (EM4050), UNIQUE, ZODIAC						
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox <sup>9)</sup> , 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) <sup>14)</sup>						
OS SUPPORT	Windows Embedded CE <sup>4)</sup> , 7 (32-/64-bit), 8, 8.1, 10, 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, SPI, 3 GPIOs, Clock/Data, Wiegand						
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 3 M						
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant, and many more						
ORDER CODE(S)	<table> <tr> <td>T430-F6C0</td> <td>OEM Board</td> </tr> <tr> <td>T430-F6C0-P</td> <td>OEM Board Option P</td> </tr> <tr> <td>T430-F6C0-PI</td> <td>OEM Board Option PI</td> </tr> </table>	T430-F6C0	OEM Board	T430-F6C0-P	OEM Board Option P	T430-F6C0-PI	OEM Board Option PI
T430-F6C0	OEM Board						
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<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>EV2/EV3 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>UID + r/w public area <sup>7)</sup>UID only, read/write on request <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>From FW V4.05 <sup>12)</sup>134.2 kHz only <sup>13)</sup>Without encryption <sup>14)</sup>UID + PAC (Facility Code), r/w on request

### ACCESSORIES

CABLES	Model	Description
	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]

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