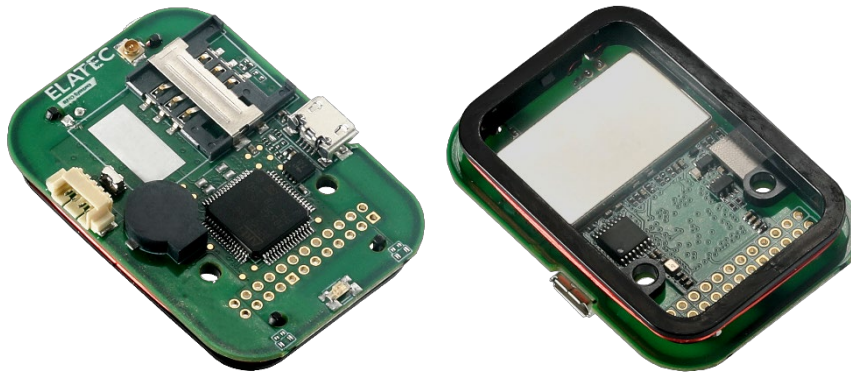


TWN4 MULTITECH 3 LEGIC M

MULTI-FREQUENCY RFID MODULE FOR LF, HF, NFC AND BLE



TWN4 MultiTech 3 LEGIC M
(exemplary illustrations*)

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

The powerful reader modules of the ELATEC TWN4 MultiTech 3 family combine a compact form factor with optimized read/write performance. All devices integrate RFID (125 kHz and 13.56 MHz), NFC and, optionally, Bluetooth Low Energy (BLE) capabilities. Thanks to their reduced size, the modules can be easily integrated in almost all applications where small size and full performance matter. Furthermore, they are compatible with the most common host interfaces, such as USB, and they can also be configured with different connector options.

TWN4 MultiTech 3 LEGIC M key features include a powerful SDK for writing apps that are executed directly on the module, the possibility to upgrade the firmware in the field, a direct chip-commands support, and a powerful BLE module. Additionally, the module can simultaneously read more than 60 RFID technologies from low (LF) and high frequency (HF) bands, including NFC. This gives the option to select as many of the technologies required instead of being forced to select just a few ones.

Special features:

- + Possibility to read more than 60 RFID technologies
- + Supports two RFID frequencies (125 kHz/13.56 MHz), NFC and BLE
- + Optionally available with a 24-pin header, further configurations available on request
- + Powerful SDK for writing apps which are executed directly on the module
- + 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
- + CCID and PC/SC 2.01
- + Optimized read/write performance combined with a compact form factor



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) | Approx. 50 x 35 x 7 mm, maximum diameter < 55 mm Approx. 1.97 x 1.38 x 0.28 inch, maximum diameter < 2.17 inch |
| POWER | Micro USB: 4.3 V - 5.5 V Generic interface (X2): 3.3 V ± 5% RS-232: requires 5 V external power supply PS2 classified power source according to 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: -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 BLE: up to several meters/feet |
| OPERATING MODES (USB) | USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01 |
| BLUETOOTH LOW ENERGY | BLE version 4.1, software upgradable to V4.2 |
| MTBF | 500,000 hours |
| WEIGHT | Approx. 10 g / 0.35 oz |
| OS SUPPORT | Windows 7 (32-/64-bit) and higher versions, Linux, Android ¹⁾ , iOS ¹⁾ , MAC OS X ¹⁾ |
| 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 D0/D1, 1 SAM slot Compatible pin header: PTT-112-01-L-D or TMM-112-03-F-D by Samtec |
| 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 LEGIC M |
| CERTIFICATION(S) | CE/RED, FCC, IC, REACH and RoHS-III compliant, and many more ²⁾ |
| ORDER CODE(S) | T430-B7C0 Reader module, standard T430-B7C0-P Reader module with P option |

SUPPORTED TRANSPONDERS³⁾

| | |
|--|--|
| SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ | <p><u>ISO 14443A:</u> LEGIC Advant, NTAG2xx, MIFARE Classic, MIFARE Classic EV1⁴⁾, MIFARE DESFire EV1, MIFARE DESFire EV2⁵⁾, MIFARE DESFire EV3⁵⁾, MIFARE DESFire Light¹⁾, MIFARE Mini, MIFARE Plus S, MIFARE Plus X, MIFARE Smart MX⁶⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1⁴⁾, SLE44R35⁶⁾, SLE66Rxx (my-d move)⁶⁾</p> <p><u>ISO 14443B:</u> Calypso⁶⁾, CEPAS⁶⁾, Pico Pass⁷⁾</p> <p><u>ISO 15693:</u> EM4x33⁶⁾, EM4x35⁶⁾, ICODE SLI, LEGIC Advant, M24LR16/64, PicoPass⁷⁾, SRF55Vxx (my-d vicinity)⁶⁾, Tag-it</p> <p><u>ISO 18092 / ECMA-340:</u> NFC Forum Tag 1-5⁸⁾, Sony FeliCa⁹⁾</p> <p><u>LEGIC Prime:</u> LEGIC Prime</p> <p><u>LEAF Identity:</u> LEAF¹⁰⁾</p> |
| SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ ¹¹⁾ | <p>AWID, Cardax¹²⁾, CASI-RUSCO, Deister¹²⁾, EM4050, EM4100, EM4102, EM4150, EM4200¹³⁾, EM4305, EM4450, EM4550, HITAG 1¹⁴⁾, HITAG 2¹⁴⁾, HITAG S¹⁴⁾, ICT¹⁾, IDTECK, ISONAS, Keri, Miro, Nedap¹²⁾, Pyramid, Q5, T5557, T5567, T5577, TITAN (EM4050), UltraProx, UNIQUE, ZODIAC</p> |

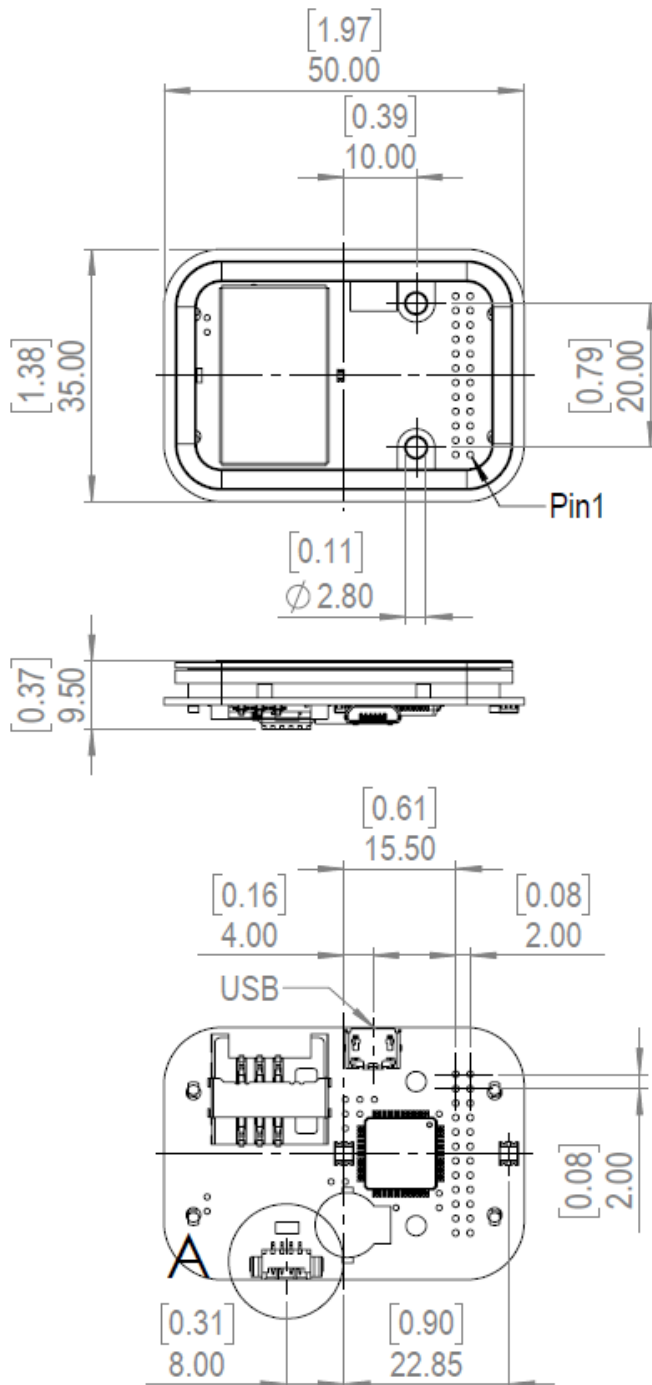
| | |
|--------------------------------------|---|
| SUPPORTED TRANSPONDERS (P OPTION) | All standard transponders, G-Prox ¹²⁾ , HID 1326 Prox II, HID 1336 DuoProx II, HID 1346 ProxKey III, HID 1386 ISO Prox II, HID 1391 Micro Prox, HID Prox, Indala, ioProx, Nexwatch |
|--------------------------------------|---|

¹⁾On request ²⁾More information on request ³⁾Unless otherwise agreed with ELATEC, the product is delivered with a standard firmware version that might be older than the latest firmware developed by ELATEC. This firmware version can be changed using the ELATEC AppBlaster tool. Please note that the information given in this document regarding the transponder technologies supported by the product is based on the latest firmware version. ⁴⁾r/w enhanced security features on request ⁵⁾Supported as part of the EV1 downward compatibility ⁶⁾r/w in direct chip command mode ⁷⁾UID only ⁸⁾NFC Forum Tag 1 not supported ⁹⁾UID + r/w public area ¹⁰⁾AV2 only, requires one free SAM slot for MIFARE SAM AV2 card ¹¹⁾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. ¹²⁾Hash value only ¹³⁾Only emulation of 4100, 4102 ¹⁴⁾Without encryption

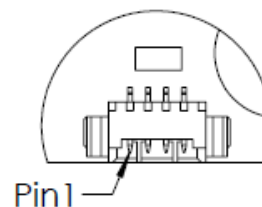
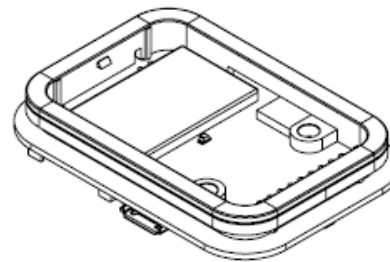
ACCESSORIES

| | | |
|--------|---------|--|
| 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 |

TECHNICAL DRAWINGS



| | Pin | |
|----------|-----|------------|
| RESET | 24 | 23 PWRDWN- |
| GPIO6 | 22 | 21 GPIO5 |
| GPIO4 | 20 | 19 VCC |
| COM1_RX | 18 | 17 COM1_TX |
| USB_DP_P | 16 | 15 UGND |
| USB_DM_P | 14 | 13 UVCC |
| GND | 12 | 11 V24_RXD |
| HOSTENSE | 10 | 9 V24_TXD |
| SPI_SCK | 8 | 7 SPI_SS- |
| SPI_MISO | 6 | 5 SPI_MOSI |
| I2C_SDA | 4 | 3 I2C_SCI |
| CAN_RX | 2 | 1 CAN_TX |



| Pin | Function |
|-----|----------|
| 1 | +5V |
| 2 | COM1_RX |
| 3 | COM1_TX |
| 4 | GND |

Pin1
DETAIL A
UART
M 2 : 1

All measures in mm [inch]

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