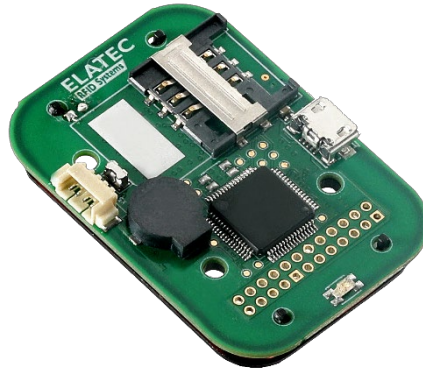# TWN4 MultiTech 3 HF

## Multi-frequency HF RFID module with NFC support



TWN4 MultiTech 3 HF
(exemplary illustration*)

*The product image may show a product variant 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 used for 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 HF is a single-frequency product model of the TWN4 MultiTech 3 family that allows users to read and write almost all common worldwide 13.56 MHz tags and/or labels. Further key features of the module include a powerful SDK for writing apps that are executed directly on the module, the possibility to upgrade the firmware in the field and transparent data exchange with the RFID media.

Special features:

+ Possibility to read many HF RFID technologies
+ Cost-optimized single-frequency RFID solution (13.56 MHz) with integrated HF antenna
+ 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
+ Supports transparent data exchange with RFID media
+ CCID and PC/SC 2.01
+ Excellent read/write performance combined with a compact form factor

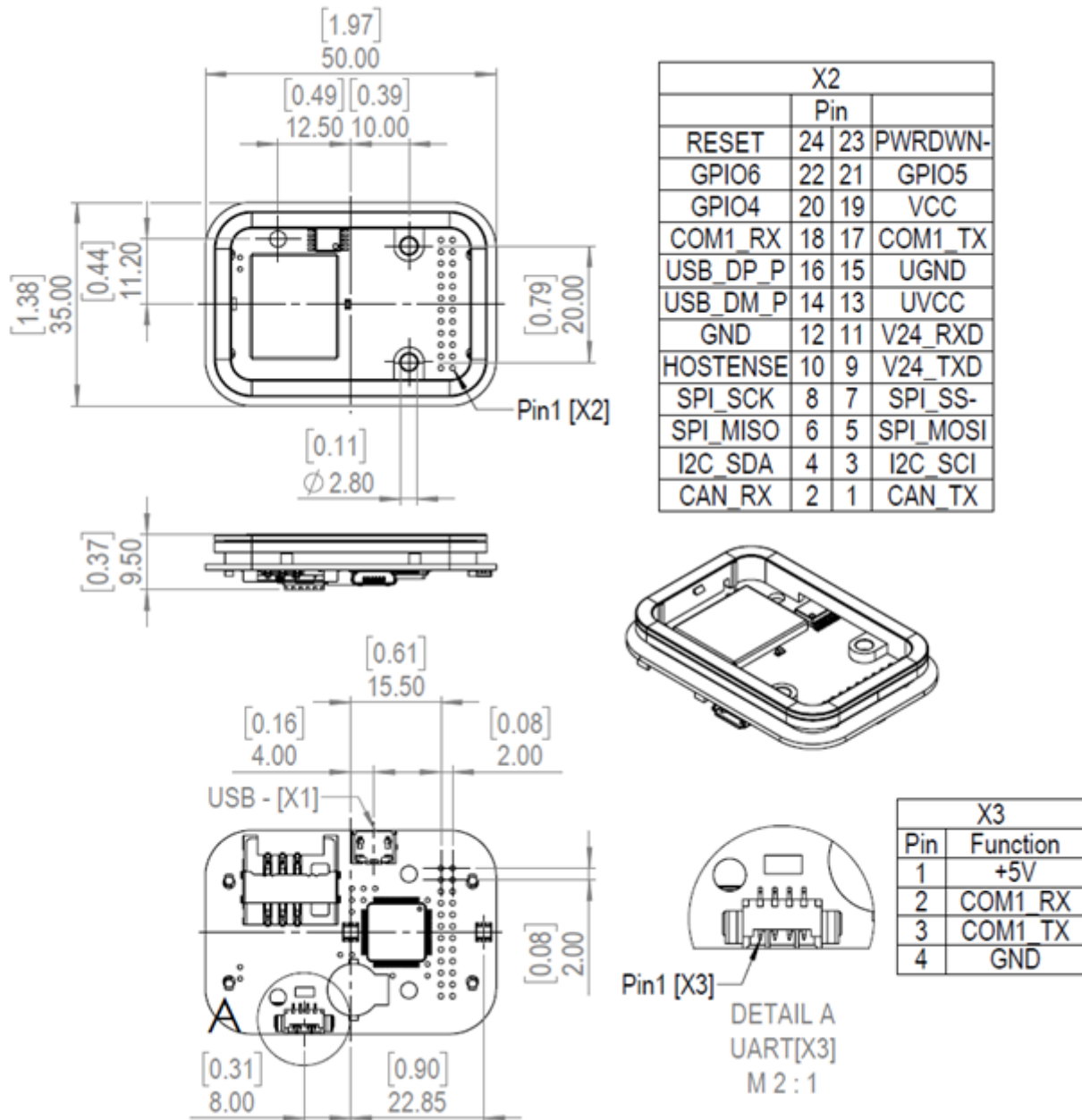| Elevator | EV Chargers | Access | Shop POS | Fitness Equipment | Ticket POS | PC Log-on | Document Management | Driver ID | Vending | Parking | Gaming | Locker Locks | Time Attendance | Industrial PC |

TECHNICAL DATA

| | |
|---|---|
| FREQUENCY | 13.56 MHz (HF) |
| ANTENNA | Integrated |
| DIMENSIONS (L X W X H) | Approx. 50.00 x 35.00 x 7.00 mm, maximum diameter < 55.00 mm<br>Approx. 1.97 x 1.38 x 0.28 inch, maximum diameter < 2.17 inch<br>Refer to the technical drawings below for further information. |
| POWER | Micro USB (X1): 4.3 V - 5.5 V<br>Generic interface (X2): 3.3 V (pin 19) or 4.3 V - 5.5 V (pin 13)<br>UART (X3): 5 V<br>ES1/PS2 classified power source according to IEC 62368-1, short-circuit current < 8 A |
| CURRENT CONSUMPTION | RF field on: 120 mA typically / Sleep: 500 μA typ. |
| TEMPERATURE RANGE | Operating: -25 °C up to +80 °C (-13 °F up to +176 °F)<br>Storage: -40 °C up to +85 °C (-40 °F up to +185 °F) |
| RELATIVE HUMIDITY | 5% to 95% non-condensing |
| READ/WRITE DISTANCE | Up to 100 mm / 4 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. 7 g / 0.25 oz |
| SUPPORTED OPTIONS AND TRANSPONDERS | Depending on the firmware version and installed options, ELATEC readers and modules can support a wide range of RFID technologies. Please refer to the relevant ELATEC transponder matrix (available at www.elatec-rfid.com/int/transponder-technology) for more information about the available options and RFID technologies supported by the product. |
| OS SUPPORT | Windows 7 (32-/64-bit) and higher versions, Linux, Android[1], iOS[1], MAC OS X[1] |
| PERIPHERAL INTERFACES | 1 SAM slot (ID-000 card format)<br>X1: micro USB, female<br>X2: generic interface (refer to pin assignment in technical drawings below for more information about the available interfaces)<br>X3: UART connector header 4 pos., 1.25 mm pitch, surface mount, right-angle |
| TRANSMISSION SPEED | Host: USB full speed (12 Mbit/s), RS-232: up to 115,200 baud, HF Air: up to 848 kbit/s |
| ORDER CODES | T43O-F2C0          Standard reader module<br>T43O-F2C0-I        Reader module with I option |

[1]On request

## TECHNICAL DRAWINGS



| X2 | | |
|---|---|---|
| | 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 |

| X3 | |
|---|---|
| Pin | Function |
| 1 | +5V |
| 2 | COM1_RX |
| 3 | COM1_TX |
| 4 | GND |

DETAIL A
UART[X3]
M 2 : 1

**All measures in mm [inch]**