Elatec’s TWN4 MultiTech HF Mini reader is designed for integration into machines, handheld computers or any other human interface devices such as displays, panels, etc. The focus has especially been set on size, flexibility and price. Thanks to its compact dimensions, integration directly on a PC board is possible.

The TWN4 Simple Protocol enables quick software development cycles. All host communication is done via USB or asynchronous serial CMOS/TTL interface. The module offers positions for placement of two LEDs that can be controlled by software.

An external Secure Access Module (SAM) is supported for enhanced security and cryptographic performance. This enables the application to perform secure transactions.

Special features:

+ powerful SDK for writing apps which are executed directly on the reader
+ firmware update in the field possible
+ direct chip-commands support
+ operating voltage: 3.15 V – 5.5 V DC
+ compact design (33 x 30 x 11 mm)
+ integrated antenna
+ 4 GPIOs
+ industrial operating temperature: -25 °C to +80 °C
+ pin compatible upgrade from Mini Reader T3MR-F
+ firmware based on versatile TWN4 technology
+ supports quick (re)configuration over network and over wireless interface with TWN4 CONFIG Card
+ TWN4 Upgrade Card for I option available on request
+ 3D construction data (STEP) available on request
## TECHNICAL DATA

<table>
<thead>
<tr>
<th><strong>FREQUENCY</strong></th>
<th>13.56 MHz (HF)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANTENNA</strong></td>
<td>Integrated</td>
</tr>
<tr>
<td><strong>DIMENSIONS (L X W X H)</strong></td>
<td>32.6 mm x 30.1 mm x 11.2 mm / 1.28 inch x 1.19 inch x 0.44 inch</td>
</tr>
<tr>
<td><strong>POWER SUPPLY</strong></td>
<td>3.15 V - 5.5 V DC</td>
</tr>
<tr>
<td><strong>CURRENT CONSUMPTION</strong></td>
<td>RF field on: 110 mA typically</td>
</tr>
</tbody>
</table>
| **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** | Up to 70 mm / 2.75 inch, depending on environment and transponder |
| **POWER SUPPLY** | Host: USB Full speed (12 Mbit/s), Serial TTL: up to 115.200 baud; Air: up to 848 kbit/s |
| **TRANSMISSION SPEED** | 500,000 hours |
| **WEIGHT** | Approx. 4 g |

### SUPPORTED TRANSPONDERS

**STANDARD**

ISO14443A:
- MIFARE Classic EV1
- MIFARE Classic
- MIFARE Mini
- MIFARE DESFire EV1
- MIFARE DESFire EV2
- MIFARE Plus S, X
- MIFARE Pro X
- MIFARE Smart MX
- MIFARE Ultralight
- MIFARE Ultralight C
- MIFARE Ultralight EV1
- NTAG2xx
- PayPass
- SLE44R35, SLE66Rxx (my-d move)
- Topaz

ISO14443B:
- Calypso
- Calypso Innovatron protocol
- CEPAS
- HID iCLASS
- Moneo
- Pico Pass
- SR4K, SRI4K, SRI512
- SRT512

ISO18092 ECMA-340:
- NFC Forum Tag 1-5
- NFC Peer-to-Peer
- Sony FeliCa
- NFC Active and passive communication mode

**ISO15693**:
- EM4x33
- EM4x35
- HID iCLASS
- HID iCLASS SE/SR
- ICODE SLI
- LEGIC Advant
- M24LR16/64, SRF55Vxx (my-d vicinity)
- Tag-it, PicoPass

### SUPPORTED TRANSPONDERS (VERSION I)

Requires external TWN4 SIO Card, All Standard Transponders, HID iCLASS, HID iCLASS SE/SEOS (CSN and Facility Code/PAC), HID iCLASS Elite & SE Elite

### OS SUPPORT

Windows XP, Vista, 7 (32-/64-bit), 8, 8.1, 10, Linux, MAC OS X

### PERIPHERAL INTERFACES

USB, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), SPI, 4 GPIOs, Clock/Data, Wiegand

### CERTIFICATION NAME

TWN4 Mini Reader MiFARE NFC

### CERTIFICATION(S)

CE/RED, RoHS-II compliant

### ORDER CODE(S)

<table>
<thead>
<tr>
<th><strong>T4MK-F, including T4MR-F</strong></th>
<th>Development Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>T4MR-F</td>
<td>OEM Board (TTL serial)</td>
</tr>
<tr>
<td>T4MR-F-U</td>
<td>OEM Board (USB)</td>
</tr>
<tr>
<td>T4MR-F-I</td>
<td>OEM Board (TTL serial) Version I</td>
</tr>
<tr>
<td>T4MR-F-UCID</td>
<td>OEM Board (USB CCID) Version I</td>
</tr>
</tbody>
</table>

**1** UID only  **2** r/w enhanced security features on request  **3** r/w in direct chip command mode  **4** UID only, read/write on request  **5** UID + r/w public area  **6** UID + PAC (CSN & Facility Code), r/w on request  **7** On request

---

**DRAWING**