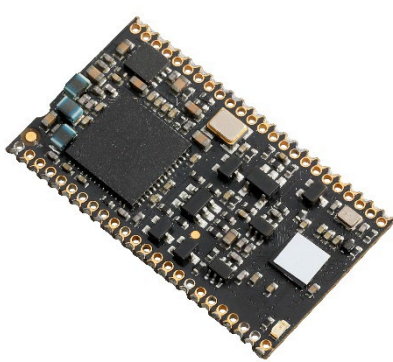
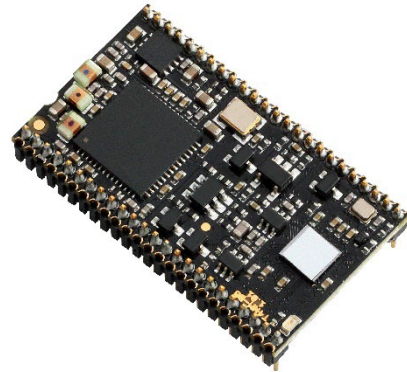


# TWN4 MULTITECH NANO LEGIC 42 M

## MINIATURE LF/HF/NFC RFID READER/WRITER FOR EXTERNAL 50 OHM ANTENNA



Version C0 (SMT)  
31 x 17.8 x 2.7 mm



Version C1 (THT)  
31 x 17.8 x 8.11 mm

ELATEC TWN4 family of RFID readers and writers allows users to read and write to almost any 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, LEGIC, etc. and ISO standards like ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / ECMA-340 (NFC).

TWN4 MultiTech Nano LEGIC 42 M is designed for integration into machines or other devices. It can be connected to an external antenna through a printed circuit board (125 kHz, 13.56 MHz or both).

### Special features:

- + Compact design (31 x 17.8 x 2.7 mm / 1.22 x 0.7 x 0.12 inch)
- + Components mounted only on one side for easy integration on the main application
- + Edge plated pads for surface mounting (C0) allows easy and reliable PCB mounting, connector option (C1) also available for THT mounting
- + 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
- + Supports connection of external ISO 7816 compatible SAM cards
- + CCID and PC/SC 2.01
- + 8 GPIOs
- + Supports quick (re)configuration over network and over wireless interface with TWN4 CONFIG Card
- + TWN4 Upgrade Card for P option 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



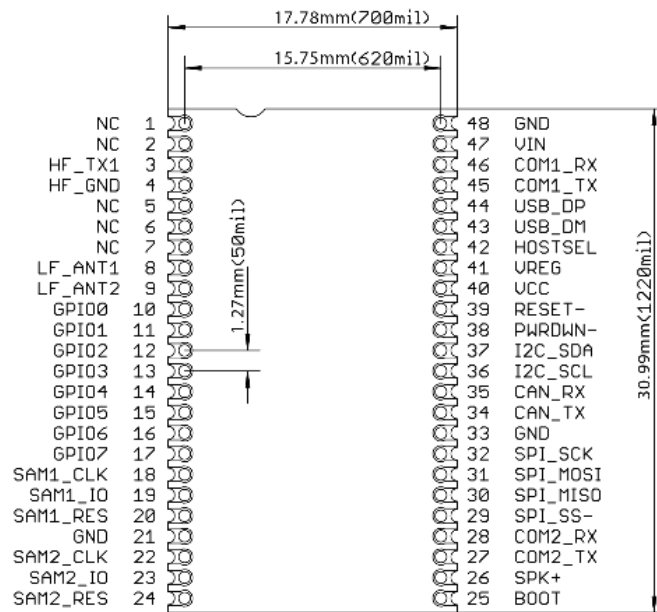
Industrial  
PC

### TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)																
ANTENNA(S)	Externally, 50 Ohm for 13.56 MHz – 490 µH ± 5% for 125 kHz																
DIMENSIONS (L X W X H)	31 mm x 17.8 mm x 2.7 mm / 1.22 inch x 0.7 inch x 0.12 inch																
POWER	3.3 V ± 5% (direct supply) or 4.3 V - 5.5 V (use of on-board voltage regulator) 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: -40 °C up to +85 °C (-40 °F up to +185 °F)																
RELATIVE HUMIDITY	5% to 95% non-condensing																
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 TRANSPONDERS (STANDARD) 13.56 MHZ	<p><u>ISO14443A:</u> HID iCLASS DESFire<sup>1)</sup>, HID iCLASS MIFARE Classic<sup>1)</sup>, HID iCLASS SEOS<sup>1)</sup>, LEGIC Advant, NTAG2xx, MIFARE Classic, MIFARE Classic EV1<sup>2)</sup>, MIFARE DESFire EV1, MIFARE DESFire EV2<sup>3)</sup>, MIFARE DESFire EV3<sup>3)</sup>, MIFARE DESFire Light<sup>4)</sup>, MIFARE Mini, MIFARE Plus S/X, MIFARE Smart MX<sup>5)</sup>, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1<sup>2)</sup>, SLE44R35<sup>5)</sup>, SLE66Rxx (my-d move)<sup>5)</sup></p> <p><u>ISO14443B:</u> Calypso<sup>5)</sup>, CEPAS<sup>5)</sup>, HID iCLASS<sup>1)</sup>, Pico Pass<sup>1)</sup></p> <p><u>ISO15693:</u> EM4x33<sup>5)</sup>, EM4x35<sup>5)</sup>, HID iCLASS<sup>1)</sup>, HID iCLASS SE/SR/Elite<sup>1)</sup>, ICODE SLI, LEGIC Advant, M24LR16/64, PicoPass<sup>1)</sup>, SRF55Vxx (my-d vicinity)<sup>5)</sup>, Tag-it</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5<sup>6)</sup>, Sony FeliCa<sup>7)</sup></p> <p><u>LEGIC Prime:</u> LEGIC Prime</p>																
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>8)</sup>	AWID, Cardax <sup>9)</sup> , CASI-RUSCO, Deister <sup>9)</sup> , EM4050, EM4100, EM4102, EM4150, EM4200 <sup>10)</sup> , EM4305, EM4450, EM4550, HITAG 1 <sup>11)</sup> , HITAG 2 <sup>11)</sup> , HITAG S <sup>11)</sup> , ICT <sup>4)</sup> , IDTECK, ISONAS, Keri, Miro, Nedap <sup>9)</sup> , Pyramid, Q5, T5557, T5567, T5577, TITAN (EM4050), UNIQUE, ZODIAC																
SUPPORTED TRANSPONDERS (OPTION P)	All standard transponders, G-Prox <sup>9)</sup> , 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																
OS SUPPORT	Windows 7 (32-/64-bit) and higher, Linux, Android <sup>4)</sup> , iOS <sup>4)</sup> , MAC OS X <sup>4)</sup>																
PERIPHERAL INTERFACES	USB, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C, SPI, 8 GPIOs, Clock/Data, Wiegand																
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), Serial TTL: up to 115,200 baud, Air: up to 848 kbit/s																
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant Further information on request																
ORDER CODE(S)	<table border="0"> <tr> <td>T4NM-B5C0</td> <td>C0 Standard</td> </tr> <tr> <td>T4NM-B5C0-P</td> <td>C0 Option P</td> </tr> <tr> <td>T4NM-B5C1</td> <td>C1 Standard</td> </tr> <tr> <td>T4NM-B5C1-P</td> <td>C1 Option P</td> </tr> <tr> <td>T4NM-B5C0-T20</td> <td>C0 Option, 20 pcs. tray</td> </tr> <tr> <td>T4NM-B5C0-PT20</td> <td>C0 Option P, 20 pcs. tray</td> </tr> <tr> <td>T4NM-B5C0-R100</td> <td>C0 Option, 100 pcs. reel</td> </tr> <tr> <td>T4NM-B5C0-R500</td> <td>C0 Option, 500 pcs. Reel</td> </tr> </table>	T4NM-B5C0	C0 Standard	T4NM-B5C0-P	C0 Option P	T4NM-B5C1	C1 Standard	T4NM-B5C1-P	C1 Option P	T4NM-B5C0-T20	C0 Option, 20 pcs. tray	T4NM-B5C0-PT20	C0 Option P, 20 pcs. tray	T4NM-B5C0-R100	C0 Option, 100 pcs. reel	T4NM-B5C0-R500	C0 Option, 500 pcs. Reel
T4NM-B5C0	C0 Standard																
T4NM-B5C0-P	C0 Option P																
T4NM-B5C1	C1 Standard																
T4NM-B5C1-P	C1 Option P																
T4NM-B5C0-T20	C0 Option, 20 pcs. tray																
T4NM-B5C0-PT20	C0 Option P, 20 pcs. tray																
T4NM-B5C0-R100	C0 Option, 100 pcs. reel																
T4NM-B5C0-R500	C0 Option, 500 pcs. Reel																

<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>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>NFC Forum Tag 1 not supported <sup>7)</sup>UID + r/w public area <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>Without encryption

## DRAWING



Top view

### ELATEC GmbH

Zeppelinstr. 1  
82178 Puchheim  
Germany  
P +49 89 552 9961 0  
F +49 89 552 9961 129  
E-Mail: info-rfid@elatec.com  
Website: elatec.com

### ELATEC Systems GmbH

Schwieberdinger Str. 44  
71636 Ludwigsburg  
Germany  
P +49 7141 309736 0  
E-Mail: info-rfid@elatec.com  
Website: elatec.com

### ELATEC Inc.

1995 SW Martin Hwy  
Palm City • FL 34990  
USA  
P +1 772 210 2263  
F +1 772 382 3749  
E-Mail: americas-info@elatec.com  
Website: elatec.com

### ELATEC Technology (Shenzhen) LLC

918, Main Building, Tian An Cyber Times  
Tower, No. 6, Tairan Fourth Road, Tian 'an  
Community, Shatou Neighborhood  
Futian District • Shenzhen • China  
P/F +86 755 2394 6014  
E-Mail: apac-info@elatec.com  
Website: elatec.com

ELATEC reserves the right to change any information or data in this document without prior notice. ELATEC declines all responsibility for the use of this product with any other specification but the one mentioned above. Any additional requirement for a specific customer application has to be validated by the customer himself at his own responsibility. Where application information is given, it is only advisory and does not form part of the specification. Disclaimer: All names used in this document are registered trademarks of their respective owners.