

TWN4 MULTITECH NANO LEGIC 63 M

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



PCB top view



PCB bottom view

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 63 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).

An integrated Bluetooth Low Energy (BLE) module supports a broad range of mobile ID and authentication solutions as well.

Special features:

- + Compact design (31 x 17.8 x 2.7 mm / 1.22 x 0.7 x 0.12 inch)
- + Equipped with LEGIC front-end chip SM-6300 with LEGIC Connect support
- + Components mounted only on one side for easy integration on the main application
- + Edge-plated pads for surface mounting allow easy and reliable PCB 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

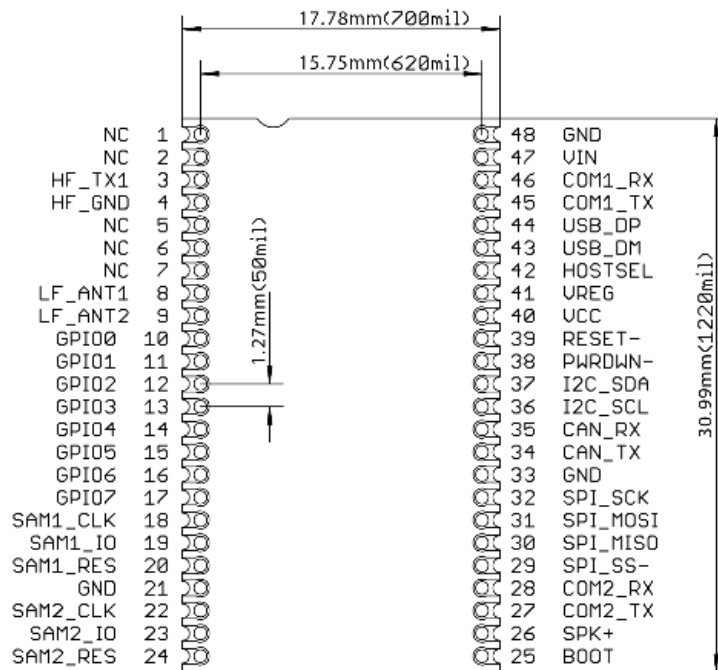
Time
AttendanceIndustrial
PC

TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)								
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: 160 mA typically / Sleep: 500 µA typ. / Cyclic Operation: 130 mA 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								
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01								
BLUETOOTH LOW ENERGY	Bluetooth v5.0, software upgradable; predefined GATT structure; AES128 supported; LEGIC Connect on demand								
MTBF	500,000 hours								
WEIGHT	Approx. 8 g / 0.28 oz								
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	<p><u>ISO14443A:</u> LEGIC Advant, MIFARE Classic EV1¹⁾, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2²⁾, MIFARE DESFire Light³⁾, MIFARE Plus S, X, MIFARE Pro X⁴⁾, MIFARE Smart MX⁴⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1¹⁾, NTAG2xx, SLE44R35⁴⁾, SLE66Rxx (my-d move)⁴⁾</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5⁵⁾, Sony FeliCa⁶⁾, NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4</p> <p><u>ISO14443B:</u> Calypso⁴⁾, CEPAS⁴⁾, HID iCLASS⁷⁾, Moneo⁴⁾, Pico Pass⁷⁾</p> <p><u>ISO15693:</u> EM4x33⁴⁾, EM4x35⁴⁾, HID iCLASS⁷⁾, HID iCLASS SE/SR⁷⁾, ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)⁴⁾, Tag-it, PicoPass⁷⁾</p> <p><u>LEGIC Prime:</u> LEGIC Prime</p>								
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ ⁸⁾	AWID, Cardax, CASI-RUSCO, Deister ⁹⁾ , EM4100, 4102, 4200 ¹⁰⁾ , EM4050, 4150, 4450, 4550, EM4305 ¹¹⁾ , FDX-B ¹²⁾ , EM4105 ¹²⁾ , UltraProx ¹²⁾ , HITAG 1 ¹³⁾ , HITAG 2 ¹³⁾ , HITAG S ¹³⁾ , ICT ³⁾ , IDTECK, Isonas, Keri, Miro, Nedap ⁹⁾ , PAC ³⁾ , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX ¹²⁾ , TITAN (EM4050), UNIQUE, ZODIAC								
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox ⁹⁾ , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch								
OS SUPPORT	Windows Embedded CE ³⁾ , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android ³⁾ , iOS ³⁾ , MAC OS X ³⁾								
PERIPHERAL INTERFACES	USB, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I ² C, SPI, 8 GPIOs, Clock/Data, Wiegand								
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), Serial TTL: up to 115,200 baud, RFID Air: up to 848 kbit/s, BT Air: up to 1 Mbit/s								
CERTIFICATION(S)	CE/RED ¹⁴⁾ , REACH and RoHS-III compliant, and many more ¹⁵⁾								
ORDER CODE(S)	<table> <tr> <td>T4NM-D5C0</td> <td>C0 Standard</td> </tr> <tr> <td>T4NM-D5C0-P</td> <td>C0 Option P</td> </tr> <tr> <td>T4NM-D5C1</td> <td>C1 Standard</td> </tr> <tr> <td>T4NM-D5C1-P</td> <td>C1 Option P</td> </tr> </table>	T4NM-D5C0	C0 Standard	T4NM-D5C0-P	C0 Option P	T4NM-D5C1	C1 Standard	T4NM-D5C1-P	C1 Option P
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T4NM-D5C1-P	C1 Option P								

¹⁾r/w enhanced security features on request ²⁾EV2/EV3 supported as part of the EV1 downward compatibility ³⁾On request ⁴⁾r/w in direct chip command mode
⁵⁾NFC Forum Tag 1 not supported ⁶⁾UID + r/w public area ⁷⁾UID only ⁸⁾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 ⁹⁾Hash value only ¹⁰⁾Only emulation of 4100, 4102 ¹¹⁾From FW V4.05 ¹²⁾134.2 kHz only ¹³⁾Without encryption ¹⁴⁾Pending ¹⁵⁾More information on request

DRAWING



Top view

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