

# TWN4 MULTITECH NANO HF

## MINIATURE HF RFID/NFC READER/WRITER FOR EXTERNAL DIRECT MATCHED ANTENNA



Version C0 (SMT)  
31 x 17.8 x 2.7 mm

Elatec's TWN4 family of transponder readers and writers allows users to read and write to almost any 13.56 MHz tags and/or labels – it supports all major transponders from various suppliers like EM, Fujitsu, ST, NXP, TI, HID, LEGIC, etc. and ISO standards like ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

The TWN4 MultiTech Nano HF is designed for integration into machines or other devices. It can be connected to an external antenna through a printed circuit board.

### 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
- + Onboard 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Direct chip-commands support
- + Compliance to EMV contactless protocol specification V2.32)
- + Supports connection of external ISO7816 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 I 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

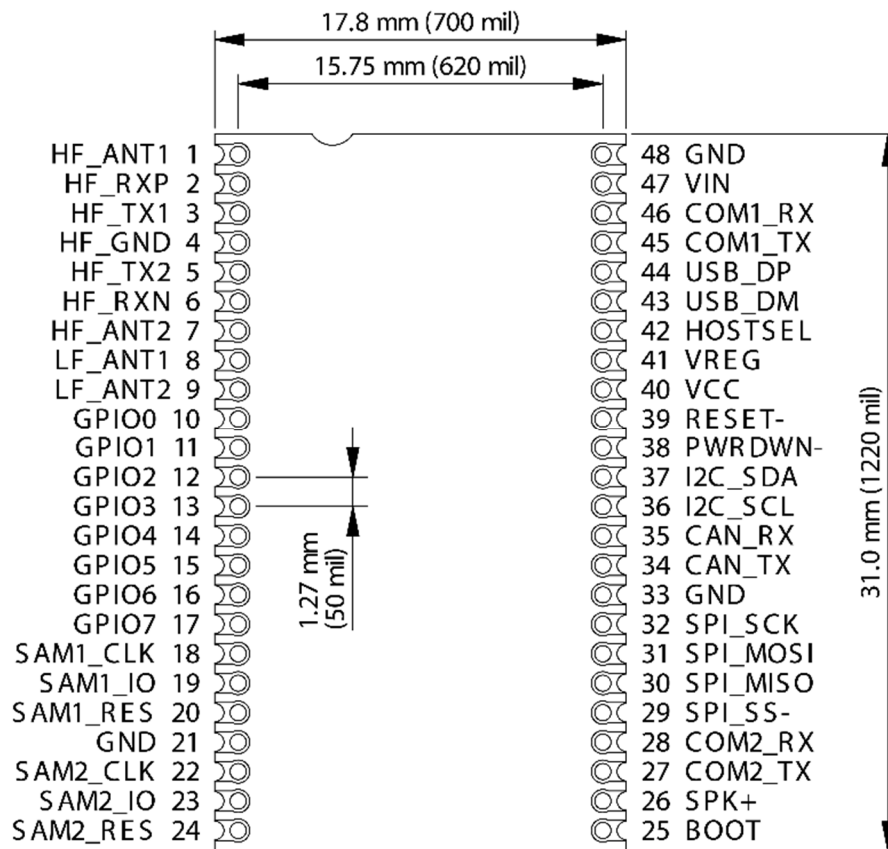
## TECHNICAL DATA

FREQUENCY	13.56 MHz (HF)
ANTENNA	Externally, direct matched for 13.56 MHz
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 SUPPLY	3.3 V +/- 5% (direct supply) or 4.3 V - 5.5 V (use of on-board voltage regulator)
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: -45 °C up to +85 °C (-49 °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
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	<p><b>ISO14443A:</b> LEGIC Advant<sup>1)</sup>, MIFARE Classic EV1<sup>2)</sup>, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2<sup>2)</sup>, MIFARE DESFire Light<sup>3)</sup>, MIFARE Plus S, X, MIFARE Pro X<sup>4)</sup>, MIFARE Smart MX<sup>4)</sup>, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass<sup>4)</sup>, SLE44R35, SLE66Rxx (my-d move)<sup>4)</sup>, Topaz</p> <p><b>ISO14443B:</b> Calypso<sup>4)</sup>, Calypso Innovatron protocol<sup>4)</sup>, CEPAS<sup>4)</sup>, HID iCLASS<sup>1)</sup>, Moneo<sup>4)</sup>, Pico Pass<sup>5)</sup>, SRI4K, SRIX4K, SRI512, SRT512</p> <p><b>ISO18092 ECMA-340:</b> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa<sup>6)</sup>, NFC Active and passive communication mode</p> <p><b>ISO15693:</b> EM4x33<sup>4)</sup>, EM4x35<sup>4)</sup>, HID iCLASS<sup>1)</sup>, HID iCLASS SE/SR<sup>1)</sup>, ICODE SLI, LEGIC Advant<sup>1)</sup>, M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)<sup>4)</sup>, Tag-it, PicoPass<sup>5)</sup></p>
SUPPORTED TRANSPONDERS (OPTION I)	Requires TWN4 SIO Card, All Standard Transponders, HID iCLASS, HID iCLASS SEOS (CSN & Facility Code/PAC) <sup>7)</sup>
OS SUPPORT	Windows XP, Vista, Embedded CE <sup>7)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>7)</sup> , iOS <sup>7)</sup> , MAC OS X <sup>7)</sup>
PERIPHERAL INTERFACES	USB, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C, SPI, 8 GPIOs, CAN <sup>7)</sup> , 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)	REACH and RoHS-III compliant
ORDER CODE(S)	T4NM-FDA0            A0 Standard T4NM-FDA0-I        A0 Option I

<sup>1)</sup>UID only <sup>2)</sup>r/w enhanced security features on request <sup>3)</sup>In preparation <sup>4)</sup>r/w in direct chip command mode <sup>5)</sup>UID only, read/write on request <sup>6)</sup>UID + r/w public area

<sup>7)</sup>On request

DRAWING



Top view

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