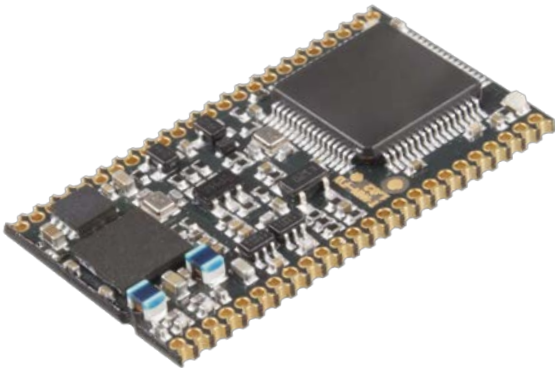
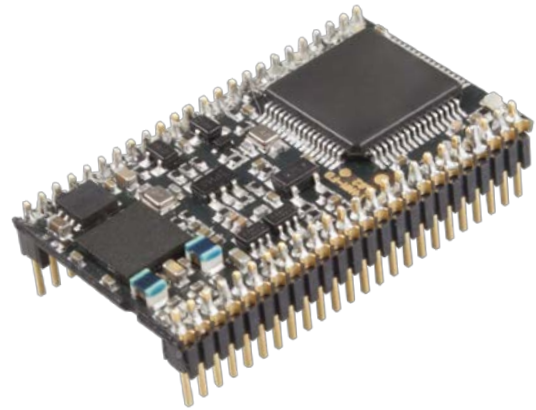


TWN4 MULTITECH NANO

125kHz/134.2kHz & 13.56MHz Contactless Reader/Writer
External Direct Matched Antenna



Version C0
(SMT)



Version C1
(THT)

Elatec's TWN4 family of transponder readers and writers allows users to read and write to almost any 125kHz / 134.2kHz and 13.56MHz 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 ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

The TWN4 MultiTech Nano is designed for integration into machines or other devices. It can be connected to an external antenna through printed circuit board. The powerful hardware allows the extension of supported transponders to meet your individual request.

Special Features:

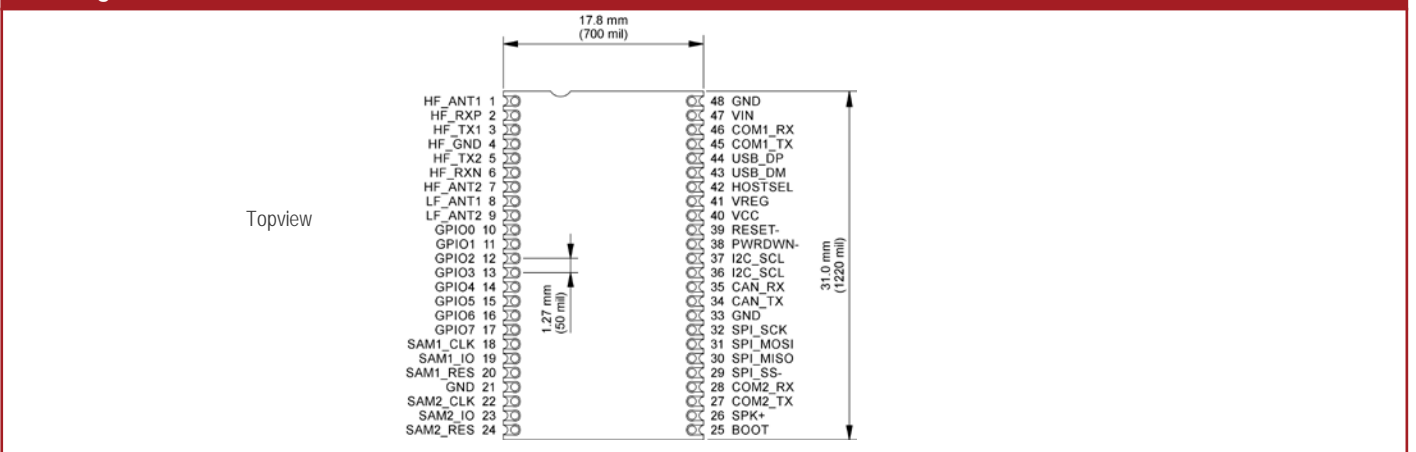
- Powerful SDK for writing apps which are executed directly on the reader
- Infield updateable
- Onboard 18kB flash storage, e.g. for storing user accessible non-volatile data
- Edge plated pads for surface mounting (C0) allows easy and reliable PCB mounting & connector option (THT) (C1)
- Compliance to EMV contactless protocol specification V2.3²⁾
- Direct chip-commands support
- Supports multiple SAMs (Secure Access Modules)
- CCID and PC/SC 2.01
- Interfaces:
USB, 2 x Serial (logic level), I²C, SPI²⁾, Clock/Data³⁾, Wiegand³⁾, 1-Wire²⁾, CAN²⁾
- 8 GPIOs
- 3D Model (STEP) on request

Technical Data⁴⁾

Frequency	125kHz, 134.2kHz (LF) / 13.56MHz (HF)									
Antenna	Externally, direct matched for 13.56MHz – 490µH ±5% for 125kHz/134.2kHz									
Dimensions (LxWxH)	31mm x 17.8mm x 2.5mm / 1.22inch x 0.7inch x 0.12inch									
Power Supply	3.3V +/-5% (direct supply) or 4.3-5.5V (use of on-board voltage regulator)									
Current Consumption	Depending on antenna: RF field on: 120mA typ. / Sleep: 500µA typ. / Cyclic Operation: TBD									
Temperature Range	Operating: -40°C up to +80°C (-40°F up to +176°F) Storage: -45°C up to +85°C (-49°F up to +185°F)									
Read- / Write Distance	Up to 100mm / 4inch, depending on antenna and tag									
HOST Interface	USB, 2 x serial (logic level 3.3V,CMOS 5V tolerant), I2C, SPI ²⁾ , Clock/Data ³⁾ , Wiegand ³⁾ , 1-Wire ²⁾ CAN, RS232/422/485 require adapter board									
OS Support	Windows XP, Vista, Embedded CE ²⁾ , 7(32-/64-bit), 8, 8.1,10, Linux, Android, iOS ²⁾ , MAC OS X ²⁾									
Transmission Speed	HOST: USB: Full speed (12Mbit)	AIR: up to 848Kbit/s								
Modes of Operation	USB key board emulation – USB virtual COM port – Transparent – CCID mode / PC/SC 2.01									
Relative Humidity	5% to 95% non-condensing									
Supported Transponders	<p>Standard</p> <ul style="list-style-type: none"> 125kHz / 134.2kHz: 4100, 4102, 4200¹⁰⁾, 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, HITAG 1¹¹⁾, HITAG 2¹¹⁾, HITAG S¹¹⁾, Keri, Miro, Pyramid, TIRIS/HDX, UNIQUE, FDX-B, Q5, TITAN, T55x7, ZODIAC Optionally, in consideration: 4305, Cardax, IDTECK 13.56MHz / ISO14443A: MIFARE Classic 1k & 4k EV1⁷⁾, Mini, DESFire EV1, Plus S&X, Pro X⁸⁾, SmartMX⁸⁾, Ultralight, Ultralight EV1⁷⁾, Ultralight C, SLE44R35, SLE66Rxx (my-d move), LEGIC Advant⁵⁾, PayPass⁸⁾, NTAG2XX⁷⁾ 13.56MHz / ISO14443B: Calypso⁸⁾ incl. Innovatron radio protocol 14443-B⁶⁾, CEPAS⁸⁾, HID iCLASS⁵⁾, Moneo⁸⁾, PicoPass⁶⁾, SRI512, SRT512, SRI4K, SRX4K 13.56MHz / ISO15693: EM4x33⁸⁾, EM4x35⁸⁾, HID iCLASS⁵⁾, ICODE SLI, LEGIC Advant⁵⁾, M24LR16/64, Tag-it, SRF55Vxx (my-d vicinity)⁸⁾, PicoPass⁶⁾ 13.56MHz / ISO18092 / NFC: NFCIP-1: Active and passive communication mode, Peer-to-Peer, NFC Forum Tag Type 1-4, Sony FeliCa⁹⁾ <p>Version P Standard+CoTag,G-Prox¹²⁾, HID (Prox,Prox II,Duo Prox II,ISO Prox II,Micro Prox,ProxKey),Honeywell NexWatch, Indala, ioProx</p> <p>Version PI (requires external TWN4 SIO Card) Version P + HID iCLASS, HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC)⁶⁾</p>									
Certifications	RoHS-II compliant									
MTBF	500.000 hours									
Weight	Approx. 7g									
Order Codes	<table border="0"> <tr> <td>C0</td> <td>C1</td> </tr> <tr> <td>Standard: T4NM-FDC0</td> <td>T4NM-FDC1</td> </tr> <tr> <td>Version P: T4NM-FDC0-P</td> <td>T4NM-FDC1-P</td> </tr> <tr> <td>Version PI: T4NM-FDC0-PI</td> <td>T4NM-FDC1-PI</td> </tr> </table>	C0	C1	Standard: T4NM-FDC0	T4NM-FDC1	Version P: T4NM-FDC0-P	T4NM-FDC1-P	Version PI: T4NM-FDC0-PI	T4NM-FDC1-PI	Development Kit TWN4 MultiTech-PI Nano T4NK-F-PI 
C0	C1									
Standard: T4NM-FDC0	T4NM-FDC1									
Version P: T4NM-FDC0-P	T4NM-FDC1-P									
Version PI: T4NM-FDC0-PI	T4NM-FDC1-PI									

¹⁾In preparation²⁾On request only³⁾External interface required⁴⁾Target specification⁵⁾UID only⁶⁾UID only, read/write on request⁷⁾r/w enhanced security features on request⁸⁾r/w in direct chip command mode⁹⁾UID + r/w public area
¹⁰⁾Only emulation of 4100,4102¹¹⁾Without encryption mode¹²⁾Hash value only

Drawings



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