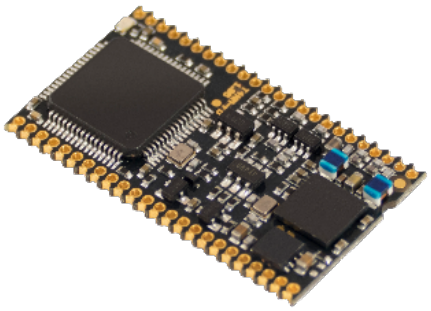
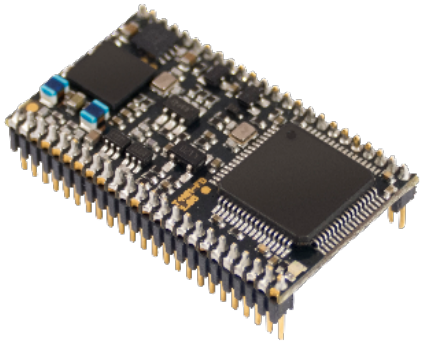
TWN4 MULTITECH NANO M

MINIATURE LF/HF/NFC RFID READER/WRITER FOR EXTERNAL DIRECT MATCHED 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 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:

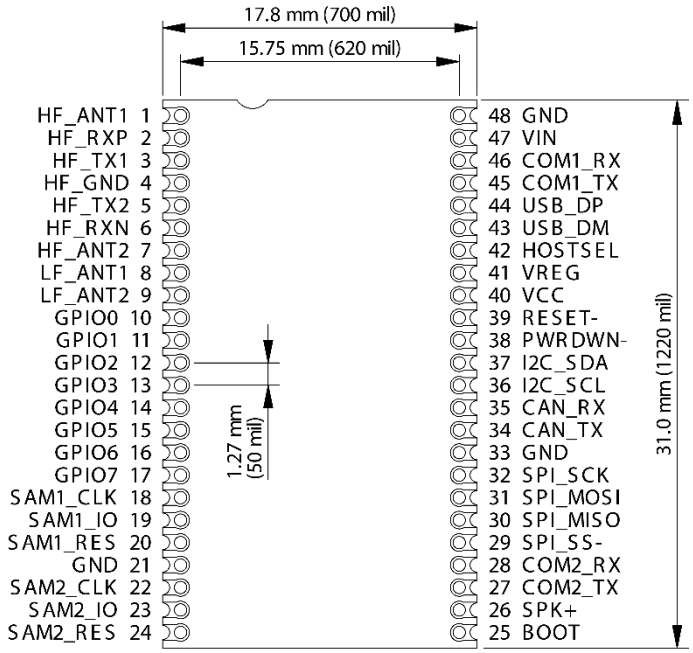
+ Compact design (31 x 17.8 x 2.7 mm / 1.22 x 0.7 x 0.12 inch)
+ Components mounted only on one side for easy integration on the main application
+ Edge plated pads for surface mounting (C0) allows easy and reliable PCB mounting, connector option (C1) also available for THT mounting
+ Powerful SDK for 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 and PI options available on request
+ 3D construction data (STEP) available on request

TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)
ANTENNA(S)	Externally, direct matched 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	ISO14443A: LEGIC Advant[1], MIFARE Classic EV1[2], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[3], MIFARE DESFire Light[4], MIFARE Plus S, X, MIFARE Pro X[5], MIFARE Smart MX[5], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1[2], NTAG2xx, SLE44R35[5], SLE66Rxx (my-d move)[5], Topaz ISO18092 ECMA-340: NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa[6], NFC Active and passive communication mode ISO14443B: Calypso[5], Calypso Innovatron protocol[5], CEPAS[5], HID iCLASS[1], Moneo[5], Pico Pass[7], SRI4K, SRIX4K, SRI512, SRT512 ISO15693: EM4x33[5], EM4x35[5], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant[1], M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)[5], Tag-it, PicoPass[7]
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ[8]	AWID, Cardax[9], 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[4], IDTECK, Isonas, Keri, Miro, Nedap[9], PAC[4], 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
SUPPORTED TRANSPONDERS (OPTION PI)	Requires TWN4 SIO Card, All Standard Transponders, All Option P Transponders, HID iCLASS, HID iCLASS SE/SR/Elite, HID iCLASS SEOS (Facility Code/PAC)[14]
OS SUPPORT	Windows Embedded CE[4], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[4], iOS[4], MAC OS X[4]
PERIPHERAL INTERFACES	USB, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I²C, 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)	T4NM-FDC0 C0 Standard T4NM-FDC0-P C0 Option P T4NM-FDC0-PI C0 Option PI T4NM-FDC1 C1 Standard T4NM-FDC1-P C1 Option P T4NM-FDC1-PI C1 Option PI

[1]UID only [2]r/w enhanced security features on request [3]EV2/EV3 supported as part of the EV1 downward compatibility [4]On request [5]r/w in direct chip command mode [6]UID + r/w public area [7]UID only, read/write on request [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]UID + PAC (Facility Code), r/w on request

DRAWING



Top view

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