TWN4 MULTITECH CORE

PROGRAMMABLE RFID READER/WRITER MODULE FOR LF/HF/NFC WITHOUT ANTENNA



Version C0



Version C1



Version C2

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

The TWN4 MultiTech Core is designed for integration into machines or any other device to be used with an external antenna (125 kHz/134.2 kHz, 13.56 MHz or both).

Special features:

+ 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
+ supports connection of external ISO7816 compatible SAM cards
+ supports 50 Ohm external antennas via SMA, SMB, SMC, MCX, UMCC/U.FL connectors
+ CCID and PC/SC 2.01
+ dedicated expansion bus for connection of LCD, mass storage, etc.
+ 8 GPIOs
+ supports quick centralized (re)configuration over network and over wireless interface with TWN4 CONFIG Card
+ 3D construction data (STEP) available on request



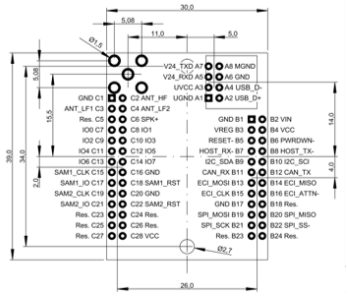
TECHNICAL DATA

FREQUENCY	125 kHz/134.2 kHz (LF) / 13.56 MHz (HF)
ANTENNA	Externally, 50 Ohm for 13.56 MHz – 490 µH ± 5% for 125 kHz/134.2 kHz
DIMENSIONS (L X W X H)	C0 Version: 39 mm x 30 mm x 4.6 mm / 1.54 inch x 1.18 inch x 0.18 inch C1 Version: 39 mm x 30 mm x 8 mm / 1.54 inch x 1.18 inch x 0.31 inch C2 Version: 39 mm x 30 mm x 9 mm / 1.54 inch x 1.18 inch x 0.35 inch
POWER SUPPLY	3.3 V +/- 5% or (by using onboard voltage regulator) 4.3 V - 5.5 V
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
READ- / WRITE DISTANCE	Up to 100 mm / 4 inch, depending on antenna, environment and transponder
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), RS-232 up to 115.200 baud; Air: up to 848 kbit/s
MODES OF OPERATION	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 7 g
SUPPORTED TRANSPONDERS (STANDARD)	ISO14443A: LEGIC Advant[1], MIFARE Classic 1k & 4k EV1[2], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[2], MIFARE Plus S, X, MIFARE Pro X[3], MIFARE Smart MX[3], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass[3], SLE44R35, SLE66Rxx (my-d move)[3], Topaz ISO14443B: Calypso[3], Calypso Innovatron protocol[3], CEPAS[3], HID iCLASS[1], Moneo[3], Pico Pass[4], SRI4K, SRIX4K, SRI512, SRT512 ISO18092 ECMA-340: NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa[5], NFC Active and passive communication mode ISO15693: EM4x33[3], EM4x35[3], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant[1], M24LR16/64, SRF55Vxx (my-d vicinity)[3], Tag-it, PicoPass[4] 125 kHz, 134.2 kHz: AWID, Cardax, CASI-RUSCO, Deister[6], EM4100, 4102, 4200[7], EM4050, 4150, 4450, 4550, EM4305[8], FDX-B, EM4105, HITAG 1[9], HITAG 2[9], HITAG S[9], ICT[8], IDTECK, Isonas[8], Keri, Miro, Nedap[6], PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (VERSION P)	All Standard Transponder, Cotag, G-Prox[6], HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
SUPPORTED TRANSPONDERS (VERSION PI)	Requires external TWN4 SIO Card, All Standard Transponder, All Version P Transponder, HID iCLASS[10], HID iCLASS SE/SR/SEOS(CSN and Facility Code/PAC)[10], HID iCLASS Elite & SE Elite
PERIPHERAL INTERFACES	USB, RS232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I²C, SPI, 8 GPIOs, CAN[8], Clock/Data, Wiegand, 1-Wire[8]
OS SUPPORT	Windows XP, Vista, Embedded CE[8], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[8], iOS[8], MAC OS X[8]
CERTIFICATIONS	RoHS-II compliant
ORDER CODE(S)	T4CM-FC0 C0 Standard T4CM-FC0-P C0 Version P T4CM-FC0-PI C0 Version PI T4CM-FC1 C1 Standard T4CM-FC1-P C1 Version P

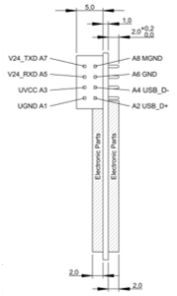
	T4CM-FC1-PI	C1 Version PI
	T4CM-FC2	C2 Standard
	T4CM-FC2-P	C2 Version P
	T4CM-FC2-PI <-- incl. TWN4 SIO card	C2 Version PI

[1]UID only [2]r/w enhanced security features on request [3]r/w in direct chip command mode [4]UID only, read/write on request [5]UID + r/w public area [6]Hash value only [7]Only emulation of 4100, 4102 [8]On request [9]Without encryption [10]UID + PAC (CSN & Facility Code), r/w on request

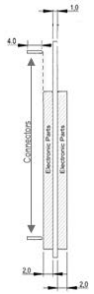
DRAWING/PIN OUT (ALL MEASUREMENTS IN MM)



Bottom view



Right view



Right view

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