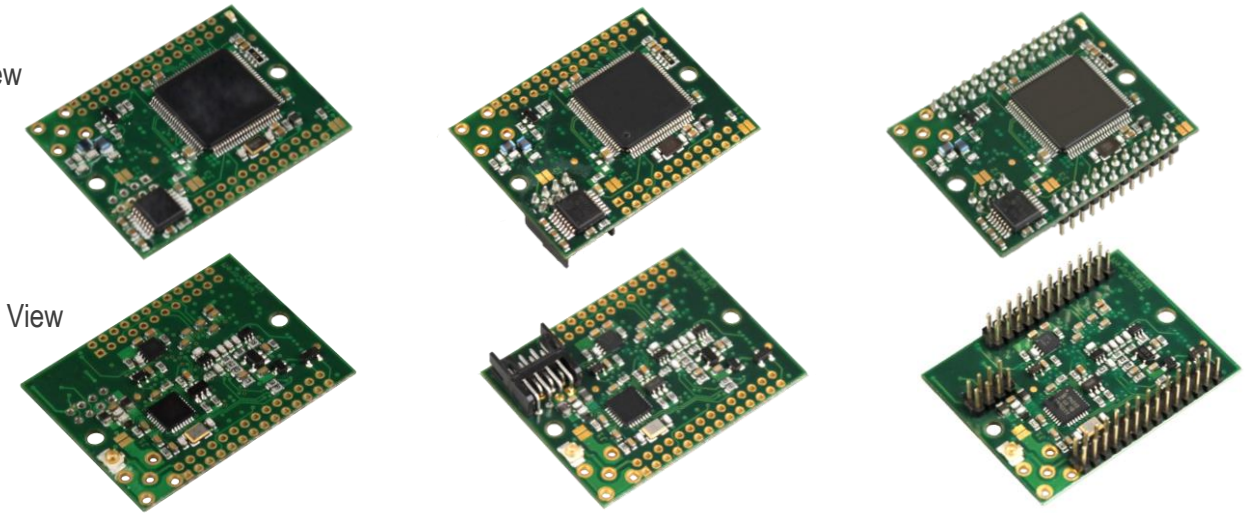
TWN4 MULTITECH CORE*

125kHz/134.2kHz & 13.56MHz Contactless Reader/Writer

*previously known as TWN4 CORE MIFARE NFC

Top View

Bottom View



C0 Version | C1 Version | C2 Version

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 (T=CL), ISO14443B (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 (125/134.2kHz,13.56MHz or both). This core module mounted on an antenna carrier board is available in the standard TWN Elatec desktop housing, too.
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 Upgradeable
- Direct chip-commands support
- Onboard 18kB flash storage
- Supports multiple SAMs (Secure Access Modules)
- Supports 50 Ohm external antennas via SMA, SMB, SMC, MCX, UMCC/U.FL connectors
- CCID and PC/SC 2.01[1)]
- Interfaces:
  USB, RS232, Serial (logical level 3.3V, CMOS 5V tolerant), I²C, SPI[2)], Clock/Data[3)], Wiegand[3)],1-Wire[2)]
- Dedicated expansion bus for connection of LCD, mass storage, etc.
- 8 GPIOs
- 3D Model (STEP) on request

ELATEC
RFID Systems

Technical Data[4)]

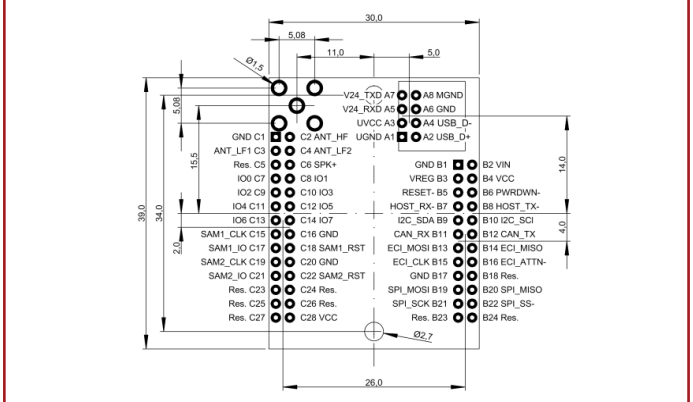
Frequency	125kHz, 134.2kHz (LF) / 13.56MHz (HF)
Antenna	Externally, 50 Ohm for 13.56MHz – 490µH ±5% for 125kHz/134.2kHz
Dimensions (L x W x H)	C0 Version: 39mm x 30mm x 4.6mm / 1.54inch x 1.18inch x 0.18inch C1 Version: 39mm x 30mm x 8mm / 1.54inch x 1.18inch x 0.31inch C2 Version: 39mm x 30mm x 9mm / 1.54inch x 1.18inch x 0.35inch
Power Supply	3.3V+/-5% or (by using on-board voltage regulator) 4.3-5.5V
Current Consumption	Depending on antenna: RF field on: 120mA typically / Sleep: 500µA 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)
Read- / Write Distance	Up to 100mm / 4inch, depending on antenna and tag
HOST Interface	USB, RS232, serial (logical level 3.3V,CMOS 5V tolerant), I²C, SPI[2)], Clock/Data[3)], Wiegand[3)], 1-Wire[2)] CAN, RS422/485 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) – RS232: up to 115.200baud / AIR: up to 848Kbit/s
Modes of Operation	USB key board emulation – USB virtual COM port – Transparent – CCID mode / PC/SC 2.01[1)]
Relative Humidity	5% to 95% non-condensing
Supported Transponders	**Standard** ▪ 125kHz / 134.2kHz: 4100, 4102, 4200[10)], 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, HITAG 1[11)], HITAG 2[11)], HITAG S[11)], 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 EV1[7)], Mini, DESFire EV1, Plus S&X, Pro X[8)], SmartMX[8)], Ultralight, Ultralight EV1[7)], Ultralight C, SLE44R35, SLE66Rxx (my-d move), LEGIC Advant[5)], PayPass[8)], NTAG2XX[7)] ▪ 13.56MHz / ISO14443B: Calypso[8)] incl. Innovatron radio protocol 14443-B'[6)], CEPAS[8)], HID iCLASS[5)], Moneo[8)], PicoPass[8)], SRI512, SRT512, SRI4K, SRIX4K ▪ 13.56MHz / ISO15693: EM4x33[8)], EM4x35[8)], HID iCLASS[5)], ICODE SLI, LEGIC Advant[5)], M24LR16/64, Tag-it, SRF55Vxx (my-d vicinity)[8)], PicoPass[8)] ▪ 13.56MHz / ISO18092 / NFC: NFCIP-1: Active and passive communication mode, Peer-to-Peer, NFC Forum Tag Type 1-4, Sony FeliCa[9)] **Version P** Standard+Cotag,G-Prox[12)], HID (Prox,Prox II,Duo Prox II,ISO Prox II,Micro Prox,ProxKey),Honeywell NexWatch, Indala, ioProx **Version PI (with external TWN4 SIO Card)** Version P + HID iCLASS, HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC)[6)]
Certifications	RoHS-II compliant
MTBF	500.000 hours
Weight	Approx. 7g

Order Codes

	C0	C1	C2	
Standard:	T4CM-FC0	T4CM-FC1	T4CM-FC2	
Version P:	T4CM-FC0-P	T4CM-FC1-P	T4CM-FC2-P	
Version PI:	T4CM-FC0-PI	T4CM-FC1-PI	T4CM-FC2-PI	← (incl. TWN4 SIO card)

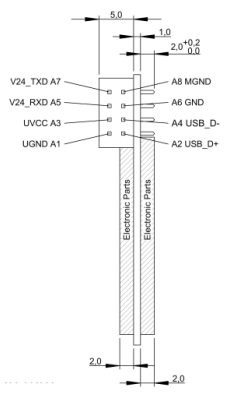
[1)]In Preparation [2)]On Request Only [3)]External Interface Required [4)]Target Specification [5)]UID Only [6)]UID Only, read/write On Request [7)]r/w enhanced security features on request [8)]r/w in direct chip command mode [9)]UID + r/w public area [10)]Only emulation of 4100,4102 [11)]Without encryption mode [12)]Hash Value Only

Drawing/Pin Out (all measurements in mm)

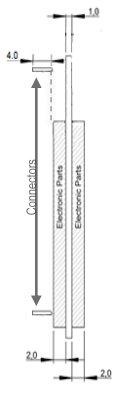


Bottom View

C1



C2



Right View

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