

# TWN4 MULTITECH CORE LEGIC 42

## PROGRAMMABLE RFID READER/WRITER MODULE FOR LF/HF 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 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 LEGIC is designed for integration into machines or any other device to be used with an external antenna (125 kHz, 13.56 MHz or both). The reader provides a powerful API which enables system integrators and solution providers to develop complex applications which can be run directly on the reader.

### 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 (re)configuration over network and over wireless interface with TWN4 CONFIG Card
- + TWN4 Upgrade Card for P 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

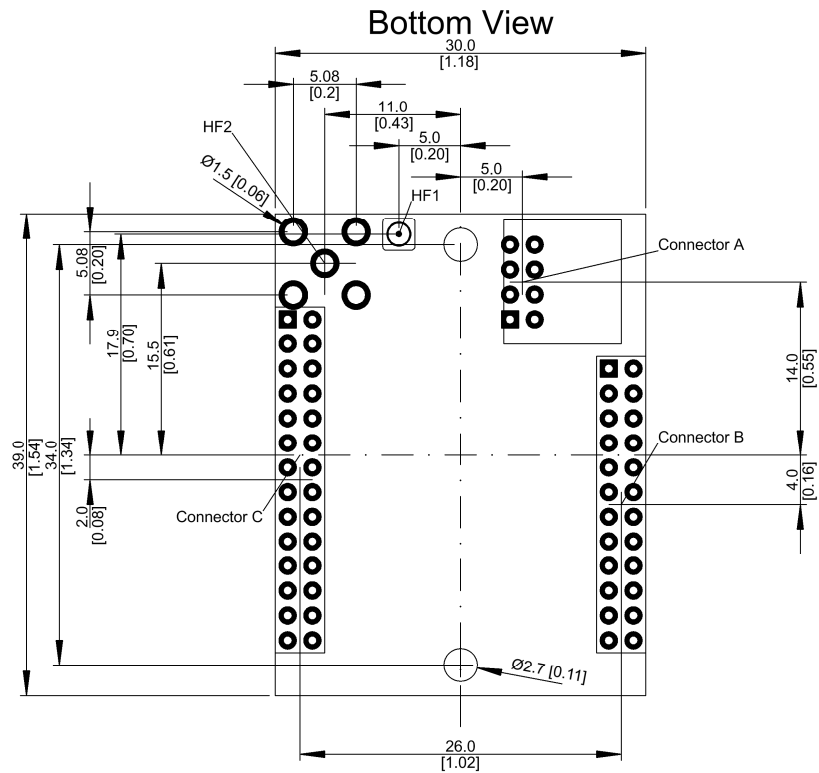
Time  
AttendanceIndustrial  
PC

## TECHNICAL DATA

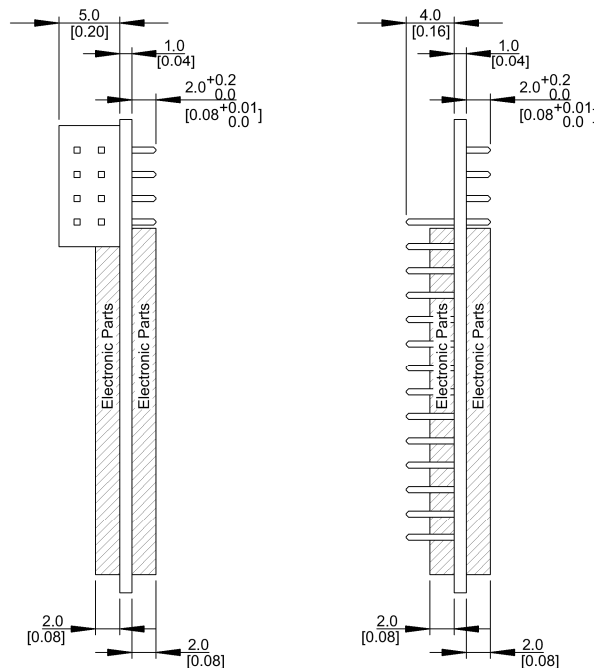
FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)
ANTENNA	Externally, 50 Ohm for 13.56 MHz – 490 $\mu$ H $\pm$ 5% for 125 kHz
DIMENSIONS (L X W X H)	C0 Version: 39 mm x 30 mm x 4.6 mm / 1.54 inch x 1.18 inch x 0.18 inch C1 Version: 39 mm x 30 mm x 8 mm / 1.54 inch x 1.18 inch x 0.31 inch C2 Version: 39 mm x 30 mm x 9 mm / 1.54 inch x 1.18inch 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: 140 mA typically
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	<u>ISO14443A:</u> LEGIC Advant, MIFARE Classic EV1 <sup>1)</sup> , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 <sup>1)</sup> , MIFARE DESFire Light <sup>2)</sup> , MIFARE Plus S, X, MIFARE Pro X <sup>3)</sup> , MIFARE Smart MX <sup>3)</sup> , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass <sup>3)</sup> , SLE44R35, SLE66Rxx (my-d move) <sup>3)</sup> <u>ISO14443B:</u> Calypso <sup>3)</sup> , CEPAS <sup>3)</sup> , HID iCLASS <sup>4)</sup> , Moneo <sup>3)</sup> , Pico Pass <sup>4)</sup> <u>ISO18092 ECMA-340:</u> NFC Peer-to-Peer, Sony FeliCa <sup>5)</sup> , NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4 <u>ISO15693:</u> EM4x33 <sup>3)</sup> , EM4x35 <sup>3)</sup> , HID iCLASS <sup>4)</sup> , HID iCLASS SE/SR <sup>4)</sup> , ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity) <sup>3)</sup> , Tag-it, PicoPass <sup>4)</sup> <u>LEGIC Prime:</u> LEGIC Prime
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>6)</sup>	AWID, Cardax, CASI-RUSCO, Deister <sup>7)</sup> , EM4100, 4102, 4200 <sup>8)</sup> , EM4050, 4150, 4450, 4550, EM4305 <sup>9)</sup> , FDX-B <sup>9)</sup> , EM4105, HITAG 1 <sup>10)</sup> , HITAG 2 <sup>10)</sup> , HITAG S <sup>10)</sup> , ICT <sup>9)</sup> , IDTECK, Isonas <sup>9)</sup> , Keri, Miro, Nedap <sup>7)</sup> , PAC <sup>9)</sup> , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX <sup>9)</sup> , TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox <sup>7)</sup> , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
OS SUPPORT	Windows XP, Vista, Embedded CE <sup>9)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>9)</sup> , iOS <sup>9)</sup> , MAC OS X <sup>9)</sup>
PERIPHERAL INTERFACES	USB, RS232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C, SPI, 8 GPIOs, CAN <sup>9)</sup> , Clock/Data, Wiegand
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), RS-232: up to 115.200 baud, Air: up to 848 kbit/s
CERTIFICATION(S)	REACH and RoHS-III compliant
ORDER CODE(S)	T4CM-BC0 C0 Standard T4CM-BC0-P C0 Option P T4CM-BC1 C1 Standard T4CM-BC1-P C1 Option P T4CM-BC2 C2 Standard T4CM-BC2-P C2 Option P

<sup>1)</sup>r/w enhanced security features on request <sup>2)</sup>In preparation <sup>3)</sup>r/w in direct chip command mode <sup>4)</sup>UID only <sup>5)</sup>UID + r/w public area <sup>6)</sup>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 <sup>7)</sup>Hash value only <sup>8)</sup>Only emulation of 4100, 4102 <sup>9)</sup>On request <sup>10)</sup>Without encryption

DRAWING



Right View



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