

TWN4 MULTITECH CORE LEGIC 45

PROGRAMMABLE RFID READER/WRITER FOR LF/HF/NFC



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 LEGIC 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).

The powerful hardware allows the extension of supported transponders to meet your individual request.

Special features:

- + supports initialization of segments
- + high-level command library for cash / value handling, e.g. electronic purse
- + 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



Elevator



EV Chargers



Access



Shop POS



Fitness
Equipment



Ticket POS



PC Log-on



Document
Management



Driver ID



Vending



Parking



Gaming



Locker Locks



Time
Attendance



Industrial
PC

TECHNICAL DATA

| | | | | | | | | | |
|------------------------------------|--|------------|-------------|-------------|--------------|------------|-------------|-------------|--------------|
| FREQUENCY | 125 kHz/134.2 kHz (LF) / 13.56 MHz (HF) | | | | | | | | |
| ANTENNA | Externally, 50 Ohm for 13.56 MHz – 490 μ H \pm 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 1.18inch 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 | | | | | | | | |
| 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) | <p><u>ISO14443A:</u> LEGIC Advant, LEGIC Prime, MIFARE Classic 1k & 4k EV1¹⁾, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2¹⁾, MIFARE Plus S, X, MIFARE Pro X²⁾, MIFARE Smart MX²⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass²⁾, SLE44R35, SLE66Rxx (my-d move)²⁾</p> <p><u>ISO14443B:</u> Calypso²⁾, CEPAS²⁾, HID iCLASS³⁾, Moneo²⁾, Pico Pass³⁾</p> <p><u>ISO18092 ECMA-340:</u> Sony FeliCa⁵⁾, passive Peer-to-Peer mode - initiator, NFC Tag 2, 3, 4</p> <p><u>ISO15693:</u> EM4x33²⁾, EM4x35²⁾, HID iCLASS³⁾, HID iCLASS SE/SR³⁾, ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)²⁾, Tag-it, PicoPass³⁾</p> <p><u>LEGIC Prime:</u> LEGIC Prime</p> <p><u>125 kHz, 134.2 kHz:</u> AWID, Cardax, CASI-RUSCO, Deister⁶⁾, EM4100, 4102, 4200⁷⁾, EM4050, 4150, 4450, 4550, EM4305⁸⁾, FDX-B, EM4105, HITAG 1⁹⁾, HITAG 2⁹⁾, HITAG S⁹⁾, ICT⁸⁾, IDTECK, Isonas⁸⁾, Keri, Miro, Nedap⁶⁾, PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC</p> | | | | | | | | |
| SUPPORTED TRANSPONDERS (VERSION P) | All Standard Transponder, G-Prox ⁶⁾ , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch | | | | | | | | |
| PERIPHERAL INTERFACES | USB, RS232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I ² C, 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) | <table> <tr> <td>T4CM-BC1-5</td> <td>C0 Standard</td> </tr> <tr> <td>T4CM-BC1-5P</td> <td>C0 Version P</td> </tr> <tr> <td>T4CM-BC1-5</td> <td>C1 Standard</td> </tr> <tr> <td>T4CM-BC1-5P</td> <td>C1 Version P</td> </tr> </table> | T4CM-BC1-5 | C0 Standard | T4CM-BC1-5P | C0 Version P | T4CM-BC1-5 | C1 Standard | T4CM-BC1-5P | C1 Version P |
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| T4CM-BC1-5 | C1 Standard | | | | | | | | |
| T4CM-BC1-5P | C1 Version P | | | | | | | | |

¹⁾r/w enhanced security features on request ²⁾r/w in direct chip command mode ³⁾UID only ⁴⁾NFC Forum Tag 1 not supported ⁵⁾UID + r/w public area ⁶⁾Hash value only ⁷⁾Only emulation of 4100, 4102 ⁸⁾On request ⁹⁾Without encryption

