TWN4 MULTITECH CORE
LEGIC 45

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

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
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 1.18inch 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

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)
- ISO14443A:
  - LEGIC Advant, MIFARE Classic EV11), MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV22), MIFARE Plus S, X, MIFARE Pro X2), MIFARE Smart MX2), MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTA2xx, PayPass2)
  - ISO14443B:
    - Calypso2), CEPAS2), HID iCLASS3), Moneo2), Pico Pass3)
    - ISO18092 ECMA-340:
    - NFC Peer-to-Peer, Sony FeliCa4), NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4
- ISO15693:
  - EM4x332), EM4x352), HID iCLASS3), HID iCLASS SE/SR3), ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d move)2)
- LEGIC Prime:
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  - 125 kHz, 134.2 kHz:
    - AWID, Cardax, CASI-RUSCO, Deister5), EM4100, 4102, 42008), EM4050, 4150, 4450, 4550, EM43058), FDX-B, EM4105, HITAG 18), HITAG 28), HITAG S8), ICT7), IDTECK, Isonas8), Keri, Miro, Nedap9), PAC, Pyramid, Q5, T5557, T5567, T5577, TiRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC, G-Prox9)

SUPPORTED TRANSPONDERS
(Versions P)
- OS SUPPORT
  - Windows XP, Vista, Embedded CE7), 7 (32-/64-bit), 8, 8.1, 10, Linux, Android7), iOS7), MAC OS X7)
- PERIPHERAL INTERFACES
  - USB, RS232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), i2C, SPI, 8 GPIOs, CAN7), Clock/Data, Wiegand, 1-Wire7)
- CERTIFICATION(S)
  - RoHS-II compliant

ORDER CODE(S)
- T4CM-BC0-5 C0 Standard
- T4CM-BC1-5 C1 Standard
- T4CM-BC1-5P C1 Version P
- On request C2 Standard

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