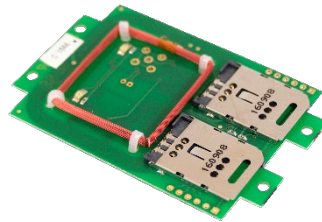


# TWN4 MULTITECH LEGIC M

(SM-4200/4500 FRONTEND)

## PROGRAMMABLE RFID READER/WRITER FOR LF/HF



TWN4 MultiTech LEGIC M  
PCB top view

ELATEC 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 ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / ECMA-340 (NFC).

The new generation is a direct enhancement to the successful TWN3 family as it comes in the same mechanical dimensions (OEM PCB and desktop housing). The reader supports host communication via USB or RS-232.

### Special features:

- + Powerful SDK for writing apps which are executed directly on the reader
- + Firmware update in the field possible
- + On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Direct chip-commands support
- + Two on-board SAM sockets (Secure Access Module)
- + CCID and PC/SC 2.01
- + Dedicated expansion bus for connection of LCD, mass storage, etc.
- + 2 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
- + Supports initialization of segments (LEGIC SM-4500 only)
- + High-level command library for cash / value handling, e.g. electronic purse (LEGIC SM-4500 only)



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 (LF) / 13.56 MHz (HF)
ANTENNA(S)	Integrated
DIMENSIONS (L X W X H)	76 mm x 49 mm x 14 mm / 3.0 inch x 1.9 inch x 0.6 inch
POWER SUPPLY	4.3 V - 5.5 V via USB or RS-232; RS-232 requires 5 V external power supply; via connector CNB 3.3 V ± 5% Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A
CURRENT CONSUMPTION	RF field on: 140 mA typically
TEMPERATURE RANGE	Operating: -25 °C up to +80 °C (-13 °F up to +176 °F) Storage: -40 °C up to +85 °C (-40 °F up to +185 °F)
RELATIVE HUMIDITY	5% to 95% non-condensing
READ- / WRITE DISTANCE	Up to 100 mm / 4 inch, depending on environment and transponder
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 12 g / 0.43 oz (without cable)
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	<b>ISO14443A:</b> LEGIC Advant, MIFARE Classic EV1 <sup>1)</sup> , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 <sup>2)</sup> , MIFARE DESFire Light <sup>3)</sup> , MIFARE Plus S, X, MIFARE Pro X <sup>4)</sup> , MIFARE Smart MX <sup>4)</sup> , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1 <sup>1)</sup> , NTAG2xx, SLE44R35 <sup>4)</sup> , SLE66Rxx (my-d move) <sup>4)</sup> <b>ISO18092 ECMA-340:</b> NFC Forum Tag 1-5 <sup>5)</sup> , Sony FeliCa <sup>6)</sup> , NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4 <b>ISO14443B:</b> Calypso <sup>4)</sup> , CEPAS <sup>4)</sup> , HID iCLASS <sup>7)</sup> , Moneo <sup>4)</sup> , Pico Pass <sup>7)</sup> <b>ISO15693:</b> EM4x33 <sup>4)</sup> , EM4x35 <sup>4)</sup> , HID iCLASS <sup>7)</sup> , HID iCLASS SE/SR <sup>7)</sup> , ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity) <sup>4)</sup> , Tag-it, PicoPass <sup>7)</sup> <b>LEGIC Prime:</b> LEGIC Prime
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ <sup>8)</sup>	AWID, Cardax, CASI-RUSCO, Deister <sup>9)</sup> , EM4100, 4102, 4200 <sup>10)</sup> , EM4050, 4150, 4450, 4550, EM4305 <sup>11)</sup> , FDX-B <sup>12)</sup> , EM4105 <sup>12)</sup> , UltraProx <sup>12)</sup> , HITAG 1 <sup>13)</sup> , HITAG 2 <sup>13)</sup> , HITAG S <sup>13)</sup> , ICT <sup>3)</sup> , IDTECK, Isonas, Keri, Miro, Nedap <sup>9)</sup> , PAC <sup>3)</sup> , Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX <sup>12)</sup> , TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox <sup>9)</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 Embedded CE <sup>3)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>3)</sup> , iOS <sup>3)</sup> , MAC OS X <sup>3)</sup>
PERIPHERAL INTERFACES	USB, RS-232, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I <sup>2</sup> C, 2 GPIOs, 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 NAME	TWN4 MultiTech LEGIC M
CERTIFICATION(S)	CE/RED, REACH and RoHS-III compliant
ORDER CODE(S)	<b>Reader modules with LEGIC SM-4200</b> T4DO-B                    OEM Board T4DO-B-P                OEM Board Option P  <b>Reader modules with LEGIC SM-4500</b> T4DO-B-5                OEM Board T4DO-B-5P              OEM Board Option P

<sup>1)</sup>r/w enhanced security features on request <sup>2)</sup>EV2/EV3 supported as part of the EV1 downward compatibility <sup>3)</sup>On request <sup>4)</sup>r/w in direct chip command mode  
<sup>5)</sup>NFC Forum Tag 1 not supported <sup>6)</sup>UID + r/w public area <sup>7)</sup>UID only <sup>8)</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>9)</sup>Hash value only <sup>10)</sup>Only emulation of 4100, 4102 <sup>11)</sup>From FW V4.05 <sup>12)</sup>134.2 kHz only <sup>13)</sup>Without encryption

## ACCESSORIES

POWER SUPPLY	PWA-EU3	Power Supply (EU)
	PWA-US3	Power Supply (US)
	PWA-UK3	Power Supply (UK)
	PWA-AU3	Power Supply (AU)
	PWA-JP3	Power Supply (JP)
CABLES	CAB-B2	USB cable type A 200 cm / 78.74 inch
	CAB-B3	USB cable type A 12 cm / 4.72 inch
	CAB-B4	USB cable type A 45 cm / 17.72 inch
	CAB-B7	USB cable type A 120 cm / 47.24 inch
	CAB-M1	USB cable mini 12 cm / 4.72 inch
	CAB-M2	USB cable mini 25 cm / 9.84 inch
	CAB-R2	RS-232 cable 200 cm / 78.74 inch

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