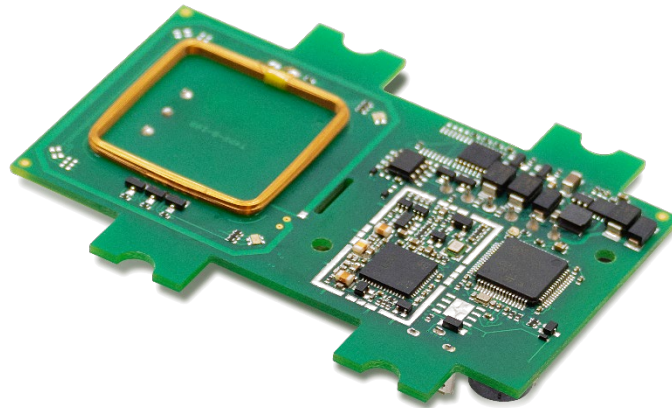


# TWN4 PALON ONE LEGIC M LF HF

## 125 KHZ & 13.56 MHZ CONTACTLESS READER/WRITER WITH NFC SUPPORT



TWN4 Palon One LEGIC M LF HF is designed as a versatile OEM module for integration into third-party products and devices. It supports enhanced interfaces. The new PCB board inherits all advantages and integrated tool support of the ELATEC TWN4 family.

TWN4 Palon One LEGIC M LF HF is a multi-technology reader/writer supporting almost all 125 kHz and 13.56 MHz contactless technologies, including NFC.

On-board antennas for HF and LF allow excellent contactless performance.

Special features:

- + Optimized PCB design for OEM integration
- + On-board LF and HF antennas
- + One on-board SAM socket (Secure Access Module)
- + Interfaces: RS-485, Clock/Data, Wiegand, USB, OSDP protocol optionally
- + Supports quick (re)configuration over network and over wireless interface with TWN4 CONFIG Card
- + Direct chip-commands support
- + Firmware update in the field possible
- + Powerful SDK for writing apps which are executed directly on the reader
- + On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + 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  
Attendance



Industrial  
PC

## TECHNICAL DATA

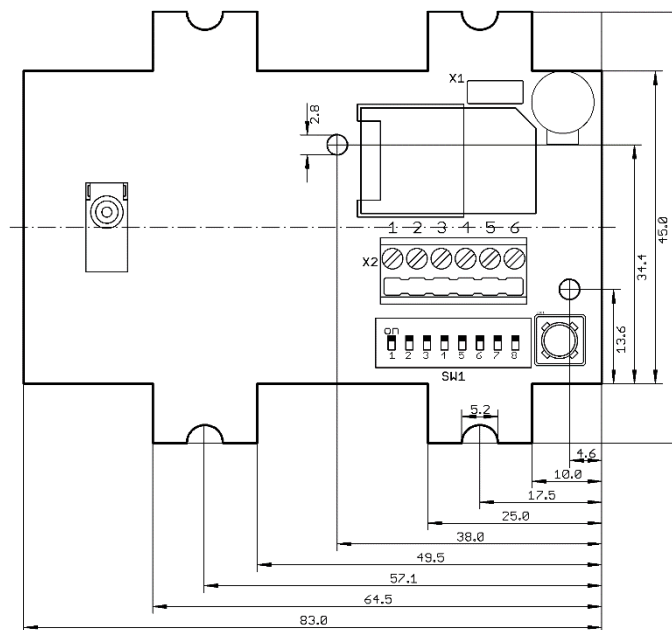
FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)
ANTENNA(S)	Integrated
DIMENSIONS (L X W X H)	PCB board (compact reader): 83 mm x 62 mm x 14 mm / 3.3 inch x 2.4 inch x 0.6 inch
POWER SUPPLY	4.3 V - 5.5 V via USB; 9.0 V - 30 V via connector X2 Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A
CURRENT CONSUMPTION	Idle: 50 mA @12 V; operating: typ. 130 mA @12 V
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 OEM environment and transponder
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 25 g / 0.88 oz
COMPATIBLE PIN HEADER	Plug-in connection terminal block, 6 pins, screw fastening of wires
SABOTAGE DETECTION	Micro Tamper Switch
SIGNALING	2 RGB LEDs, individually programmable, buzzer
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>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> <u>ISO18092 ECMA-340:</u> 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 <u>ISO14443B:</u> Calypso <sup>4)</sup> , CEPAS <sup>4)</sup> , HID iCLASS <sup>7)</sup> , Moneo <sup>4)</sup> , Pico Pass <sup>7)</sup> <u>ISO15693:</u> 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> <u>LEGIC Prime:</u> 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	RS-485, OSDP <sup>3)</sup> , RS-232 (RX/TX) <sup>3)</sup> , Output 5V: Wiegand (D0/D1), or Clock/Data, USB, Bluetooth Low Energy (BLE) <sup>3)</sup>
TRANSMISSION SPEED	USB Full speed (12 Mbit/s), RS-485: up to 38,400 baud
CERTIFICATION NAME	TWN4 Palon One LEGIC M LF HF
CERTIFICATION(S)	CE/RED <sup>14)</sup> , REACH and RoHS-III compliant
ORDER CODE(S)	T4W1-B1B16            OEM Board T4W1-B1B16-P        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 <sup>14)</sup>Pending

## DRAWING / CONNECTOR ASSIGNMENT

PIN	ASSIGNMENT
1	RS-485 A
2	RS-485 B
3	Wiegand D0 or DATA
4	Wiegand D1 or CLOCK
5	GND
6	VIN 9 – 30 Volt

DIP	ASSIGNMENT
1	RS-485 address 0 LSB
2	RS-485 address 1
3	RS-485 address 2
4	RS-485 address 3
5	RS-485 BIAS on/off
6	RS-485 speed 0
7	RS-485 speed 1
8	RS-485 Termination 120 Ohm



Drawing  
(All measures in mm)

Firmware may change the assignment of the DIP switch. Please refer to the TWN4 Palon manual.  
For Wiegand, Clock/Data the DIP switches are not in use.

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