TWN4 PALON ONE LEGIC

125 KHZ/134,2 KHZ & 13,56 MHZ CONTACTLESS READER/WRITER WITH NFC SUPPORT

TWN4 Palon One LEGIC PCB 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 PCB is a multi-technology reader/writer supporting almost all 125 kHz/134,2 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
- Onboard LF and HF antennas
- One onboard SAM socket (Secure Access Module)
- Interfaces: RS485, 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
- Onboard 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

TECHNICAL DATA

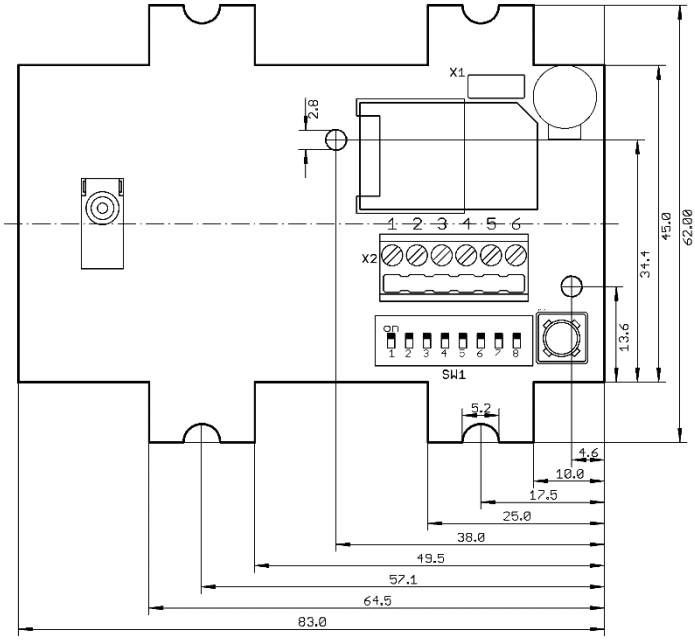
FREQUENCY	125 kHz/134,2 kHz (LF) / 13,56 MHz (HF)
ANTENNA	Integrated
DIMENSIONS (L X W X H)	PCB Board (compact reader): 83 mm x 62 mm x 14 mm (3,3 inch x 2,4 inch x 0,6 inch)
POWER SUPPLY	4.3 V - 5.5 V via USB; 9.0 V - 30 V via connector X2
CURRENT CONSUMPTION	Idle: 50 mA @12 V; operating: typ. 130 mA @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 (3,9 inch), depending on OEM environment and transponder
TRANSMISSION SPEED	USB Full speed (12 Mbit/s), RS485: up to 38.400 baud
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500.000 hours
WEIGHT	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	ISO14443A: LEGIC Advant, MIFARE Classic EV1[1], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[1], MIFARE Plus S, X, MIFARE Pro X[2], MIFARE Smart MX[2], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass[2], SLE44R35, SLE66Rxx (my-d move)[2], HID iClass SEOS[3] ISO14443B: Calypso[2], CEPAS[2], HID iCLASS[3], Moneo[2], PicoPass[3] ISO18092 ECMA-340: NFC Peer-to-Peer, Sony FeliCa[4], NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4 ISO15693: EM4x33[7], EM4x35[2], HID iCLASS[3], HID iCLASS SE/SR[3], ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)[2], Tag-it, PicoPass[3] LEGIC Prime: LEGIC Prime
SUPPORTED TRANSPONDERS (STANDARD) 125 kHz[9], 134.2 kHz[9]	AWID, Cardax, CASI-RUSCO, Deister[5], EM4100, 4102, 4200[6], EM4050, 4150, 4450, 4550, EM4305[7], FDX-B, EM4105, HITAG 1[8], HITAG 2[8], HITAG S[8], ICT[7], IDTECK, Isonas, Keri, Miro, Nedap[5], PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All standard transponders, Cotag, G-Prox[5], 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[7], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[7], iOS[7], MAC OS X[7]
PERIPHERAL INTERFACES	RS-485; OSDP[7] protocol optionally; RS-232 (RX/TX)[7]; Output 5V: Wiegand (D0/D1), or Clock/Data, USB, Bluetooth Low Energy (BLE)[7]
CERTIFICATION NAME	TWN4 Palon One LEGIC
CERTIFICATION(S)	CE/RED pending, RoHS-II compliant
ORDER CODE(S)	T4W1-B1B16 OEM board T4W1-B1B16-P OEM board option P

[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 encrypt [9] 125/134.2kHz 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

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	RS485 address 0 LSB
2	RS485 address 1
3	RS485 address 2
4	RS485 address 3
5	RS485 BIAS on/off
6	RS-485 speed 0
7	RS-485 speed 1
8	RS485 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.

ELATEC GmbH
Zeppelinstr. 1
82178 Puchheim • Germany
P +49 89 552 9961 0 • F +49 89 552 9961 129
E-Mail: info-rfid@elatec.com

ELATEC USA Inc.
4203 SW High Meadows Ave
Palm City • FL 34990 • USA
P +1 772 210 2263 • F +1 772 382 3749
E-Mail: americas-info@elatec.com

ELATEC Technology (Shenzhen) LLC
No. 716 Industrial Bank Tower
Futian District • Shenzhen • China
P/F +86 755 2394 6014
E-Mail: apac-info@elatec.com