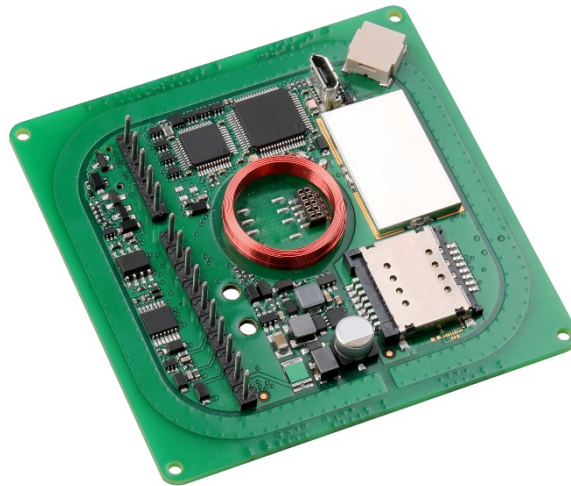# TWN4 PALON SQUARE M

MULTI-TECHNOLOGY RFID READER/WRITER MODULE FOR LF, HF AND NFC

TWN4 Palon Square M
PCB component side (prototype picture)

TWN4 Palon Square M is a versatile OEM PCB for integration into third-party products and devices. It supports enhanced interfaces, especially RS-485. The new single PCB module inherits all advantages and tool support of the ELATEC TWN4 family. Although being a general-purpose PCB module, it is optimized for time attendance and access control.

TWN4 Palon Square M is a multi-technology reader/writer family 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
+ On-board SAM socket (Secure Access Module), up to two slots ID-000 size
+ Interfaces: RS-485 (OSDP protocol optional), Wiegand, Clock/Data, USB, I²C optional
+ Direct chip-commands support
+ Firmware update in the field possible
+ Tamper detection input
+ On-board MEMS gyro sensor
+ 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
+ Supports quick (re)configuration over network and over wireless interface with TWN4 CONFIG Card
+ TWN4 Upgrade Card for P and PI options available on request
+ Version with BLE support in preparation

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

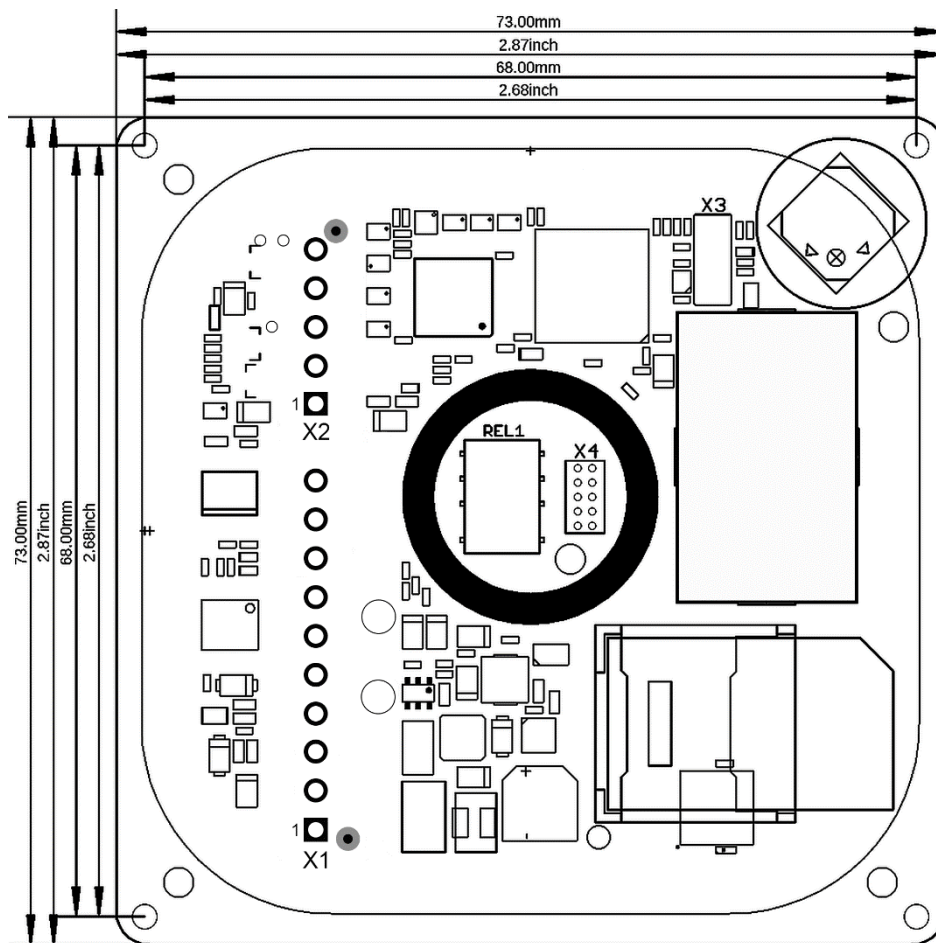|	
FREQUENCY	125 kHz (LF) / 13.56 MHz (HF)
ANTENNA	Integrated
DIMENSIONS (L X W X H)	73 mm x 73 mm x 25.4 mm / 2.87 inch x 2.87 inch x 1.0 inch
POWER SUPPLY	9.0 V - 30 V via connector X1; 4.3 V - 5.5 V via micro USB Limited power source according to IEC 60950-1 or PS2 classified IEC 62368-1, short-circuit current < 8 A
CURRENT CONSUMPTION	Operating: typ. 180 mA @12 V; Idle: typ. 50 mA @12 V; Peak typ. 250 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, depending on product derivate
SABOTAGE DETECTION	Tamper detection input On-board MEMS gyro sensor
WIRE CONNECTOR	Connector X1 1x10 pin header, RS-485 Connector X2 1x5 pin header for auxiliary ports/signals Connector X4 2x5 for I²C and extended ports
SIGNALING	One center RGB LED, on reverse side of PCB (optional: up to 5 LEDs for OEM designs); acoustic loudspeaker
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	ISO14443A: LEGIC Advant[1], MIFARE Classic EV1[2], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[3], MIFARE DESFire Light[3], MIFARE Plus S, X, MIFARE Pro X[4], MIFARE Smart MX[4], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1[2], NTAG2xx, PayPass[4], SLE44R35[4], SLE66Rxx (my-d move)[4], Topaz ISO14443B: Calypso[4], Calypso Innovatron protocol[4], CEPAS[4], HID iCLASS[1], Moneo[4], Pico Pass[5], SRI4K, SRIX4K, SRI512, SRT512 ISO18092 ECMA-340: NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa[6], NFC Active and passive communication mode ISO15693: EM4x33[4], EM4x35[4], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant[1], M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)[4], Tag-it, PicoPass[5]
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ[7]	AWID, Cardax, CASI-RUSCO, Deister[8], EM4100, 4102, 4200[9], EM4050, 4150, 4450, 4550, EM4305[10], FDX-B[10], EM4105[10], HITAG 1[11], HITAG 2[11], HITAG S[11], ICT[10], IDTECK, Isonas, Keri, Miro, Nedap[8], PAC[10], Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX[10], TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox[8], HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
SUPPORTED TRANSPONDERS (OPTION PI)	Requires TWN4 SIO Card, All Standard Transponders, All Option P Transponders, HID iCLASS, HID iCLASS SE/SR/Elite, HID iCLASS SEOS (Facility Code/PAC)[12]
OS SUPPORT	Windows 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[10], iOS[10], MAC OS X[10]
PERIPHERAL INTERFACES	USB, RS485, I²C[10], 3 GPIOs, Clock/Data, Wiegand, OSDP[10], 1 tamper detection input
TRANSMISSION SPEED	HF Air: up to 848 kbit/s, USB Full speed (12 Mbit/s), Host RS-485: up to 38,400 baud, I²C 100 kbit/s
EXTENSION SLOT	Two SAM slots for ID-000 cards (duplex) For Option PI, plug-in of ELATEC SIO card also consumes one slot.
RS-485 CONFIGURATION	RS-485 address configuration and speed settings by Upgrade Card or AppBlaster tool or ex-fab preset; if required, RS-485 termination resistors to be provisioned off-board, externally

ENVIRONMENT	Special TWN4 Palon Square M versions for potting or coating on request
CERTIFICATION NAME	TWN4 Palon Square M
CERTIFICATION(S)	CE/RED, FCC[13], IC[13], REACH and RoHS-III compliant
IMMUNITY AGAINST EM FIELDS	10 V/m according to EN 61000-6-2
ORDER CODE(S)	T4WQ-F1F26 OEM board with LF/HF, with MEMS sensor T4WQ-F1F26-P OEM board with LF/HF, with MEMS sensor, Option P T4WQ-F1F26-PI OEM board with LF/HF, with MEMS sensor, Option PI Customer-specific TWN4 Palon Square M derivates and configurations on request

[1]UID only [2]r/w enhanced security features on request [3]In preparation [4]r/w in direct chip command mode [5]UID only, read/write on request [6]UID + r/w public area [7]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 [8]Hash value only [9]Only emulation of 4100, 4102 [10]On request [11]Without encryption [12]UID + PAC (CSN & Facility Code), r/w on request [13]Planned

ACCESSORIES

CONNECTORS	CON-0001	Spring contact with 2 cable guides, 10-pole
	CON-0002	Spring contact with 2 cable guides, 5-pole
	CON-0003	Pluggable connection clamp, 10-pole
	CON-0004	Pluggable connection clamp, 5-pole

CONNECTOR ASSIGNMENT

	ASSIGNMENT		
	X1 PIN	**X2 PIN**	**X4 PIN**
1	GND	Relay N.C. Normally Closed	VOUT +5V
2	VIN 9 – 30 Volt	Relay N.O. Normally Open	GND
3	Reserved, do not connect	Relay Common	I²C SDA
4	Wiegand D0 or DATA, TTL	TAMPER IN, TTL, RFU	I²C SCL
5	Wiegand D1 or CLOCK, TTL	GND	OUT, TTL, RFU
6	IN1, TTL, RFU		IN, TTL, RFU
7	IN2, TTL, RFU		GND
8	IN3, TTL, RFU		GND
9	RS-485 A		N.C. reserved, do not connect
10	RS-485 B		N.C. reserved, do not connect

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Elatec *manufacturer:*

Other Similar products are found below :

TECHTRACER KIT T4W2-B01C7-P T4W2-F02B6-PI TCP3 KIT STANDARD POE CAB-BS3 (12CM FOR TWN4 SLIM) T43O-B7C0-P
TWN4 MULTITECH NANO LEGIC 63M C0 T4PK-B02TR6-P T4PK-B02TR7-P TWN4 MULTITECH SMARTCARD LEGIC 42 USB
T4WK-B01EU6-P DEVKIT TWN4 MULTITECH NANO LEGIC ART10499 HHRM-NB2B00 T4W2-F01C7 T4W2-F01C7-PI T4W2-
F02B6 T4W2-F02B6-P TWN4 PALON ONE LEGIC T43O-B7C0 T4DT-FB3WEL-PI T4NM-FDB0 T4PK-B01TR7 T4PK-B02TR6
TWN4 SLIM LEGIC P TWN4 SLIM PI (NO CABLE) TWN4 SLIM PI ALL INCLUSIVE KIT TWN4 SLIM PI INDUSTRY KIT T4WK-
B01EU6 TWN4 PALON SQUARE M TWN4 PALON SQUARE M, P TWN4 MULTITECH 3-I HF PCB WIEGAND, BLE TWN4 USB
FRONT READER STANDARD TWN4 MULTITECH SMARTCARD TWN4 MULTITECH 2 BLE DT-U20-B T4W2-B01C7 T4W2-F01C7-
P TWN4 MULTITECH 2 BLE IP68 TWN4 MULTITECH-P DT-U20-B USB WHITE T4NM-FDA0 T4PK-F01TR7 T4DK-FB7BLZ-PI
NANO MODULE MIFARE TWN4 MULTITECH 3 HF PCB WIEGAND, BLE TECHTRACER LITE LEGIC TWN4 SLIM LEGIC TWN4
MULTITECH NANO LEGIC TWN4 MULTITECH 2 BLE-PI HOPK-B2AEL T4BO-F2-I