

TWN4 MULTITECH SMARTCARD

PROGRAMMABLE RFID/CONTACT READER & WRITER FOR LF/HF/NFC & ISO/IEC7816 CARDS



TWN4 MultiTech SmartCard
(inlay customizable)

Elatec's TWN4 MultiTech SmartCard is a combination of the TWN4 MultiTech (RFID) with an integrated contact card reader/writer (ISO7816). It allows users to read and write almost any 125 kHz, 134.2 kHz and 13.56 MHz transponders supporting all major technologies from various suppliers like ATMEL, EM, ST, NXP, TI, HID, LEGIC, etc. and many ISO standards such as ISO14443A/B (T=CL), ISO15693, and ISO18092 / ECMA-340 (NFC). The integrated chip card reader is designed for easy integration into various applications.

The readers can be programmed with a script language for autonomous execution of even complex commands like login procedures, increment/decrement functions and many more. 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
- + onboard 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + direct chip-commands support
- + CCID and PC/SC 2.01
- + two onboard SAM sockets (Secure Access Module), extendable by 2 SAM sockets
- + 2 GPIOs
- + supports quick centralized (re)configuration over network and over wireless interface with TWN4 CONFIG Card
- + 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/134.2 kHz (LF) / 13.56 MHz (HF)
ANTENNA	Integrated
HOUSING	Material: ABS UL94-V0, color: black or white
DIMENSIONS (L X W X H)	Desktop Reader: 88 mm x 68 mm x 19 mm / 3.46 inch x 2.68 inch x 0.75 inch OEM Board: 76 mm x 62 mm x 11 mm / 3 inch x 2.44 inch x 0.43 inch
POWER SUPPLY	4.3 V - 5.5 V via USB
TEMPERATURE RANGE	Desktop, Operating: -25 °C up to +70 °C (-13 °F up to +158 °F) Desktop, Storage: -45 °C up to +75 °C (-49 °F up to +167 °F) PCB, Operating: -25 °C up to +80 °C (-13 °F up to +176 °F) PCB, 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 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
MODES OF OPERATION	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours / Min. 100,000 card insertion cycles
WEIGHT	Approx. 35 g (without housing) / Approx. 140g (with housing and USB Cable)
SMARTCARD STANDARDS	ISO/IEC7816 Part 1-4, Class A/B/C (5V, 3V, 1.8V), T=0, T=1
SMARTCARD CLOCK FREQUENCY	5 MHz up to 15 MHz
SUPPORTED SMARTCARDS	5V, 3V and 1.8V, ISO/IEC7816 Class A/B/C
POWER TO SMARTCARD	60mA in Class A; 55mA in Class B; 35mA in Class C
SMARTCARD DETECTION	Card present switch / Automatic power on/off / Short-circuit protection
SMARTCARD CARD SIZE	2xID-000 (SAM) ID-1
SMARTCARD CONTACT TYPE	8 pin Sliding Contact Socket, C4/C8 support ID-1
SUPPORTED TRANSPONDERS (STANDARD)	<p><u>ISO14443A:</u> LEGIC Advant¹⁾, MIFARE Classic 1k & 4k EV1²⁾, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2²⁾, MIFARE Plus S, X, MIFARE Pro X³⁾, MIFARE Smart MX³⁾, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass³⁾, SLE44R35, SLE66Rxx (my-d move)³⁾, Topaz</p> <p><u>ISO14443B:</u> Calypso³⁾, Calypso Innovatron protocolo³⁾, CEPAS³⁾, HID iCLASS¹⁾, Moneo³⁾, Pico Pass⁴⁾, SRI4K, SRIX4K, SRI512, SRT512</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa⁵⁾, NFC Active and passive communication mode</p> <p><u>ISO15693:</u> EM4x33³⁾, EM4x35³⁾, HID iCLASS¹⁾, HID iCLASS SE/SR¹⁾, ICODE SLI, LEGIC Advant¹⁾, M24LR16/64, SRF55Vxx (my-d vicinity)³⁾, Tag-it, PicoPass⁴⁾</p> <p><u>125 kHz, 134.2 kHz:</u> AWID, Cardax, CASI-RUSCO, Deister⁶⁾, EM4100, 4102, 4200⁷⁾, EM4050, 4150, 4450, 4550, EM4305⁸⁾, FDX-B, EM4105, HITAG 1⁹⁾, HITAG 2⁹⁾, HITAG S⁹⁾, ICT⁸⁾, IDTECK, Isonas⁸⁾, Keri, Miro, Nedap⁶⁾, PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC</p>
SUPPORTED TRANSPONDERS (VERSION P)	All Standard Transponder, G-Prox ⁶⁾ , HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
SUPPORTED TRANSPONDERS (VERSION PI)	Requires external TWN4 SIO Card, All Standard Transponder, All Version P Transponder, HID iCLASS ¹⁰⁾ , HID iCLASS SE/SR/SEOS(CSN and Facility Code/PAC) ¹⁰⁾ , HID iCLASS Elite & SE Elite

PERIPHERAL INTERFACES	USB, RS232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I ² C, 2 GPIOs, Clock/Data, Wiegand, 1-Wire ⁸⁾	
OS SUPPORT	Windows XP, Vista, Embedded CE ⁸⁾ , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android ⁸⁾ , iOS ⁸⁾ , MAC OS X ⁸⁾	
CERTIFICATIONS	RoHS-II compliant, CE, FCC, RED	
ORDER CODE(S)	T4SO-F	OEM Board
	T4SD-FB2BE1	USB Black
	T4SD-FB2WE1	USB White
	T4SO-F-P	OEM Board Version P
	T4SO-FB2BE1-P	USB Version P Black
	T4SO-FB2WE1-P	USB Version P White
	T4SO-F-PI	OEM Board Version PI
	T4SO-FB2BE1-PI	USB Version PI Black
	T4SO-FB2WE1-PI	USB Version PI White

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

ACCESSORIES

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: RS232 cable 200 cm / 78.74 inch

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