TWN4 USB FRONT READER

COMPACT LF/HF/NFC RFID READER/WRITER FOR DIRECT CONNECTION TO PRINTER

TWN4 USB Front Reader
Top view (inlay customizable)

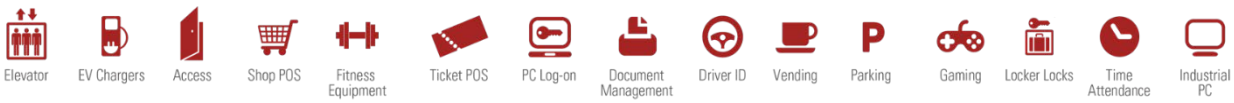
TWN4 USB Front Reader
Bottom view (360° mounting possibility)

The TWN4 USB Front Reader integrates RFID (125 kHz and 13.56 MHz), NFC and Bluetooth Low Energy capabilities into a compact but powerful reader. Thanks to its patented turnable USB connector, which offers a 360° mounting opportunity, the reader can be easily connected to an external USB port. Furthermore, it is equipped with a USB hub that can optionally be disabled. Its reduced size combined with excellent read/write performance makes it the perfect reader for various applications, including but not limited to print solutions and single sign-on.

The TWN4 USB Front Reader allows users to read and write almost all common worldwide 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 etc. and ISO standards like ISO 14443A/B (T=CL), ISO 15693, ISO 18092 / ECMA-340 (NFC).

Special features:

+ Multi-frequency RFID reader/writer for 125 kHz, 13.56 MHz, NFC, Bluetooth Low Energy
+ Powerful SDK for writing apps which are executed directly on the reader
+ Encrypted communication (AES128) between card reader and printer available
+ Firmware update in the field possible
+ USB hub “pass through” on the front side can be deactivated via device driver
+ Patented USB connector on the rear side can be rotated, which offers the possibility of a 360° mounting
+ Available with custom inlay and packaging as “ready to sell from stock”
+ On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
+ Direct chip-commands support
+ One on-board SAM socket (Secure Access Module)
+ CCID and PC/SC 2.01
+ 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
+ 3D construction data (STEP) available on request

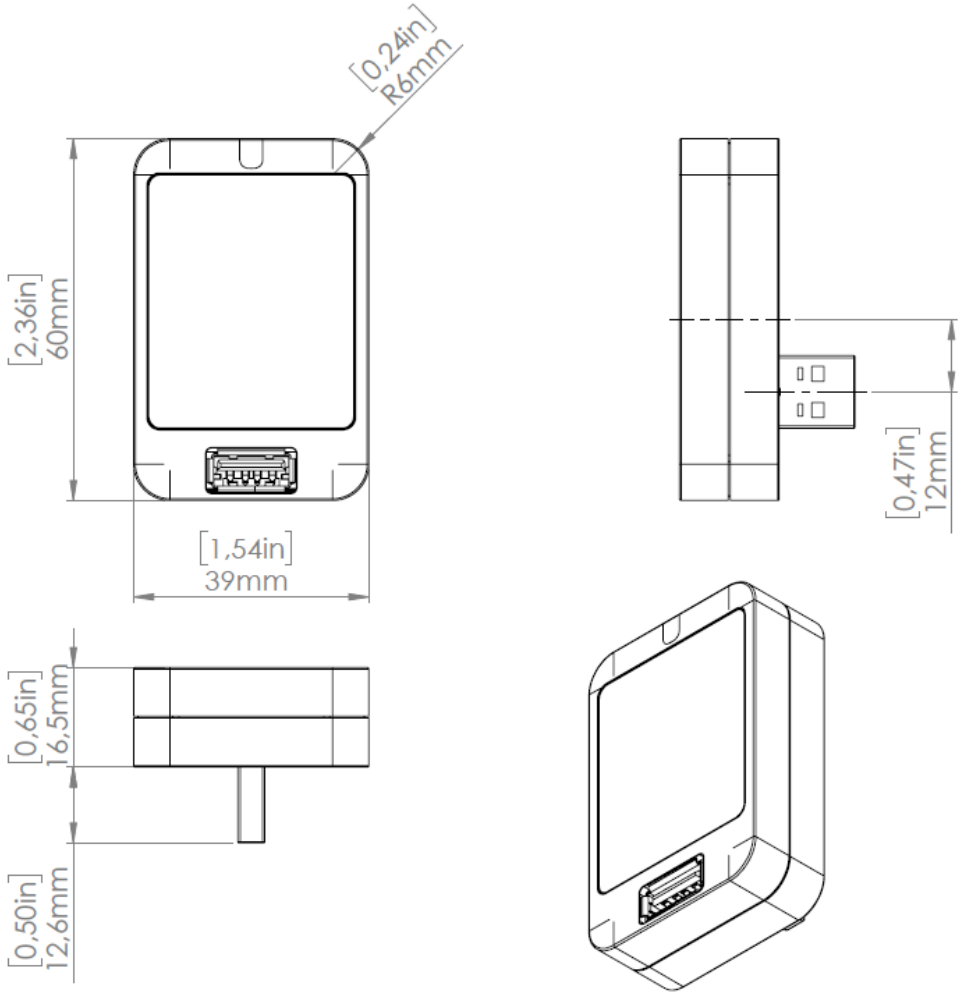


TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)
ANTENNA(S)	Integrated
HOUSING	Material: ABS UL94-V0, color: black
DIMENSIONS (L X W X H)	60 mm x 39 mm x 16.5 mm / 2.36 inch x 1.54 inch x 0.65 inch
POWER SUPPLY	4.3 V - 5.5 V via USB 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: 250 mA typically + 16 mA (BT)
TEMPERATURE RANGE	Operating: 0 °C up to +65 °C (+32 °F up to +149 °F) Storage: -45 °C up to +70 °C (-49 °F up to +158 °F)
RELATIVE HUMIDITY	5% to 95% non-condensing
READ- / WRITE DISTANCE	LF and HF: Up to 45 mm / 1.77 inch, depending on environment and transponder / BT: n/a
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
BLUETOOTH LOW ENERGY	Bluetooth V4.1, software upgradable to V4.2; API; standards as GAP, SM, L2CAP, ATT; predefined GATT structure; up to 8 connections; AES128 supported
MTBF	500,000 hours
WEIGHT	Approx. 22 g / 0.78 oz
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[4], MIFARE Plus S, X, MIFARE Pro X[5], MIFARE Smart MX[5], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1[2], NTAG2xx, PayPass[5], SLE44R35[5], SLE66Rxx (my-d move)[5], Topaz ISO18092 ECMA-340: NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa[6], NFC Active and passive communication mode ISO14443B: Calypso[5], Calypso Innovatron protocol[5], CEPAS[5], HID iCLASS[1], Moneo[5], Pico Pass[7], SRI4K, SRIX4K, SRI512, SRT512 ISO15693: EM4x33[5], EM4x35[5], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant[1], M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)[5], Tag-it, PicoPass[7]
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ[8]	AWID, Cardax, CASI-RUSCO, Deister[9], EM4100, 4102, 4200[10], EM4050, 4150, 4450, 4550, EM4305[11], FDX-B[11], EM4105[11], HITAG 1[12], HITAG 2[12], HITAG S[12], ICT[11], IDTECK, Isonas, Keri, Miro, Nedap[9], PAC[11], Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX[11], TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox[9], 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)[13]
OS SUPPORT	Windows XP, Vista, Embedded CE[11], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[11], iOS[11], MAC OS X[11]
PERIPHERAL INTERFACES	Male USB type A, female USB type A, Bluetooth Low Energy (BLE)
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), USB Hub: USB Hi-Speed up to 40 MB/s, HF Air: up to 848 kbit/s, BT Air: up to 100 kbit/s
CERTIFICATION NAME	TWN4 USB Front Reader
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant, and many more
ORDER CODE(S)	T4FK-FBFRLM7 Front Reader Kit T4FK-FBFRLM7-P Front Reader-P Kit T4FK-FBFRLM7-PI Front Reader-PI Kit

[1]UID only [2]r/w enhanced security features on request [3]EV2/EV3 supported as part of the EV1 downward compatibility [4]In preparation [5]r/w in direct chip command mode [6]UID + r/w public area [7]UID only, read/write on request [8]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 [9]Hash value only [10]Only emulation of 4100, 4102 [11]On request [12]Without encryption [13]UID + PAC (Facility Code), r/w on request

DRAWING



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