

# 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 new TWN4 USB Front Reader integrates RFID (125 kHz, 134.2 kHz and 13.56 MHz), NFC and Bluetooth Low Energy capabilities into a compact but powerful reader. It can be easily connected to an external USB port. Furthermore, it has a rotatable USB interface, which offers a 360° mounting opportunity, as well as a USB-Hub which 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, healthcare applications, single sign-on.

The TWN4 USB Front Reader allows users to read and write almost all common worldwide 125 kHz, 134.2 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 ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

### Special features:

- + multi-frequency RFID reader/writer for 125/134.2 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
- + 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”
- + onboard 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + direct chip-commands support
- + one onboard 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/134.2 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)
ANTENNA	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
CURRENT CONSUMPTION	RF field on: 250 mA typically + 16 mA (BT)
TEMPERATURE RANGE	Operating: -25 °C up to +65 °C (-13 °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 100 mm / 4 inch, depending on environment and transponder / BT: n/a
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
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
SUPPORTED TRANSPONDERS (STANDARD)	<p><u>ISO14443A:</u> LEGIC Advant<sup>1)</sup>, MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2<sup>2)</sup>, MIFARE Plus S, X, MIFARE Pro X<sup>3)</sup>, MIFARE Smart MX<sup>4)</sup>, MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, MIFARE Ultralight EV2, NTAG2xx, PayPass<sup>4)</sup>, SLE44R35, SLE66Rxx (my-d move)<sup>4)</sup>, Topaz</p> <p><u>ISO14443B:</u> Calypso<sup>3)</sup>, Calypso Innovatron protocol<sup>3)</sup>, CEPAS<sup>3)</sup>, HID iCLASS<sup>1)</sup>, Moneo<sup>3)</sup>, Pico Pass<sup>4)</sup>, SRI4K, SRIX4K, SRI512, SRT512</p> <p><u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa<sup>5)</sup>, NFC Active and passive communication mode</p> <p><u>ISO15693:</u> EM4x35<sup>3)</sup>, HID iCLASS<sup>1)</sup>, HID iCLASS SE/SR<sup>1)</sup>, ICODE SLI, LEGIC Advant<sup>1)</sup>, M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)<sup>3)</sup>, Tag-it, PicoPass<sup>4)</sup></p> <p><u>125 kHz, 134.2 kHz:</u> AWID, Cardax, CASI-RUSCO, Deister<sup>6)</sup>, EM4100, 4102, 4200<sup>7)</sup>, EM4050, 4150, 4450, 4550, EM4305<sup>8)</sup>, FDX-B, EM4105, HITAG 1<sup>9)</sup>, HITAG 2<sup>9)</sup>, HITAG S<sup>9)</sup>, ICT<sup>8)</sup>, IDTECK, Isonas<sup>8)</sup>, Keri, Miro, Nedap<sup>6)</sup>, PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC</p>
SUPPORTED TRANSPONDERS (VERSION P)	All Standard Transponders, Cotag, G-Prox <sup>6)</sup> , 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 Transponders, All Version P Transponders, HID iCLASS <sup>10)</sup> , HID iCLASS SE/SR/SEOS(CSN and Facility Code/PAC) <sup>10)</sup> , HID iCLASS Elite & SE Elite
OS SUPPORT	Windows XP, Vista, Embedded CE <sup>8)</sup> , 7 (32-/64-bit), 8, 8.1, 10, Linux, Android <sup>8)</sup> , iOS <sup>8)</sup> , MAC OS X <sup>8)</sup>
PERIPHERAL INTERFACES	Male USB type A, female USB type A
CERTIFICATION NAME	TWN4 USB Front Reader
CERTIFICATION(S)	CE/RED, RoHS-II compliant

ORDER CODE(S)	T4FK-FBFRLM7	Front Reader Kit
	T4FK-FBFRLM7-P	Front Reader-P Kit
	T4FK-FBFRLM7-PI	Front Reader-PI Kit

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

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