

TWN4 MULTITECH 3 HF

HF RFID READER/WRITER WITH NFC SUPPORT



TWN4 MultiTech 3 HF
PCB top view



TWN4 MultiTech 3 HF
PCB bottom view

The new TWN4 MultiTech 3 HF integrates RFID (13.56 MHz) and NFC capabilities into a compact but powerful reader. Its reduced size combined with excellent read/write performance makes it the perfect reader for all applications where small size and full performance matters, e.g. print solutions, healthcare applications, driver identification, POS integration and much more. Furthermore, the TWN4 MultiTech 3 HF provides access to most common host interfaces such as USB, serial (TTL) or I2C which are readily accessible through an on-board connector.

The TWN4 MultiTech 3 HF allows users to read and write almost all common worldwide 13.56 MHz tags and/or labels. It supports all major transponders from various suppliers like EM, Fujitsu, ST, NXP, TI, HID etc. and ISO standards like ISO14443A/B (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

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
- + one onboard SAM socket (Secure Access Module)
- + CCID and PC/SC 2.01
- + 3 GPIOs
- + 3D construction data (STEP) available on request
- + supports quick centralized (re)configuration over network and over wireless interface with TWN4 CONFIG Card



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	13.56 MHz (HF)
ANTENNA	Integrated
DIMENSIONS (L X W X H)	OEM Board (compact reader): 50 mm x 35 mm x 7 mm, maximum diameter < 55 mm.
POWER SUPPLY	4.3 V - 5.5 V via USB; via connector CNB 3.3 V +/- 5%
CURRENT CONSUMPTION	RF field on: 120 mA typically / Sleep: 500 µA typ. / Cyclic Operation: TBD
TEMPERATURE RANGE	Operating: -25 °C up to +80 °C (-13 °F up to +176 °F) 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 antenna, environment and transponder
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), Serial TTL: up to 115.200 baud; Air: up to 848 kbit/s
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 7 g
COMPATIBLE PIN HEADER	PTT-112-01-L-D or TMM-112-03-F-D by Samtec
SUPPORTED TRANSPONDERS (STANDARD)	<u>ISO14443A:</u> LEGIC Advant ¹⁾ , MIFARE Classic EV1 ²⁾ , MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2 ²⁾ , MIFARE Plus S, X, MIFARE Pro X ³⁾ , MIFARE Smart MX ³⁾ , MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, PayPass ³⁾ , SLE44R35, SLE66Rxx (my-d move) ³⁾ , Topaz <u>ISO14443B:</u> Calypso ³⁾ , Calypso Innovatron protocol ³⁾ , CEPAS ³⁾ , HID iCLASS ¹⁾ , Moneo ³⁾ , Pico Pass ⁴⁾ , SRI4K, SRIX4K, SRI512, SRT512 <u>ISO18092 ECMA-340:</u> NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa ⁵⁾ , NFC Active and passive communication mode <u>ISO15693:</u> EM4x33 ³⁾ , EM4x35 ³⁾ , HID iCLASS ¹⁾ , HID iCLASS SE/SR ¹⁾ , ICODE SLI, LEGIC Advant ¹⁾ , M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity) ³⁾ , Tag-it, PicoPass ⁴⁾
SUPPORTED TRANSPONDERS (VERSION I)	Requires external TWN4 SIO Card, All Standard Transponders, HID iCLASS, HID iCLASS SE/SR/SEOS (CSN and Facility Code/PAC) ⁶⁾ , HID iCLASS Elite & SE Elite
PERIPHERAL INTERFACES	USB, RS232, TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), I ² C, SPI, 3 GPIOs, CAN ⁷⁾ , Clock/Data, Wiegand, 1-Wire ⁷⁾
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⁾
CERTIFICATIONS	RoHS-II compliant
ORDER CODE(S)	T430-F2C0 OEM Board T430-F2C0-I OEM Board Version I

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⁾UID + PAC (CSN & Facility Code), r/w on request ⁷⁾On request

CONNECTOR ASSIGNMENT

	X2	
RESET	24	23 PWRDWN-
GPIO6	22	21 GPIO5
GPIO4	20	19 VCC
COM1_RX	18	17 COM1_TX
USB_DP_P	16	15 UGND
USB_DM_P	14	+13 UVCC
GND	12	11 V24_RXD
HOSTSENSE	10	9 V24_TXD
SPI_SCK	8	7 SPI_SS
SPI_MISO	6	5 SPI_MOSI
I2C_SDA	4	3 I2C_SCL
CAN_RX	2	1 CAN_TX

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