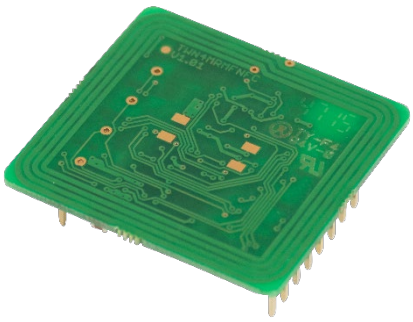
TWN3 Mini Reader MIFARE NFC

Single-frequency HF RFID module with NFC support

TWN3 Mini Reader MIFARE NFC
top view*



TWN3 Mini Reader MIFARE NFC
bottom view*

*The product images are illustrative only and might differ from the actual product.

ELATEC's TWN3 Mini Reader MIFARE NFC is designed for integration into machines, handheld computers or any other device. The focus has especially been set on size, low power consumption, price and flexibility. Thanks to its compact dimensions, integration directly on a PC board is possible.

Outstanding features are: 4 user-configurable ports (to be configured as input or output), beeper support and an integrated high performance antenna. The simple ASCII or Binary protocol enables quick software development cycles. All host communication is done via SPI or asynchronous serial TTL interface. The module offers positions for placement for two LEDs that can be controlled by software. An external Secure Access Module (SAM) is supported for enhanced security and cryptographic performance. This enables the application to perform secure transactions, e.g. payment terminals etc..

Special features:

+ Firmware update in the field possible
+ Supports transparent data exchange with RFID media
+ Operating voltage: 3.20 V – 5.5 V DC
+ Low power (< 2 µA)
+ Supports connection of external ISO 7816 compatible SAM cards
+ Compact design (33 x 30 x 11 mm)
+ Integrated antenna
+ Interfaces: Serial TTL or SPI
+ ASCII or Binary protocol
+ 4 GPIOs
+ Industrial operating temperature: -25 °C to +80 °C
+ Pin compatible downgrade from TWN4 MultiTech HF Mini Reader T4MR-F

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

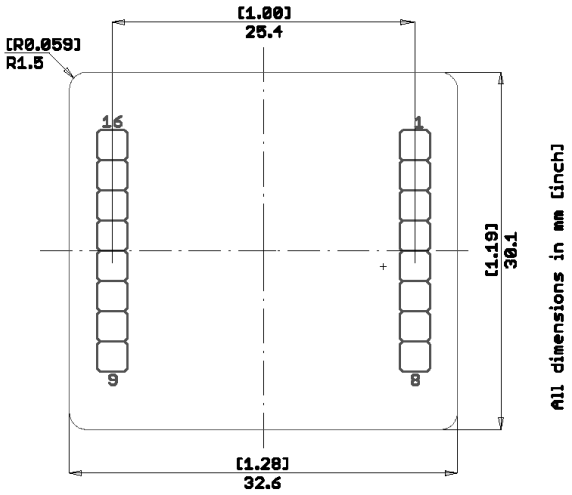
TECHNICAL DATA

FREQUENCY	13.56 MHz (HF)	
ANTENNA	Integrated	
DIMENSIONS (L X W X H)	Approx. 32.60 x 30.10 x 11.20 mm / 1.26 x 1.19 x 0.44 inch	
POWER	3.2 V – 5.5 V DC PS2 classified power source according to IEC 62368-1, short-circuit current < 8 A	
CURRENT CONSUMPTION	RF field on: 80 mA typically, RF field off: 10 mA, power down: < 2 µA	
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 70 mm / 2.75 inch, depending on environment and transponder	
MTBF	500,000 hours	
WEIGHT	Approx. 15 g / 0.53 oz	
SUPPORTED TRANSPONDERS	Depending on the firmware version, the reader supports a wide range of transponder technologies. Please refer to the relevant ELATEC transponder matrix (available at www.elatec-rfid.com/int/transponder-technology) for more information about the transponder technologies supported by the reader.	
OS SUPPORT	Windows 7 (32-/64-bit) and higher versions, Linux, Android[1)], iOS[1)], MAC OS X[1)]	
PERIPHERAL INTERFACES	TTL serial (logic level 3.3 V, CMOS, 5 V tolerant), SPI, 4 GPIOs	
TRANSMISSION SPEED	9,600 baud, 8N1 (default) – up to 115,200 baud	
CERTIFICATION NAME	TWN3 Mini Reader MIFARE NFC	
CERTIFICATIONS	Non-exhaustive list[2)]: CE/RED, REACH and RoHS-III compliant	
ORDER CODES	T3MR-FC1	Reader module, C1 version
	T3MR-FC2	Reader module, C2 version
	T3MK-F	Development board, incl. T3MR-FC1 and CAB-U9

[1)]On request

[2)]The product has been certified for use in many countries and regions. Contact your Sales representative for detailed information about all certifications and approvals granted to the product.

DRAWING (COMPONENT SIDE)



PINNING

Pin	Name	Description
1	RESET	Asynchronous reset
2	PWRDWN	Hard power down
3	GND	Ground
4	VCC	3.3 – 5 V
5	RXD/MOSI	UART/SPI receiver input
6	TXD/MISO	UART/SPI transmitter input
7	SCK	SPI serial clock input
8	SS	SPI slave select input
9	VSAM	3.0V regulated supply for SAM
10	SAM_IO	Bidirectional SAM I/O line
11	GPIO3	General purpose input/output 3
12	GPIO2	General purpose input/output 2
13	GPIO1	General purpose input/output 1
14	GPIO0	General purpose input/output 0
15	SAM_CLK	SAM clock output
16	SAM_RST	SAM reset output

Pin spacing 2.54 mm

ELATEC GmbH
Zeppelinstr. 1
82178 Puchheim
Germany
P +49 89 552 9961 0
F +49 89 552 9961 129
E-Mail: info-rfid@elatec.com
Website: elatec.com

ELATEC Systems GmbH
Schwieberdinger Str. 44
71636 Ludwigsburg
Germany
P +49 7141 309736 0

E-Mail: info-rfid@elatec.com
Website: elatec.com

ELATEC Inc.
1995 SW Martin Hwy
Palm City • FL 34990
USA
P +1 772 210 2263
F +1 772 382 3749
E-Mail: americas-info@elatec.com
Website: elatec.com

ELATEC Technology (Shenzhen) LLC
918, Main Building, Tian An Cyber Times
Tower, No. 6, Tairan Fourth Road, Tian 'an
Community, Shatou Neighborhood
Futian District • Shenzhen • China
P/F +86 755 2394 6014
E-Mail: apac-info@elatec.com
Website: elatec.com