

# TWN4 Mifare™ NFC

## 125kHz/134.2kHz & 13.56MHz Contactless Reader/Writer



TWN4 OEM PCB  
Bottom View



TWN4 OEM PCB  
Top View



Desktop  
Top View

Elatec's TWN4 Family allows users to read and write to almost any 125kHz/134.2kHz and 13.56MHz tags and/or labels. It supports all major transponders from various suppliers like ATMEL, EM, ST, NXP, TI, HID, LEGIC, INSIDE etc. and ISO standards like ISO14443A/B including layer 4 (T=CL), ISO15693, ISO18092 / ECMA-340 (NFC).

The new generation is a direct enhancement to the successful TWN3 family as it comes in the same mechanical dimensions (OEM PCB and Desktop Housing). All host communication can be done via USB, RS232 or serial TTL interface.

### Special Features:

- Powerful SDK for writing Apps which are running directly on the reader
- Power down mode for lowest power consumption
- Two onboard SAM sockets (Secure Access Module)<sup>6</sup>
- PC/SC 2.01<sup>6</sup>
- Additional interfaces for OEM PCB version
  - CAN<sup>4</sup>, SPI<sup>4</sup>, I<sup>2</sup>C
  - Dedicated expansion bus for connection of LCD, mass storage, etc.
  - 8 GPIOs

Worldwide certifications for worldwide sales:

WEEE, RoHS, R&TTE, CE (Europe),


FCC (USA), IC (Canada), ACA (Australia / New Zealand), VCCI (Japan), SRRRC<sup>4</sup> (China),

KCC (Korea), ANATEL (Brasil)<sup>6</sup>

Technical Data <sup>1)</sup>			
Frequency	125kHz, 134.2kHz (LF) / 13.56MHz (HF)		
Housing	Material ABS UL94-V0, colour black or white		
Dimensions (L x W x H)	Desktop Reader: 88mm x 56mm x 18mm / 3.5inch x 2.2inch x 0.7inch OEM Board: 76mm x 49mm x 14mm / 3.0inch x 1.9inch x 0.6inch		
Power Supply	4.3V ... 5.5V via USB cable; serial version requires external power supply, voltage range 3.3V ... 5.5V		
Current Consumption	RF field off: 20mA / Trickle Mode: 2mA <sup>6)</sup> / Power down Mode: 10µA <sup>4)</sup> RF field on: 120mA typically		
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)		
Read- / Write Distance	Up to 100mm / 4inch (depending on transponder)		
HOST Interface	USB or RS232 or serial TTL, one board supports all three		
OS Support	Windows XP, Vista, 7 (32-/64-bit), 8, CE, Mac OS and Linux		
Transmission Speed	Host: USB: Full speed (12Mbit) – RS232: up to 115.200baud / Air: up to 848kbit/s		
Modes of Operation	<ul style="list-style-type: none"> <li>• USB key board emulation – USB virtual COM port – Transparent</li> <li>• PC/SC 2.01 / CCID mode<sup>6)</sup></li> </ul>		
Relative Humidity	5% to 95% non-condensing		
Supported Transponders	<p><b>Standard:</b></p> <ul style="list-style-type: none"> <li>• 125kHz / 134.2kHz 4100, 4102, 4200, Casi Rusco, HITAG 1, HITAG 2, HITAG S, MIRO, TIRIS/HDX, UNIQUE Optionally, in preparation: 4105, 4x50, AWID, Cardax, FDX-B, G-Prox II, Honeywell Nexwatch, IDTECK, Pyramid, Q5, TITAN, T55x7, ZOODIAC</li> <li>• ISO14443A Mifare Classic 1k &amp; 4k, Mini, DESFire EV1, Plus S&amp;X<sup>5)</sup>, Pro X<sup>5)</sup>, SmartMX<sup>5)</sup>, Ultralight, Ultralight C, SLE44R35, SLE66Rxx (my-d move)<sup>5)</sup>, Legic Advant<sup>3)</sup>, PayPass<sup>5)</sup></li> <li>• ISO14443B Calypso<sup>5)</sup>, CEPAS<sup>5)</sup>, HID iCLASS<sup>3)</sup>, Moneo<sup>5)</sup>, PicoPass<sup>5)</sup>, SRI512, SRT512, SRI4K, SR1X4K</li> <li>• ISO18092 / NFC NFCIP-1: Active and passive communication mode, Peer-to-Peer<sup>6)</sup>, NFC Forum Tag Type 1-4 Sony FeliCa<sup>2)</sup></li> <li>• ISO15693 EM4x33<sup>5)</sup>, EM4x35<sup>5)</sup>, HID iCLASS<sup>3)</sup>, ICODE SLI, Legic Advant<sup>3)</sup>, M24LR16/64, Tag-It, SRF55Vxx (my-d vicinity)<sup>5)</sup>, PicoPass<sup>5)</sup></li> </ul> <p><b>Version P:</b> Standard + Cotag, HID Prox, Indala, ioProx <b>Version PI<sup>6)</sup>:</b> Version P + HID iClass (read/write)</p>		
Certifications	CE, R&TTE, RoHS-II compliant, FCC, IC, ACA, VCCI, SRRC <sup>4)</sup> , KCC, ANATEL <sup>6)</sup>		
MTBF	500.000 hours		
Weight	Approx. 20 g (without housing)		
Order Code	<b>Standard</b>	<b>Version P</b>	<b>Version PI</b>
OEM Board	ART14187	ART14763	ART14764
USB black / white	ART14188/ART14189	ART14765/ART14767	ART14766/ART14768
RS232 black / white	ART14190/ART14191	ART14769/ART14771	ART14770/ART14772

<sup>1)</sup>Target Specification <sup>2)</sup>Encryption not supported <sup>3)</sup>UID Only <sup>4)</sup>On request only <sup>5)</sup>UID/PUPI only, read/write on request <sup>6)</sup>In preparation

## Accessories

Order Code	ART13512	ART11493	ART12240
	Snap-in holder for TWN3/TWN4 desktop 	2.0m USB Type A cable for TWN3/TWN4 OEM PCB	2.0m RS232 DSUB 9 DC cable for TWN3/TWN4 OEM PCB
Order Code	ART14712	ART14713	ART14714
AC Wall Adapter	Europe	USA	AUSTRALIA
			UK

## Drawing/Pin Out

Refer to document DS\_TWN4 Reader Family Pinouts

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