TWN4 MULTITECH NANO LF

MINIATURE LF RFID READER/WRITER FOR EXTERNAL ANTENNA

Version C0 (SMT)
31 x 17.8 x 2.7 mm

Elatec's TWN4 family of transponder readers and writers allows users to read and write to almost any 125 kHz and 134.2 kHz tags and/or labels. It supports all major transponder technologies like HID, HITAG, Nexwatch, KERI, Cotag, CASI-RUSCO etc.

The TWN4 MultiTech Nano LF is designed for integration into machines or other devices. It can be connected to an external antenna through a printed circuit board (125 kHz/134.2 kHz).

Special features:

+ Compact design (31 x 17.8 x 2.7 mm / 1.22 x 0.7 x 0.12 inch)
+ Components mounted only on one side for easy integration on the main application
+ Edge plated pads for surface mounting (C0) allows easy and reliable PCB mounting, connector option (C1) also available for THT mounting
+ 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
+ Supports connection of external ISO7816 compatible SAM cards
+ CCID and PC/SC 2.01
+ 8 GPIOs
+ 3D construction data (STEP) available on request

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
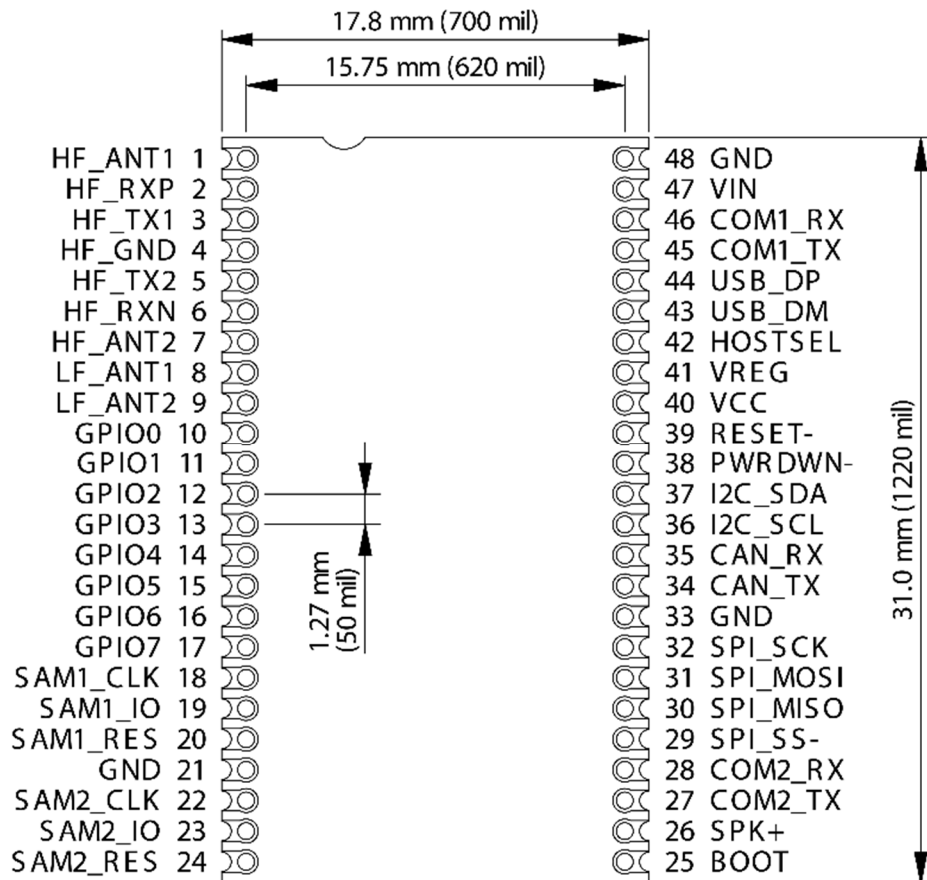
TECHNICAL DATA

FREQUENCY	125 kHz/134.2 kHz (LF)
ANTENNA	490 µH ± 5% for 125 kHz/134.2 kHz
DIMENSIONS (L X W X H)	31 mm x 17.8 mm x 2.7 mm / 1.22 inch x 0.7 inch x 0.12 inch
POWER SUPPLY	3.3 V +/- 5% (direct supply) or 4.3 V - 5.5 V (use of on-board voltage regulator)
CURRENT CONSUMPTION	RF field on: 80 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
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 7 g
SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ KHZ[1], 134.2 KHZ	AWID, Cardax, CASI-RUSCO, Deister[2], EM4100, 4102, 4200[3], EM4050, 4150, 4450, 4550, EM4305[4], FDX-B, EM4105, HITAG 1[5], HITAG 2[5], HITAG S[5], ICT[4], IDTECK, Isonas[4], Keri, Miro, Nedap[2], PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All Standard Transponders, Cotag, G-Prox[2], HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch
OS SUPPORT	Windows XP, Vista, Embedded CE[4], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[4], iOS[4], MAC OS X[4]
PERIPHERAL INTERFACES	USB, 2 x serial (logic level 3.3 V, CMOS 5 V tolerant), I²C, SPI, 8 GPIOs, CAN[4], Clock/Data, Wiegand
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), Serial TTL: up to 115.200 baud, Air: up to 848 kbit/s
CERTIFICATION(S)	REACH and RoHS-III compliant
ORDER CODE(S)	T4NM-FDB0 B0 Standard T4NM-FDB0-P B0 Option P

[1] 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 [2] Hash value only [3] Only emulation of 4100, 4102 [4] On request [5] Without encryption

DRAWING

Top view

17.8 mm (700 mil)
15.75 mm (620 mil)
31.0 mm (1220 mil)
1.27 mm (50 mil)

Pin	Signal		Pin	Signal
1	HF_ANT1		48	GND
2	HF_RXP		47	VIN
3	HF_TX1		46	COM1_RX
4	HF_GND		45	COM1_TX
5	HF_TX2		44	USB_DP
6	HF_RXN		43	USB_DM
7	HF_ANT2		42	HOSTSEL
8	LF_ANT1		41	VREG
9	LF_ANT2		40	VCC
10	GPIO0		39	RESET-
11	GPIO1		38	PWRDWN-
12	GPIO2		37	I2C_SDA
13	GPIO3		36	I2C_SCL
14	GPIO4		35	CAN_RX
15	GPIO5		34	CAN_TX
16	GPIO6		33	GND
17	GPIO7		32	SPI_SCK
18	SAM1_CLK		31	SPI_MOSI
19	SAM1_IO		30	SPI_MISO
20	SAM1_RES		29	SPI_SS-
21	GND		28	COM2_RX
22	SAM2_CLK		27	COM2_TX
23	SAM2_IO		26	SPK+
24	SAM2_RES		25	BOOT