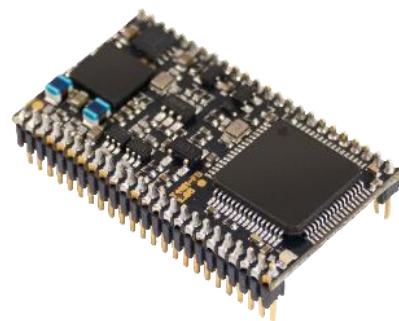


TWN4 MultiTech Nano Plus M

Miniature RFID module (LF/HF/NFC) for external direct matched antenna



CO version (SMT mounting)



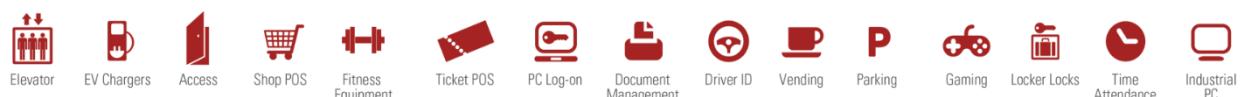
C1 version (THT mounting)

With the TWN4 MultiTech Nano family, ELATEC offers extremely compact RFID modules that are also fully compliant with the TWN4 technology. Their miniature size and low energy consumption give the option to integrate them in smaller battery-powered consumer devices, like tablet PCs. Furthermore, their components are mounted on one side only, which facilitates easy placement on the main circuit board. These devices are the ideal solution in case of particular restrictions during the installation (space limitations, metal surrounding the reader antenna, etc.).

Key features of the TWN4 MultiTech Nano Plus M RFID module include compact dimensions and two mounting options (Surface Mounting or Through Hole Technology) for an easy integration into almost all mobile and battery-operated applications, as well as the possibility to read more than 60 RFID technologies from low (125 kHz/134.2 kHz) and high (13.56 MHz) frequency bands, including NFC, depending on the external antenna/mother board connected to the module. The ELATEC B option also gives the possibility to connect the reader module with an external BLE module.

Special features:

- + Easy integration thanks to a compact design and components mounted only on one side
- + Available with edge-plated pads for easy and reliable surface mounting (CO version) or with connectors (C1 version) for THT mounting
- + Supports connection of external ISO 7816 compatible SAM cards
- + Powerful SDK for writing apps which are executed directly on the module
- + Firmware update in the field possible
- + On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
- + Supports transparent data exchange with RFID media
- + CCID and PC/SC 2.01
- + Development board and I/O Extender for interface testing available on request



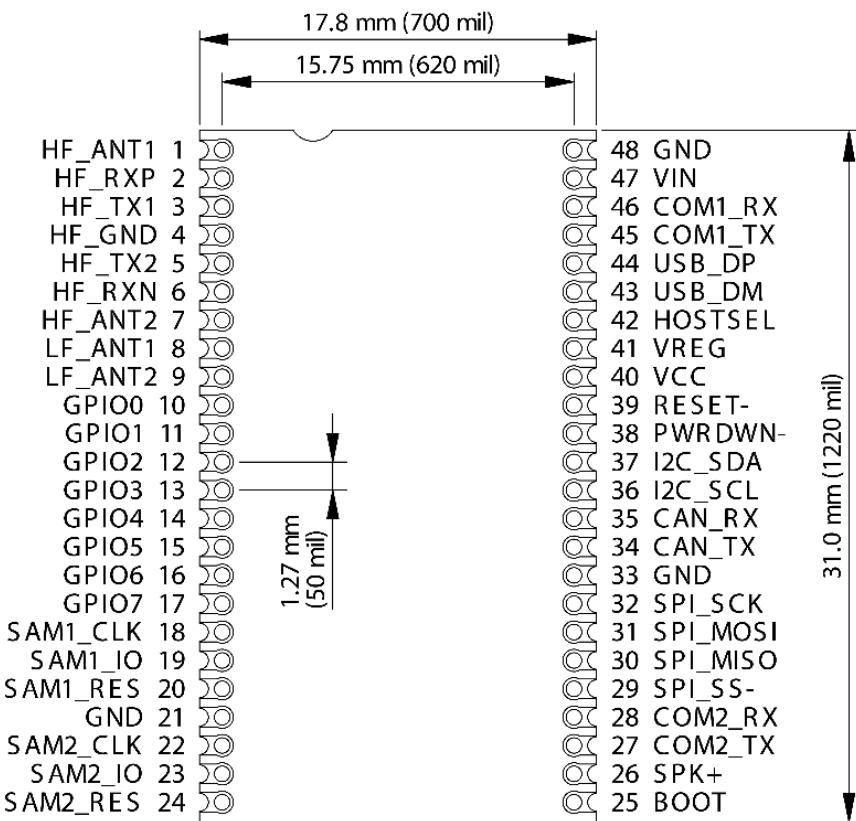
TECHNICAL DATA

FREQUENCIES	125 kHz, 134.2 kHz (LF) / 13.56 MHz (HF)
ANTENNAS	Externally, direct matched for 13.56 MHz – 490 μ H \pm 5% for 125 kHz/134.2 kHz
DIMENSIONS (L X W X H)	C0 version: approx. 31.00 x 17.80 x 2.70 mm / 1.22 x 0.70 x 0.11 inch C1 version: approx. 31.00 x 17.80 x 8.11 mm / 1.22 x 0.70 x 0.32 inch
POWER	Direct power supply: 3.3 V \pm 5% On-board voltage regulator: 4.3 V – 5.5 V ES1/PS2 classified power source according to IEC 62368-1, short-circuit current < 8 A
CURRENT CONSUMPTION	RF field on: 160 mA typically / Sleep: 500 μ A typ.
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
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500,000 hours
WEIGHT	Approx. 7 g / 0.25 oz
SUPPORTED OPTIONS AND TRANSPONDERS	Depending on the firmware version and installed options, ELATEC readers and modules can support a wide range of RFID technologies. Please refer to the relevant ELATEC transponder matrix (available at www.elatec-rfid.com/int/transponder-technology) for more information about the available options and RFID technologies supported by the product.
OS SUPPORT	Windows 7 (32-/64-bit) and higher versions, Linux, Android ¹⁾ , iOS ¹⁾ , MAC OS X ¹⁾
PERIPHERAL INTERFACES	USB, 2 x TTL serial (logic level 3.3 V, CMOS 5 V tolerant), I ² C, SPI, 8 GPIOs, Clock/Data, Wiegand D0/D1
TRANSMISSION SPEED	Host: USB Full speed (12 Mbit/s), TTL serial: up to 115,200 baud, HF Air: up to 848 kbit/s
CERTIFICATION NAME	TWN4 MultiTech Nano Plus M
CERTIFICATIONS	Non-exhaustive list ²⁾ : CE/RED, FCC, IC, TAA compliant, REACH and RoHS-III compliant
ORDER CODES	C0 version (SMT) T4NM-FDC0-E Standard reader module T4NM-FDC0-PE Reader module with P option T4NM-FDC0-PIE Reader module with PI options
	C1 version (THT) T4NM-FDC1-E Standard reader module T4NM-FDC1-PE Reader module with P option T4NM-FDC1-PIE Reader module with PI options

¹⁾On request

²⁾Please note that TWN4 MultiTech Nano Plus M has been tested with an external printed circuit board equipped with specific RFID LF and HF antennas (refer to the user manual for more information). The use of TWN4 MultiTech Nano Plus M with other antennas is not part of the approvals granted to the product. In case TWN4 MultiTech Nano Plus M is used with other antennas, a separate approval, additional testing or new authorization for a use with these specific antennas is required. Contact ELATEC for more information.

TECHNICAL DRAWINGS



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