

TWN4 MultiTech Nano LEGIC 63 M

Miniature RFID module (LF/HF/NFC/BLE) for external 50 Ohm antenna



C0 version (SMT mounting)
Top view



C0 version (SMT mounting)
Rear view

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 LEGIC 63 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 (LF) and high (HF) frequency bands, including NFC, depending on the external antenna/mother board connected to the module. Furthermore, the module is also equipped with an integrated BLE module and the LEGIC frontend chip SM-6300 (optionally, SM-6300init) that supports LEGIC Connect.

Special features:

- + Easy integration thanks to a compact design and components mounted only on one side
- + Integrated BLE module and LEGIC frontend chip SM-6300 or SM-6300init with LEGIC Connect support
- + Supports segment initialization function (LEGIC SM-6300init frontend only)
- + Supports connection of external ISO 7816 compatible SAM cards
- + Powerful SDK for writing apps which are executed directly on the reader
- + 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
- + Development board and I/O Extender for interface testing 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

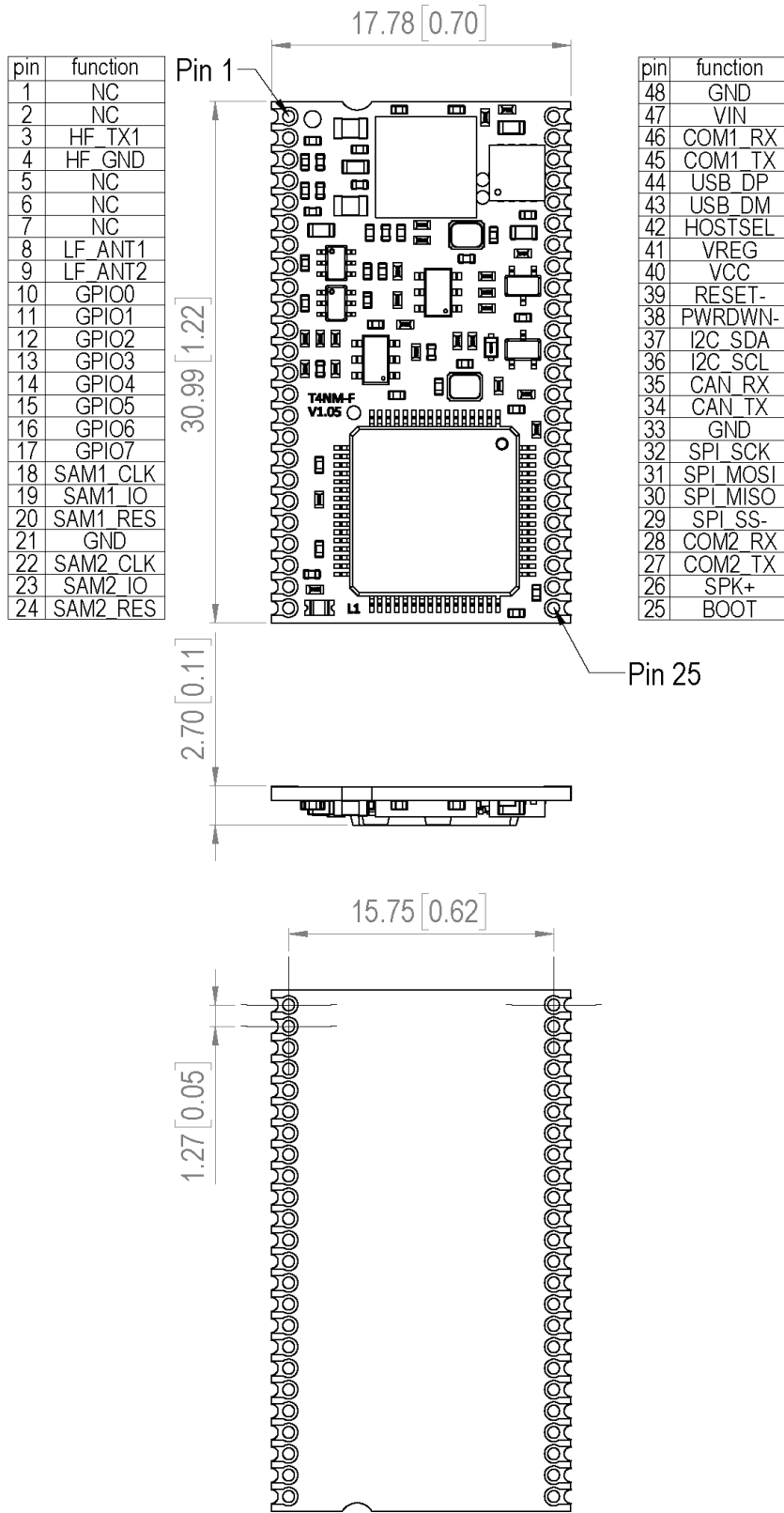
TECHNICAL DATA

FREQUENCIES	125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)
ANTENNAS	Externally, 50 Ohm for 13.56 MHz – 490 µH ± 5% for 125 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 ± 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 µA typ. / Cyclic operation: 130 mA 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
BLUETOOTH LOW ENERGY	BLE version 5.0 (upgradable) LEGIC Connect on demand
MTBF	500,000 hours
WEIGHT	Approx. 8 g / 0.28 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, BLE Air: up to 1 Mbit/s
CERTIFICATION NAME	TWN4 MultiTech Nano LEGIC 63 M
CERTIFICATIONS	Non-exhaustive list ²⁾ : CE/RED, REACH and RoHS-III compliant
ORDER CODES	<p>C0 version (SMT)</p> <p>T4NM-D5C0 Standard reader module</p> <p>T4NM-D5C0-P Reader module with P option</p> <p>T4NM-D5C0-5 Standard reader module with LEGIC SM-6300init</p> <p>T4NM-D5C0-5P Reader module with P option and LEGIC SM-6300init</p> <p>C1 version (THT)</p> <p>T4NM-D5C1 Standard reader module</p> <p>T4NM-D5C1-P Reader module with P option</p> <p>T4NM-D5C1-5 Standard reader module with LEGIC SM-6300init</p> <p>T4NM-D5C1-5P Reader module with P option and LEGIC SM-6300init</p>

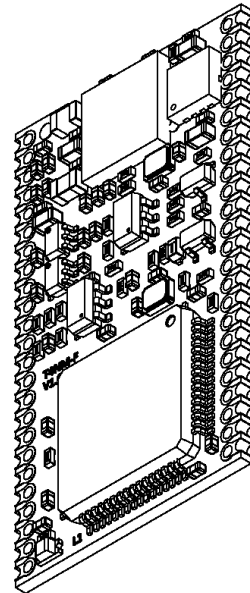
¹⁾On request

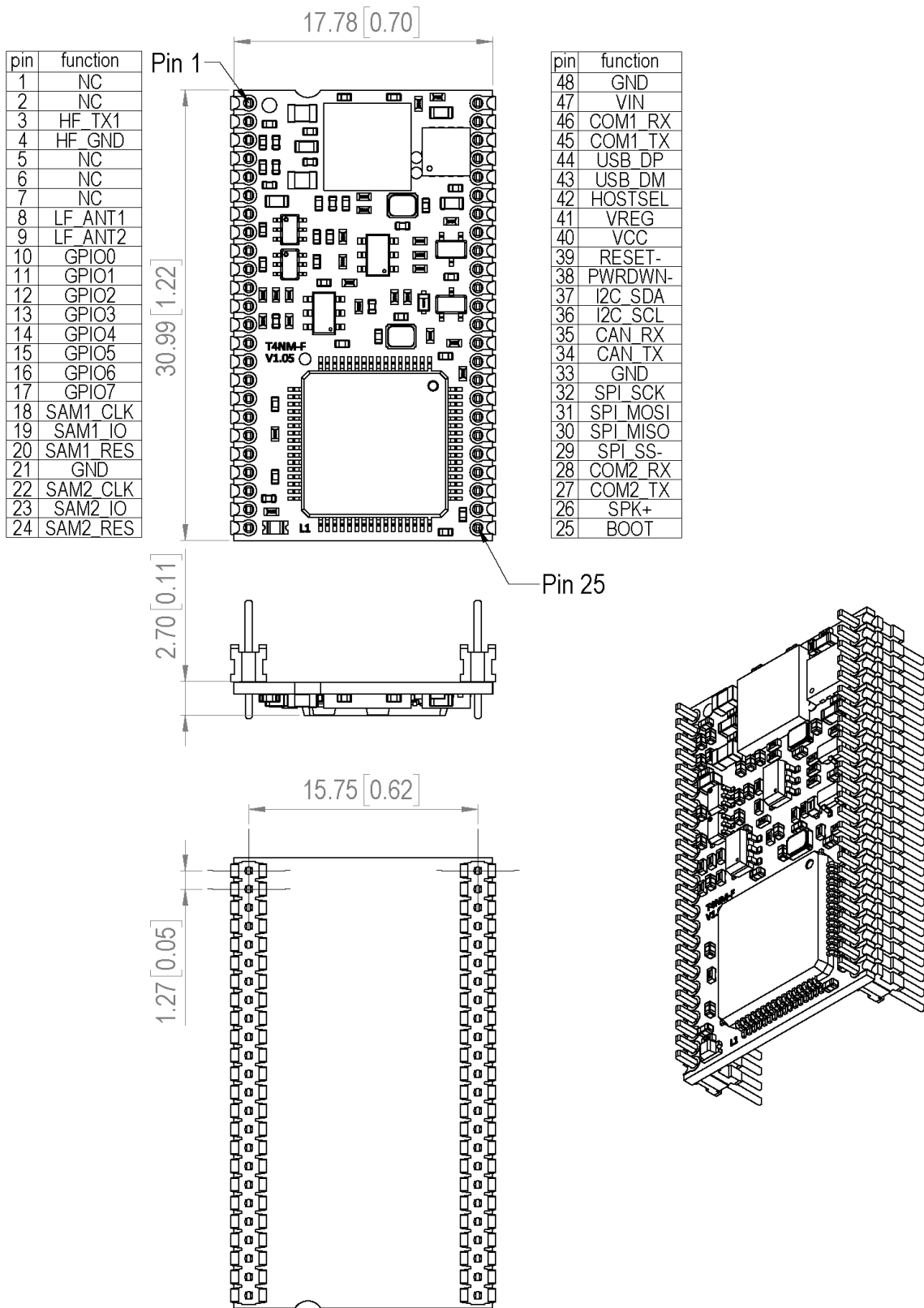
²⁾Please note that TWN4 MultiTech Nano LEGIC 63 M has been tested with an external printed circuit board equipped with specific RFID LF and HF antennas (refer to the user manual for more information). The use of TWN4 MultiTech Nano LEGIC 63 M with other antennas is not part of the approvals granted to the product. In case TWN4 MultiTech Nano LEGIC 63 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



CO version





C1 version

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