



**Technical Data Sheet**

**MicroDem2**

Microdem2-Man-v3

## Introduction

A MicroDem2 is demonstration module designed for “micro” series readers (i.e. UM-005, MM-U57D, UM-RWDM, Q5M-005, H1M-005-p, MM-005, I1M-005), which feature RS-232 interface with TTL levels.

On PCB of the module there are located a logic state RS-TTL bus converters, which convert them to RS-232 or RS-485 interface states.

Owing to these converters, the reader module can be connected to PC (RS-232) or to RS-485 bus directly. (In case of operation via RS-232, it is possible to test reader by means of free tool „Framer” software.)

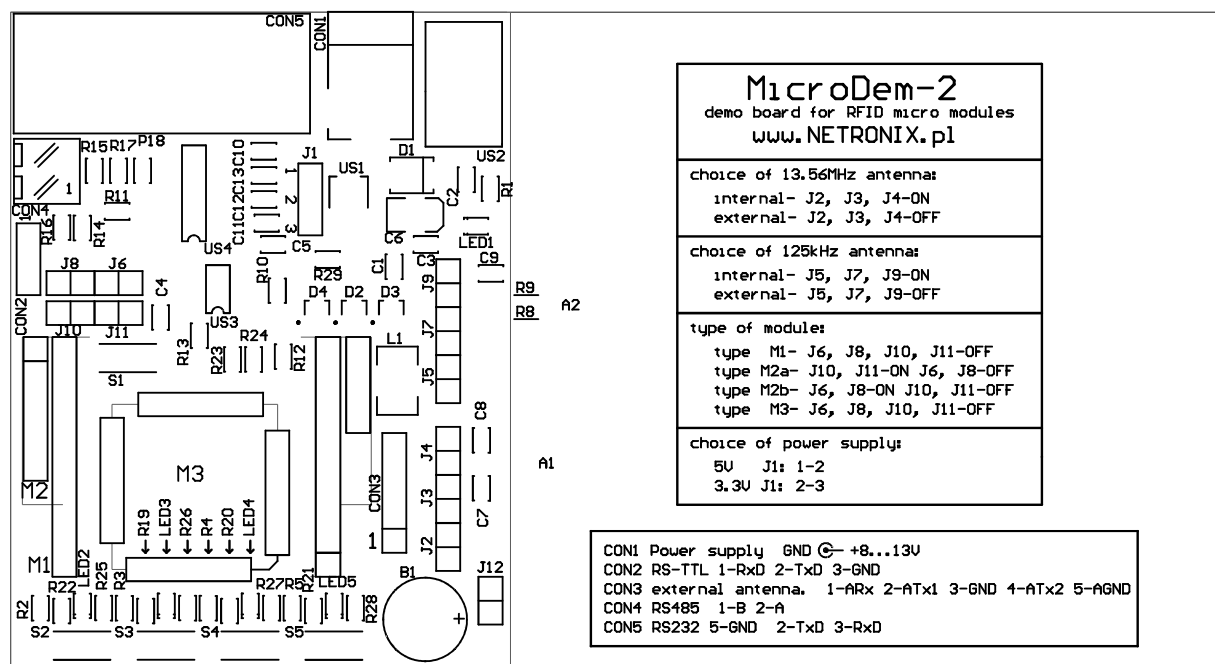
On PCB of the module there are designed two antennas:

- 13.56 MHz for MM-005, I1M-005 or MM-U57D module
- 125 kHz for UM-005, Q5M-005, H1M-005-p, HSM-005 or UM-RWDM module

The MicroDem2 demonstration module is equipped with four switches, which allow testing the I/O terminals of the modules and LED's showing states of these terminals.

All options and settings can be done by means of jumper switching.

## Terminal layout



Picture: PCB - view from component side

**Jumper settings depending on demonstration mode****Selecting RS interface type:**

RS232 - CON5 connector

RS485 - CON4 connector

RSTTL – CON2 connector

Jumper settings

	J2, J3, J4	J5 J7 J9	J6 J8	J10 J11	U supply	Type
UM-005, UM-RWD-M	OFF	ON	ON	OFF	5 V	M2b
MM-005, I1M-005, MM-U57D	ON	OFF	OFF	OFF	5 V	M1
Another 125 kHz	OFF	ON	OFF	ON	5 V	M2a
Another 13,56 MHz	ON	OFF	OFF	ON	5 V	M2a

**Selecting external antenna:**

Jumpers: J2,J3,J4,J5,J7,J9 - OFF

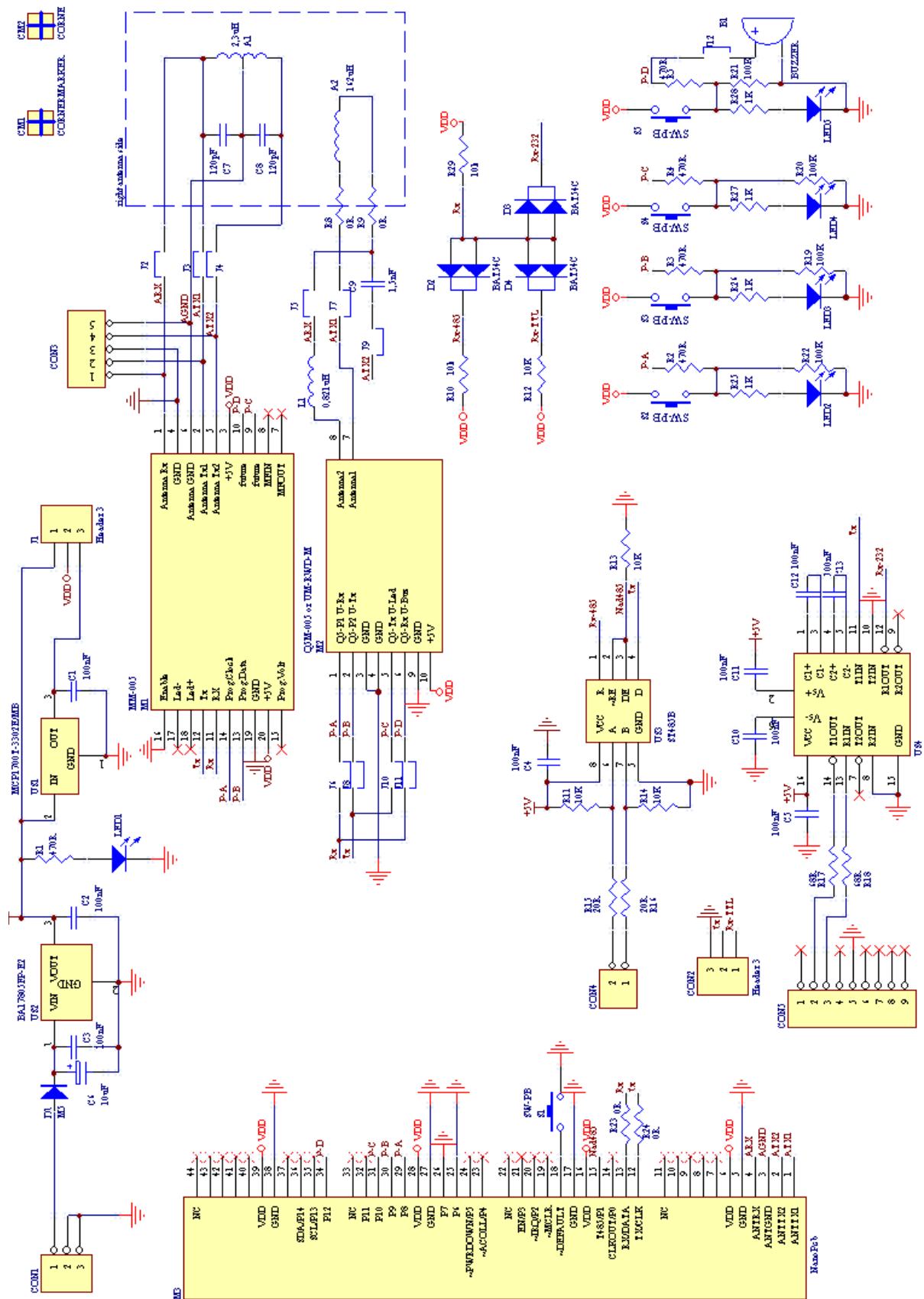
**Selection: with / without buzzer:**

Buzzer enabled: J12-ON

Buzzer disabled: J12-OFF

The “buzzer enabled” option is used for UM-005 module, which controls one of I/O terminals, after successful reading of transponder.

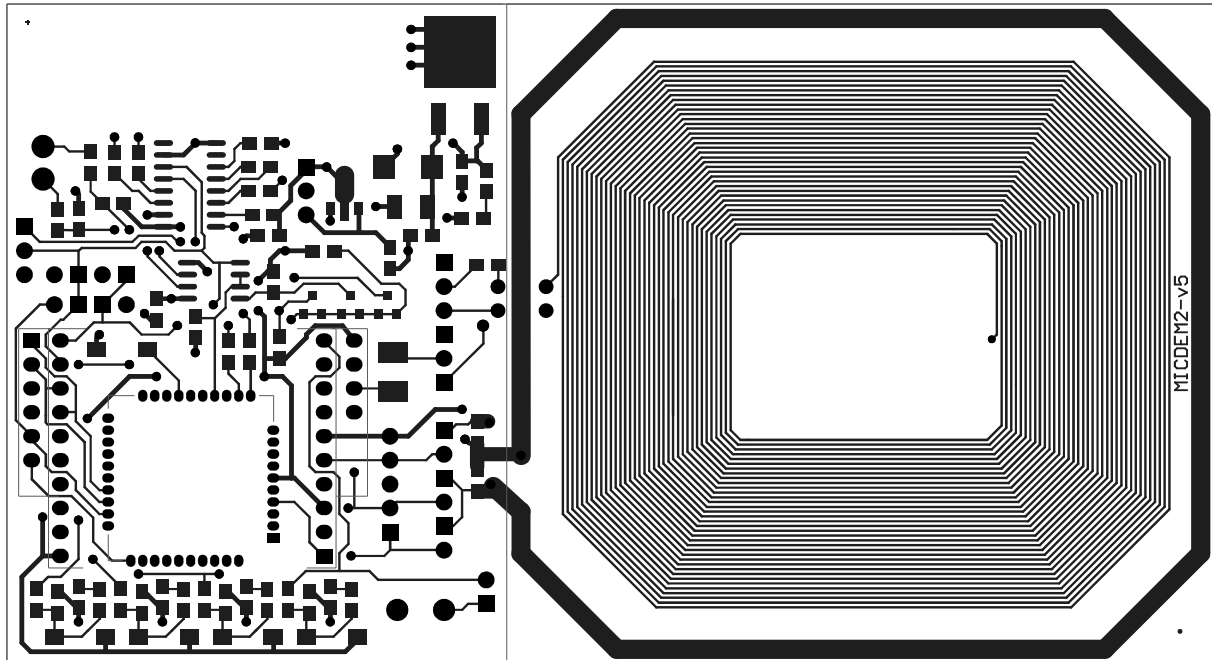
### MicroDem2 circuit diagram



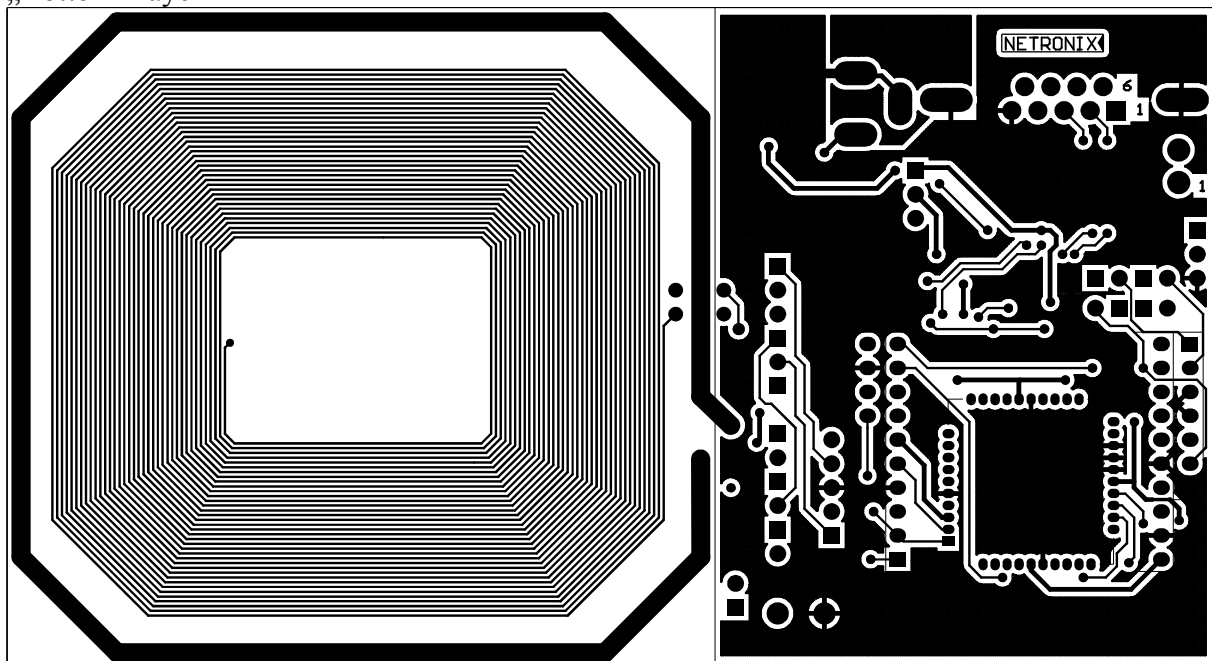
Picture: MicroDem2 circuit diagram

## PCB circuit

“Top” layer



„Bottom” layer



125 kHz antenna parameters:

“top” layer: 37 turns,

“bottom” layer: 37 turns,

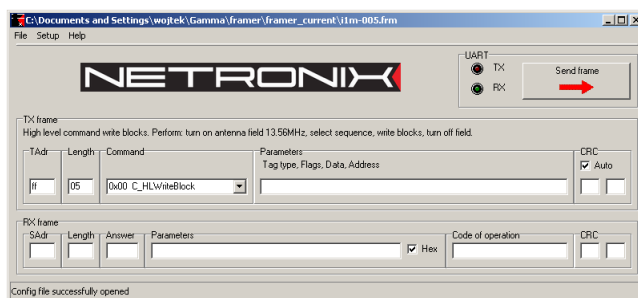
external dimensions: 1975 x 1645 mils.

13.56 MHz antenna parameters:

“top” layer: 1 turn,

“bottom” layer: 1 turn,

external dimensions: 2900 x 2700 mils.



The MicroDem2 can be tested with some reader modules by means of free tool FRAMER software, which makes work with frames easier.

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