Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
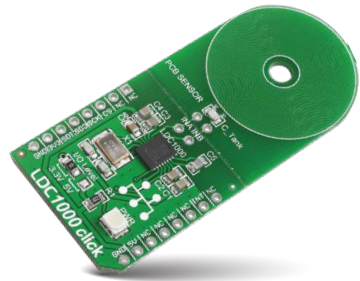

## Contact us

LDC1000 click™

1. Introduction
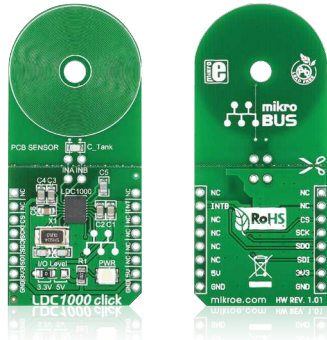
LDC1000 click™ carries the world's first **inductance-to-digital** converter IC, along with a detachable sensor (an LC tank comprising a 36-turn PCB coil and a 100pF 1% NPO capacitor). The board can be used for short range measurements of the position, motion or composition of conductive targets. LDC1000 click™ communicates with the target board through mikroBUS™ SPI (CS, SCK, MISO, MOSI) and INT lines. The board is designed to use either a 3.3V or a 5V power supply.

2. Soldering the headers

Before using your click™ board, make sure to solder 1x8 male headers to both left and right side of the board. Two 1x8 male headers are included with the board in the package.
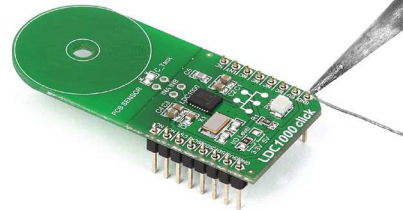
❶
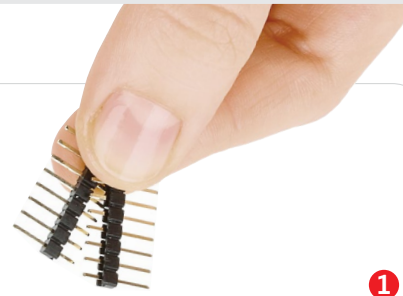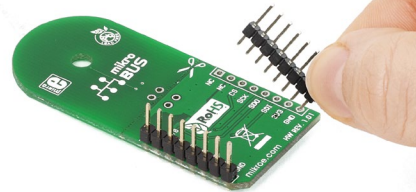
❷ Turn the board upside down so that the bottom side is facing you upwards. Place shorter pins of the header into the appropriate soldering pads.

❸ Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.

3. Plugging the board in

Once you have soldered the headers your board is ready to be placed into the desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all the pins are aligned correctly, push the board all the way into the socket.
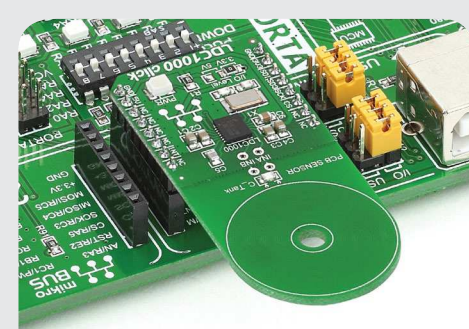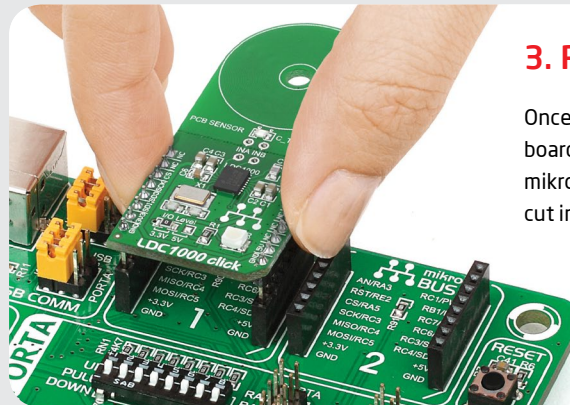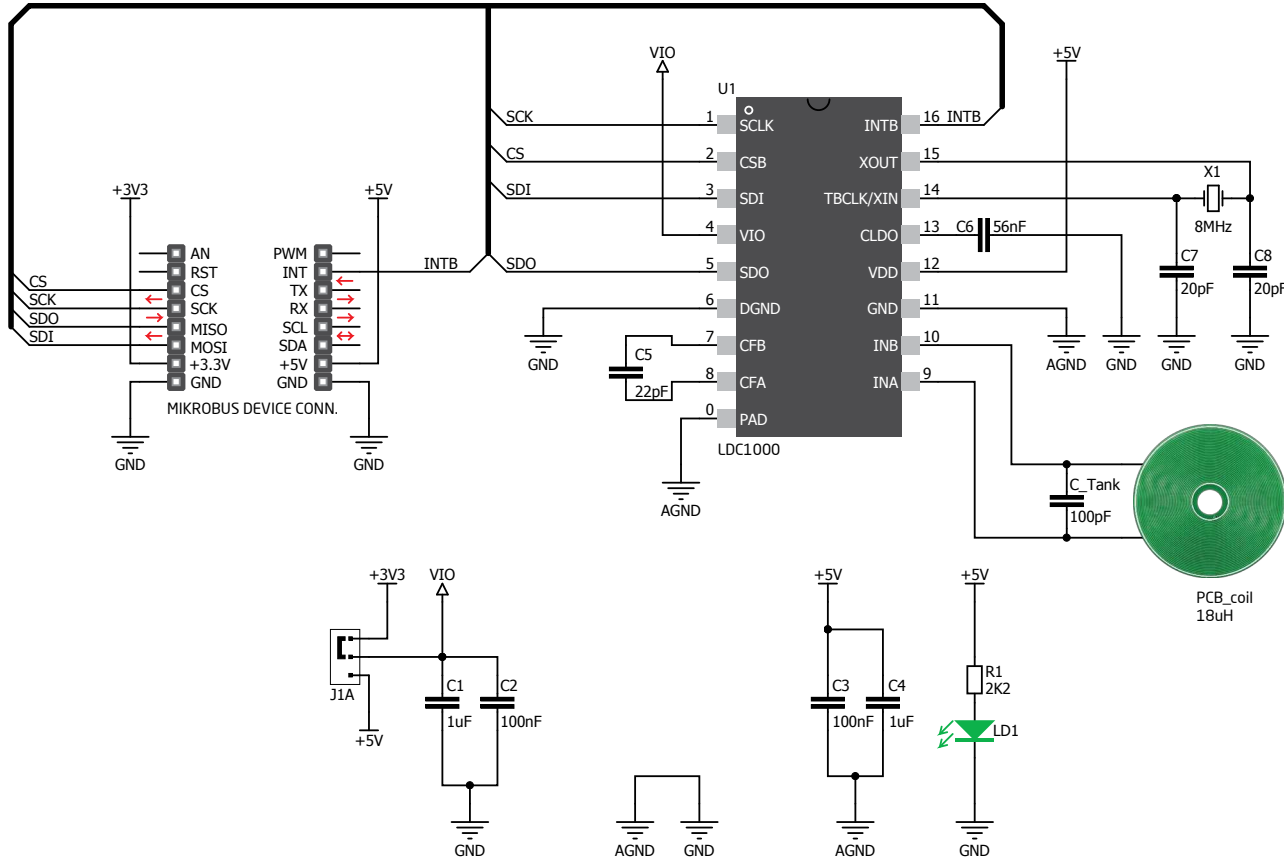
4. Essential features

Inductive sensing is a contactless, magnet-free technology. It's highly reliable making it suitable for use in harsh environments - dust, dirt, oil or moisture don't hinder its performance. LDC1000 click™ allows you to achieve a high level of sensing precision with a sub-micron resolution in short range applications. You can use it to infer attributes such as position, rotation, motion, twist and torque, shape and even defects in the material composition from any conductive target. Onboard INA and INB pins allow you to replace the provided detachable sensor and solder your own.
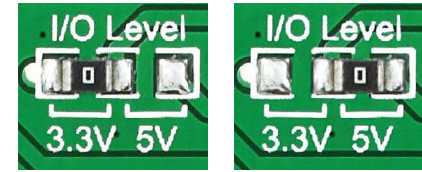
click™ BOARD

www.mikroe.com

5. LDC1000 click™ board schematic

MIKROBUS DEVICE CONN.

U1

1	SCLK	INTB	16	INTB
2	CSB	XOUT	15	
3	SDI	TBCLK/XIN	14	
4	VIO	CLDO	13	
5	SDO	VDD	12	
6	DGND	GND	11	
7	CFB	INB	10	
8	CFA	INA	9	
0	PAD			

LDC1000

X1
8MHz

C6 56nF
C7 20pF
C8 20pF

C5 22pF

C_Tank
100pF

PCB_coil
18uH

J1A

C1 1uF
C2 100nF

C3 100nF
C4 1uF

R1 2K2

LD1

6. SMD jumper

To switch between 3.3V and 5V power supplies use the on-board zero-ohm SMD jumper. By default it's soldered in the 3.3V position.

7. Code examples

Once you have done all the necessary preparations, it's time to get your click™ board up and running. We have provided examples for mikroC™, mikroBasic™ and mikroPascal™ compilers on our **Libstock** website. Just download them and you are ready to start.

8. Support

MikroElektronika offers **free tech support (www.mikroe.com/support)** until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!

MikroElektronika
DEVELOPMENT TOOLS | COMPILERS | BOOKS