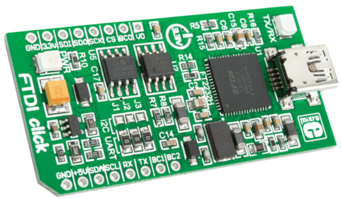
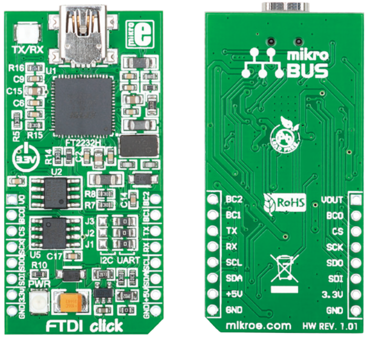


FTDI click™

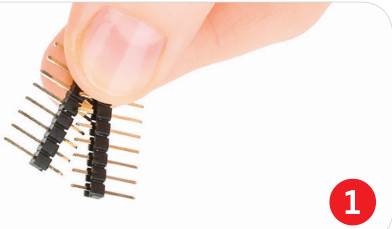
1. Introduction



FTDI Click™ is an accessory board in **mikroBUS™** form factor. It's a compact and easy solution for adding USB to UART/SPI/I²C communication to your design. It features **FT2232H** dual high speed USB to multipurpose IC, DA converter as well as EEPROM. FTDI Click™ communicates with the target board microcontroller via **mikroBUS™** SPI (MOSI, MISO, SCK, CS), I²C (SDA, SCL), UART (Tx, Rx), RST, PWM, AN and INT lines. LED diode (GREEN) indicates the presence of power supply.

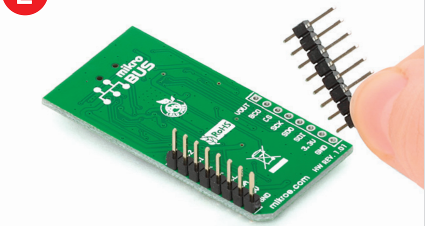
2. Soldering the headers

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.



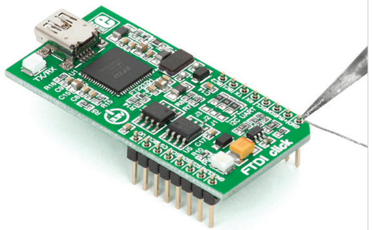
1

2



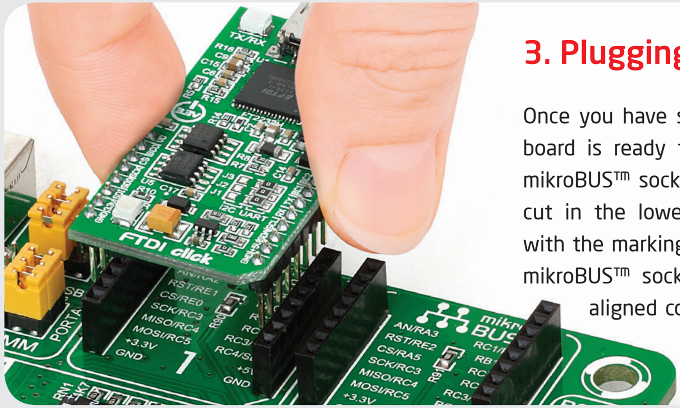
Turn the board upside down so that bottom side is facing you upwards. Place shorter parts of the header pins in both soldering pad locations.

3

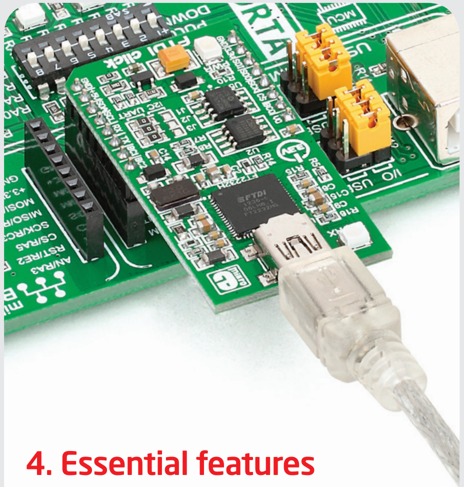


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.

3. Plugging the board in



Once you have soldered the headers your board is ready to be placed into 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 of the pins are aligned correctly, push the board all the way into the socket.



4. Essential features

FTDI Click™ with it's **FT2232H** IC is a dual high speed USB 2.0 to UART/SPI/I2C serial interfaces converter. The entire USB protocol is handled on the chip (USB drivers from FTDI are required). The board can be powered by USB cable or directly from mikroBUS socket. It is ideal for USB applications (smart card readers, instrumentation, industrial control, MP3 player interface, digital camera interface, bar code readers) and many more.

click™
BOARD
www.mikroe.com

FTDI click Manual
ver. 1.01

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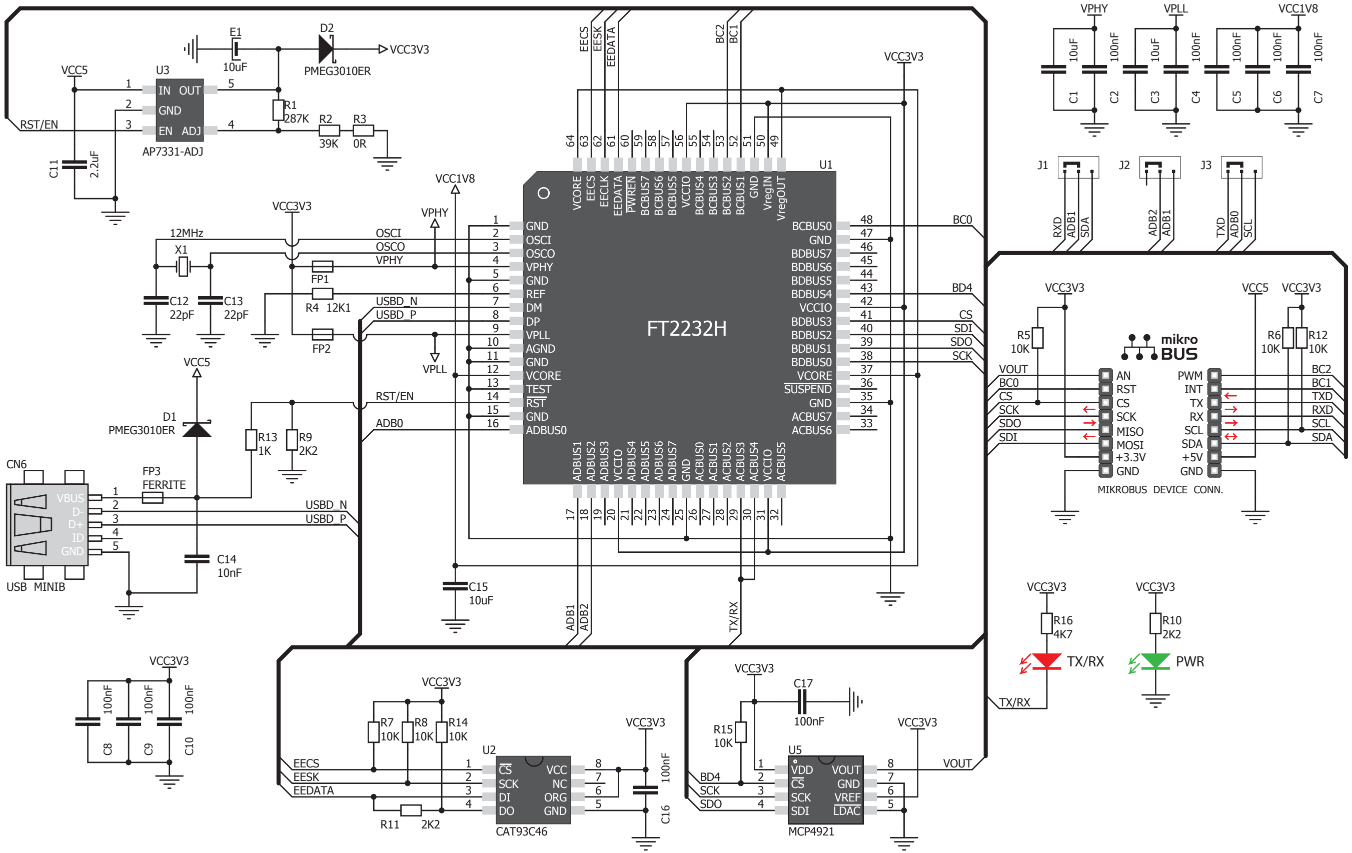
5. FTDI Click™ Board Schematic



U1
FT2232H
GND
OSCI
OSCO
VPHY
REF
DM
DP
VPLL
AGND
VCORE
TEST
RST
ADBUS0
VCORE
ECS
EECS
EECLK
EEDATA
PWREN
BCBUS7
BCBUS6
BCBUS5
VCCIO
BCBUS4
BCBUS3
BCBUS2
BCBUS1
VregIN
VregOUT
BCBUS0
BDBUS7
BDBUS6
BDBUS5
BDBUS4
VCCIO
BDBUS3
BDBUS2
BDBUS1
BDBUS0
SUSPEND
ACBUS7
ACBUS6
ADBUS1
ADBUS2
ADBUS3
VCCIO
ADBUS4
ADBUS5
ADBUS6
ADBUS7
ACBUS0
ACBUS1
ACBUS2
ACBUS3
ACBUS4
ACBUS5
U3
AP7331-ADJ
IN
OUT
EN
ADJ
VCC5
RST/EN
E1
10uF
D2
PMEG3010ER
VCC3V3
R1
287K
R2
39K
R3
0R
C11
2.2uF
VCC1V8
12MHz
X1
C12
22pF
C13
22pF
FP1
FP2
R4
12K1
USBD_N
USBD_P
VPHY
VPLL
RST/EN
ADB0
D1
PMEG3010ER
R13
1K
R9
2K2
CN6
VBUS
D-
D+
ID
GND
USB MINIB
FP3
FERRITE
C14
10nF
C15
10uF
ADB1
ADB2
TX/RX
BC0
BD4
CS
SDI
SDO
SCK
C1
10uF
C2
100nF
C3
10uF
C4
100nF
C5
100nF
C6
100nF
C7
100nF
J1
J2
J3
RXD
ADB1
SDA
ADB2
ADB1
TXD
ADB0
SCL
R5
10K
R6
10K
R12
10K
VCC5
mikro BUS
VOUT
BC0
CS
SCK
SDO
SDI
AN
RST
CS
SCK
MISO
MOSI
+3.3V
GND
PWM
INT
TX
RX
SCL
SDA
+5V
GND
BC2
BC1
TXD
RXD
SCL
SDA
MIKROBUS DEVICE CONN.
R16
4K7
TX/RX
R10
2K2
PWR
C8
100nF
C9
100nF
C10
100nF
R7
10K
R8
10K
R14
10K
R11
2K2
U2
CAT93C46
EECS
EESK
EEDATA
VCC
NC
ORG
DO
DI
C16
100nF
C17
100nF
R15
10K
U5
MCP4921
VDD
VOUT
GND
VREF
LDAC
BD4
SCK
SDO

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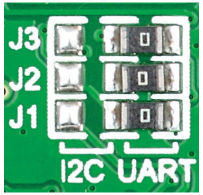
6. SMD Jumpers



J3
J2
J1
0
0
0
I2C UART

The FTDI Click™ board communicates with the main board microcontroller via I²C or UART interface depending on the position of the **J1**, **J2** and **J3** SMD jumpers. These jumpers are soldered in UART position by default.

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 the examples for mikroC, mikroBasic and mikroPascal compilers on our **Libstock** website. Just download them and you are ready to start.

LIBSTOCK.com

8. Support

MikroElektronika offers **Free Tech Support (www.mikroe.com/esupport)** until the end of product lifetime, so if something goes wrong, we are ready and willing to help!

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