GPS click™ L10

1. Introduction

GPS Click - L10 is an accessory board in **mikroBus™** form factor. It's a compact solution for adding GPS functionality to your device. It features **Quectel® L10,** high performance MTK positioning engine. GPS Click - L10 communicates with target board through UART or I²C interface. Data can be acquired using PC application through USB connection. Board features connector compatible with active and passive antennas. It can operate on 3.3V power supply only.
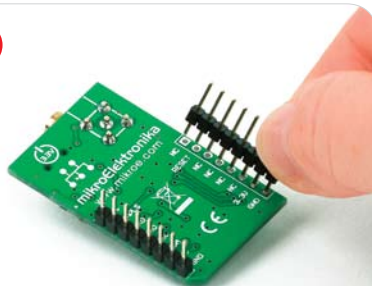
2. Soldering the headers

Before using your click board, make sure to solder the provided 1x8 male headers to both sides 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 pins are aligned correctly, push the board all the way into the socket.

4. Features and applications

GPS Click - L10 board with it's **Quectel® L10** module supports 210 PRN channels, with 66 search channels and 22 simultaneous tracking channels. It has low tracking power consumption of 38mA, 4Mbit flash memory, superior anti-jamming design, and up to 5Hz update rate. Its ease of integration results in fast time-to-market in a wide range of automotive, consumer and industrial applications.
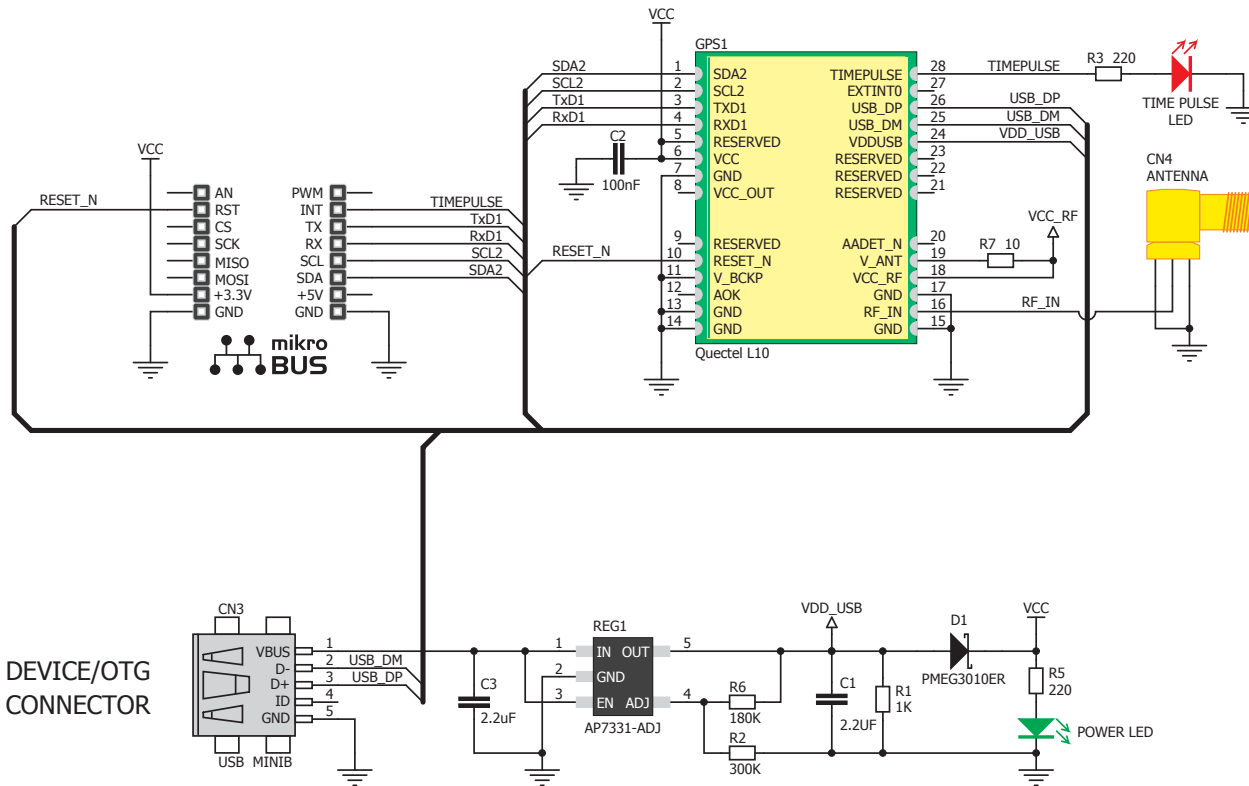
5. GPS click L10 Board Schematics

GPS1

SDA2	1	SDA2	TIMEPULSE	28	TIMEPULSE
SCL2	2	SCL2	EXTINT0	27	
TxD1	3	TXD1	USB_DP	26	USB_DP
RxD1	4	RXD1	USB_DM	25	USB_DM
	5	RESERVED	VDDUSB	24	VDD_USB
	6	VCC	RESERVED	23	
	7	GND	RESERVED	22	
	8	VCC_OUT	RESERVED	21	
	9	RESERVED	AADET_N	20	
RESET_N	10	RESET_N	V_ANT	19	
	11	V_BCKP	VCC_RF	18	
	12	AOK	GND	17	
	13	GND	RF_IN	16	RF_IN
	14	GND	GND	15	

Quectel L10

VCC

C2 100nF

TIMEPULSE — R3 220 — TIME PULSE LED

VCC_RF — R7 10

CN4 ANTENNA

RESET_N

mikroBUS

AN		PWM
RST		INT
CS		TX
SCK		RX
MISO		SDA
MOSI		SCL
+3.3V		+5V
GND		GND

TIMEPULSE
TxD1
RxD1
SCL2
SDA2

VCC

DEVICE/OTG CONNECTOR

CN3

VBUS	1	
D-	2	USB_DM
D+	3	USB_DP
ID	4	
GND	5	

USB MINIB

C3 2.2uF

REG1

IN	OUT
GND	
EN	ADJ

AP7331-ADJ

R6 180K

R2 300K

VDD_USB

C1 2.2UF

R1 1K

D1 PMEG3010ER

VCC

R5 220

POWER LED

6. Power supply - 3.3V only

Board is designed to use 3.3V power supply only. If you need to add GPS feature to your 5V prototype or development board, we recommend you to use other boards such as the SmartGPS Accessory Board:

http://www.mikroe.com/eng/products/view/122/smartgps-board/

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!

MikroElektronika
DEVELOPMENT TOOLS | COMPILERS | BOOKS