# Black Magic Probe univerzalni programator

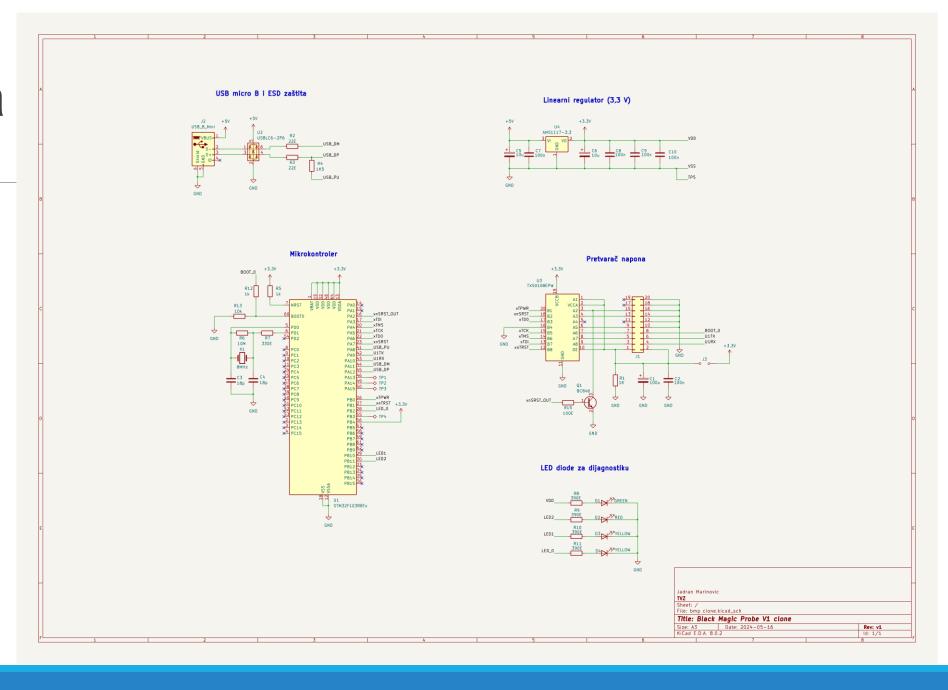
### Osnovne značajke

- Black Magic Probe je univerzalni programator i debbuger za STM 32, Atmel, Nordic i NXP mikrokontrolere
- Koristi SWD i JTAG sučelja
- STM32F103RBTx (ARM Cortex-M3 jezgra)
- Koristi vanjski 8 MHz kristal
- Pločica je veličine 55 x 31 mm
- Koristi micro USB B konektor
- Koristi 5 V i 3.3 V

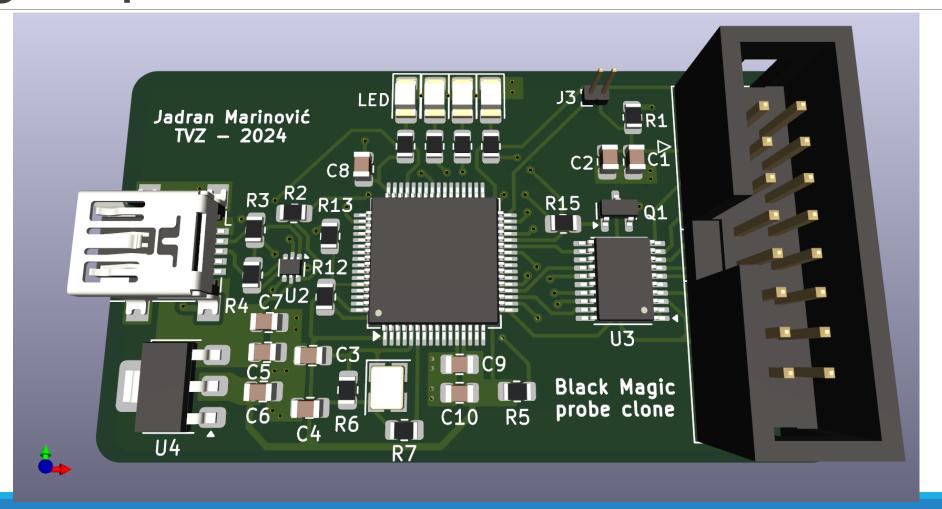
# Popis komponenata

Id Designator	Footprint	Quantity	Designation
1R7	R_0805_2012Metric	1	330E
2C1	C_0805_2012Metric	1	100u
3 D2	LED_1206_3216Metric	1	RED
4C3,C4	C_0805_2012Metric	2	18p
5 R3,R2	R_0805_2012Metric	2	22E
6 R4	R_0805_2012Metric	1	1K5
7 U2	SOT-666	1	USBLC6-2P6
8X1	Crystal_SMD_3225-4Pin_3.2x2.5mm	1	8MHz
9 R6	R_0805_2012Metric	11	10M
10 R1	R_0805_2012Metric	1	1K
11 Q1	SOT-23	11	BC846
12U1	LQFP-64_10x10mm_P0.5mm	1	STM32F103RBTx
13 C9,C7,C2,C10,C8	C_0805_2012Metric	5	100n
14LED	LED_1206_3216Metric	1	GREEN
15 D4,D3	LED_1206_3216Metric	2	YELLOW
16 R12,R5	R_0805_2012Metric	2	1k
17 R9,R10,R11,R8	R_0805_2012Metric	4	390E
18 C6,C5	C_0805_2012Metric	2	10u
19R15	R_0805_2012Metric	11	100E
20 J1	IDC-Header_2x08_P2.54mm_Vertical	1	Conn_02x10_Odd_Even
21 J2	USB_Mini-B_Lumberg_2486_01_Horizontal	1	USB_B_Mini
22 J3	PinHeader_1x02_P1.00mm_Vertical	1	Jumper_2_Open
23 U4	SOT-223	1	AMS1117-3.3
24U3	TSSOP-20_4.4x6.5mm_P0.65mm	1	TXS0108EPW
25 R13	R_0805_2012Metric	1	10k
26TP1,TP2,TP3,TP4	TestPoint_Pad_D1.0mm	4	TestPoint_Alt

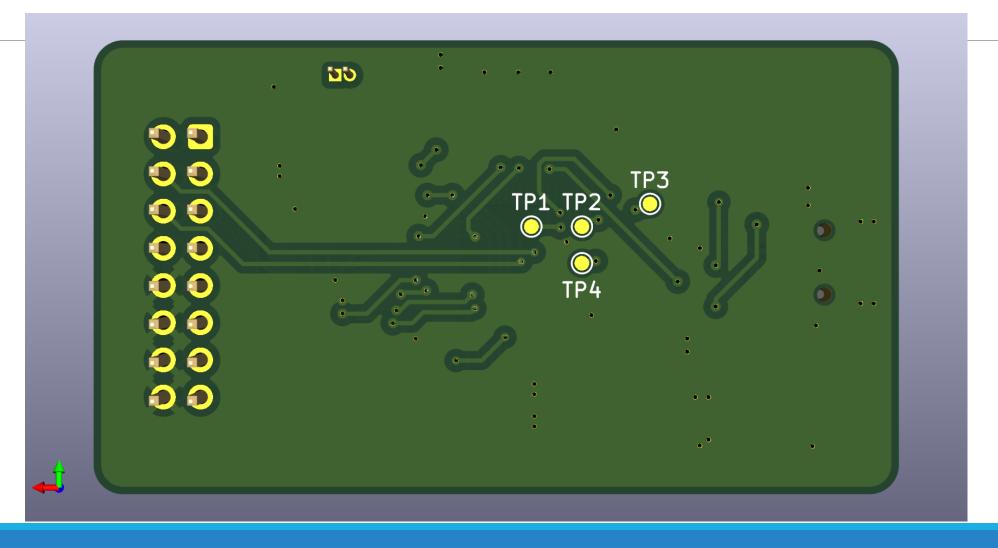
#### Električna shema



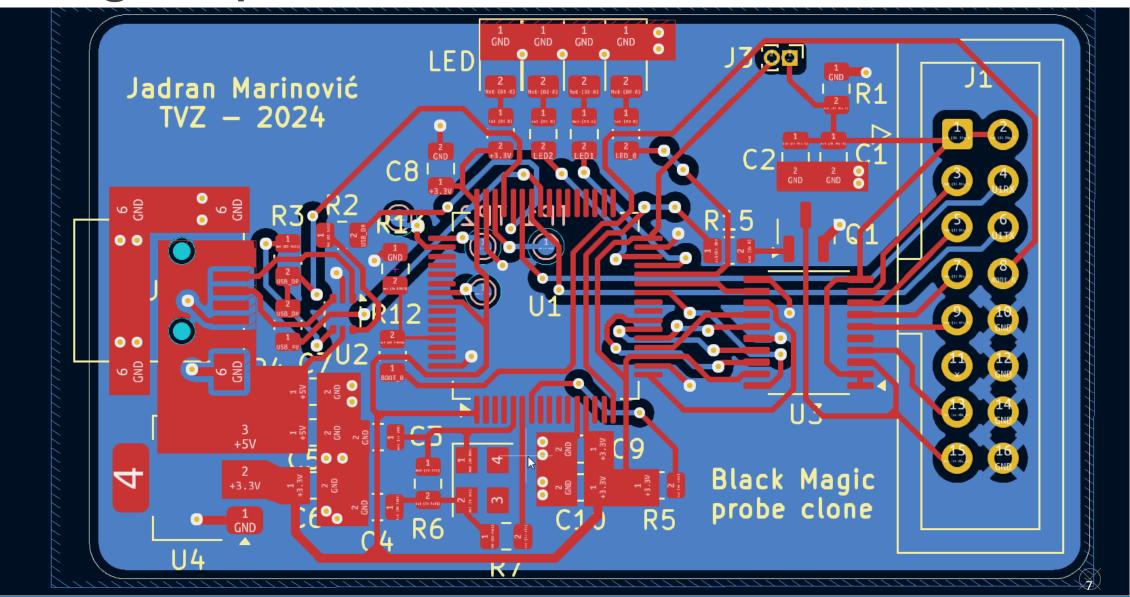
### Izgled pločice u 3D-u



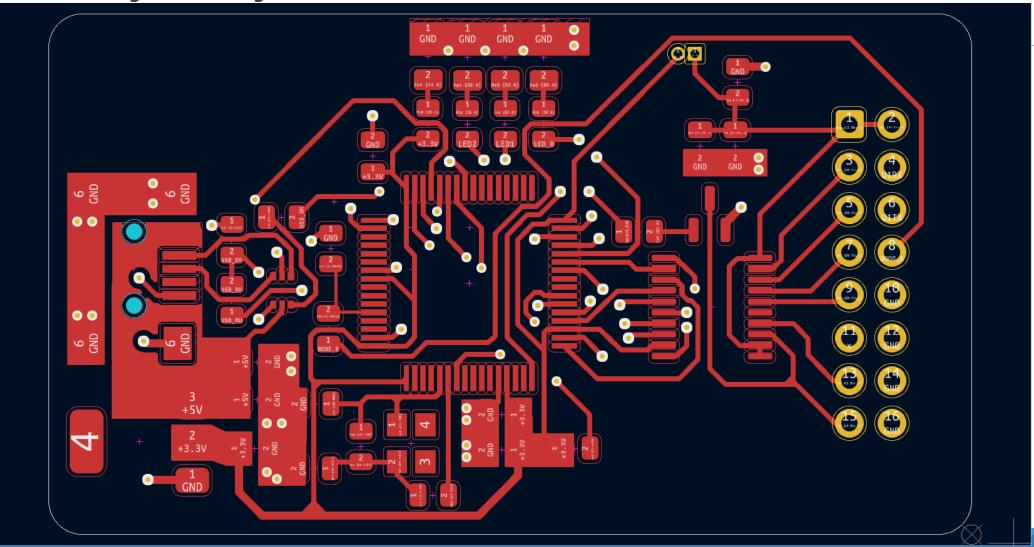
## Izgled pločice u 3D-u



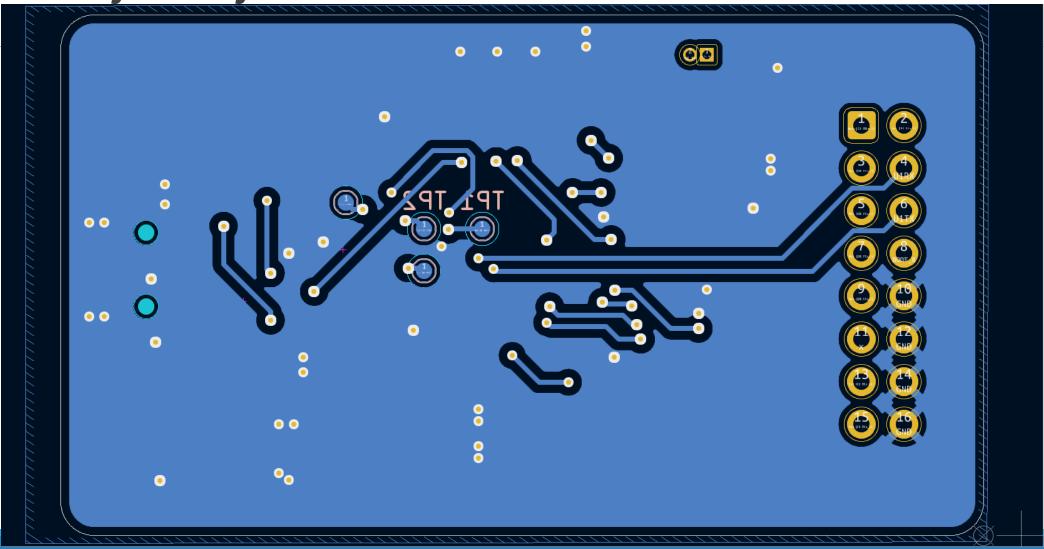
## Izgled pločice



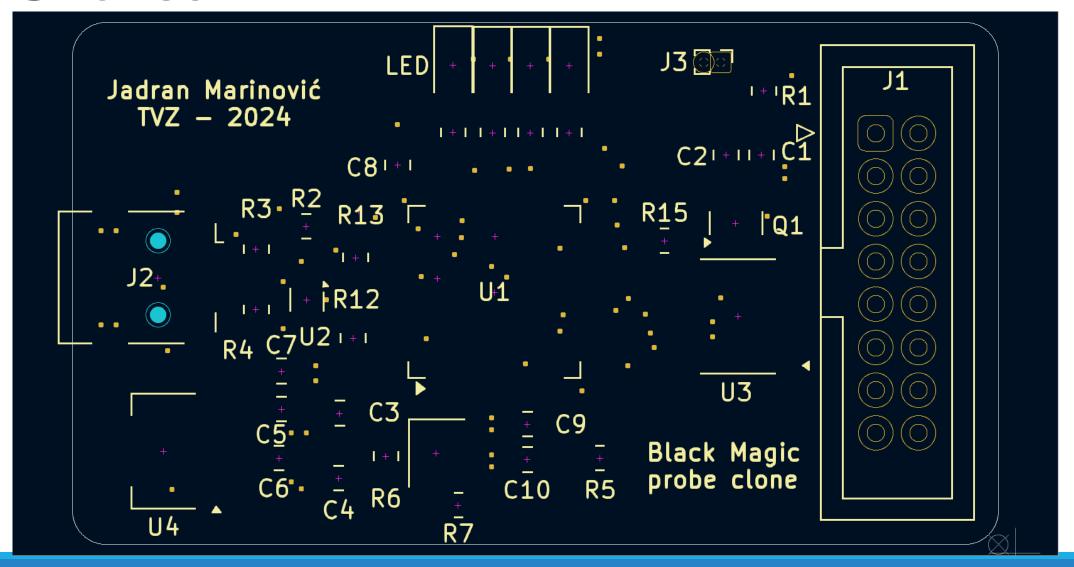
# Gornji sloj



Donji sloj



#### Sitotisak



# Hvala na pažnji