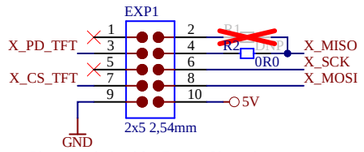
Connector to Printer

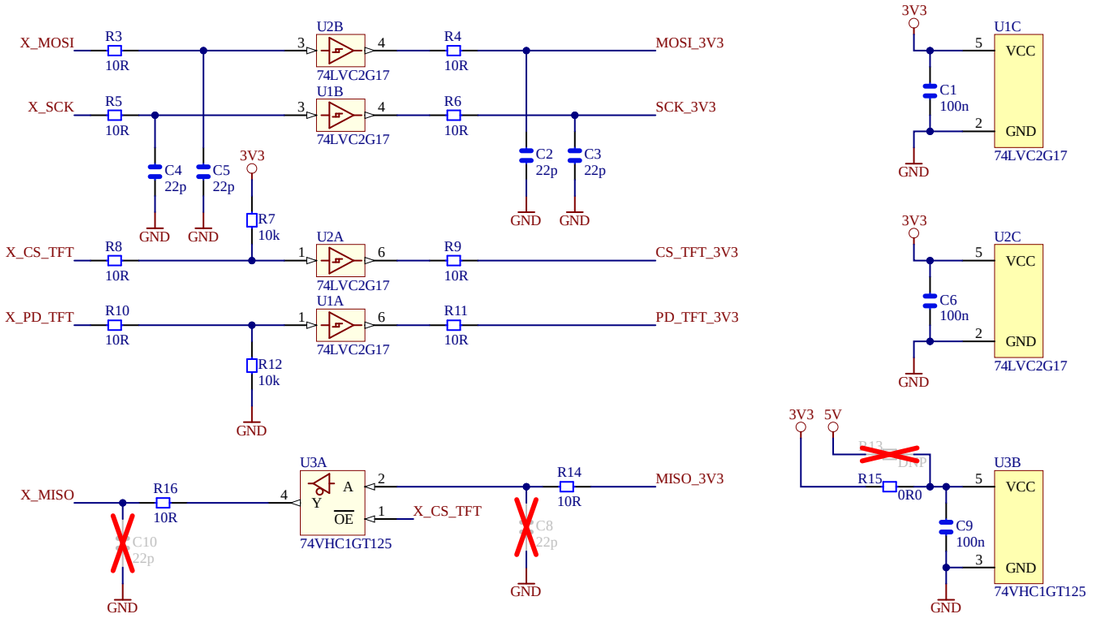


Pinout optimised for Fysetc Cheetah

For the stock CR-10/Ender-3 board, remove R2 and populate R1

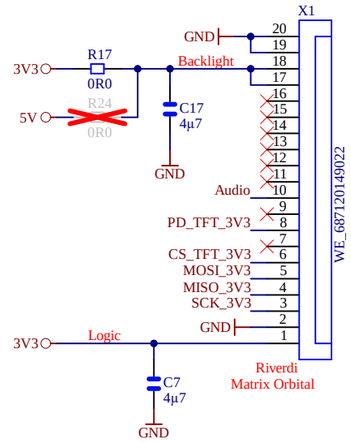
Note: many boards have the pins in the wrong order wi t h a false numeration.
For example the CR-10/Ender-3/SKR mini E3 board s show VCC on pin 1 and GND on pin 2 while the connector is populated rotated by 180° and therefore actually having VCC on pin 10 and GND on pin 9.
Others like the Fysetc Cheetah use the correct numerat i on and while on a quick glance it appears that they use a different pinout for the EXP1 header than the stock Ender-3 board it really is the same.
And others like the MKS Robin E3 have the connect o r rotated while keeping the correct numeration.

Level-Shifter 5V or 3,3V I/O from printer-controller to 3,3V I/O for the display



Display-Connector

not mirrored
-> for use with FCC cable with connections on opposite sides



Note:
Matrix Orbital EVE2 displays can not be used with a 5V backlight supply.
Matrix Orbital EVE3 displays use 3.3V by default for the backlight supply.
Matrix Orbital EVE3 displays can be converted to use 5V for the backlight supply.
Riverdi displays can use 3.3V or 5V for the backlight supply directly.

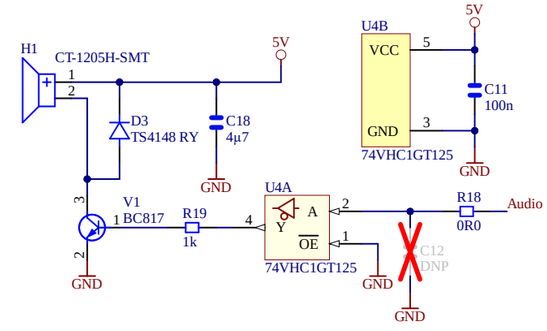
If the backlight is supplied with 5V, U6 can be used instead of U5.
If the backlight is supplied with 3.3V, using U5 instead of U6 is required at 4.3" or above.

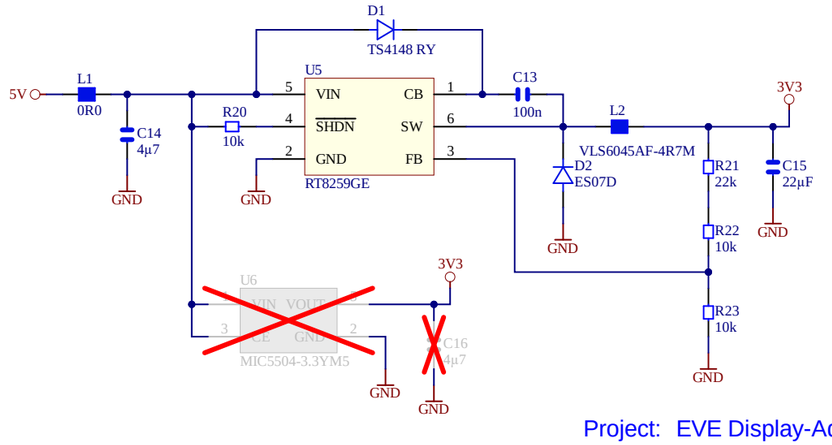
	Rumba32	ARMED	Fysetc Cheetah	Reprap GLCD	EXP1	Reprap GLCD	Fysetc Cheetah	ARMED	Rumba32
	PE8	PC9	PC9	Beeper	1 2	BTN_ENC	PC12	PC3	PE7
	PE9	PE8	PC11	LCDE	3 4	LCD_RS	PB14 (SPI2_MISO)	PE9	PE10
	PE12 (SPI4_SCK)	PB12 (SPI2_SS)	PC10	LCD4	5 6	LCD5	PB13 (SPI2_SCK)	PB13 (SPI2_SCK)	PE13 (SPI4_MISO)
	PE14 (SPI4_MOSI)	PB14 (SPI2_MISO)	PB12 (SPI2_SS)	LCD6	7 8	LCD7	PB15 (SPI2_MOSI)	PB15 (SPI2_MOSI)	PE15
	GND	GND	GND	GND	9 10	5V	5V	5V	5V

REMRAM	Bigtreetech SKR V1.3 V1.4	Bigtreetech SKR E3 DIP	Bigtreetech SKR mini E3	Creality CR-10/Ender-3	Reprap GLCD	EXP1	Reprap GLCD	Creality CR-10/Ender-3	Bigtreetech SKR mini E3 V1 SKR E3 DIP	Bigtreetech SKR V1.3 V1.4	REMRAM
PC6	P1.30	PA15	PB5 (SPI3.MOSI)	PA4	Beeper	1 2	BTN_ENC	PC0	PB6	P0.28	PC7
PD14	P1.18	TX1	PA9	PD3 (USART1_MOSI)	LCDE	3 4	LCD_RS	RESET	RESET	P1.19	PD15
PD13	P1.20 (SCK0)	PA9	PA10	PD2 (USART1_MISO)	LCD4	5 6	LCD5	PA1	PB9	P1.21 (SSEL0)	PD12
PD11	P1.22	PB8	PB8	PA3	LCD6	7 8	LCD7	PC1	PB7	P1.23 (MISO0)	PD10
GND	GND	GND	GND	GND	GND	9 10	5V	5V	5V	5V	5V

	MKS Robin E3 Robin Lite3	Ultimachine Archim2.2b	Fysetc S6	EXP1	Fysetc S6	Ultimachine Archim2.2b	MKS Robin E3 Robin Lite3
	PC1	PA14	PC9	10 9	PA8	PA13 (USART1_MOSI)	PC3
	PA4 (SPI1_SS)	PA15	PC11 (SPI3.MISO)	8 7	PD2	PA12 (USART1_MISO)	PA5 (SPI1_SCK)
	PA6 (SPI1_MISO)	PA0	PC10 (SPI3_SCK)	6 5	PC12 (SPI3_MOSI)	PA16 (USART1_SCK)	PA7 (SPI1_MOSI)
	PC4	PA1	PD0	4 3	PD1	PC2	PC5
	GND	GND	GND	2 1	5V	5V	5V

	MKS SBASE V1.3	Bigtreetech SKR PRO	Einsy Rambo	Fysetc F6	EXP1	Fysetc F6	Einsy Rambo	Bigtreetech SKR PRO	MKS SBASE V1.3
	P1.31 (SCK)	PG4	PH2 (UART2_SCK)	PC0	10 9	PC2	PH6	PA8	P1.30
	P0.18 (MOSI)	PD11	PF7	PH0 (UART2_MISO)	8 7	PH1 (UART2_MOSI)	PD5 (UART1_SCK)	PD10	P0.16 (SSEL)
	P0.15 (SCK)	PG2	PF5	PA1	6 5	PA3	PG4	PG3	NC
	NC	PG6	PH7	PA5	4 3	PA7	PG3	PG7	NC
	GND	GND	GND	GND	2 1	5V	5V	5V	5V





MTG1 MH_M3
MTG2 MH_M3

Project: EVE Display-Adapter
Version, Revision: Matrix Orbital / Riverdi , 05
Date: 2020-06
Copyright: Rudolph Riedel
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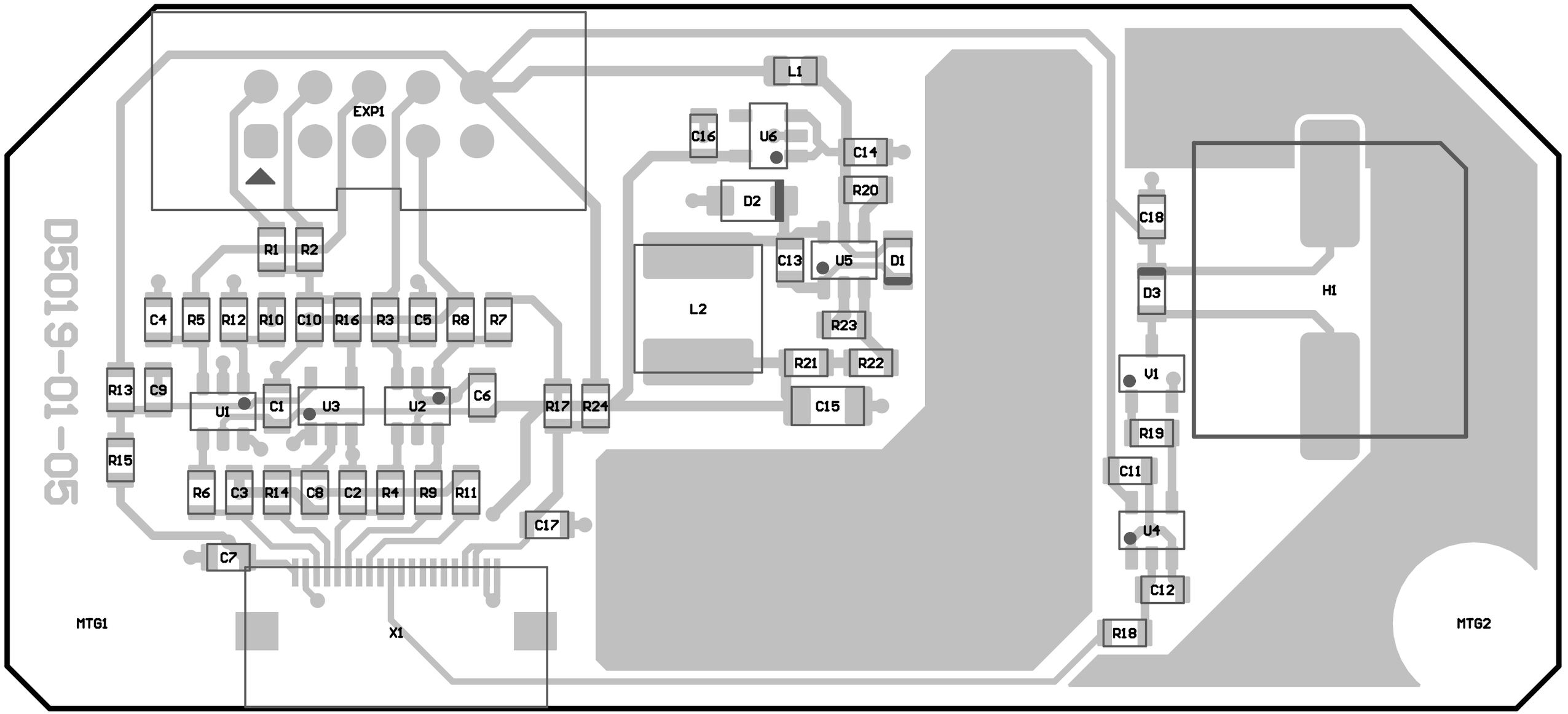
EXP1
L1
C16
U6
C14
R20
D2
C13
U5
D1
L2
R23
R21
R22
C15
C18
D3
H1
V1
R19
C11
U4
C12
R18
MTG2
R1
R2
C4
R5
R12
R10
C10
R16
R3
C5
R8
R7
R13
C9
U1
C1
U3
U2
C6
R17
R24
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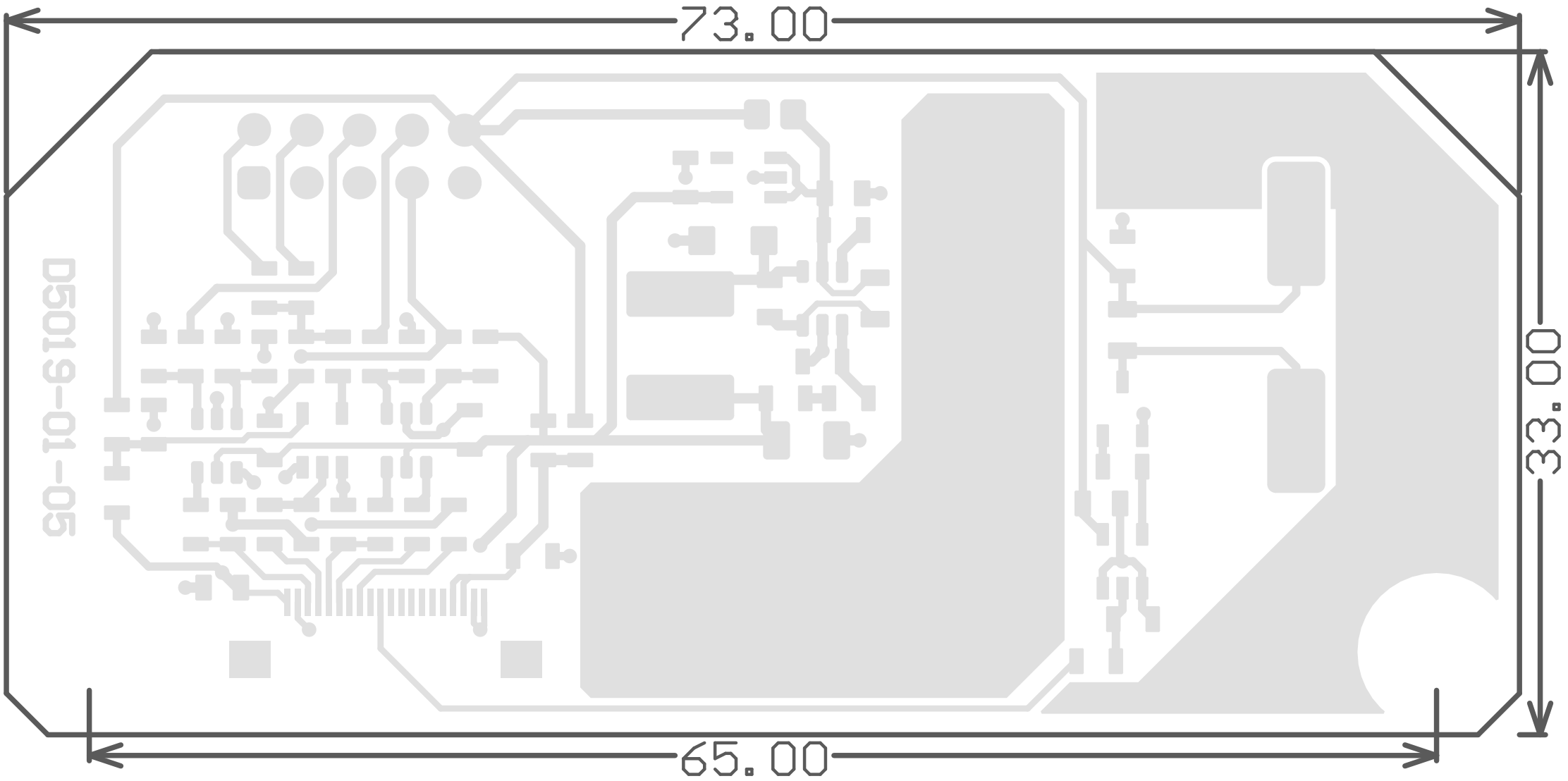
R11
C17
C7
MTG1
X1
50-10-6101950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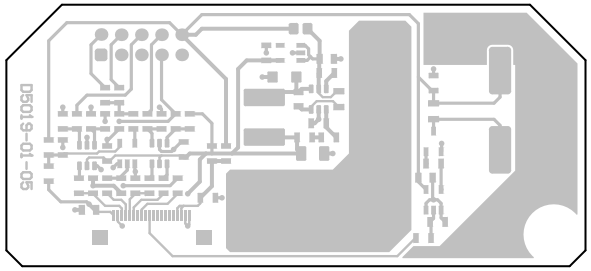
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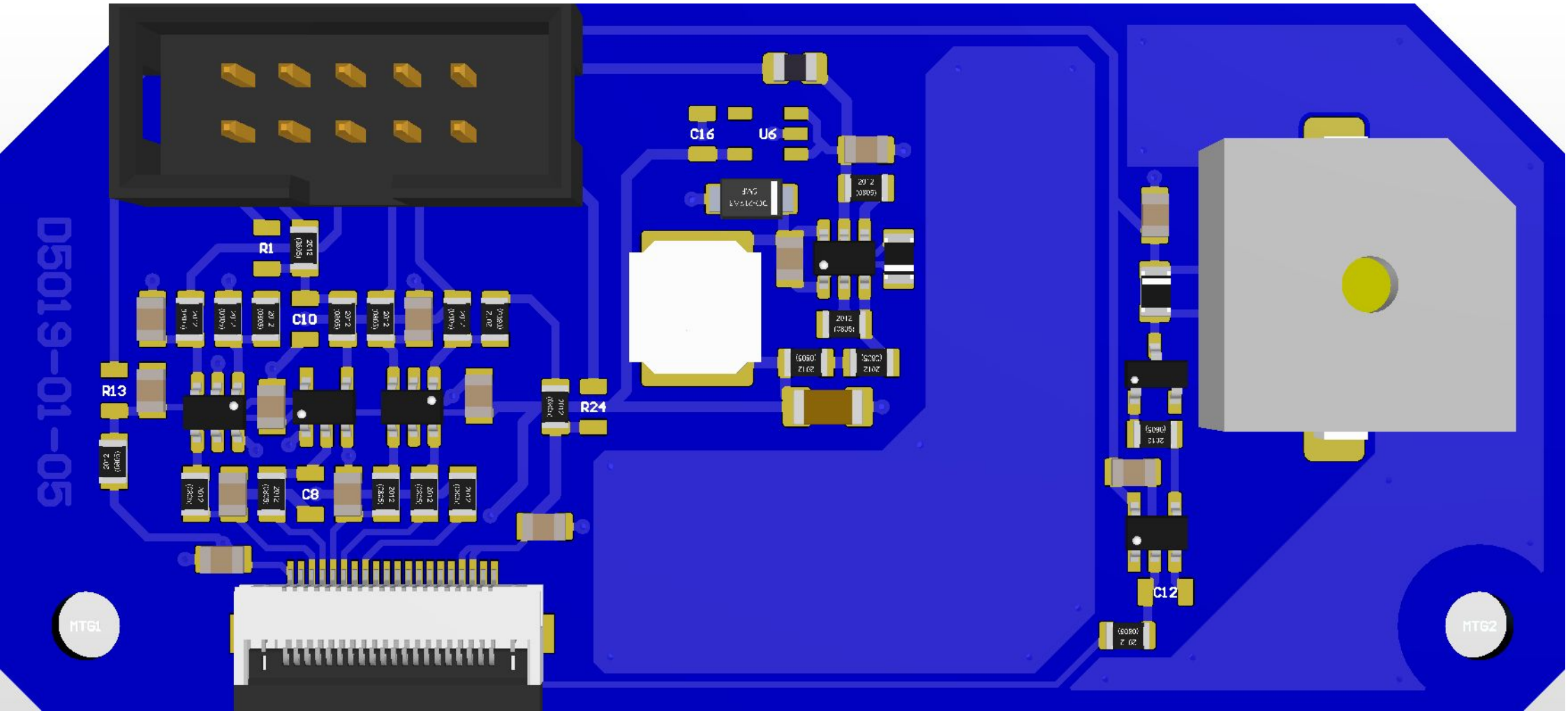
C16
U6
R1
C10
R13
R24
C8
C12
MTG1
MTG2
50-10-6050-01-05