

PCB specification

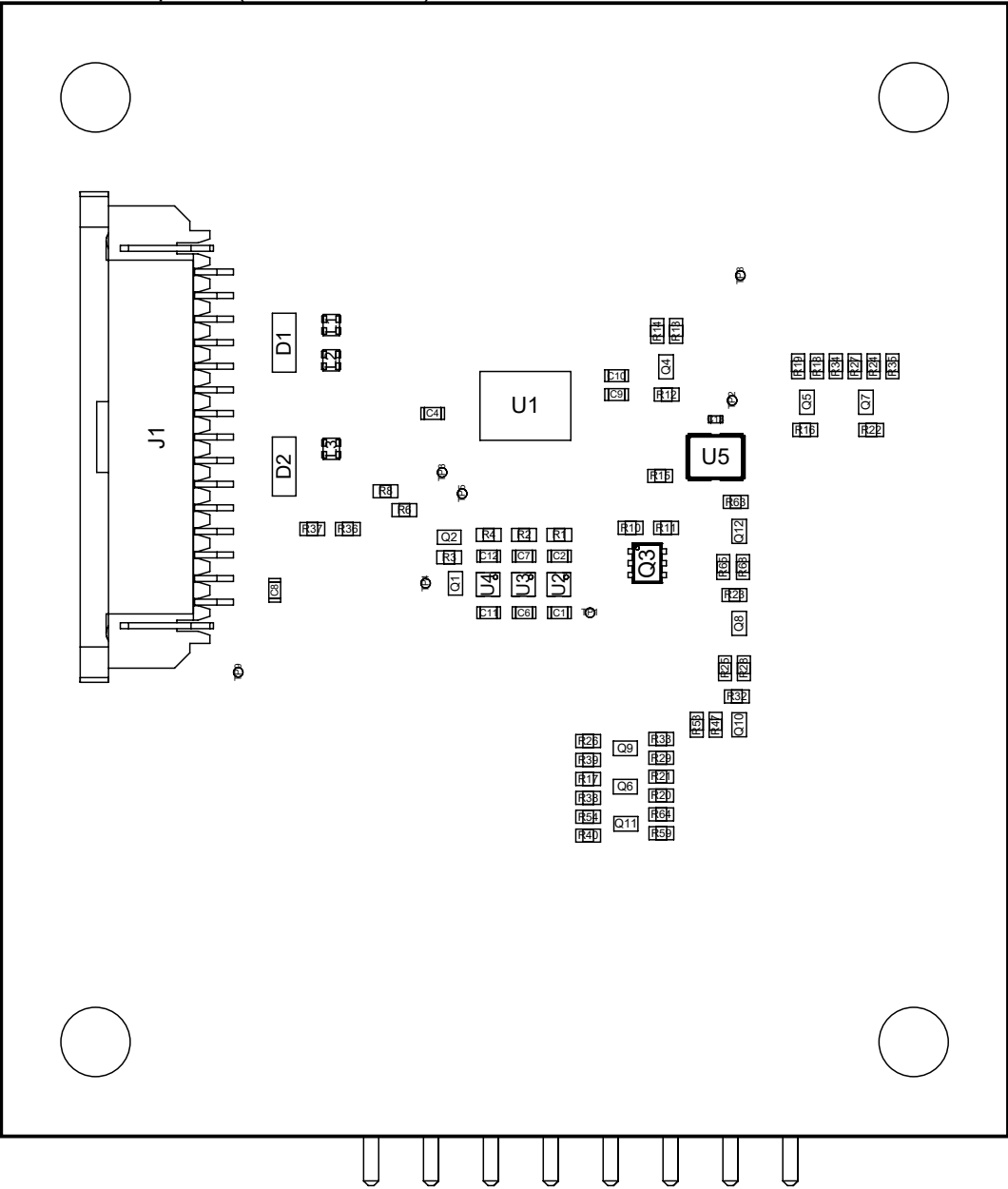
WCAM-BREAKOUT-PCB-R01.PcbDoc

Project Name	WCAM-BREAKOUT-PCB.PrjPcb
Author	Thomas Ludemann
Revision	0.1
Date	15.11.2024

Rev.	Date	Changed by	Summary of change
0.1	15.11.2024	Thomas Ludemann	Initial creation

Assembly layer TOP

View from Top side (Scale 3.2787:1)



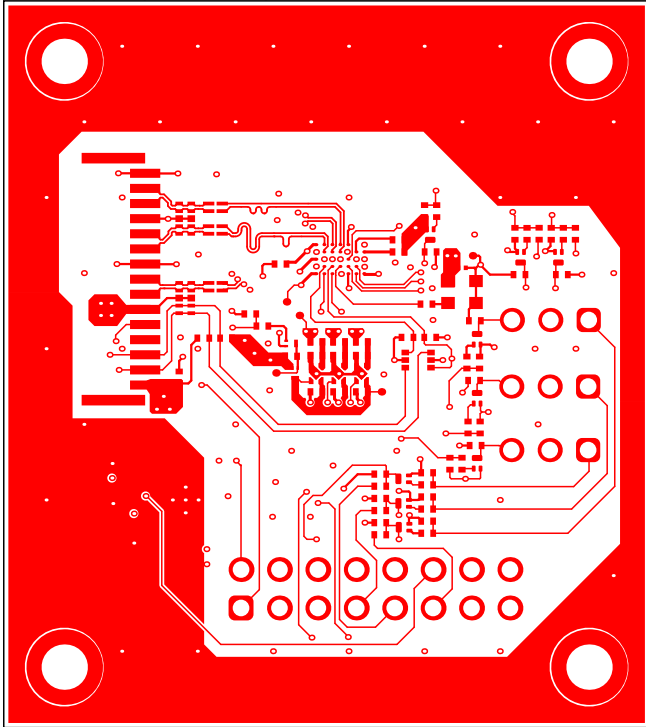
The PCB layout for the 'MID' board features a central microcontroller U8 (8-pin DIP) connected to a 10-pin connector J4 at the bottom. To the left of U8 are three 2-pin connectors J1, J2, and J3. To the right of U8 is a 14-pin connector J7. Various resistors (R1-R14) and capacitors (C1-C4) are distributed around the microcontroller. Test points TP1 through TP14 are located near the connectors and components. The board has four mounting holes at the corners.

## Bill of materials

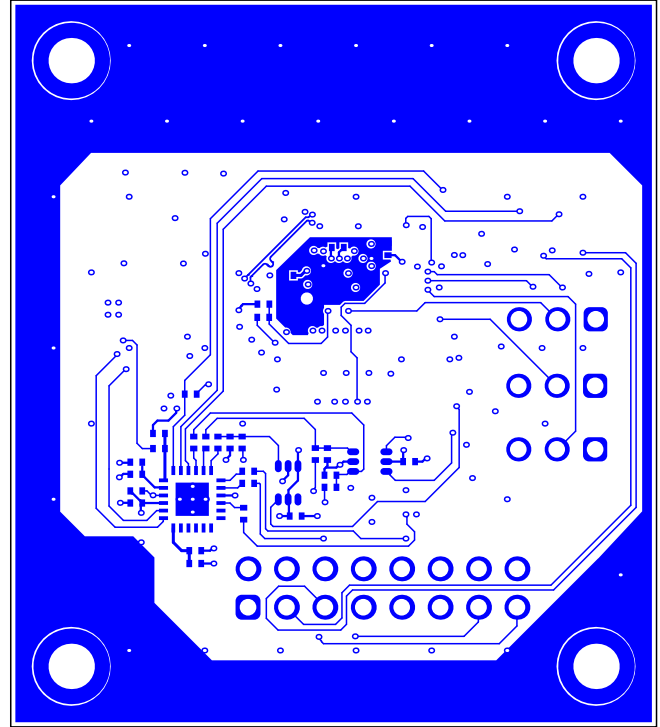
Line #	Designator	Comment	Quantity	Manufacturer 1	Manufacturer 1 Prt. Nr.
1	C1, C2, C3, C6, C7, C8, C9, C10, C11, C12, C14, C15, C16	1µF 25V	13	Murata Electronics	GRM155R61E105KE11D
2	C4, C5	470nF 25V	2	Murata Electronics	GRM155R61E474KE01D
3	C13	470nF 10V	1	Taiyo Yuden	LMK063BBJ474KPLF
4	D1, D2	ESD7504MUTAG	2	onsemi	ESD7504MUTAG
5	J1	SFW15R-1STE1LF	1	Amphenol FCI	SFW15R-1STE1LF
6	J2, J3, J5	61300311121	3	Würth elektronik	61300311121
7	J4	61301621021	1	Würth elektronik	61301621021
8	L1, L2, L3	90Ohm 100mA	3	Murata Electronics	DLM0NSM900HY2D
9	Q1	SSM3J56ACT,L3F	1	Toshiba	SSM3J56ACT,L3F
10	Q2	SSM3K15ACT,L3F	1	Toshiba	SSM3K15ACT,L3F
11	Q3	DMG1024UV-7	1	Diodes Incorporated	DMG1024UV-7
12	Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12	PMZ130UNEYL	9	Nexperia	PMZ130UNEYL
13	R1, R2, R4, R9, R30, R31, R34, R35, R38, R39, R40, R43, R46, R60, R61, R66, R67	0Ohm 1%	17	Bourns	CR0402AJ/-000GAS
14	R3, R8	15k 1%	2	Vishay / Dale	CRCW040215K0FKED
15	R5, R7, R12, R16, R22, R23, R32, R63	1.5k 1%	8	Vishay / Dale	CRCW04021K50FKED
16	R6	240R 1%	1	Vishay / Dale	CRCW0402240RFKEDC
17	R10, R11	2.2k 1%	2	Vishay / Dale	CRCW04022K20FKED
18	R13, R18, R20, R24, R25, R29, R47, R59, R65	100R 1%	9	Vishay / Dale	CRCW0402100RFKEDC
19	R14, R17, R19, R21, R26, R27, R28, R33, R36, R37, R41, R42, R50, R53, R54, R64, R68	10k 1%	17	Vishay / Dale	CRCW040210K0FKEDC
20	R15	27R 1%	1	YAGEO	RC0402FR-0727RL
21	R44, R45, R62	47k 1%	3	Vishay / Dale	CRCW040247K0FKEDC
22	R48, R49, R51, R52, R55, R56	200 1%	6	Panasonic	ERJ-2RKf2000X
23	U1	OV02740-H34A-Z	1	OV02740-H34A-Z	OmniVision
24	U2	TLV74018PDQNR	1	Texas Instruments	TLV74018PDQNR
25	U3	TLV74012PDQNR	1	Texas Instruments	TLV74012PDQNR
26	U4	TLV74028PDQNR	1	Texas Instruments	TLV74028PDQNR
27	U5	ECS-2520MV-240-BN-TR	1	ECS	ECS-2520MV-240-BN-TR
28	U6, U8	74HC2G14GW-Q100	2	Nexperia	74HC2G14GW-Q100
29	U7	TCAL9539RTWR	1	Texas Instruments	TCAL9539RTWR

## Layout, separated into the layers

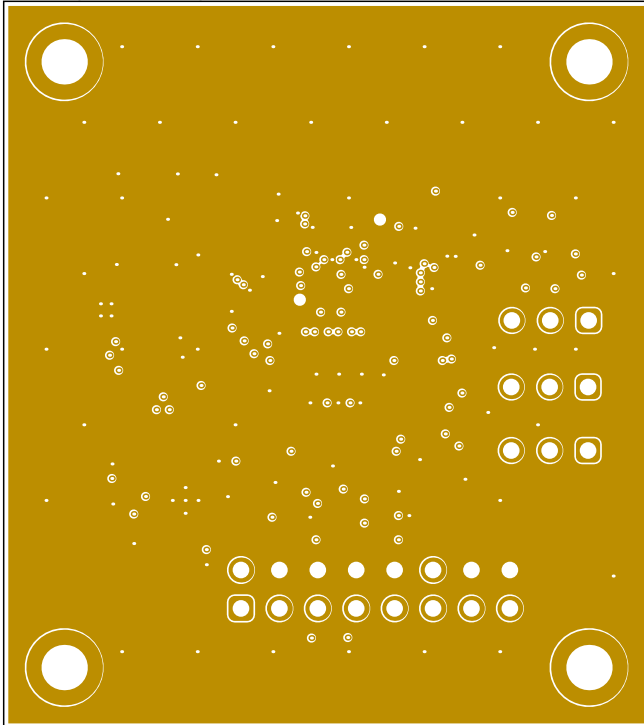
Top Layer (Scale 2:1)



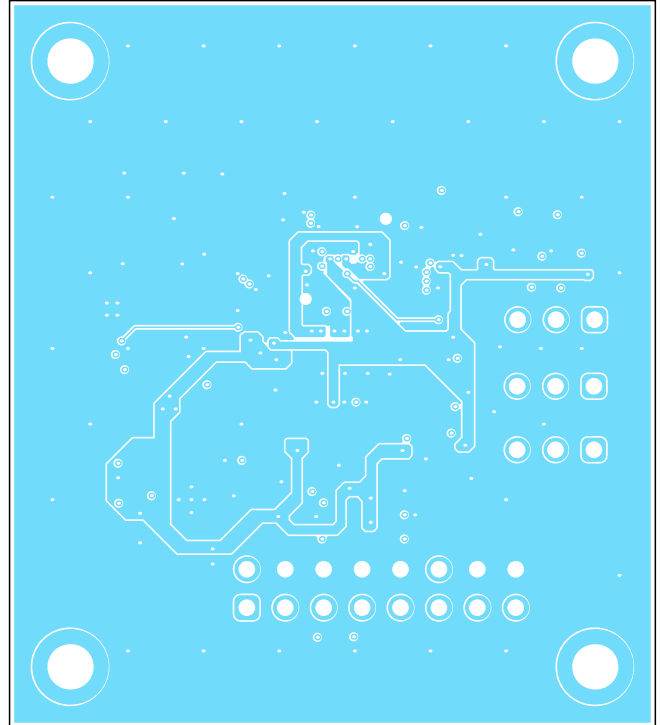
Bottom Layer (Scale 2:1)



Mid1 (Scale 2:1)



Mid2 (Scale 2:1)



## Realistic View

