

Introduction

OEM Dev board this is a convenient adapter for SBGC32 OEM controller. It contains connectors used in common BaseCam products and compatible with cables available for them. All connectors on one board edge, which allows you to install the board in a case or gimbal frame with convenient access to connectors. Also, some ports are duplicated with footprints for standard 2.54" headers, and can be used for additional engineering purposes.

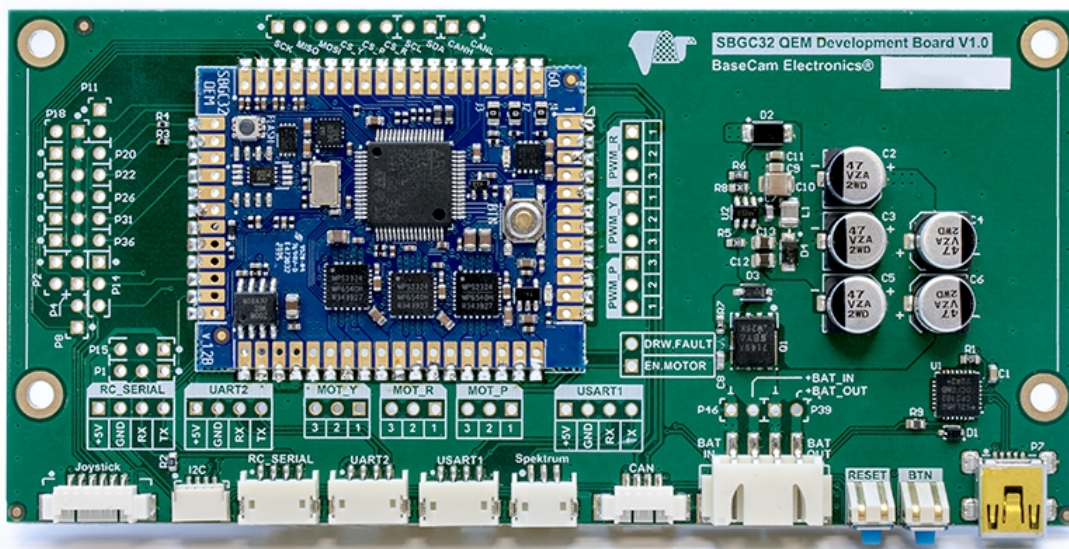


Fig.1 Top view

Note. In the figure above, the OEM controller is installed on a board for an installation example.

Features:

- Wide capability to exploring of SBGC32 OEM gimbal controller performance.
- A large set of compatible interfaces for interaction with the stabilization controller.
- Convenient connection of main interfaces using standard cables .
- Built-in battery reverse polarity protection.
- PCB with an advanced heat sink for an OEM module.
- Compact size and low profile device.

Document revision: 1.0.229 (5. Apr. 2024)
Hardware version: 1.0

Device description

Connectors designation, pinout and part numbers

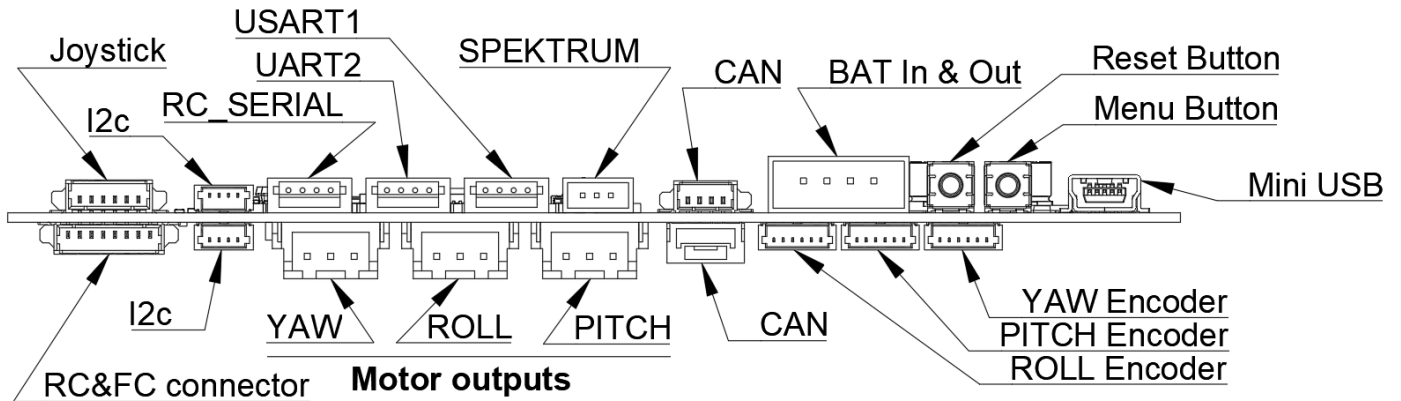


Fig.2 Connectors designation

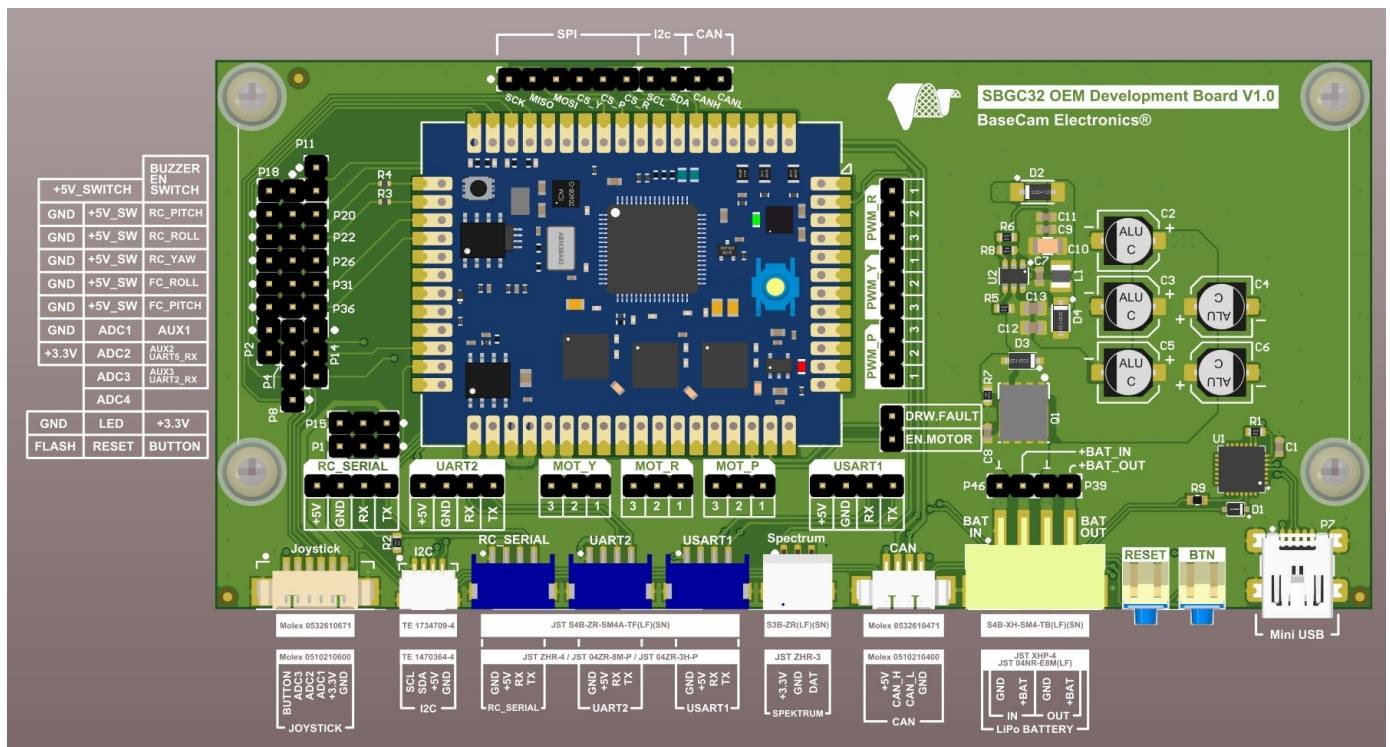


Fig.3 Top side connectors pinout and part numbers

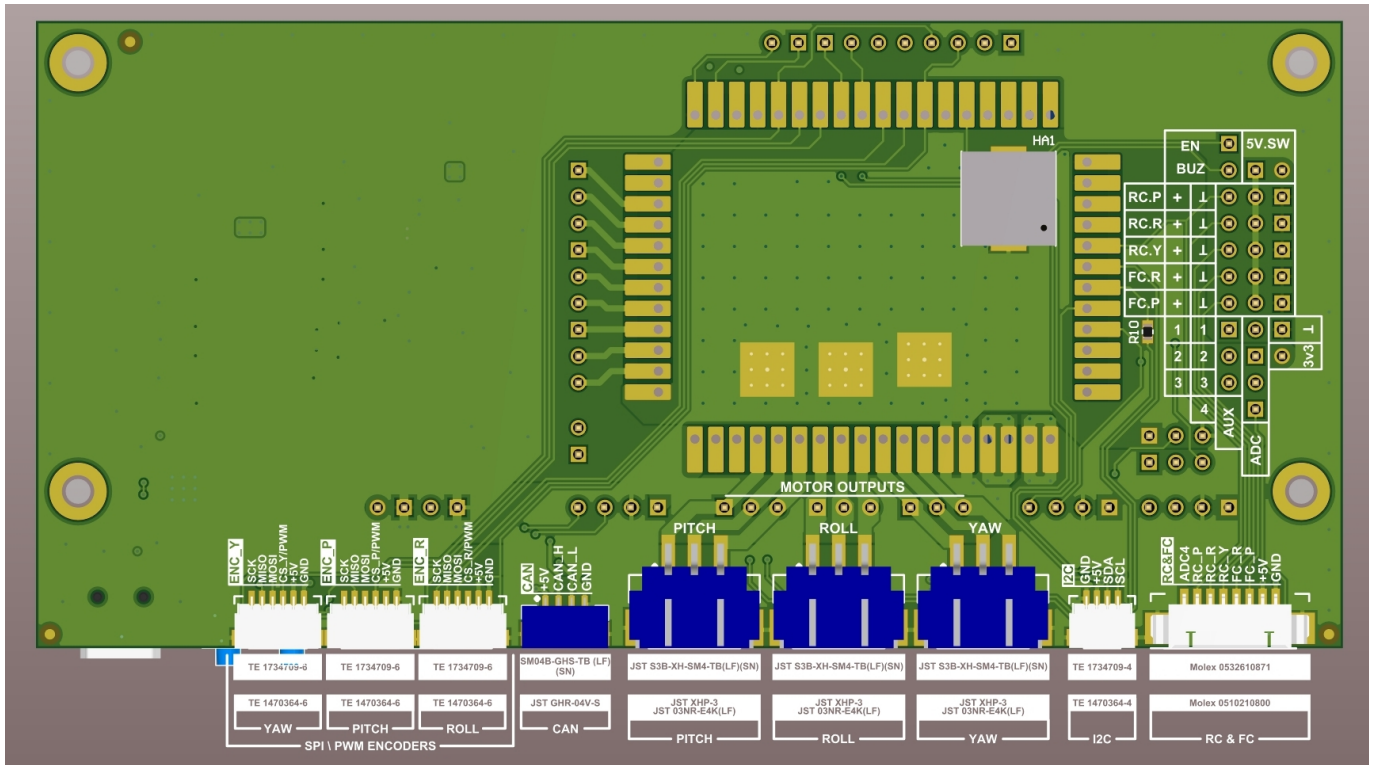
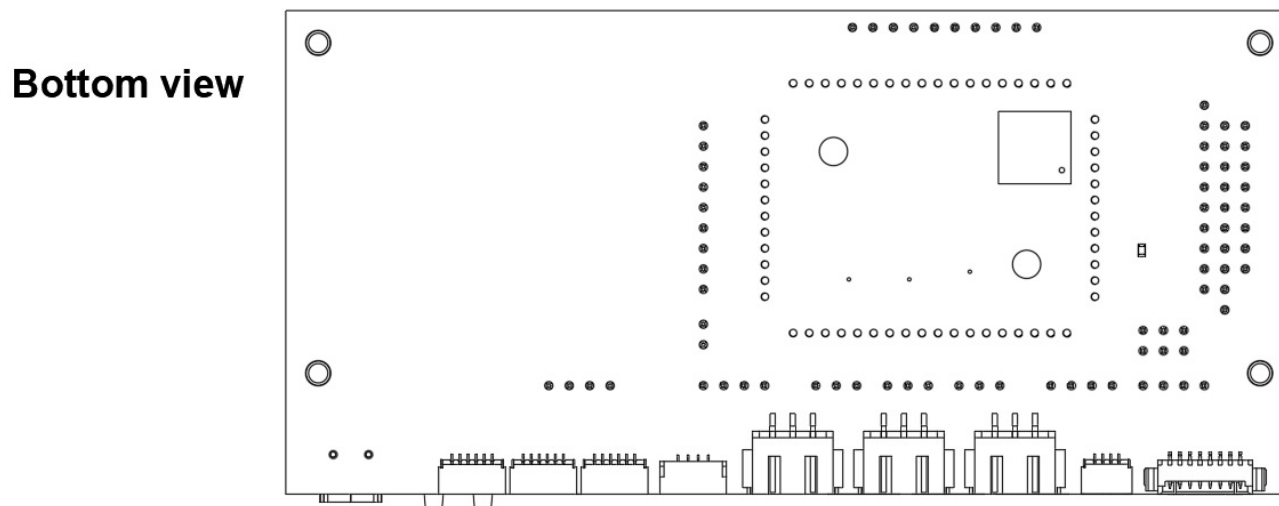
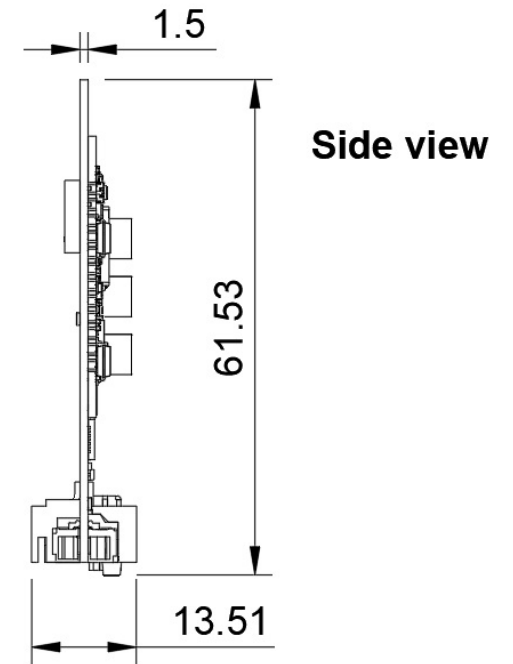
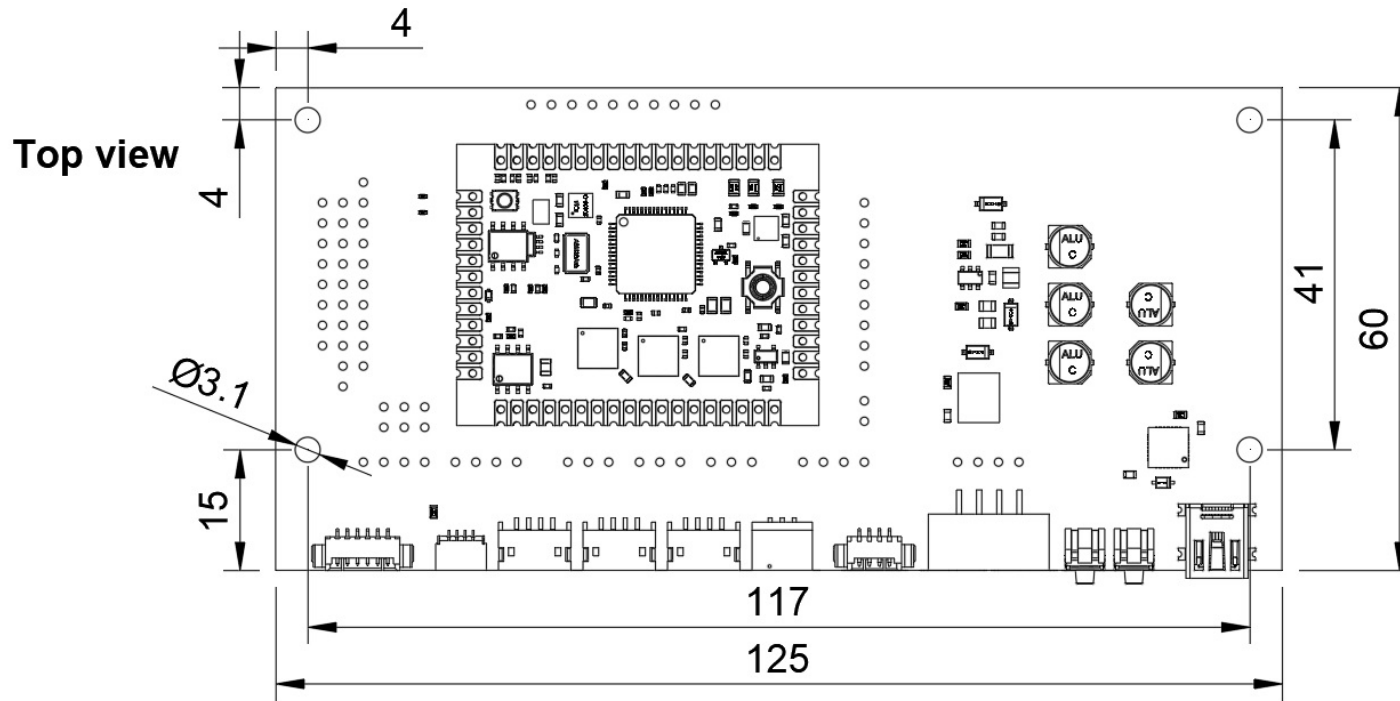
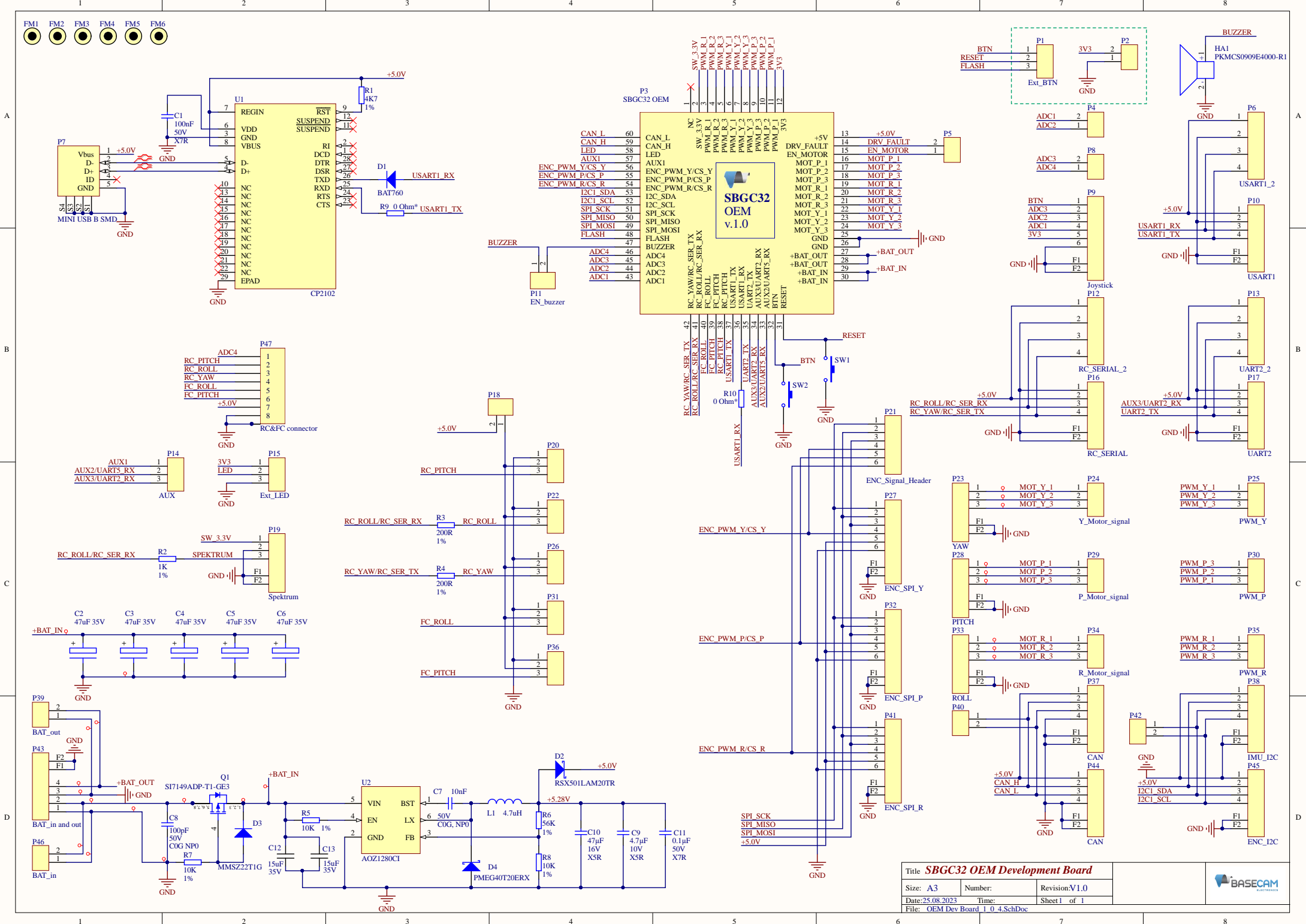


Fig.4 Bottom side connectors pinout and part numbers

Device drawing and dimensions



Size in millimeters
SCALE 1:1



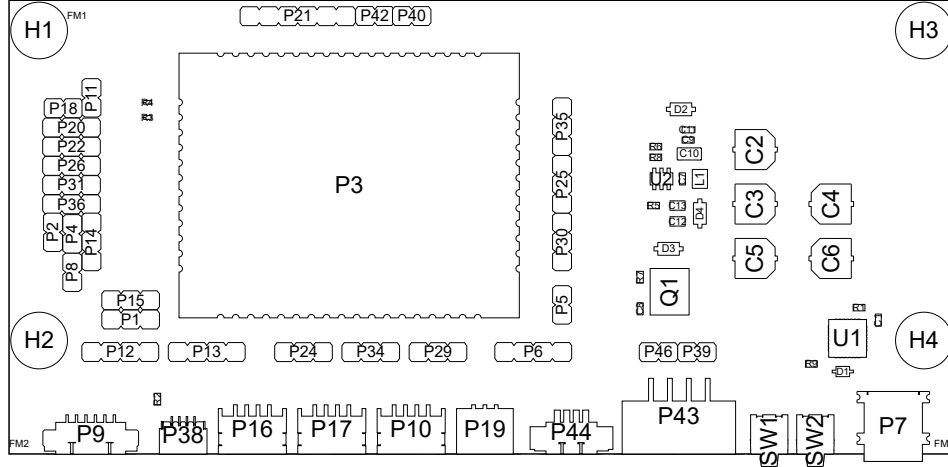
Title SBGC32 OEM Development Board		
Size: A3	Number:	Revision: V1.0
Date: 25.08.2023	Time:	Sheet 1 of 1
File: OEM Dev Board 1_0_4_SchDoc		



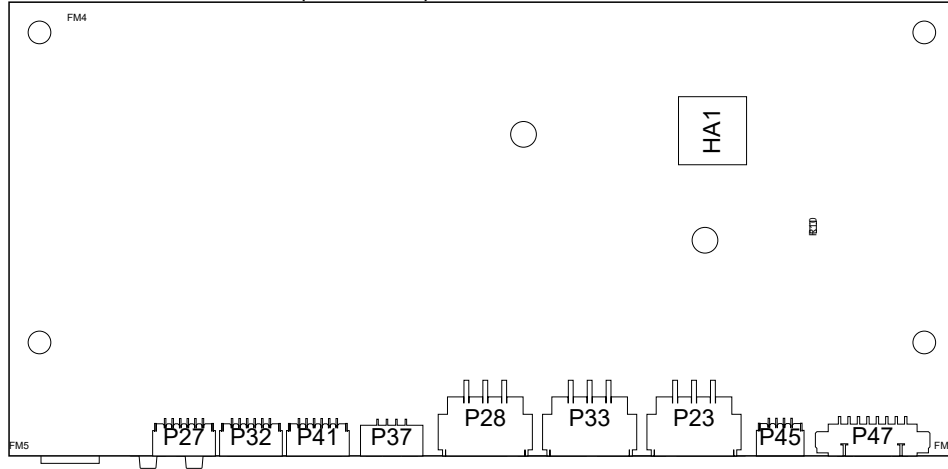
Board layout

Components places and part numbers

View from Top side (Scale 1:1)



View from Bottom side (Scale 1:1)



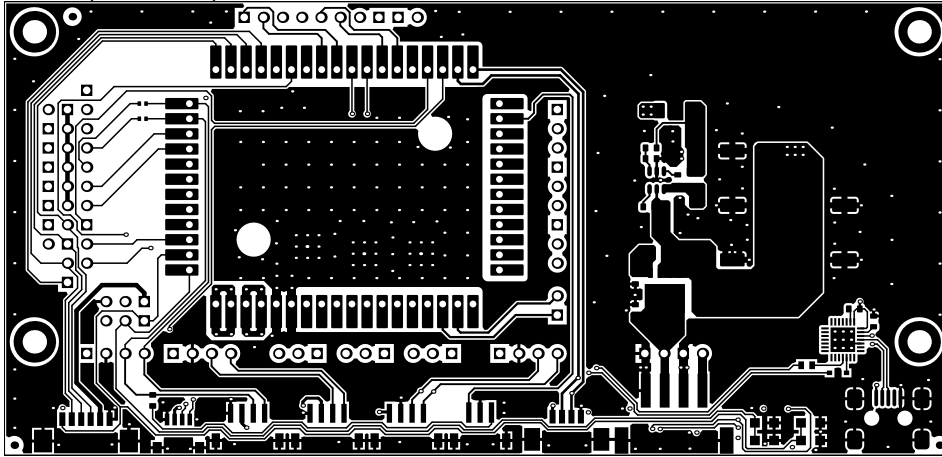
Bill Of Materials

Designator	PartNumber	Description	Quantity
C1	CGA3E2X7R1H104K080AA	C0603 100nF 50V X7R SMD ±10%	1
C2, C3, C4, C5, C6	EEH-ZA1V470P	CAP ALUM HYB 47UF 20% 35V SMD	5
C7	C1608C0G1H103J080AA	C0603 10nF 50V C0G, NP0 SMD	1
C8	CC0603JRNPO9BN101	C0603 100pF 50V C0G/NP0 SMD ±5%	1
C9	CC0603KRX5R6BB475	C0603 4.7µF 10V X5R SMD 20%	1
C10	CL32A476KOJNNNE	C1206 47µF 16V X5R SMD 10%	1
C11	CGA3E2X7R1H104K080AA	C0603 0.1µF 50V X7R SMD ±10%	1
C12, C13	C2012X5R1V156M125AC	C0805 15UF 35V X5R 0805	2
D1	BAT760	BAT760	1
D2	RSX501LAM20TR	Schottky Barrier Diode	1
D3	MMSZ22T1G	MMSZ22T1G	1
D4	PMEG40T20ERX	Schottky Barrier Diode	1
FM1, FM2, FM3, FM4, FM5, FM6	DNP	Fiducial marker	6
HA1	PKMCS0909E4000-R1	PKMCS0909E4000-R1	1
L1	DFE252012F-4R7M=P2	L1008 4.7UH 1.5A 0.19OHM	1
P1, P14, P15, P20, P22, P24, P25, P26, P29, P30, P31, P34, P35, P36	DNP	C2100-40ASGAS0R	14
P2, P4, P5, P8, P11, P18, P39, P40, P42, P46	DNP	C2100-40ASGAS0R	10
P3	SBGC32 OEM		1
P6, P12, P13	DNP	PLS-4	3
P7	10033526-N3212LF	STE USB MINI B LP Buchse SMD	1
P9	53261-0671	SMT 53261-0671	1
P10, P16, P17	S4B-ZR-SM4A-TF(LF)(SN)	S4B-ZR-SM4A-TF(LF)(SN)	3
P19	S3B-ZR-SM4A-TF	S3B-ZR-SM4A-TF	1
P21	DNP	PLS-6	1
P23, P28, P33	S3B-XH-SM4-TB(LF)(SN)	S3B-XH-SM4-TB(LF)(SN)	3
P27, P32, P41	1734709-6	1734709-6	3
P37	SM04B-GHS-TB (LF) (SN)	SM04B-GHS-TB (LF) (SN)	1
P38, P45	1734709-4	1734709-4	2
P43	S4B-XH-SM4-TB(LF)(SN)	S4B-XH-SM4-TB(LF)(SN)	1
P44	53261-0471	CONN HEADER SMD R/A 4POS 1.25MM	1
P47	Molex 0532610871	CONN HEADER SMD R/A 8POS 1.25MM	1
Q1	SI7149ADP-T1-GE3	SI7149DP	1
R1	RC0603FR-074K7L	R0603 4K7 1% 0,1W	1
R2	RC1608F102CS	R0603 1K 1% 0,1W	1
R3, R4	RC0402FR-07200RL	R0402 200R 1% 0,063W	2
R5, R7, R8	RC0603FR-0710KL	R0603 10K 1% 0,1W	3
R6	RC1608F563CS	R0603 56K 1% 0,1W	1
R9, R10	BLM18RK102SN1D	FB0603 1K OHM 1LN	2
SW1, SW2	7914S-1-000E	7914S-1-000E	2
U1	CP2102	CP2102	1
U2	AOZ1280Ci	AOZ1280CI	1

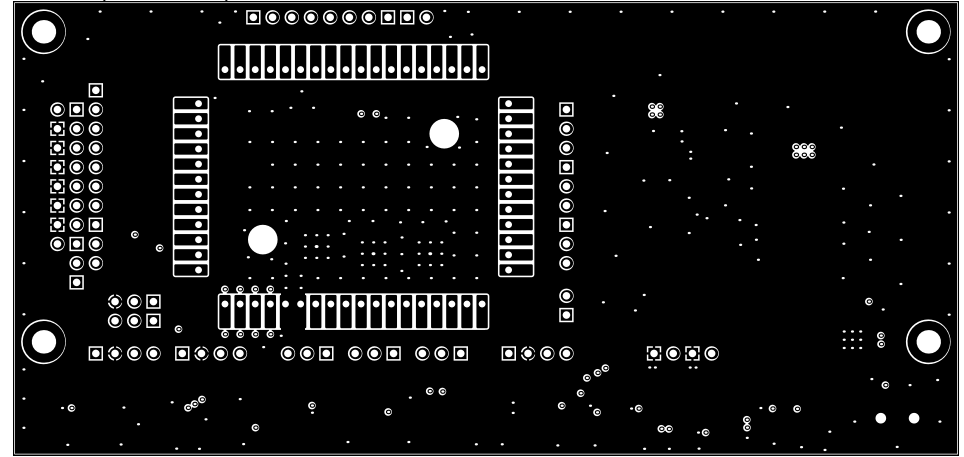
Board layout

Layers of PCB

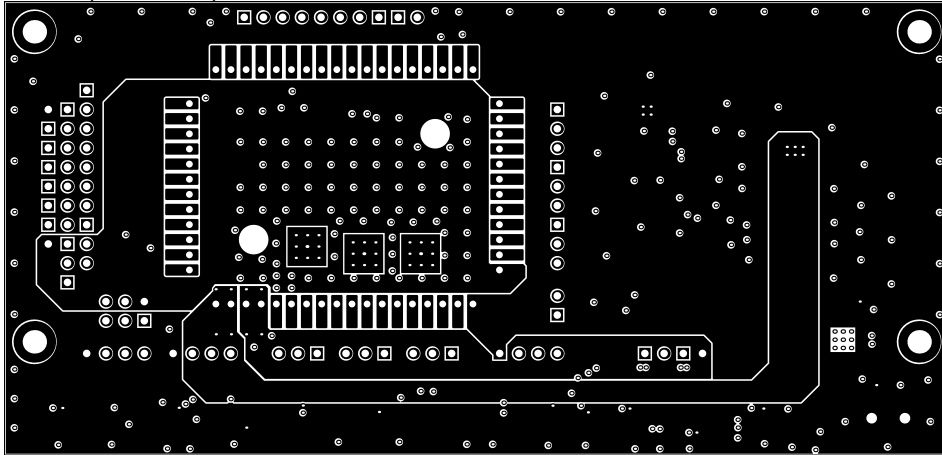
L01 S (Scale 1:1)



L02 G (Scale 1:1)



L03 P (Scale 1:1)



L04 S (Scale 1:1)

