













Comment Capacitor	Description	Designator	Footprint	LibRef	Quantity	Value
	Capacitor	C1, C2, C3, C4	CAP-0402	Capacitor	4	900pF
		C5, C6, C9, C10,				
		C13, C15, C20, C22, C26, C27,				
		C29, C37, C38,				
		C39, C42, C44, C45, C46, C47,				
Capacitor	Capacitor	C53, C54, C55	CAP-0805	Capacitor	22	100nF
		C7, C8, C11, C12,				
Capacitor	Capacitor	C14, C21, C28, C36, C40, C43	CAP-0805	Capacitor	10	22uF
•				Electrolytic		
MAL215099911E3		C16, C17, C18, C19	CAP-1621	Capacitor	4	330uF
		C23, C24, C25, C30, C31, C32,				
		C33, C48, C49,				
Capacitor	Capacitor	C50, C51, C52	CAP-0805	Capacitor Electrolytic	12	10uF
		C34, C35	CAP-H13	Capacitor	2	330uF
				Electrolytic		
20SVP150M		C41	CAP-F12	Capacitor	1	150uF
US1M-E3		D1, D2, D3, D4	DO-214AC	Diode	4	
SBR2A40P1	Schottky Rectifier	D5, D7, D8	POWERDI-123	SBR2A40P1	3	
TL431AIDBZT	Variable voltage reference	D6	SOT-23B	TL431AIDBZT	1	
IL40174IDDL1	100p connector,	50	FCI_BERGSTAK_100			
BERGSTAK 100P	BERGSTAK	JX1, JX2	P	BERGSTAK 100P	2	
2.2uH	SRN5020-2R2Y	L1	SRN5020-2R2Y_FP	SRN5020-2R2Y	1	2.2uH
ZH-6P		P1	ZH-6P	ZH-6P	1	
ZH-12P		P2, P3, P5	ZH-12P	ZH-12P	3	
ZH-8P		P4	ZH-8P	ZH-8P	1	
ZH-4P	İ	P6, P7	ZH-4P	ZH-4P	2	
2P Terminal	i e	P8	2P-TERM	2P Terminal	1	
ZH-5P		P9, P10	ZH-5P	ZH-5P	2	
ZH-3P ZH-10P	 	P11	ZH-10P-T	ZH-10P	1	
En 10F	 	Q1, Q2, Q3, Q4,	A 1-10F-1	L. PIOP	<u> </u>	
		Q5, Q6, Q7, Q8,				
DCC1201T1C	N-Channel	Q9, Q20, Q21, Q22,	SOT-23B	DCC1201T10	40	
BSS138LT1G	MOSFET	Q23 Q10, Q11, Q12,	3U1-23B	BSS138LT1G	13	
IRF100B202		Q10, Q11, Q12, Q13	TO-220AB	IRF100B202	4	
TLV3492		Q14	SOT23-8	TLV3492	1	
G6BK Relay		Q15	G6BK	G6BK Relay	1	
LEV100A4ANG		Q16	ZH-2P	LEV100A4ANG	1	
Emergency Button		Q17	2P-TERM	Emergency Button	1	
FDV303N		Q18, Q19	SOT-23B	FDV303N	2	
		R1, R4, R7, R10, R14, R16, R20,				
		R23, R25, R51,				
Resistor	Resistor	R52, R54	RES-0805	Resistor	12	330R
Resistor	Resistor	R2, R6, R8, R11, R13, R17, R19, R21	RES-0402	Resistor	8	100R
пслио	RESISTO	R3, R9, R12, R18,	NES 0402	RESISTO:		TOUR
Resistor	Resistor	R22, R26	RES-0805	Resistor	6	85R
Resistor	Resistor	R5, R15, R24	RES-0805	Resistor	3	145R
Resistor	Resistor	R27, R29	RES-0805	Resistor	2	2k2
Resistor	Resistor	R28, R30	RES-0805	Resistor	2	150R
	Resistor	R31, R32, R33	RES-0805	Resistor	3	2k7
			RES-2512	Resistor	2	4R7 2W
Resistor	Posistor	P34 P41				
	Resistor	R34, R41	RE3-2512		2	
	Resistor Resistor	R34, R41 R35, R36, R37, R38	RES-0805	Resistor	4	7R
Resistor				Resistor Resistor		7R 220k
Resistor Resistor	Resistor	R35, R36, R37, R38	RES-0805		4	
Resistor Resistor Resistor	Resistor Resistor	R35, R36, R37, R38 R39, R40	RES-0805 RES-0805	Resistor	4	220k 200uR
Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47	RES-0805 RES-0805 RES-3920 RES-0805	Resistor Resistor Resistor	4 2 1 2	220k 200uR 68k
Resistor Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50	RES-0805 RES-0805 RES-3920 RES-0805	Resistor Resistor Resistor	4 2 1 2 4	220k 200uR 68k 33k
Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46	RES-0805 RES-0805 RES-3920 RES-0805	Resistor Resistor Resistor	4 2 1 2	220k 200uR 68k 33k
Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68,	RES-0805 RES-0805 RES-3920 RES-0805 RES-0805 RES-RWS5	Resistor Resistor Resistor Resistor Resistor	4 2 1 2 4	220k 200uR 68k 33k 180R 5W
Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75	RES-0805 RES-0805 RES-3920 RES-0805 RES-0805 RES-RWS5	Resistor Resistor Resistor Resistor Resistor Resistor	4 2 1 2 4 1	220k 200uR 68k 33k 180R 5W
Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R55	RES-0805 RES-0805 RES-3920 RES-0805 RES-0805 RES-RWS5 RES-0805 RES-0805	Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	4 2 1 2 4 1 5	220k 200uR 68k 33k 180R 5W 3k92
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R55	RES-0805 RES-0805 RES-3920 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805	Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor Resistor	4 2 1 2 4 1 5 5	220k 200uR 68k 33k 180R 5W 3k92 1k5
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R55 R56 R57, R59, R67	RES-0805	Resistor	4 2 1 2 4 1 5 1 1 3	220k 200uR 68k 33k 180R 5W 3k92 1k5 3k
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R55 R56 R57, R59, R67 R58	RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805 RES-0805	Resistor	4 2 1 2 4 1 5 1 1 3	220k 200uR 68k 33k 180R 5W 3k92 1k5 3k
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R49, R53, R68, R69, R75 R55 R57, R59, R67 R58 R60	RES-0805	Resistor	4 4 2 2 1 1 2 2 4 4 1 1 1 5 5 1 1 1 3 3 1 1 1 1 1	220k 200uR 68k 33k 180R SW 3k92 1k5 3k 1l 1k 45k3
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46, R69, R75 R55 R56 R57, R59, R67 R68 R60 R61	RES-0805	Resistor	4 4 2 1 1 2 4 4 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 200uR 68k 33k 180R SW 3k92 1k5 3k 1k 45k3 100k
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R60, R75 R55 R56 R56 R57, R59, R67 R58 R60 R61 R61	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 200uR 68k 33k 180R 5W 3k92 1k5 3k 1k 45k3 100k 10K
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R57, R59, R67 R58, R69, R75 R56 R60 R61 R61 R62 R63	RES-0805 RES-0805 RES-3920 RES-3920 RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 66k 33k 180R SW 3k92 1k5 3k 11 445k3 100k 10k 3874 383k 1%
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R60, R75 R55 R56 R56 R57, R59, R67 R58 R60 R61 R61	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 200uR 68k 33k 180R 5W 3k92 1k5 3k 1k 45k3 100k 10K
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R57, R59, R67 R58, R69, R75 R56 R60 R61 R61 R62 R63	RES-0805 RES-0805 RES-3920 RES-3920 RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 66k 33k 180R SW 3k92 1k5 3k 11 445k3 100k 10k 3874 383k 1%
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R49, R53, R68, R69, R75 R57, R59, R67 R58, R69, R75 R56 R60 R61 R61 R62 R63	RES-0805 RES-0805 RES-3920 RES-3920 RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 66k 33k 180R 5W 3k92 1k5 3k 11 445k3 100k 10k 3874 383k1%
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47, R53, R68, R69, R75 R55 R56 R57, R59, R67 R61 R61 R62 R63 R64 R65, R66, R72	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 3 3 1 3 3 3 3 3 3 3 3 3	220k 220uR 68k 33k 180R SW 3k92 1k5 3k 11 10 10 3k74 383k 19 384R 196 11k5
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R55, R56, R56, R57, R59, R67 R58 R60 R61 R62 R63 R64 R65, R66, R72 R70	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 5 5 1 1 1 1 1 1 1 1 3 3 1 1	220k 220k 220uR 68k 33k 18k 38k 2 1k5 3k 10k 45k3 100k 10k 38k7 383k1% 348R1% 560R
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R55, R56, R57, R59, R67 R61 R62 R62 R63 R64 R65, R66, R72 R71	RES-0805	Resistor	4 4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1	220k 220k 220uR 68k 33k 180R 5W 3k92 1k5 1k 1k1 100k 10k 3874 3884 1% 348R 1% 11k5 680R 220R
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R42 R43, R47 R44, R45, R48, R50 R46 R47 R57, R59, R67 R57, R59, R67 R61 R61 R62 R63 R64 R64 R65, R66, R72 R71 R73 R74	RES-0805 RES-0805 RES-0805 RES-3920 RES-3920 RES-0805	Resistor	4 4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 100k 10k 38x1 100k 110k 38x1 38x1 38x1 48x3 38x1 48x3 48x1 4x 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R44, R45, R48, R50 R46 R47, R44, R45, R48, R50 R57, R59, R67 R57, R59, R67 R61 R61 R62 R63 R64 R65, R66, R72 R70 R71 R73	RES-0805 RES-0805 RES-0805 RES-3920 RES-3920 RES-0805	Resistor	4 4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 100k 10k 38x1 100k 110k 38x1 38x1 38x1 48x3 38x1 48x3 48x1 4x 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R42 R43, R47 R44, R45, R48, R50 R46 R47 R57, R59, R67 R57, R59, R67 R61 R61 R62 R63 R64 R64 R65, R66, R72 R71 R73 R74	RES-0805 RES-0805 RES-3920 RES-3920 RES-3920 RES-0805	Resistor	4 4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56 R56 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 SW1	RES-0805	Resistor	4 2 2 1 1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47, R53, R68, R69, R75 R55 R56 R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 U11	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 18 18c6 3k 18 3k 3
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56 R56 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 SW1	RES-0805	Resistor	4 2 2 1 1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47, R53, R68, R69, R75 R55 R56 R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 U11	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47, R53, R68, R69, R75 R55 R56 R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 U11	RES-0805	Resistor	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R46, R55, R56, R57 R56 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 RG81, RG82, RG83 SW1 U1 U2	RES-0805	Resistor Res	4 2 2 1 1 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56, R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R73 R74 RGB1, RGB2, RGB3 SW1 U1 U2	RES-0805	Resistor Res	4 4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R46, R55, R56 R56 R56 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R73 R74 R6B1, RGB2, RGB3 SW1 U1 U2 U3 U4	RES-0805 RES	Resistor Res	4 2 2 1 1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 668 33k 180R 5W 3892 1855 38 180R 5W 100k 10k 3834 100k 10k 3834 118 3838 119 3848 119 48680R 2200R
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56, R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R73 R74 RGB1, RGB2, RGB3 SW1 U1 U2	RES-0805	Resistor Res	4 4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R46, R55, R56 R56 R56 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R73 R74 R6B1, RGB2, RGB3 SW1 U1 U2 U3 U4	RES-0805 RES	Resistor Res	4 2 2 1 1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R59, R53, R68, R69, R75 R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R73 R74 R74 R75 SW1 U1 U2 U3 U4 U5, U6 U7	RES-0805 RES	Resistor Res	4 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 18 18c6 3k 18 3k 3
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56 R56 R57 R58 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R6B1, RGB2, RGB3 SW1 U1 U2 U3 U4 U5, U6	RES-0805 RES	Resistor Res	4 4 2 2 1 1 2 2 2 1 1 1 1 1 2 2 2 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 11c5 3k 11c5 3k 11c6
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56 R56 R57 R58 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R681, R682, R683 SW1 U1 U2 U3 U4 U5, U6 U7	RES-0805 RES	Resistor LIRB R8SF 1101M2S3CQE2 NRF24L01 Module INA286 SN74F21D LMR10510XMF	4 2 2 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 18 18c6 3k 18 3k 3
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56, R57, R59, R67 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R74 R75 R74 R75 R74 R74 R75 R74 R74 R74 R74 R74 R74 R74 R77 R74 R74	RES-0805 RES	Resistor Res	4 4 2 2 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 18 18c6 3k 18 18c6 3k 18 3k 3
Resistor Res	Resistor	R35, R36, R37, R38 R39, R40 R42 R43, R47 R44, R45, R48, R50 R46 R47 R55, R56 R56 R57 R58 R60 R61 R62 R63 R64 R65, R66, R72 R71 R73 R74 R681, R682, R683 SW1 U1 U2 U3 U4 U5, U6 U7	RES-0805 RES	Resistor LIRB R8SF 1101M2S3CQE2 NRF24L01 Module INA286 SN74F21D LMR10510XMF	4 2 2 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 1 1	220k 220uR 200uR 68k 33k 1808 5W 38v2 18c5 3k 100k 10k 38x1 100k 110k 38x1 38x1 38x1 48x3 38x1 48x3 48x1 4x 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3 4x3