

## VIS GAMEBOY DMGC v3.0 and v3.1 BOM

COMPONENT	DESCRIPTION	LCSC CODE	Mfr. Part #
Link port			Grab from DMG PCB or from the DMG-07
Power Switch	1212 pin 2P4T	C2939338	SK24D02G4 or grab from the DMG PCB
Slot cartdridge	32 pin		(Aliexpress) or grab from the DMG PCB
C1A, C1B, C1C	100 $\mu$ F 6.3V 1206 100 $\mu$ F 10V 1206	C77085 or C312983	GRM31CR60J107ME39L GRM31CR61A107ME05L
C1	18 pF 100V 0603	C913624	GCM1885C2A180JA16D
C2	27 pF 50V 0603	C162215	GRM1885C1H270FA01D
C4	22 pF 0603	C408549	GCM1885C2A220JA16D
C9, C10, C29, C33, C41, C45 (C35, C48, C49 only for rev E)	10 nF 50V 0603	C100042	CC0603KRX7R9BB103
C16, C17, C39, C40	1 uF 0603	C126631	GRT188R61H105KE13D
C5, C6, C7, C79	100 pF 50V 0603	C14665	CC0603JRNPO9BN101
C24, C28, C43, C75, C82 (C33 only for rev E)	100 nF 100V 0603	C161117	GCJ188R72A104KA01D
C37, C81	10 $\mu$ F 10V 0603	C77044	GRM188R61A106KE69D
C47	150 pF 0603	C2176758	GCM1885C2A151FA16D
C50, C51	390 nF 16V 0603	C437460	GCM188R71C394KA55D
C52, C53 (normal audio bass) C52, C53 (audio "bass mod")	1 uF 16V 0603 10 $\mu$ F 10V 0603	C77049 C77044	GRM188R71C105KE15D GRM188R61A106KE69D
C54, C55, C56, C72, C73, C78, C95 (C34 only for rev E)	1 uF 16V 0603	C77049	GRM188R71C105KE15D
C70, C71	100 $\mu$ F 6.3V D=5mm	C336192	EEE0JA101WR
C76	22 uF 10V 0603	C84419	GRM188R61A226ME15D
C74	220 $\mu$ F 6.3V 1206	C412252	GRM31CR60J227ME11L
R3	18 k $\Omega$ 0603	C137655	RC0603JR-0718KL
R11	47 k $\Omega$ 100mW 0603	C105579	RC0603FR-0747KL
R25	1.5 M $\Omega$ 100 mW 0603	C137773	RC0603FR-071M5L
R26	5.6 k $\Omega$ 100 mW 0603	C114627	RC0603FR-075K6L
R27	100 $\Omega$ 100mW 0603	C105588	RC0603FR-07100RL
RA3A-RA3D	270 $\Omega$ 100 mW 0603	C137754	RC0603FR-07270RL
EM9	Filter 6003	C78748	BLM18BD102SN1D
R50, R51	510 $\Omega$ 100mW 0603	C114670	RC0603FR-07510RL
R52, R54	20 k $\Omega$ 100mW 0603	C105575	RC0603FR-0720KL
R53, R56 (for 1 Watt speaker) R53, R56 (for DMG normal speaker)	25.5 k $\Omega$ 100mW 0603 10 k $\Omega$ 100mW 0603	C861257 C98220	RT0603BRD0725K5L RC0603FR-0710KL
R55, R71	100 k $\Omega$ 100mW 0603	C14675	RC0603FR-07100KL
R70	732 k $\Omega$ 100mW 0603	C228042	AC0603FR-07732KL
R80, R82, R83	1 k $\Omega$ 100mW 0603	C22548	RC0603FR-071KL
R81 (for 0.5A charging) R81 (for 0.9A charging)	2 k $\Omega$ 100mW 0603 1.21 k $\Omega$ 100mW 0603	C227483 C705737	AC0603DR-072KL RT0603BRD071K21L
R84	100 $\Omega$ 100mW 0603	C105588	RC0603FR-07100RL
FB1	Ferrite Bead 1206	C524527	BLA31AG601SN4D
D1	30V 2A SBD Diode	C12889	B230A-13-F
D2	20V Schottky Barrier Diodes	C552826	PMEG2010EJ,115
F1, F2	6V 2A fuse 0603	C2757930	BSMD0603L-200
Q1	30V 4.2A P channel mo	C306862	AO3401A
Q2	20V 6A mosfet	C16052	FS8205A
U6	Audio Amp VSSOP-10 Amps	C2872995	LM4853MM/NOPB
U7	Supervisory IC SOT23-5	C2866251	TPS3840DL35 or TPS3840DL37 or 40
U11 (only rev E)	LDO		Grab from rev E GBC PCB
U10	SOT23-6 Battery	C18164398	DW01A

MAINBOARD

# MAINBOARD AUDIOBOARD IPSBOARD FOR CABLES

U20	TP4056	C16581	TP4056-42-ESOP8
U30	boost converter SOT-563	C919459	TPS61023DRLR
U40	LDO 5v ultra-low noise	C2864504	TPS7A2050PDBVR
U50	3.3v LDO SOT23-5	C892187	NCP161ASN330T1G
U50 cheaper alternative	3.3v LDO SOT23-5	C3021095	TPNCP161ASN330T1G
L1	6A 2.2uH Power Inductor	C142092	MHCI06018-2R2M-R8A
L2	200mA 5.6uH ±5% 1210 indu	C295106	NLV32T-5R6J-EF
LED GREEN	25mA 0603	C965805	XL-1608SYGC-06
LED RED	20mA 0603	C125099	LTST-C191KRKT
X1 Quartz Crystal	8.388608 MHz 7.5X5-4-PAD		Grab from the GCB PCB or buy LFX TAL003157Bulk
Potentiometer	10k 5pin		(Aliexpress) or grab from the DMG PCB
RAM	TSOP-28		LH52256CVTXIZ
DC Jack 3.5 mm x 1.35 mm	2A 24V	C381119	DC-002-2.0A-1.3
J1	50 pin FFC connector		62684-502100AHLF or FFC2B17-50-T
Power Switch	1212 pin 2P4T	C2939338	SK24D02G4 or grab from the DMG PCB
2 pin conn	Ph 2.0	C16965	PH-2AW
5 pin conn	Ph 2.0	C10402	PH-5AW
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L1, L2, L3	420mA 33uH 1210	C2047418	BRL3225T330K
Audio Jack		C397344	PJ-3655-SMT
R1, R2	1 kΩ 125mW 0805	C95781	RC0805FR-071KL
C1, C2, C3	100 μF 6.3V 4mm SMD	C401761	EEEF0J101AR
Audio speaker	1w 8Ω		(Retrosix)
2 pin conn	Ph 2.0	C16965	PH-2AW
5 pin conn	Ph 2.0	C10402	PH-5AW
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Wheel IPS	Surface Mount Navigation Switch		COM-08184
C1, C2, C6, C7, C8, C24	100 nF 0603	C161115	GCJ188R71H104KA12D
C4, C5	220 pF 100V 0603	C388907	GCM1885C2A221JA16D
C9, C10	27 pF 50V 0603	C162215	GRM1885C1H270FA01D
R1, R14	10 kΩ 100 mW 0603	C98220	RC0603FR-0710KL
R22-R29 (only if 0603 LED are used)	See DMGC original project		
R2, R6, R7	18 kΩ 100 mV 0603	C114610	RC0603FR-0718KL
R3, R5, R11, R12	402 kΩ 100 mV 0603	C874662	RC0603FR-07402KL
R4	100 Ω 100mW 0603	C105588	RC0603FR-07100RL
R8, R10	100 kΩ 100 mW 0603	C14675	RC0603FR-07100KL
R9	510 Ω 100 mW 0603	C114670	RC0603FR-07510RL
R13	15 kΩ 100 mW 0603	C114661	RC0603FR-0715KL
POWER LED RED	3 mm red led (cloudy len)	C397053	MHL3014SRTS
RGB LED x 8	RBG 2020		WS2812
Q1	N-channel MOSFET	C350313	2N7002
U1	Op-amp	C2943013	LMV358
U2	Microcontroller		ATTINY85V-10SU
J1, J2	50 pin FFC connector		62684-502100AHLF or FFC2B17-50-T
J3 (Optional for assembly, only helpful for programming the ATTINY)			TSM-107-01-T-SH
FFC cable	Flat Flexible Cable		0151660539
Tactile switch (D-PAD. A, B) x 6	7mm 0.6mm Round Button	C125046 C97437	SKRRABE010 SKRRAAE010
Tactile switch (Start/select) x 2	4.5mm 0.4mm Round Button	C139795	SKRMABE010
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2 pin conn	Ph 2.0 housing	C10408	PH-2Y
5 pin conn	Ph 2.0 housing	C10411	PH-5Y

This is a DIY project for electronic enthusiasts. For this reason, I am not responsible for any damage incurred while attempting this project or after completion of the project. You alone accept all risk since you are 100% liable for damage to yourself or your property.