

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 μ F 6.3V 1206 100 μ 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 | 100 pF 50V 0603 | C14665 | CC0603JRNPO9BN101 |
| C24, C28, C43, C75, C82 (C33 only for rev E) | 100 nF 100V 0603 | C161117 | GCI188R72A104KA01D |
| C37, C74, C81 | 10 μ F 10V 0603 | C77044 | GRM188R61A106KE69D |
| C47 | 150 pF 0603 | C2176758 | GCM1885C2A151FA16D |
| C50, C51 | 390 nF 16V 0603 | C437460 | GCM188R71C394KA55D |
| C52, C53, C54, C55, C56, C72, C73, C78, C95 (C34 only for rev E) | 1 uF 16V 0603 | C77049 | GRM188R71C105KE15D |
| C70, C71 | 100 μ F 6.3V D=5mm | C336192 | EEE0JA101WR |
| C76, C77 | 22 uF 10V 0603 | C84419 | GRM188R61A226ME15D |
| C79 | 220 pF 100V 0603 | C388907 | GCM1885C2A221JA16D |
| R3 | 18 k Ω 0603 | C137655 | RC0603JR-0718KL |
| R11 | 47 k Ω 100mW 0603 | C105579 | RC0603FR-0747KL |
| R25 | 1.5 M Ω 100 mW 0603 | C137773 | RC0603FR-071M5L |
| R26 | 5.6 k Ω 100 mW 0603 | C114627 | RC0603FR-075K6L |
| R27 | 100 Ω 100mW 0603 | C105588 | RC0603FR-07100RL |
| RA3A-RA3D | 270 Ω 100 mW 0603 | C137754 | RC0603FR-07270RL |
| EM9 | Filter 6003 | C78748 | BLM18BD102SN1D |
| R50, R51 | 510 Ω 100mW 0603 | C114670 | RC0603FR-07510RL |
| R52, R54 | 20 k Ω 100mW 0603 | C105575 | RC0603FR-0720KL |
| R53, R56 (for 1 Watt speaker) R53, R56 (for DMG normal speaker) | 25.5 k Ω 100mW 0603 10 k Ω 100mW 0603 | C861257 C98220 | RT0603BRD0725K5L RC0603FR-0710KL |
| R55, R71 | 100 k Ω 100mW 0603 | C14675 | RC0603FR-07100KL |
| R70 | 732 k Ω 100mW 0603 | C228042 | AC0603FR-07732KL |
| R80, R82, R83 | 1 k Ω 100mW 0603 | C22548 | RC0603FR-071KL |
| R81 (for 0.5A charging) R81 (for 0.9A charging) | 2 k Ω 100mW 0603 1.21 k Ω 100mW 0603 | C227483 C705737 | AC0603DR-072KL RT0603BRD071K21L |
| R84 | 100 Ω 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 |
| U20 | TP4056 | C16581 | TP4056-42-ESOP8 |

MAINBOARD

MAINBOARD AUDIOBOARD IPSBOARD FOR CABLES

| | | | |
|---|-----------------------------------|-------------------|--|
| 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 | 7A 1uH Power Inductor | C285722 | MHCI06018-1R0M-R8A |
| L2 | 200mA 5.6uH ±5% 1210 Power Induct | 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 |
| ----- | ----- | ----- | ----- |
| 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 | EEFT0J101AR |
| Audio speaker | 1w 8Ω | | (Retrosix) |
| 2 pin conn | Ph 2.0 | C16965 | PH-2AW |
| 5 pin conn | Ph 2.0 | C10402 | PH-5AW |
| ----- | ----- | ----- | ----- |
| 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 |
| ----- | ----- | ----- | ----- |
| 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.