

# Large Drive Unit Logic Board V2

Ref Name	Qty	Component
CONN2,CONN6	2	2PinJSTCPT
CONN8,CONN10,CONN12,CONN13,CONN17,SWPRC	5	3WAY_SIL
CONN7	1	4PinJSTCPT
CONN1	1	8PinJSTCPT
CONN5	1	12PinJSTCPT
CONN3	1	20PinJSTCPT
CONN4	1	24PinJSTCPT
IC12	1	74HCT4052D
IC13	1	74LVC2G17GW
R3	1	3314G-1-105E
L1	1	7447709470
IC9	1	ADM3101EARQZ
C64,41,44,24,23,43,42,106,36,16,11,10,8,4	8	C-USC0805
C45,54	2	C-USC0805
C34,33,20	3	C-USC0805
33,62,61,60,59,58,57,31,30,29,28,26,25,22,21,37,15,1	27	C-USC0805
C51,50,49,48,47,46	6	C-USC0805
C1,2	1	C-USC0805
C105	1	C-USC0805
C53,55	1	C-USC0805
C52,56	1	C-USC0805
C3	1	Cap_el
IC3	1	CD74HC30M
X2	1	CRYSTALTC26HM
C12,13	1	C_0805
C5,9,17,39,40	5	C_0805
C38	1	EEEFK1A221XP
C35	1	EEVEB2C680SM
LD1	1	LD1117SOT223
LED1,2	1	LED0805
X1	1	LFXTAL011301
IC5	1	LM2596S-5.0_NOPB
IC6	1	LM2664M6X_NOPB
IC2	1	LM2901DT
IC11	1	LTC1799CS5#TRMPBF
L2	1	L_PM0603
D1,2	1	MBRS540T3G
IC10	1	MC74HCT573ADWR2G
IC7	1	MCP6292-E_SN
Q1	1	MMBT3904
R8,6,38,38,40,41,43	7	R-US_R0805
R24,26,28,32,33	5	R-US_R0805
R78,83	1	R-US_R0805
R17	1	R-US_R0805
R84,23,25,27,31,79,34,11	8	R-US_R0805
R77,82	1	R-US_R0805
R76,81	1	R-US_R0805
R2,4,9,10,12,14,15,1,18,19,20,21,29,30,36,37	16	R-US_R0805
R64,65	1	R-US_R0805
R52	1	R-US_R0805

R16	1	R-US_R0805
R55,62,63	3	R-US_R0805
R69,70	1	R-US_R0805
R74,73,71,72	4	R-US_R0805
R42	1	R-US_R0805
R66,67	2	R-US_R0805
R5	1	R-US_R0805
R56,57,58,59,60,61	6	R-US_R0805
R75,80	1	R-US_R0805
IC8	1	SN65HVD234
IC1	1	STM32F103
J1	1	T821120A1S100CEU
IC4	1	ULN2003ADR

Value	Package
	DSC
	DIL
	DSC
	DSC
	DSC
	DSC
	DSC
	SOIC127P600X175-16N
	SOT65P210X110-6N
	3314G-1
	WE-PD_1260/1245/1280/121054
	SOP64P600X175-16N
0.1uF	C0805
1N5	C0805
1nF	C0805
1uF	C0805
10nF	C0805
27pF	C0805
47nF	C0805
150PF	C0805
330PF	C0805
100uF	DSC
	SOIC127P600X175-14N
32.768kHz	TC26H-M
10pF	C0805
10uF	C0805
220uF	FKSV(D8)
680uF	EBV(K16)
LD1117-3.3	SOT223
	CHIPLED_0805
8.00MHz	LFXTAL011301
	TO170P1435X465-6N
	SOT95P280X145-6N
	SOIC127P600X175-14N
	SOT95P280X100-5N
10uH	PM0603
	DIOM7958X256N
	SOIC127P1030X265-20N
	SOIC127P600X175-8N
	SOT95P240X93-3N
1K	R0805
1K5	R0805
2K7	R0805
3K3	R0805
4K7	R0805
5K1	R0805
6K8	R0805
10k	R0805
15k	R0805
22k	R0805

47K	R0805
147K	R0805
60R4	R0805
100K	R0805
100R	R0805
470k	R0805
470R	R0805
560R	R0805
910R	R0805
SN65HVD234	SOIC8
STM32F103RBT6	TQFP-10X10-64
	SHDR20W64P254X254_2X10_3302X89
	SOIC127P600X175-16N

<b>Manufacturer</b>	<b>MPN</b>
JST (JAPAN SOLDERLESS TERMINALS)	SM02B-CPTK-1A-TB
AMPHENOL FCI	77311-401-36LF
JST (JAPAN SOLDERLESS TERMINALS)	SM04B1-CPTK-1A-TB
JST (JAPAN SOLDERLESS TERMINALS)	SM08B-CPTK-1A-TBL
JST (JAPAN SOLDERLESS TERMINALS)	SM12B-CPTK-1A-TB
JST (JAPAN SOLDERLESS TERMINALS)	SM20B-CPTK-1A-TB
JST (JAPAN SOLDERLESS TERMINALS)	SM24B-CPTK-1A-TB(L)
NXP	74HCT4052D
NXP	74LVC2G17GW
Bourns	3314G-1-105E
Wurth Elektronik	7447709470
Analog Devices	ADM3101EARQZ
MURATA	GRM219R71C104KA01D
Wurth Elektronik	8.85012E+11
MULTICOMP	MCSH21B102K160CT
KEMET	C0805C105K4RACTU
Wurth Elektronik	8.85012E+11
MULTICOMP	MC0805N270J500CT
YAGEO (PHYCOMP)	CC0805KRX7R9BB473
MULTICOMP	MC0805B151K201CT
Wurth Elektronik	8.85012E+11
MULTICOMP	MCMR6V3107M6.3X7
Texas Instruments	CD74HC30M
RALTRON	R26-32.768- 12.5
Wurth Elektronik	8.85012E+11
MURATA	GRM21BR61E106KA73L
Panasonic	EEEFK1A221XP
Panasonic	EEEFK1E681SP
STMICROELECTRONICS	LD1117S33CTR
MULTICOMP	MCL-S270GC
IQD	LFXTAL011301
Texas Instruments	LM2596S-5.0/NOPB
Texas Instruments	LM2664M6X/NOPB
STMicroelectronics	LM2901DT
Linear Technology	LTC1799CS5#TRMPBF
TDK	MLZ1608M100WT
ON Semiconductor	MBRS540T3G
ON Semiconductor	MC74HCT573ADWR2G
Microchip	MCP6292-E/SN
Fairchild Semiconductor	MMBT3904
MULTICOMP	MC01W080551K
Panasonic	ERJ6RBD1501V
WELWYN	WCR0805-2K7FI
Panasonic	ERJ6RBD3301V
Panasonic	ERJ6RBD4701V
MULTICOMP	MCWR08X5101FTL
WELWYN	ASC0805-6K8FT5
BOURNS	CRT0805-FZ-1002ELF
WELWYN	ASC0805-15KFT5
WELWYN	ASC0805-22KFT5

Panasonic  
WELWYN  
TE CONNECTIVITY  
MULTICOMP  
MULTICOMP  
WELWYN  
Panasonic  
VISHAY  
Panasonic  
TEXAS INSTRUMENTS  
STMICROELECTRONICS  
AMPHENOL  
Texas Instruments

ERJ6RBD4702V  
WINT0805LF031473B  
RN73C2A60R4BTDF  
MC01W08055100K  
MC01W08055100R  
ASC0805-470KFT5  
ERJ6RBD4700V  
CRCW0805560RFKEA  
ERJ6GEYJ911V  
SN65HVD234D  
STM32F103RBT6  
T821120A1S100CEU  
ULN2003ADR

## Farnell Part Number

## Mouser Part Number

2708677  
1097954  
2708678

306-SM08B-CPTK-1ATBL

2708680  
2708682

306-SM24B-CPTK-1ATBL

4836730  
8168823  
1689907  
1635946  
7097966  
2611934  
2533867  
1856432  
9227792  
2534055  
1759196  
718683  
1855783  
2495143  
9452567  
526824  
1652573  
2533859  
1735530  
1850097  
2507731  
1467779  
1581242  
4789656  
1469195

926-LM2664M6X/NOPB

2382614  
1663863  
2215635  
2101838  
**2774672**  
1439468  
7390303  
9333711  
2380317  
1100317  
2380370  
2380397  
**2447692**  
2078961  
2008317  
2078963  
**2078964**

512-MMBT3904

2380398  
2428837  
2688288RL  
9333738  
9333703  
2078973  
2380396  
1469945  
2323872  
1212363  
1447640  
8323499  
1651927



## Description

Wire-To-Board Connector, 2 mm, 2 Contacts, Header, CPT Series, Crimp, 1 Rows  
Board-To-Board Connector, 2.54 mm, 36 Contacts, Header, BergStik 77311 Series, Through Hole, 1 Rows  
Wire-To-Board Connector, 2 mm, 4 Contacts, Header, CPT Series, Crimp, 1 Rows  
Automotive Connectors SIDE ENTRY CPT HDR 2.0MM PITCH  
Wire-To-Board Connector, 2 mm, 12 Contacts, Header, CPT Series, Crimp, 2 Rows  
Wire-To-Board Connector, 2 mm, 20 Contacts, Header, CPT Series, Crimp, 2 Rows  
Automotive Connectors 24 POS SIDE ENTRY CPT MALE CONN  
74HCT4052D, Multiplexer/Demultiplexer Dual 4:1, 5 V, 16-Pin, SOIC, 2  
NXP 74LVC2G17GW, Dual, Buffer, Single Ended, Non-Inverting, 1.65 5.5 V, 6-Pin SC-88  
3314G SMT top adj cermet trimmer, 1M 4mm Bourns 3314G Series SMD Cermet Trimmer Resistor with Gull Wing Terminations, 1M 20% 0.25W 100ppm/C Top Adjust  
Surface Mount Power Inductor, WE-PD Series, 47 µH, 3.8 A, 4.5 A, Shielded, 0.06 ohm  
ADM3101EARQZ, Line Transceiver, EIA-232-E, RS-232, V.28, 3.3 V, 16-Pin QSOP  
Murata 0805 GRM 100nF Ceramic Multilayer Capacitor, 16 V dc X7R Dielectric ±10% SMD  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 1500 pF, 25 V, ± 5%, C0G / NP0  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 1000 pF, 16 V, ± 10%, X7R, MCSH Series  
Kemet 0805 1µF Ceramic Multilayer Capacitor, 16V dc X7R Dielectric ±10% SMD  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 0.01 µF, 16 V, ± 10%, X7R,  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 27 pF, 50 V, ± 5%, C0G / NP0, MC Series  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 0.047 µF, 50 V, ± 10%, X7R, CC Series  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 150 pF, 200 V, ± 10%, X7R  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 330 pF, 50 V, ± 5%, C0G / NP0  
Electrolytic Capacitor, 100 µF, 6.3 V, MCMHR Series, ± 20%, Radial Leaded, 6.3 mm  
CD74HC30M, Logic Gate 8 Input NAND, HC, 5.2mA 2 to 6V 14-Pin SOIC  
Crystal, 32.768 kHz, Cylinder Radial, 6.2mm x 2mm Dia, 12.5 pF, 20 ppm, R26 Series  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 10 pF, 16 V, ± 5%, C0G / NP0  
SMD Multilayer Ceramic Capacitor, 0805 [2012 Metric], 10 µF, 25 V, ± 10%, X5R, GRM Series  
Ecap 220uF 10V D8 Case FK SMD Panasonic 220F 10 V dc Aluminium Electrolytic Capacitor, FK SMD Series 2000h 6.3 Dia. x 7.7mm  
SMD Aluminium Electrolytic Capacitor, Radial Can - SMD, 680 µF, 25 V, 0.08 ohm, FKS Series ELECTRONIC COMPONENTS  
Fixed LDO Voltage Regulator, 4.75V to 15V, 1.1V Dropout, 3.3Vout, 950mAout, SOT-223-4  
LED, Green, SMD, 1.25mm x 1.4mm, 20 mA, 2.1 V, 570 nm  
Crystal SMD 8.000MHz HC49S-SMD Crystal 8MHz, 30ppm, 2-Pin HC-49-4H-SMX  
SIMPLE SWITCHER 4.5V to 40V, 3A Low Component Count Step-Down Regulator  
TEXAS INSTRUMENTS - LM2664M6X/NOPB - SWITCHED CAPACITOR VOLT CONV, SOT-23-6  
LM2901DT, Quad Comparator Open Collector 1.3s 12 V, 15 V, 18 V, 24 V, 28 V, 3 V, 5 V, 9 V 14-Pin SO  
LTC1799CS5#TRMPBF, Silicon Oscillator, 33MHz, 5-Pin TSOT-23  
Surface Mount High Frequency Inductor, MLZ Series, 10 µH, 250 mA, 0603 [1608 Metric], Multilayer  
Diode Schottky 40V 5A SMC ON Semiconductor MBRS540T3G Schottky Diode, 5A, 40V, 2-Pin SMC  
Dual 10MHz Op Amp, MCP6292-E/SN  
Transistor GP BJT NPN 40V 0.2A SOT23 Fairchild MMBT3904 NPN Bipolar Transistor, 0.2 A, 40 V, 3-Pin SOT-23  
SMD Chip Resistor, Thick Film, 1 kohm, 150 V, 0805 [2012 Metric], 100 mW, ± 5%, MC Series  
SMD Chip Resistor, Thick Film, 1.5 kohm, 150 V, 0805 [2012 Metric], 100 mW, ± 0.5%, ERJ6E Series  
SMD Chip Resistor, Thick Film, AEC-Q200 WCR Series, 2.7 kohm, 100 V, 0805 [2012 Metric], 125 mW  
SMD Chip Resistor, Thick Film, 3.3 kohm, 150 V, 0805 [2012 Metric], 100 mW, ± 0.5%, ERJ6E Series  
SMD Chip Resistor, Thick Film, 4.7 kohm, 150 V, 0805 [2012 Metric], 100 mW, ± 0.5%, ERJ6E Series  
SMD Chip Resistor, Thick Film, 5.1 kohm, 150 V, 0805 [2012 Metric], 125 mW, ± 1%  
SMD Chip Resistor, Thick Film, 6.8 kohm, 150 V, 0805 [2012 Metric], 125 mW, ± 1%  
SMD Chip Resistor, Thin Film, 10 kohm, 100 V, 0805 [2012 Metric], 100 mW, ± 1%, CRT Series  
SMD Chip Resistor, Thick Film, 15 kohm, 150 V, 0805 [2012 Metric], 125 mW, ± 1%  
SMD Chip Resistor, Thick Film, 22 kohm, 150 V, 0805 [2012 Metric], 125 mW, ± 1%

SMD Chip Resistor, Thick Film, 47 kohm, 150 V, 0805 [2012 Metric], 100 mW,  $\pm 0.5\%$ , ERJ6E Series  
SMD Chip Resistor, Thin Film, 147 kohm, 100 V, 0805 [2012 Metric], 125 mW,  $\pm 0.1\%$   
SMD Chip Resistor, Precision, 60.4 ohm, 100 V, 0805 [2012 Metric], 100 mW,  $\pm 0.1\%$   
SMD Chip Resistor, 100 kohm, 150 V, 0805 [2012 Metric], 100 mW,  $\pm 5\%$ , MC Series  
SMD Chip Resistor, Thick Film, 100 ohm, 100 V, 0805 [2012 Metric], 100 mW,  $\pm 5\%$ , MC Series  
SMD Chip Resistor, Thick Film, 470 kohm, 150 V, 0805 [2012 Metric], 125 mW,  $\pm 1\%$   
SMD Chip Resistor, Thick Film, 470 ohm, 150 V, 0805 [2012 Metric], 100 mW,  $\pm 0.5\%$ , ERJ6E Series  
SMD Chip Resistor, Thick Film, 560 ohm, 150 V, 0805 [2012 Metric], 125 mW,  $\pm 1\%$   
SMD Chip Resistor, Thick Film, 910 ohm, 150 V, 0805 [2012 Metric], 125 mW,  $\pm 5\%$   
CAN Bus, Transceiver, CAN, 1, 1, 3 V, 3.6 V, SOIC  
ARM Microcontroller, Motor Control, ARM Cortex-M3, 32bit, 72 MHz, 128 KB, 20 KB, 64 Pins  
HEADER, VERTICAL, 2.54MM, 20WAY Amphenol T821 Series, 2.54mm Pitch 20 Way 2 Row Shrouded Straight PCB Header, Through Hole, Solder Termination  
Trans Darlington NPN 50V 0.5A SOIC16 Texas Instruments ULN2003ADR, 7-element NPN Darlington Transistor Array, 0.5 A 50 V, 16-Pin SOIC