

## GUAVA CONTROLLER BOX INTERNAL/EXTERNAL WIRING & CABLES

Type	Description	Spec / Details	MFG	MFG Part No	DiGiKEY Part No	Qty / Mach	Qty Order
<b>Connector</b>	<b>Receptacle</b>	14-POS, panel mount w. brass inserts	TE Conn.	<b>211103-1</b>	<b>A106308-ND</b>	4	3200
Pin/ Socket	Socket	20-24 AWG Tin Sockets for Receptacle, <u>Tape reel of 4000</u>	TE Conn.	1-66331-4	A31995TR-ND	48	10
		20-24 AWG Tin Sockets for Receptacle	TE Conn.	1-66399-0	A31995-ND	48	2300
<b>*Connector</b>	<b>Plug</b>	14-POS, free hanging	TE Conn.	<b>206044-1</b>	<b>A1358-ND</b>	3	2400
*Pin/ Socket	Pin	20-24 AWG Tin Pin for Plug, <u>Tape reel of 4000</u>	TE Conn.	1-66106-5	A31991TR-ND	36	8
		20-24 AWG Tin Pin for Plug	TE Conn.	1-66103-8	A31989-ND	36	2000
*Str Relief	Straight Housing	Cable Clamp for 14-Pos; 0.453" opening	TE Conn.	206070-8	A32516-ND	2	1650
*Str Relief	90 Deg Housing	-----//-----; 0.453" opening; full cover	TE Conn.	1546349-2	A33754-ND	1	750
<b>Connector</b>	<b>Receptacle</b>	4-POS, panel mount w. brass inserts	TE Conn.	<b>211102-1</b>	<b>A25053-ND</b>	1	1001
Pin/ Socket	Socket	14-18 AWG Tin Sockets for Receptacle, <u>Tape reel of 4000</u>	TE Conn.	1-66358-6	A31997TR-ND	2	1
		14-18 AWG Tin Sockets for Receptacle	TE Conn.	1-66360-2	A31997-ND	2	100
Pin/ Socket	Socket	20-24 AWG Tin Sockets for Receptacle	TE Conn.	1-66399-0	A31995-ND	2	
<b>*Connector</b>	<b>Plug</b>	4-POS, free hanging	TE Conn.	<b>206429-1</b>	<b>A1357-ND</b>	1	1001
*Pin/ Socket	Pin	14-18 AWG Tin Pin for Plug, <u>Tape reel of 4000</u>	TE Conn.	1-66359-4	A31998TR-ND	2	1
		14-18 AWG Tin Pin for Plug	TE Conn.	1-66361-2	A31998-ND	2	110
*Pin/ Socket	Pin	20-24 AWG Tin Pin for Plug	TE Conn.	1-66103-8	A31989-ND	2	
*Str Relief	Straight Housing	Cable Clamp for 4-Pos; 0.329" opening	TE Conn.	1-206062-5	A104910-ND	1	1001
<b>Connector</b>	<b>Receptcl/Socket</b>	<b>D-Sub RCPT 25POS IDC</b>	3M	8350-7005	3M15414-ND	1	1001
*	Plug	D-Sub Plug 25POS IDC	3M	8225-8000	3M15408-ND	1	1001
*Str Relief	Back Shell	Backshell DB25 Flat Ribbon - Gray	Norcomp	976-025-010R031	976-25RPE-ND	1	750
<b>Cable</b>	Flat Ribbon Cable	25Cond Ribbon LT GRY 100FT (16cm)	3M	HF365/25SF	MD25R-100-ND	1	4

<b>Switch</b>	Micro Limit SW	Switch SIM Roll SPDT 3A 125V	Omron	SS-3GL13PT	SW768-ND	3	2300
<b>Connector</b>	LCD Con Housing	8-POS .100 Dual (Black)	Molex	22-55-2081	WM2521-ND	1	1001
Connector	LCD Con Housing	20-POS .100 Dual (Black)	Molex	22-55-2201	WM2527-ND	1	1001
Connector	LCD Socket	IDC 10POS Dual 30AU	FCI	71600-010LF	609-1739-ND	2	1500?
Connector	Thermistor/switch	Connector Housing 2POS .100 W/Latch	Molex	0050579452	WM2900-ND	10	7500
Connector	Motor Conn	Connector Housing 4POS .100 W/Latch	Molex	0050579404	WM2902-ND	11	8500
Connector	Switch Conn	Connector Housing 3POS .100 W/Latch	Molex	0050579403	WM2901-ND	3	2200
* Connector	Housing	Conn Housing Male 2POS .100	Molex	0701070001	WM2533-ND	5	3700
* Connector	Housing	Conn Housing Male 4POS .100	Molex	0701070003	WM2535-ND	6	4500
<b>Connector</b>	<b>Socket/ Female</b>	<b>Conn. Term Female 22-24AWG Tin</b>	<b>Molex</b>	<b>0016020102</b>	<b>WM2510-ND</b>	<b>86</b>	<b>5000</b>
		<b>Connector Term Female 22-24AWG Tin Tape reel of 20,000</b>	<b>Molex</b>	<b>0016020086</b>	<b>WM2510TR-ND</b>	<b>86</b>	<b>3</b>
<b>Connector</b>	<b>Pin/ Male</b>	<b>Conn Term Male Pin 24-30AWG Tin</b>	<b>Molex</b>	<b>0016020108</b>	<b>WM2565-ND</b>	<b>8</b>	<b>1000</b>
		<b>Conn Term Male Pin 24-30AWG Tin Tape reel of 20,000</b>	<b>Molex</b>	<b>0016020105</b>	<b>WM2565TR-ND</b>	<b>8</b>	<b>1</b>
Terminal	Switch connect	Conn Recept Faston 22-26AWG .110	TE Conn.	7-520366-2	A27793-ND	6	4800
Terminal	24V Pwr Switch	Conn Fast Receptacle14-16 AWG .250	TE Conn.	3-350820-2	A27824-ND	5	4000
Terminal	Grounding	Term Ring Non Ins 26-22AWG #4	Panduit	P22-4R-M	298-10067-ND	4	3200
<b>Switch</b>	<b>Power Switch</b>	<b>Switch Rocker DPST 20A 125V</b>	E-Switch	R5ABLKBLKFF0	EG1529-ND	1	800
	(2nd Source)	Switch Rocker DPST 16A 125V	Cherry	WRG32F2FBBNN	CH784-ND		
<b>Wire/Cable</b>	<b>Motor Power</b>	<b>Shielded 4Cond 22AWG / 100Ft</b>	Gen Cable	C07623.12.10	W504-100-ND		
		Shielded 4Cond 22AWG / 500 ft			W504-500-ND		1
		Shielded 4Cond 22AWG / 1000 ft			W504-1000-ND		7
Wire	Bed Heat Power	16AWG Stranded – Violet – 100 ft	Gen Cable	C2065A.12.19	C2065V-100-ND		
		16AWG Stranded – Violet – 1000 ft	Gen Cable	C2065A.12.19	C2065V-1000-ND		2
Wire	Bed Thermistor	24AWG Stranded – Yellow – 100 ft	Gen Cable	C2015A.12.05	C2015Y-100-ND		
<b>Type</b>	<b>Description</b>	<b>Spec / Details</b>	<b>MFG</b>	<b>MFG Part No</b>	<b>DiGiKEY Part No</b>	<b>Qty/ Mach</b>	<b>Qty Order</b>
		24AWG Stranded – Yellow – 1000 ft	Gen Cable	C2015A.21.05	C2015Y-1000-ND		4
Wire	Extrd Power (2)	24AWG Stranded – Red – 100 ft	Gen Cable	C2015R.12.03	C2015R-100-ND		

		24AWG Stranded – Red – 1000 ft	Gen Cable	C2015R.21.03	C2015R-1000-ND		11
Wire	Extrd Thermist (2)	24AWG Stranded – Orange – 100 ft	Gen Cable	C2015A.12.04	C2015A-100-ND		
		24AWG Stranded – Orange – 1000 ft	Gen Cable	C2015A.21.04	C2015A-1000-ND		7
Wire	Extrd Fan (2)	24AWG Stranded – Red – 100 ft	Gen Cable	C2015R.12.03	C2015R-100-ND		
		24AWG Stranded – Red – 1000 ft	Gen Cable	C2015R.21.03	C2015R-1000-ND		
Wire		24AWG Stranded – Black – 100 ft	Gen Cable	C2015A.12.01	C2015B-100-ND		
		24AWG Stranded – Black – 1000 ft	Gen Cable	C2015A.21.01	C2015B-1000-ND		12
Wire	Extrd Motor (2)	Same as Motor Power Wire - 90 mm					
Wire	24VDC	16AWG Stranded – Red – 100 ft	Gen Cable	C2065A.12.03	C2065R-100-ND		
		16AWG Stranded – Red – 1000 ft	Gen Cable	C2065A.21.03	C2065R-1000-ND		2
Wire	24VDC Common	16AWG Stranded – Yellow – 100 ft	Gen Cable	C2065A.12.05	C2065Y-100-ND		2
		16AWG Stranded – Yellow – 1000 ft	Gen Cable	C2065A.21.05	C2065Y-1000-ND		
Wire	Z-Right Motor	Same as Motor Power Wire - 18.5 mm					
	Z- Left Motor	Same as Motor Power Wire - 185 mm					
Wire	Z- Switch	24AWG Stranded – White – 100 ft	Gen Cable	C2015A.12.02	C2015W-100-ND		
		24AWG Stranded – White – 1000 ft	Gen Cable	C2015A.21.02	C2015W-1000-ND		8
Wire		24AWG Stranded – Black – 100 ft	Gen Cable	C2015A.12.01	C2015B-100-ND		
		24AWG Stranded – Black – 1000 ft	Gen Cable	C2015A.21.01	C2015B-1000-ND		
Wire	X- Motor	Same as Motor Power Wire - 180 mm					
Wire	X- Switch	24AWG Stranded – White – 100 ft	Gen Cable	C2015A.12.02	C2015W-100-ND		
		24AWG Stranded – White – 1000 ft	Gen Cable	C2015A.21.02	C2015W-1000-ND		
Wire		24AWG Stranded – Black – 100 ft	Gen Cable	C2015A.12.01	C2015B-100-ND		
		24AWG Stranded – Black – 1000 ft	Gen Cable	C2015A.21.01	C2015B-1000-ND		
Wire	Y- Motor	Same as Motor Power Wire - 200 mm					
Wire	X- Switch	24AWG Stranded – White – 100 ft	Gen Cable	C2015A.12.02	C2015W-100-ND		
		24AWG Stranded – White – 1000 ft	Gen Cable	C2015A.21.02	C2015W-1000-ND		
Wire		24AWG Stranded – Black – 100 ft	Gen Cable	C2015A.12.01	C2015B-100-ND		
		24AWG Stranded – Black – 1000 ft	Gen Cable	C2015A.21.01	C2015B-1000-ND		

TB	Power Plug	Term Block Plug 6POS STR 5.08MM	Molex	39530-0006	WM7822-ND	1	1001
TB	Heat & Fan	Term Block Plug 2POS STR 5.08MM	Molex	39530-0002	WM7819-ND	5	3800
* Wire Tubing	Corrugated Tubing	TUBING CORRUGATED LOOM .25"X100' - BLACK	Panduit	CLT25F-C20	298-1141-ND	1	

\* Part not internal to the box

### PARTS Can only order from MOUSER & McMASTER-CARR

Type	Description	Spec / Details	MFG	MFG Part No	MOUSER ELEC.	Qty/ Mach	Qty Order
Connector	Heat Bed Conn. Housing	Heavy Duty Power Connectors PP15/45 HOUSING ONLY - BLACK			879-1327G6-BK (Mouser Part no)	2	1500
Connector	Heat Bed Conn, Terminal	Heavy Duty Power Connectors PP15 #16-20 AWG CONT LOW DETENT			879-1332-BK (Mouser Part No)	2	1500
*Cable	LCD External Flat Cable	Flat Cables .050" 10C Shielded Black 28AWG Stranded	3M	3517/10-1005	517-3517/10	68cm	17
Type	Description	Spec / Details	MFG	MFG Part No	McMaster-Carr	Qty/ Mach	
* Shrink Tubing	Motor EMI Tubing	EMI/RFI-Shield Heat-Shrink Tubing 3/16" ID Before, 3/32" ID After - 48" Length, Black.			7937K21		
Standoff	4-40 Screw Size Hex Standoff	Aluminum Male-Female Threaded Hex Standoff, 3/16" Hex, 3/16" Length,			93505A853 – Screw Size 4-40	2	1500
* Wire Tubing	Corrg. Sleeving Guava 2 <sup>nd</sup> Extrdr	TUBING CORRUGATED LOOM .25"X100' – BLUE, 1/4", 100ft	Panduit		7700K141		4**
* Wire Tubing	Corrg. Sleeving Pre-Guava 2 <sup>nd</sup> Extrdr	TUBING CORRUGATED LOOM .25"X100' – BLUE, 3/8", 100ft	Panduit		7700K181		2**

\* Part not internal to the box

\*\* Assumption: 100 Guava dual extruder demand & 50 Pre-Guava dual extruder demand

## TOOLS

Type	Description	Spec / Details	MFG	MFG Part No	DiGiKEY Part No	Qty/ Mach	Qty Order
Hand Tool	Crimp Tool	TOOL CRIMPER RATCHETING 16-24AWG	TE Conn.	91505-1	A9841-ND		
Hand Tool	Insertion Tool	TOOL INSERTION CPC CONTACTS	TE Conn.	200893-2	200893-2-ND		
Hand Tool	Extraction Tool	CONTACT EXTRACTION TOOL	TE Conn.	305183	A1329-ND		
Bench Tool	Applicator	(TBD)					
Bench Tool	Flat C/Conn Press	HAND PRESS BENCH MOUNT	PanaVise	502	502PV-ND		
		HAND PRESS IDC CONVERSION KIT	PanaVise	506	506PV-ND		
		BASE PLATE SOCKET IDC	PanaVise	510	510PV-ND		
Hand Tool	Crimp Tool	TOOL CRIMP CGRD KK MICROFIT SPOX	Molex	0640160201	WM17552-ND		
Hand Tool	Insertion Tool	TOOL HAND INSERTION	Molex	0011020022	WM9911-ND		
Hand Tool	Extraction Tool	TOOL HAND EXTRACTION	Molex	0011030036	WM1032-ND		
Bench Tool	Applicator	TOOL APPLICATOR 22-24AWG CRIMP	Molex	0639023200	WM6338-ND		
Hand Tool	Pwr SW Terminal	HAND CRIMP TOOL/FASTOS(W/O DIES)	TE Conn.	58078-3	A28005-ND		
	Dies	DIE SET ULTRA-FASTONS 16-14 AWG	TE Conn.	90391-3	A28008-ND		