Main Controller Board

		GND	HEADER	VDD		
Power System	BAT12_VOLTS	2.0		GND		
	BAT12_AMPS	2.1		1.7 <Reserved Indication>		
	BAT24_VOLTS	2.2	LED	1.6 LED		
	BAT24_AMPS	2.3		1.5 <Reserved Indication>		
LifeRay	LIFERAY_ENABLE	2.4		1.4 <Reserved Indication>		
	<Reserved Output>	2.5		1.3 SERVO_4_TILT	Gimbal	
Video Mux	VIDMUX_A	2.6		1.2 SERVO_3_PAN		
	VIDMUX_B	2.7		1.1 SERVO_2_RIGHT	Drive ESCs	
IMU	SCL	3.0		1.0 SERVO_1_LEFT		
	SDA	3.1		0.7 SW (BUTTON)		
	DEBUG	3.2	IC	0.6 SCLK		
	DEBUG	3.3		0.5 MISO		
	<Reserved Input>	3.4		0.4 MOSI		
	<Reserved Input>	3.5		0.3 WIZ_SS	WizNet	
	<Reserved Input>	3.6		0.2 WIZ_RST		
	<Reserved Input>	3.7		0.1 WIZ_RDY		
	DEBUG	3.2		0.0 WIZ_INT		
	DEBUG	3.3		4.3 <Reserved>		
	DEBUG	RESET		4.2 GPS_ENABLE		
	DEBUG	GND		4.1 TX-OUT	GPS	
	DEBUG	VDD	BUTTON	4.0 RX-IN		

v1.2

Legend

Not Assigned
System/No Use
Analog
PWM Outputs
I2C
SPI
Serial
Digital Outputs
Buttons/Switchs

Arm Controller Board

		GND	HEADER	VDD		
Arm Joints	POT_SHOULDER	2.0		GND		
	POT_ELBOW	2.1		1.7 <Reserved Indication>		
Soil Taster	SENS_HYGRO	2.2	LED	1.6 LED		
	SENS_PH	2.3		1.5 <Reserved Indication>		
	MOTOR_AUGER_A	2.4		1.4 <Reserved Indication>		
	MOTOR_AUGER_B	2.5		1.3 SERVO_4_GRIPPER	Gripper Servo	
	<Reserved Output>	2.6		1.2 SERVO_3_ELBOW	Arm ESCs	
	<Reserved Output>	2.7		1.1 SERVO_2_SHOULDER		
	<I2C Reserved>	3.0		1.0 SERVO_1_TURRET	Monster Red Servo	
	<I2C Reserved>	3.1		0.7 SW (BUTTON)		
	DEBUG	3.2	IC	0.6 SCLK		
	DEBUG	3.3		0.5 MISO		
Arm Hardstop switches	STOP_SHDR_UP	3.4		0.4 MOSI		
	STOP_SHDR_DN	3.5		0.3 WIZ_SS	WizNet	
	STOP_ELB_UP	3.6		0.2 WIZ_RST		
	STOP_ELB_DN	3.7		0.1 WIZ_RDY		
	DEBUG	3.2		0.0 WIZ_INT		
	DEBUG	3.3		4.3 <Reserved>		
	DEBUG	RESET		4.2 BIDIR_SEL		
	DEBUG	GND		4.1 TX-OUT	Dynamixel Servos	
	DEBUG	VDD	BUTTON	4.0 RX-IN		

Details

GPS_ENABLE	Prevent GPS talking when system is programming via Serial, High_Z State: Mute
BIDIR_SEL	Dynamixels are BiDirectional. High-Z State: Receive
MOTOR_AUGER_x	Stimulates H-Bridge motor driver to control drill/auger system (Can be ESC(s) instead)