## Main Controller Board

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|---|---|---|---|---|---|---|
| | | 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> | | |
| Video Mux | VIDMUX_A | 2.5 | | 1.3 SERVO_4_TILT | Gimbal | |
| | VIDMUX_B | 2.6 | | 1.2 SERVO_3_PAN | | |
| | VIDMUX_C | 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 <Reserved> | | |
| | DEBUG | GND | | 4.1 TX-OUT | GPS | |
| | DEBUG | VDD | BUTTON | 4.0 RX-IN | | |

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> | | |
| | <Reserved Output> | 2.4 | | 1.4 <Reserved Indication> | | |
| | <Reserved Output> | 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 | | |
| | DEBUG | RESET | | 4.2 BIDIR_SEL | | |
| | DEBUG | GND | | 4.1 TX-OUT | Dynamixel Servos | |
| | DEBUG | VDD | BUTTON | 4.0 RX-IN | | |