# Analogue In

| Color | Port | Channel | Arduino | Pin | Description | Wire Color |
|-------|------|---------|---------|-----|-------------|------------|
| Blue | A1 | A2 | A1 | 1 | A2 | Yellow |
|  |  | A1 | A0 | 2 | A1 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |
| Blue | A2 | A4 | A3 | 1 | A4 | Yellow |
|  |  | A3 | A2 | 2 | A3 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |
| Blue | A3 | A6 | A5 | 1 | A6 | Yellow |
|  |  | A5 | A4 | 2 | A5 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |
| Blue | A4 | A8 | A7 | 1 | A8 | Yellow |
|  |  | A7 | A6 | 2 | A7 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |
| Blue | A5 | A10 | A9 | 1 | A10 | Yellow |
|  |  | A9 | A8 | 2 | A9 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |
| Blue | A6 | A12 | A10 | 1 | A12 | Yellow |
|  |  | A11 | A11 | 2 | A11 | Green |
|  |  |  |  | 3 | +5V | Red |
|  |  |  |  | 4 | GND | Black |

Looking into connector numbering is from right to left on individual connector.

# Servo Out

| Color | Port | Channel | Arduino | Pin | Description | Wire Color |
|-------|------|---------|---------|-----|-------------|------------|
| Yellow | S1 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S2 | 3 | 3 | S2 | Green |
| | | S1 | 2 | 4 | S1 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |
| | | | | | | |
| Yellow | S2 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S4 | 5 | 3 | S4 | Green |
| | | S3 | 4 | 4 | S3 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |
| | | | | | | |
| Yellow | S3 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S6 | 7 | 3 | S6 | Green |
| | | S5 | 6 | 4 | S5 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |
| | | | | | | |
| Yellow | S4 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S8 | 9 | 3 | S8 | Green |
| | | S7 | 8 | 4 | S7 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |
| | | | | | | |
| Yellow | S5 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S10 | 11 | 3 | S10 | Green |
| | | S9 | 10 | 4 | S9 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |
| | | | | | | |
| Yellow | S6 | | | 1 | GND | Blue |
| | | | | 2 | +5V | Yellow |
| | | S12 | 13 | 3 | S12 | Green |
| | | S11 | 12 | 4 | S11 | Red |
| | | | | 5 | +5V | Black |
| | | | | 6 | GND | White |

# Digital Out

| Color | Port | Channel | Arduino | Pin | Description | Wire Color |
|-------|------|---------|---------|-----|-------------|------------|
| Red | DO1 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | DO4 | 30 | 3 | DO4 | Black |
| | | DO3 | 31 | 4 | DO3 | Red |
| | | DO2 | 32 | 5 | DO2 | Green |
| | | DO1 | 33 | 6 | DO1 | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |
| | | | | | | |
| Red | DO2 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | DO8 | 26 | 3 | DO8 | Black |
| | | DO7 | 27 | 4 | DO7 | Red |
| | | DO6 | 28 | 5 | DO6 | Green |
| | | DO5 | 29 | 6 | DO5 | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |
| | | | | | | |
| Red | DO3 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | DO12 SDA | ~~22~~ 20 | 3 | DO12 | Black |
| | | DO11 SCL | ~~23~~ 21 | 4 | DO11 | Red |
| | | DO10 RESET | ~~24~~ | 5 | DO10 | Green |
| | | DO9 | 25 | 6 | DO9 | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |

# Digital In

| Color | Port | Channel | Arduino | Pin | Description | Wire Color |
|-------|------|---------|---------|-----|-------------|------------|
| Green | DI1  |         |         | 1   | GND         | Blue       |
|       |      |         |         | 2   | +5V         | White      |
|       |      | DI4     | 42      | 3   | DI4         | Black      |
|       |      | DI3     | 43      | 4   | DI3         | Red        |
|       |      | DI2     | 44      | 5   | DI2         | Green      |
|       |      | DI1     | 45      | 6   | DI1         | Yellow     |
|       |      |         |         | 7   | +5V         | Brown      |
|       |      |         |         | 8   | GND         | Grey       |
|       |      |         |         |     |             |            |
| Green | DI2  |         |         | 1   | GND         | Blue       |
|       |      |         |         | 2   | +5V         | White      |
|       |      | DI8     | 38      | 3   | DI8         | Black      |
|       |      | DI8     | 39      | 4   | DI7         | Red        |
|       |      | DI6     | 40      | 5   | DI6         | Green      |
|       |      | DI5     | 41      | 6   | DI5         | Yellow     |
|       |      |         |         | 7   | +5V         | Brown      |
|       |      |         |         | 8   | GND         | Grey       |
|       |      |         |         |     |             |            |
| Green | DI3  |         |         | 1   | GND         | Blue       |
|       |      |         |         | 2   | +5V         | White      |
|       |      | DI12    | 34      | 3   | DI12        | Black      |
|       |      | DI11    | 35      | 4   | DI11        | Red        |
|       |      | DI10    | 36      | 5   | DI10        | Green      |
|       |      | DI9     | 37      | 6   | DI9         | Yellow     |
|       |      |         |         | 7   | +5V         | Brown      |
|       |      |         |         | 8   | GND         | Grey       |

# Communication

| Color | Port | Channel | Arduino | Pin | Description | Wire Color |
|-------|------|---------|---------|-----|-------------|------------|
| Orange | C1 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | | 50 | 3 | MISO | Black |
| | | | 51 | 4 | MOSI | Red |
| | | | 52 | 5 | SCK | Green |
| | | | 53 | 6 | SS | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |
| | | | | | | |
| Orange | C2 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | | 16 | 3 | TX2 | Black |
| | | | 17 | 4 | RX2 | Red |
| | | | 18 | 5 | TX1 | Green |
| | | | 19 | 6 | RX1 | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |
| | | | | | | |
| Orange | C3 | | | 1 | GND | Blue |
| | | | | 2 | +5V | White |
| | | | 1 | 3 | TX0 | Black |
| | | | 0 | 4 | RX0 | Red |
| | | | 14 | 5 | TX3 | Green |
| | | | 15 | 6 | RX3 | Yellow |
| | | | | 7 | +5V | Brown |
| | | | | 8 | GND | Grey |