

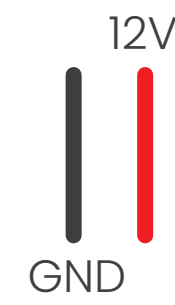


# Control System Overview

B2.1.00

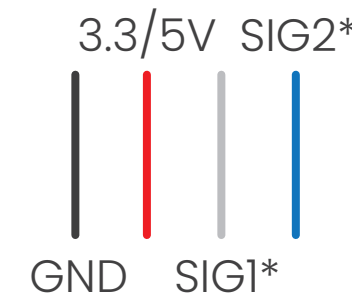
### Power

12VDC Main



### Data

22 AWG Minimum



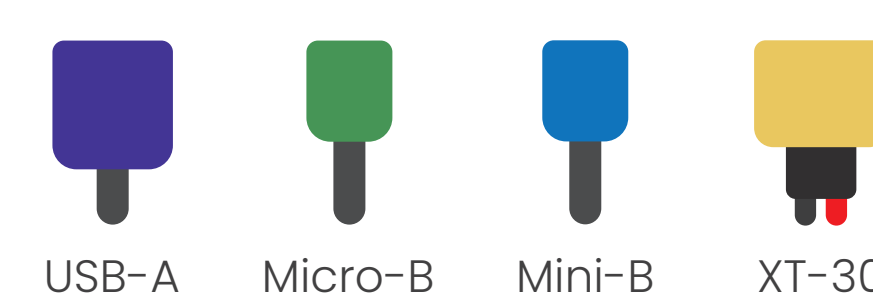
### Wire Gauge

Minimum Gauge per connection shown



### I/O

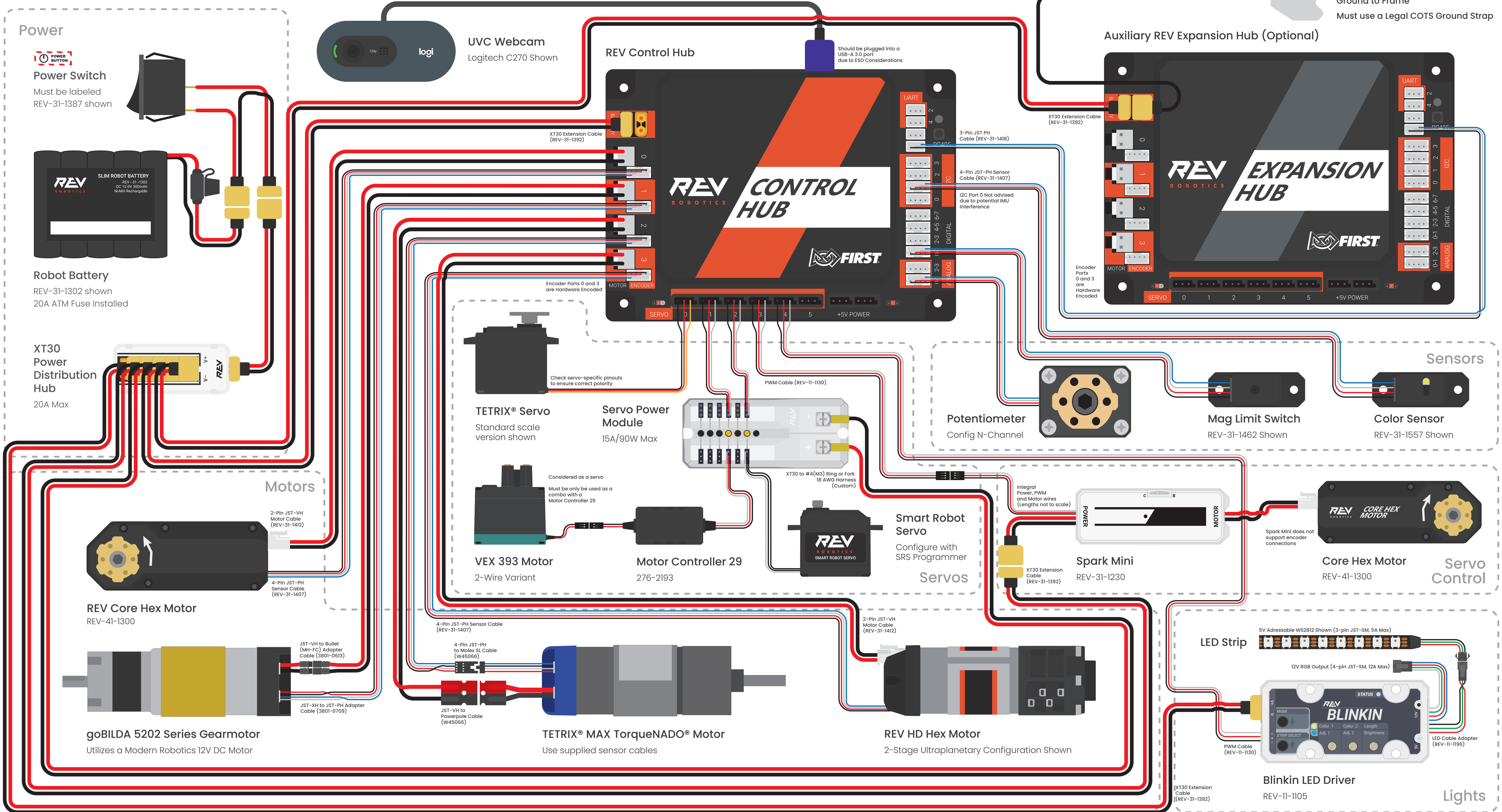
Connector Interfaces



\* SIG1 and SIG2 are utilized differently depending on the communication protocol used in a specific connection. Learn more about each protocol's pinouts and the FTC control system at: [ftc-docs.firstinspires.org](http://ftc-docs.firstinspires.org)

Keep in Mind

## B2 - REV Control Hub Configuration - Advanced



### Power

**Power Switch**  
Must be labeled  
REV-31-1387 shown

**Robot Battery**  
REV-31-1302 shown  
20A ATM Fuse Installed

**XT30 Power Distribution Hub**  
20A Max

**UVC Webcam**  
Logitech C270 Shown

**REV CONTROL HUB**  
FIRST

**Auxiliary REV Expansion Hub (Optional)**  
REV EXPANSION HUB  
FIRST

**TETRIX® Servo**  
Standard scale version shown

**Servo Power Module**  
15A/90W Max

**VEX 393 Motor**  
2-Wire Variant

**Motor Controller 29**  
276-2193

**Smart Robot Servo**  
Configure with SRS Programmer

**Potentiometer**  
Config N-Channel

**Mag Limit Switch**  
REV-31-1462 Shown

**Color Sensor**  
REV-31-1557 Shown

**REV Core Hex Motor**  
REV-41-1300

**goBILDA 5202 Series Gearmotor**  
Utilizes a Modern Robotics 12V DC Motor

**TETRIX® MAX TorqueNADO® Motor**  
Use supplied sensor cables

**REV HD Hex Motor**  
2-Stage Ultrapanetary Configuration Shown

**Spark Mini**  
REV-31-1230

**Core Hex Motor**  
REV-41-1300

**Blinkin LED Driver**  
REV-11-1105

**Lights**

Robot Ground (Optional)  
Ground to Frame  
Must use a Legal COTS Ground Strap

XT30 Extension Cable (REV-31-1392)

Should be plugged into a USB-A 3.0 port due to ESD Considerations

Encoder Ports 0 and 3 are Hardware Encoded

Check servo-specific pinouts to ensure correct polarity

Considered as a servo. Must be only be used as a servo with a Motor Controller 29

PWM Cable (REV-11-1130)

XT30 to #4(M3) Ring or Fork 18 AWG Harness (Custom)

Integral Power, PWM and Motor wires (lengths not to scale)

Spark Mini does not support encoder connections

5V Addressable WS2812 Shown (3-pin JST-SM, 5A Max)

12V RGB Output (4-pin JST-SM, 12A Max)

LED Cable Adapter (REV-11-1196)