



Control System Overview

A2.1.10

Power
12VDC Main
GND

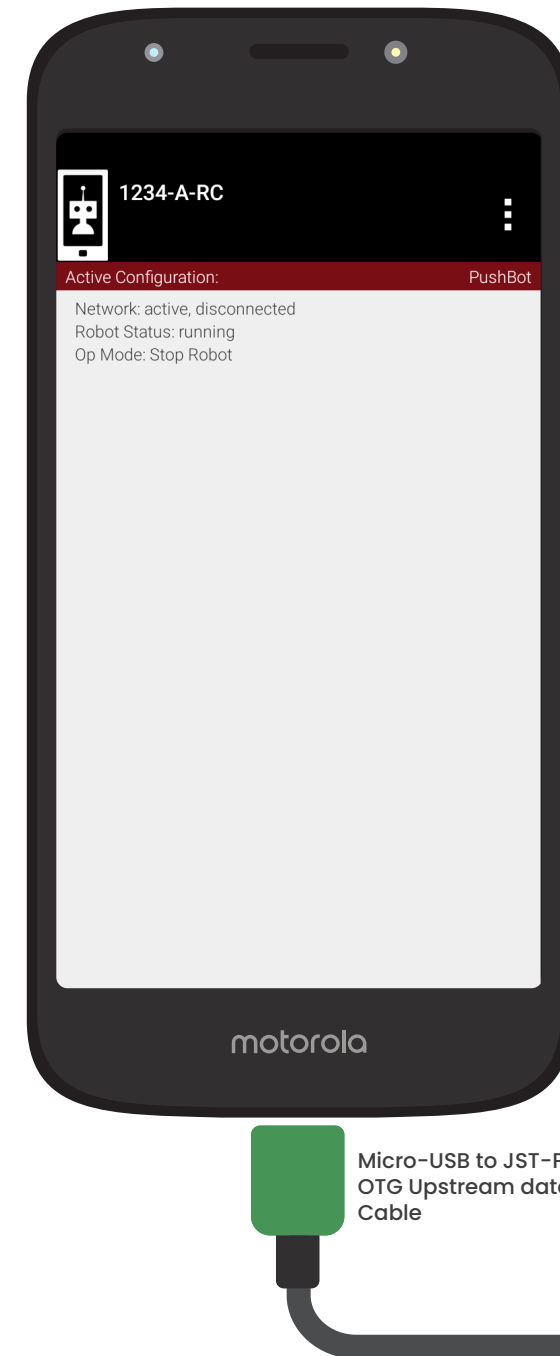
Data
22 AWG Minimum
GND SIG1*

Wire Gauge
Minimum Gauge per connection shown
18 AWG 22 AWG

I/O Connector Interfaces
USB-A Micro-B Mini-B XT-30

Keep in Mind
* 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

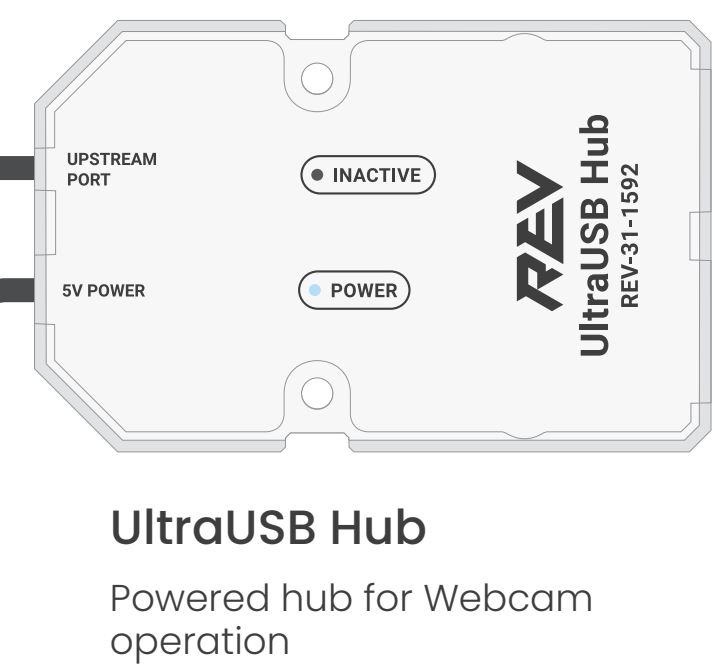
A2 - Phone Configuration - Advanced



FTC-Legal Android Phone
Motorola E5 Play shown
Running FTC Robot Controller App

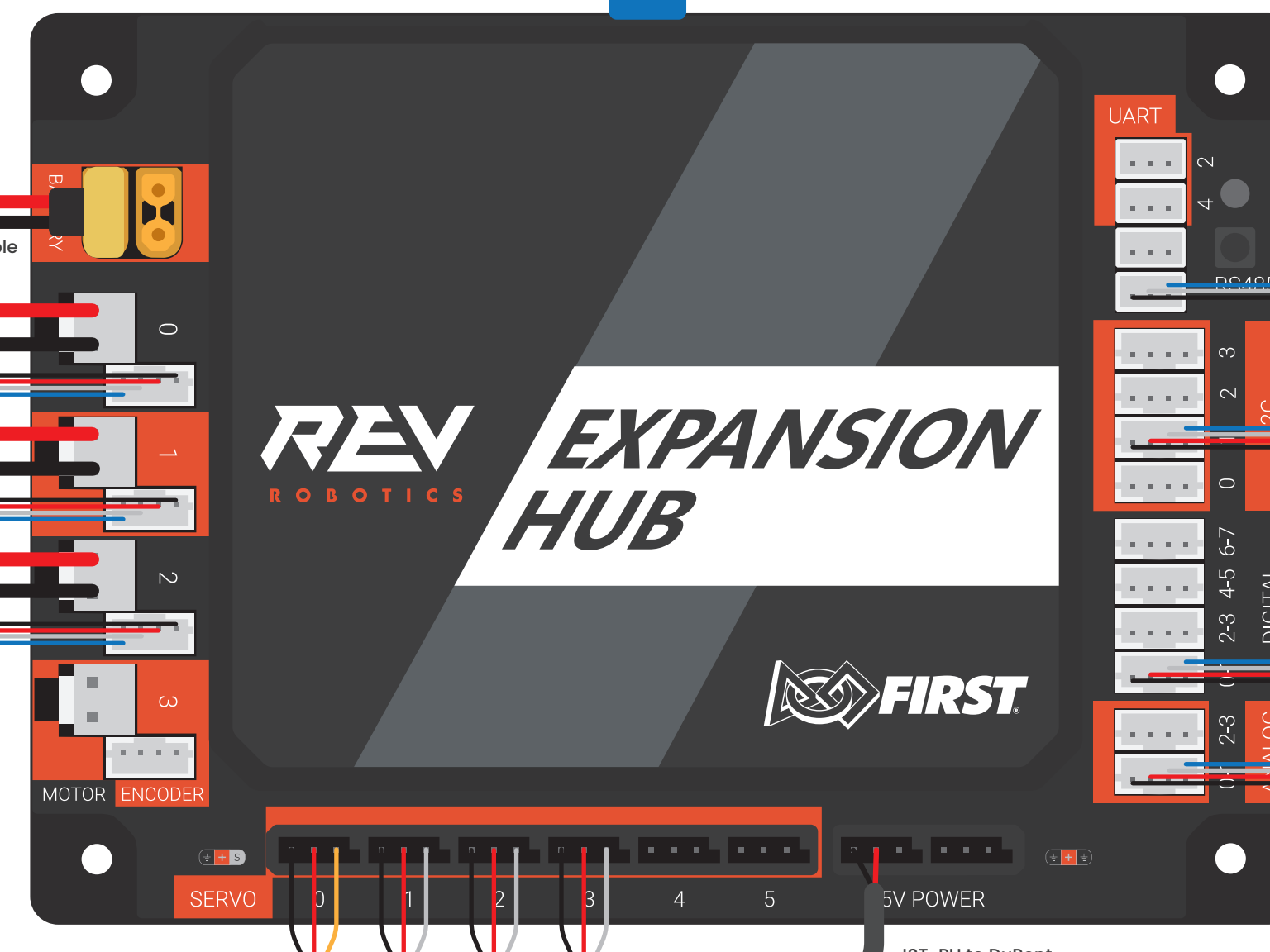


UVC Webcam
Logitech C270 Shown

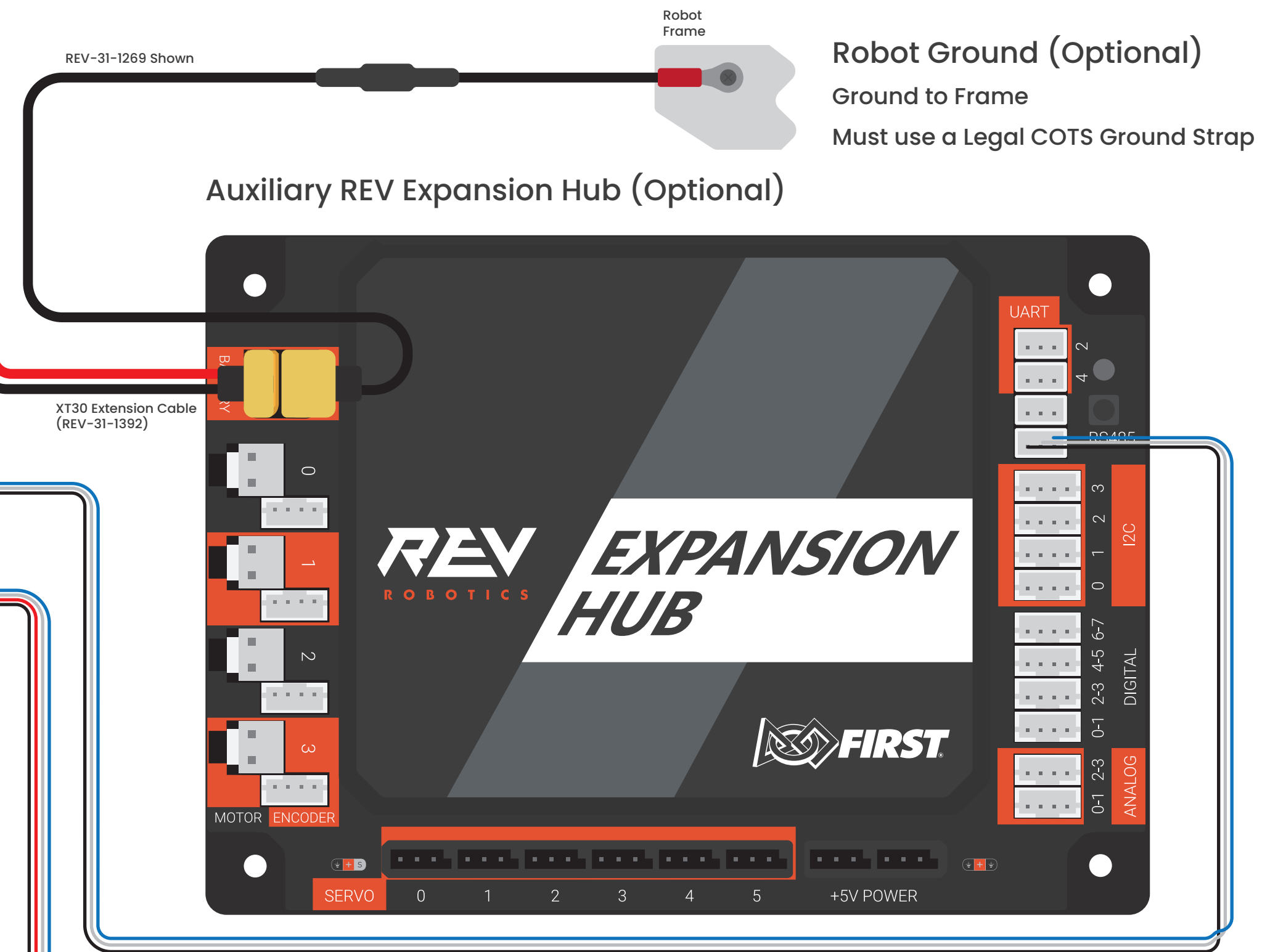


UltraUSB Hub
Powered hub for Webcam operation

Primary REV Expansion Hub

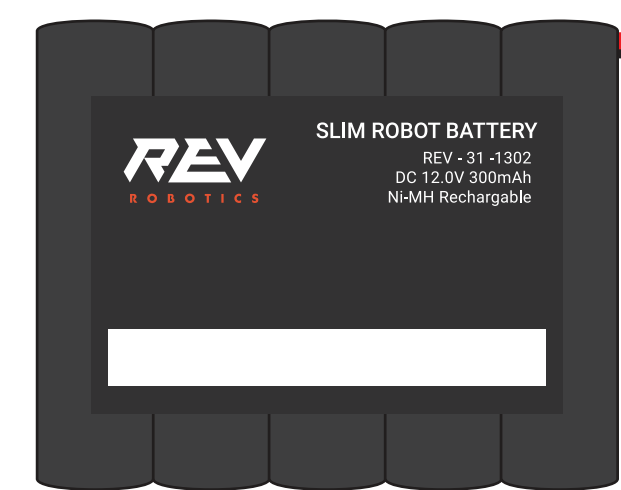


Auxiliary REV Expansion Hub (Optional)



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

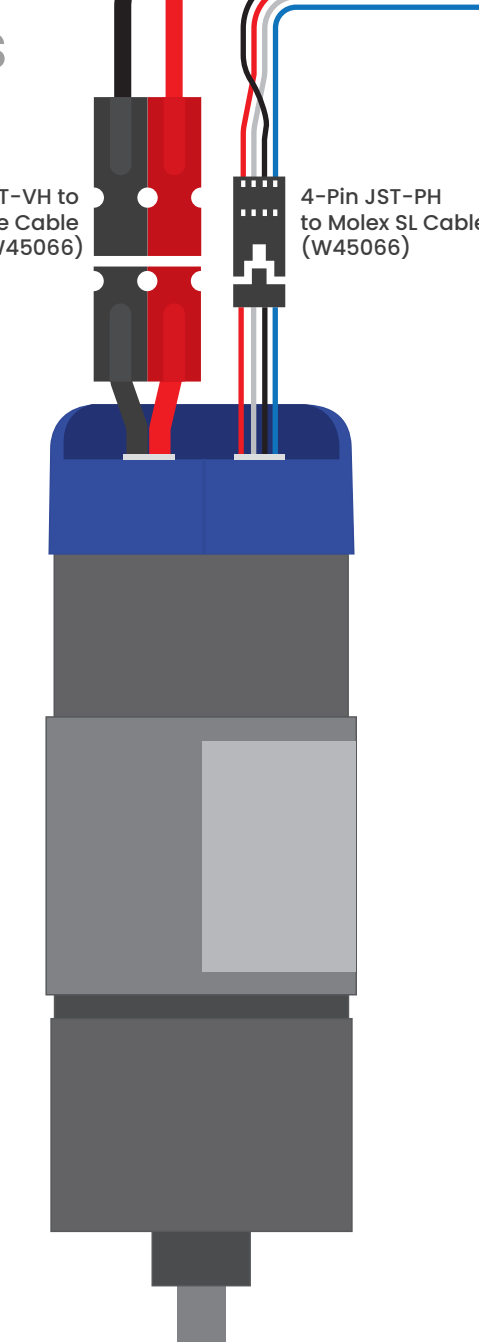
XT30 Power Distribution Hub
20A Max (Combined)



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

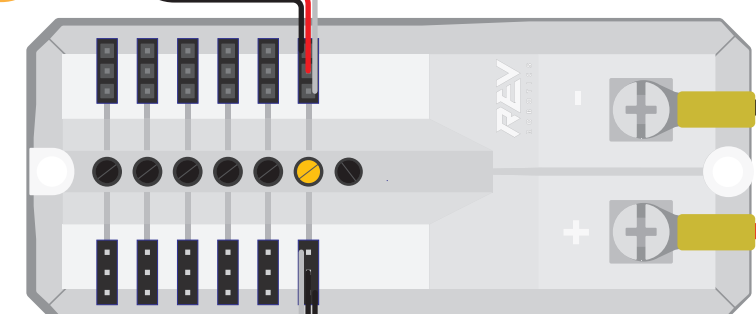
Power Switch
Must be labeled
REV-31-1387 shown

Motors



TETRIX® MAX TorqueNADO® Motor
Use supplied sensor cables

Servo Power Module
15A/90W Max



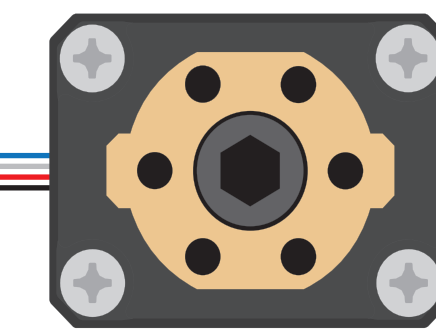
TETRIX® Servo
Standard scale version shown

Smart Robot Servo
Configure with SRS Programmer

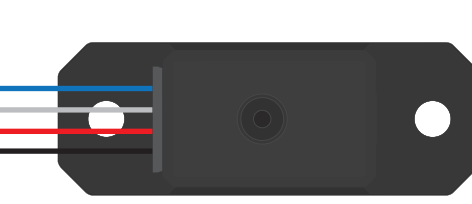
goBILDA 5202 Series Gearmotor
Utilizes a Modern Robotics 12V DC Motor

REV HD Hex Motor
2-Stage Ultrapanetary Configuration Shown

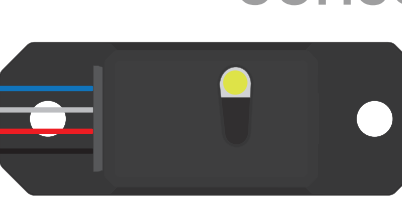
Potentiometer
Config N-Channel



Mag Limit Switch
REV-31-1462 Shown



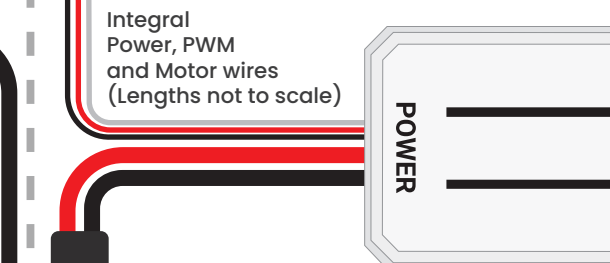
Color Sensor
REV-31-1557 Shown



Sensors

Servos

Spark Mini
REV-31-1230



Core Hex Motor
REV-41-1300



Servo Control

LED Strip



Blinkin LED Driver
REV-11-1105

Lights