Components

#	Type
5	Talon Motor Controllers (Drive Motors)
7	Black Jaguar Motor Controllers (4x Steering, Shooter Tilt, 2x Climber Winch)
1	Pneumatics compressor Spike Relay
2	Double Solenoids (Magazine Trigger, Magazine Lifter)
1	Solenoid (Climber Hook)
2	Servos (Camera Gimbal)
4	US Digital E4P Optical Encoders (Drive RPM)
4	Avagotech Hall Effect Absolute Encoders (Steering Angle)
1	Sharp IR Proximity Sensor, Short Range (Magazine Frisbee Counter)
1	Sharp IR Proximity Sensors, Medium Range (Shooter Tilt Distance Sensor)
1	Pandaboard computer
1	IMU

Wiring

DIO on Digital Sidecar 1

#	Sensor
1	Shooter encoder Channel A
2	Shooter encoder Channel B
3	Pneumatics compressor Pressure Switch
4	
5	SwerveDriveSystem right_front_rpm_sensor Channel B

6   SwerveDriveSystem right_front_rpm_sensor Channel A

7   SwerveDriveSystem right_front_angle_sensor data

8   SwerveDriveSystem right_front_angle_sensor clock

9   SwerveDriveSystem right_front_angle_sensor chip select

10 SwerveDriveSystem left_front_rpm_sensor Channel B

11 SwerveDriveSystem left_front_rpm_sensor Channel A

12 SwerveDriveSystem left_front_angle_sensor data

13 SwerveDriveSystem left_front_angle_sensor clock

14 SwerveDriveSystem left_front_angle_sensor chip select

DIO on Digital Sidecar 2

#	Sensor
1	
2	
3	
4	
5	SwerveDriveSystem right_back_rpm_sensor Channel B
6	SwerveDriveSystem right_back_rpm_sensor Channel A
7	SwerveDriveSystem right_back_angle_sensor data
8	SwerveDriveSystem right_back_angle_sensor clock
9	SwerveDriveSystem right_back_angle_sensor chip select
10	SwerveDriveSystem left_back_rpm_sensor Channel B
11	SwerveDriveSystem left_back_rpm_sensor Channel A
12	SwerveDriveSystem left_back_angle_sensor data

13 SwerveDriveSystem left_back_angle_sensor clock

14 SwerveDriveSystem left_back_angle_sensor chip select

PWMs on Digital Sidecar 1

#	Motor
1	Shooter motor Output
2	Tilter motor Output
3	Climber front_winch_motor Output
4	Climber rear_winch_motor Output
5	Camera Azimuth Servo
6	Camera Elevation Servo
7	SwerveDriveSystem right_front_steer_motor Output
8	SwerveDriveSystem right_front_drive_motor Output
9	SwerveDriveSystem left_front_steer_motor Output
10	SwerveDriveSystem left_front_drive_motor Output

PWMs on Digital Sidecar 2

#	Motor
1	
2	
3	
4	
5	
6	

7   SwerveDriveSystem right_back_steer_motor Output

8   SwerveDriveSystem right_back_drive_motor Output

9   SwerveDriveSystem left_back_steer_motor Output

10   SwerveDriveSystem left_back_drive_motor Output

Relays on Digital Sidecar 1

#	Relay
1	Pneumatics compressor Spike

Analog Module 1

#	Sensor
1	Magazine frisbee_counter Input
2	Tilter height_sensor Input

Solenoid Module 1

#	Solenoid
1	Magazine trigger Forward
2	Magazine trigger Reverse
3	Magazine lifter Forward
4	Magazine lifter Reverse
5	Front Climber lift

RS-232 on CRio

#	Device

1 IMU

Ethernet on CRio

**Device**

1 D-Link Access Point
2

Ethernet on D-Link Access Point

**Device**

1 CRio Ethernet
2 Axis Camera Ethernet

3 Pandaboard Ethernet