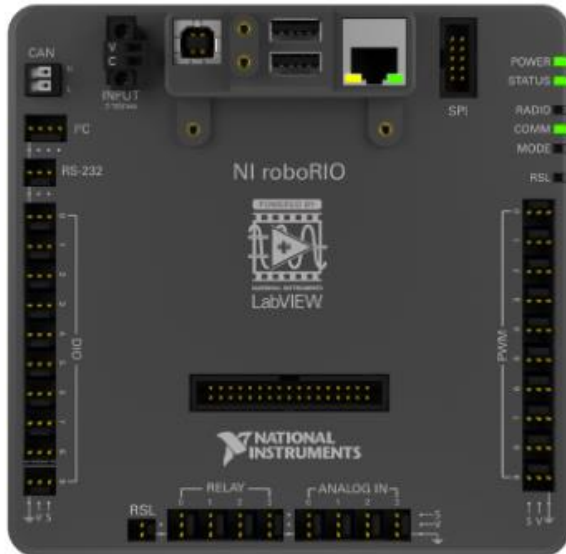


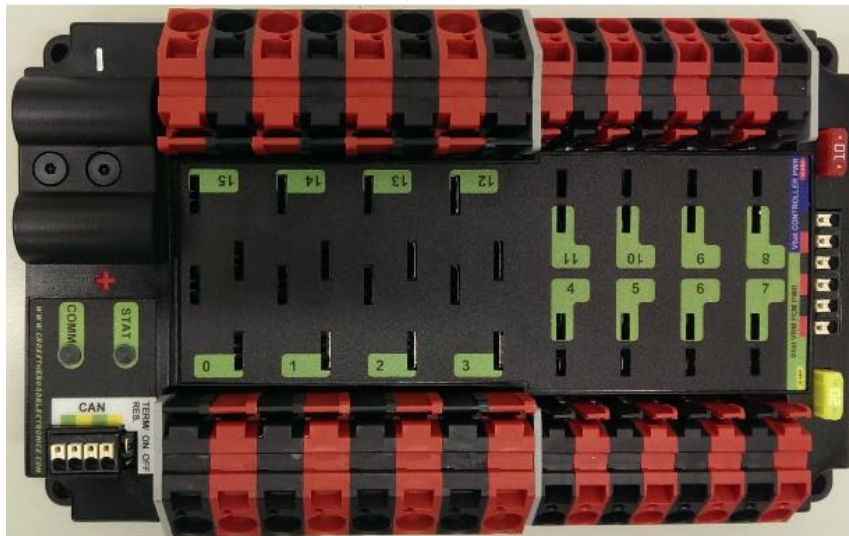
Frc 2605- Seamonsters Electronics Reference

National Instruments roboRIO:



The NI- roboRio is the main robot controller used by the Seamonsters and all other FRC teams. It runs both control and safety code from the FRC as well as team-generated code. This controller is able to communicate with sensors on the robot with CAN, SPI and more and is powered by a 12V port located on the Power Distribution Power.

Power Distribution Panel (PDP):



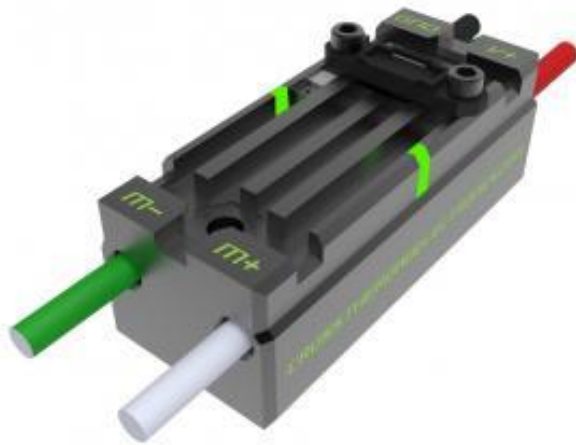
The Power Distribution Panel (or PDP) distributes power from the 12VDC battery to all the sensors and controllers located on the robot. It can also log current, temperature, and battery voltage.



Voltage Regulator Module:

The Voltage Regulator Module, or VRM, is a module powered directly by the battery, but that delivers other voltages and amperages to other parts as necessary. Some examples of parts that would be plugged in here are the camera, robot radio, and more.

Talon SRX motor controller:



The Talon SRX motor controller controls the voltage going from the power distribution panel to the motor according to the code from the roboRIO. They are connected in a “CAN network” to each other.

120A Circuit Breaker



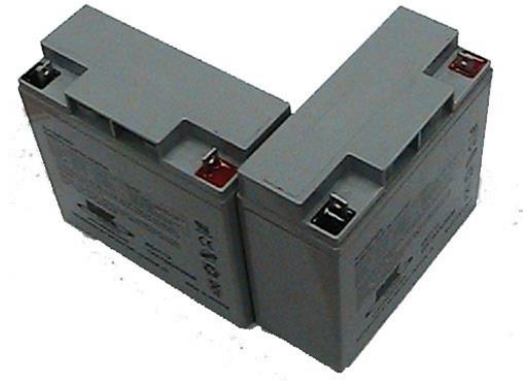
The Circuit Breaker serves as the main power switch on the robot and also as a protection device for current for other modules located downstream.

Wifi Router (Robot Radio)



The wifi router is used for providing wireless communication between the robot and the controlling laptop. It is powered by the VRM and connected to the roboRIO by Ethernet

Robot Battery



The robot is powered by one 12V 18 Ah battery. They are lead acid batteries, and are very similar to car batteries. The voltage and amperage levels can be checked using the battery beak