

Adding an Expansion Hub

If you want to use more than 4 motors or 6 servos, you can add an Expansion Hub to your robot. An Expansion Hub ([REV-31-1153](#)) can be added to a Control Hub ([REV-31-1595](#)) or another Expansion Hub. The Expansion Hub has all of the same ports as the Control Hub but without the wireless capability.

Control Hub vs Expansion Hub in FIRST

FIRST Tech Challenge

FIRST Tech Challenge teams may use one (1) Control Hub and may add one (1) Expansion Hub starting in the 2020-2021 season. Read the official FTC Game Manuals for complete game rules.

FIRST Global

FIRST Global teams must use one (1) Control Hub and may add one (1) Expansion Hub to their robot. Read the official FIRST Global manual for complete game rules.

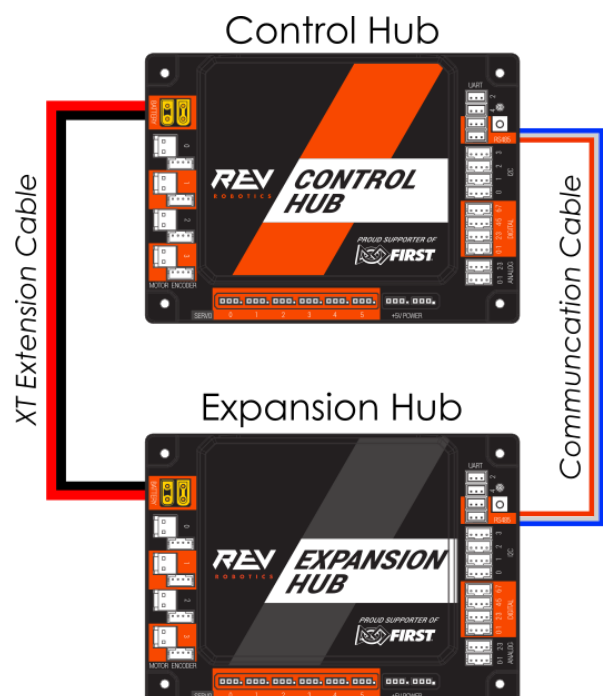
Adding an Expansion Hub to your Robot

Step

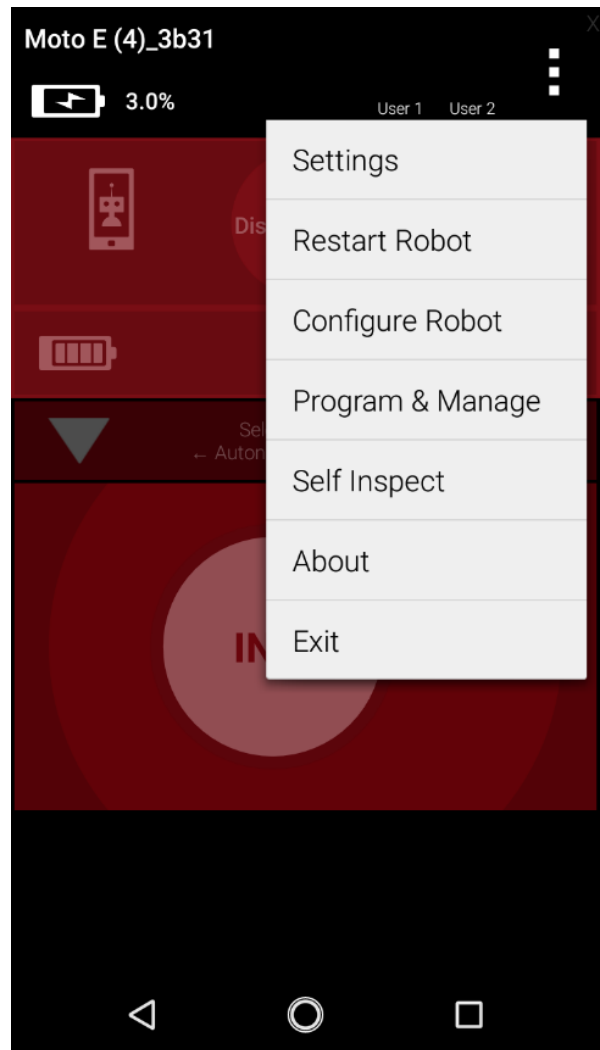
Image

Use the XT Extension Cable to connect power between the Control Hub and the Expansion Hub.

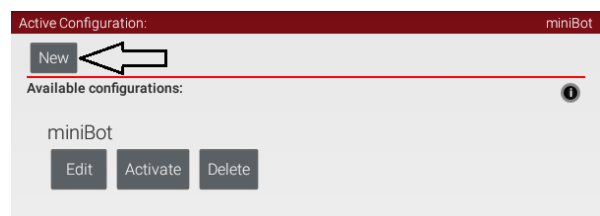
Use a 3-pin JST PH cable to connect the RS485 port on the Control Hub to the Expansion Hub.



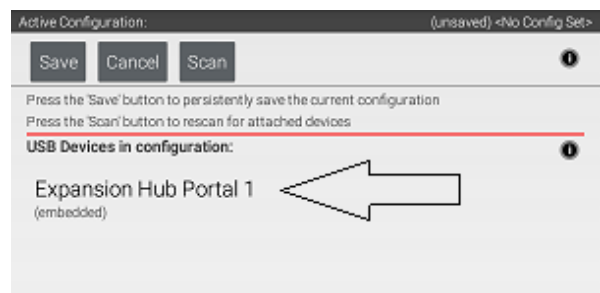
From the Driver Station choose “Configure Robot”



Select “New” in the top left hand corner.



Select “Expansion Hub Portal 1”



Now you have two Expansion Hubs to choose from. “Expansion Hub 1” is the embedded device of the Control Hub or the Android Device the Expansion Hub is connected to via USB.

“Expansion Hub 2” is the connected Expansion Hub that is communicating over RS485.

Configure and program as necessary. Please see the [Configuration](#) section of for an overview of configuration.

