

# ChatterBox Heltec E-Paper Node

Based on Heltec Vision e290



## Acquire Parts

Parts Required (with Amazon links):

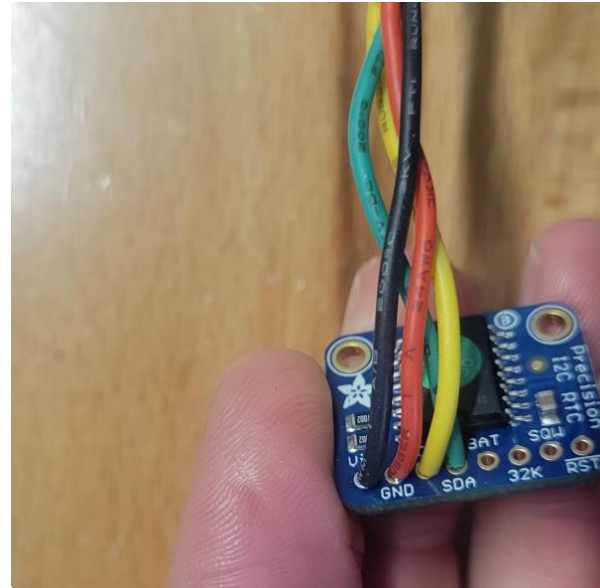
[Heltec Vision Master E290](#)

[Adafruit DS3231 RTC](#)

[CR1220 Battery for RTC](#)

[2000 mAh LiPo Battery](#)

## Solder Connector to DS3231



Although I added a plug here, you could just cut the Heltec supplied wire and solder directly to the DS3231.

NOTE: The Heltec supplied wire/plug MAY HAVE BLACK GOING TO GROUND – as shown in the image!!

The port number/color mappings are:

DS3231 VIN (Black) -> Heltec V

DS3231 Gnd (Red) -> Heltec G

DS3231 SCL (Yellow) -> Heltec 39

DS3231 SDA (Green) -> Heltec 38

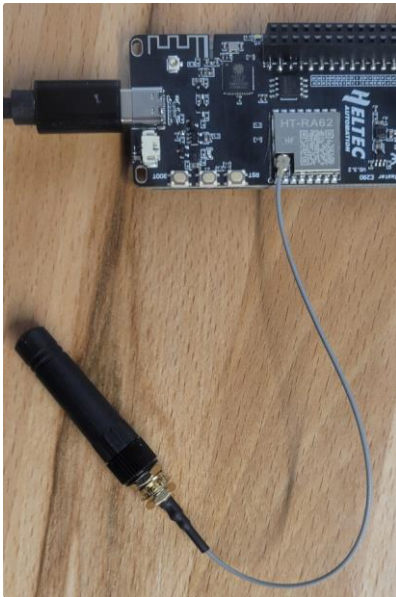
### Connect DS3231 to Heltec



Pretty straightforward, just plug it in.

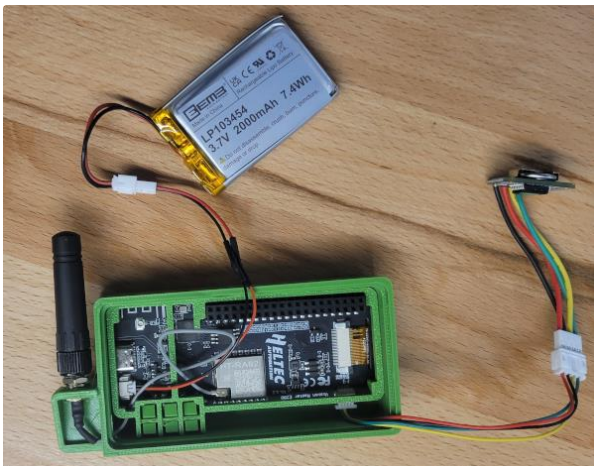
*Again notice how the Heltec-supplied plug has black going to V and red going to GND.*

### Connect Antenna



The Heltec E290 does come with an antenna, but you may want to connect a different one as I've done here.

### Connect Battery and Insert into Enclosure



Whatever enclosure you are using will need to have room for the battery, RTC, and wiring.

Here, I am using the [Vision Master E290 V0.3](#) case by [HarukiTorida](#)

This enclosure looks very nice, but the buttons were a little tricky to get into place, due to their location on the backside of the heltec.

### Flash the ChatterBox Firmware

Visit the [mesh firmware flash page](#) and choose either the Heltec E290 or Anon Heltec E290, based on your needs.



Most likely you *don't want Anon*, unless you're connecting this node to an open or public channel.

Similar to other nodes, put the device in boot mode by holding the "boot" button while powering on the node, then releasing the boot button.

