Connect TXD0 from Raspberry Pi 3B+/4 Connector TO RX1 from GTR V1.0 Raspberry Pi connector.

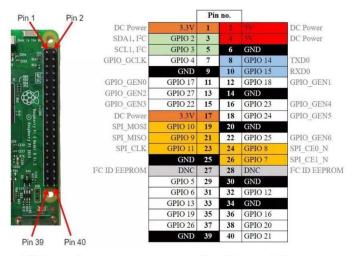
Connect RXD0 from Raspberry Pi 3B+/4 Connector TO TX1 from GTR V1.0 Raspberry Pi connector.

Connect GND from Raspberry Pi 3B+/4 Connector TO GND from GTR V1.0 Raspberry Pi connector.

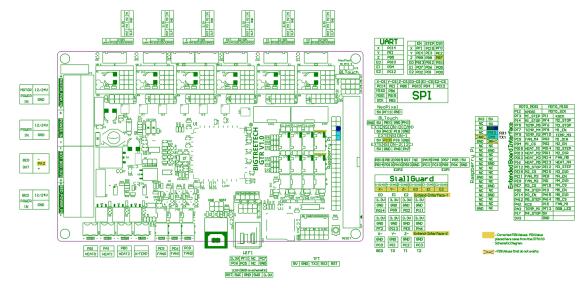
No need to connect V+ from the Raspberry Pi 3B+/4 connector. In fact, I recommend powering the Raspberry pi from a seperarate 5V power supply but connect the GND on the Raspberry Pi power supply to the GND on the GTR V1.0 Board.

Rasberry Pi 3B+/4 and GTR V1.0 both use 3.3 V logic.

Pi 3B+ @ GPIO connector: PINS used: TXD0, RXD0 and GND (8-10-6):



GTR V1.0 @ Raspberry pi connector: TX1, RX1 and GND



You also have to change some settings in the Raspberry pi 3B+/4 operating system.

Raspberry Pi 3B+/4 Changes that need to be made:

Login to your Raspberry Pi.

Swapping ports used by GPIO and Bluetooth

The first thing to change in the serial connection is to swap the ports used by the GPIO pins and the internal Bluetooth chip. We need to add a line in the boot config file on the boot partition.

Log in to the Pi3 with SSH on the IP address used.

Type in sudo nano /boot/config.txt

Move the cursor to the end of the file by cursor and add:

dtoverlay=pi3-miniuart-bt

save the file and exit the editor by control+O and control+X

Disabling the serial console

Moving to another config file, where part of the code must be deleted to disable serial console.

Type in sudo nano /boot/cmdline.txt

Look for following string (text) and delete it

console=serial0,115200

save the file and exit the editor by control+O and control+X

Rebooting RPi

For all changes to take effect, please reboot your Raspberry Pi 3

Type in Sudo reboot

Adding the serial port in Octoprint

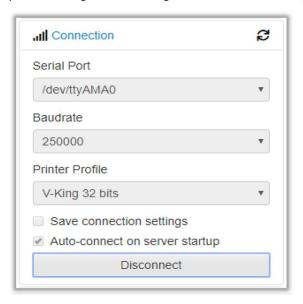
Last part of the configuration is in the Octoprint web interface. Open your browser and type either "octoprint.local" or the IP address of the Pi 3. You might be greeted with the welcome wizard, please go through it first.

As soon as you arrive at the home screen, open "Settings" (top right), head to "Serial Connection", then "Additional serial ports" and insert following:

/dev/ttyAMA0

PRINTER	General Intervals & tin	neouts Firmware & protocol Behaviour
Serial Connection		
Printer Profiles	Connection	
Temperatures	Connection	
Terminal Filters		
GCODE Scripts	Serial Port	AUTO v
FEATURES		3.4.0
Features	Baudrate	AUTO ▼
Webcam & Timelapse		
GCODE Visualizer		Auto-connect to printer on server start
API		
Application Keys	Additional serial ports	/tmp/printer /dev/ttvAMA0
OCTOPRINT		/get/trainag
Server		
Folders		Use this to define additional glob patterns matching serial ports to list for
Appearance		connecting against, e.g. /dev/ttyAMA* . One entry per line.
Logging	Additional baud rates	
Plugin Manager	riadilorial bada ratos	Use this to define additional serial port baud rates to list for connecting with, e.g.
Software Update		123456 . Comma separated.

Save the change and reboot OctoPrint. After reboot, select the new port and connect to your printer. Making connection might take a few seconds longer then with USB.



*1 This information was taken from BIGTREETECH SKRV1.3 Guide 2019 - 6 .PDF and adjusted for the GTR V1.0 Board.