

Getting Started

Firmware

- New 2.6.3R firmware: <http://developers.myzeo.com/raw-data-library/>
- The original 2.6.3 firmware: <http://developers.myzeo.com/firmware-v2.6.3.zip>

Update Zeo Bedside Display Firmware to 2.6.3R:

- The standard Zeo firmware (version 2.6.3) produces encrypted .dat files. The 2.6.3R firmware produces decrypted .dat files. To avoid mixing encrypted and unencrypted outputs on the SD card, please follow these steps:
 1. Upload data as usual.
 2. Download the zeo.img file corresponding to firmware 2.6.3R.
 3. Place the zeo.img file on the SD card.
 4. Update the firmware on your Zeo by following these steps:
 1. Press the settings button.
 2. Press right 8 times to show the software version.
 3. Press down to load the new firmware.
 5. Tell Zeo to erase the Zeo SD card.
 6. Use your Zeo as usual and enjoy having offline access to your sleep data and raw data access.

Interface Cable

There is a serial port on the back of your Zeo next to the power outlet. If you remove its white cover you can now plug a serial cable into these pins to interface with your Zeo.

- The pinout for the serial port is as follows (left to right looking into the Zeo port):

| 1 | 2 | 3 | 4 | 5 |
|----------------------|----------------------|--------|-------------------|------------------------|
| Rx (external>Zeo) | Tx (Zeo>external) | Ground | DTR (Not used) | Vcc (3.3V from Zeo) |

- Currently only the Tx and Gnd lines need to be connected to use the library. Rx is connected in the cable below in case future firmware ever allows communication back to Zeo. Vcc could be used to power an external microcontroller.

- Please note that connecting to other pins can cause problems. For instance, if the DTR pin is pulled low when Zeo is turned on, it enters a flash programming mode. If this occurs, just restart Zeo with the DTR pin disconnected.

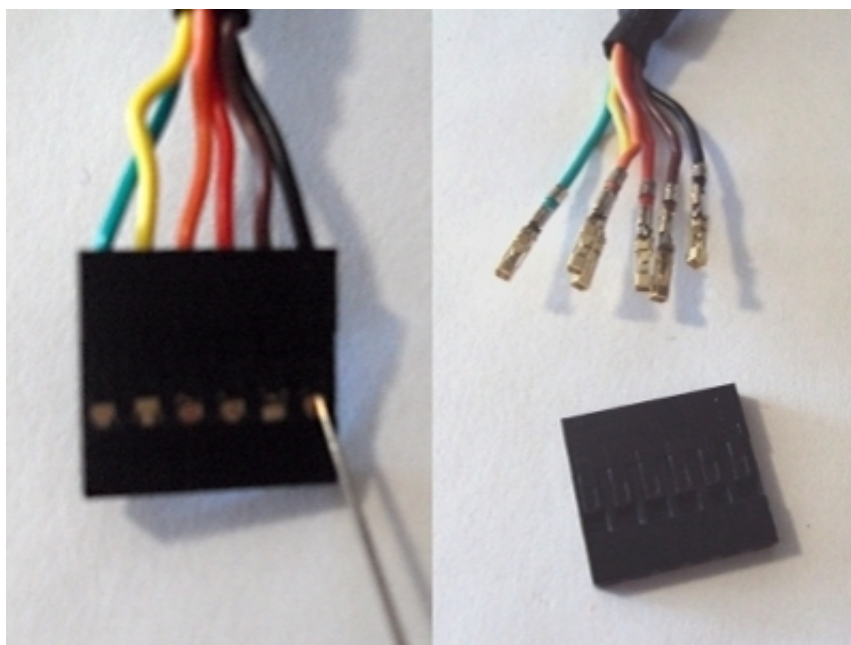
For the cable we suggest you use this [cable](#), but any 3.3V serial cable will work.



This cable requires some modification to make it work with Zeo. There are two methods for this:

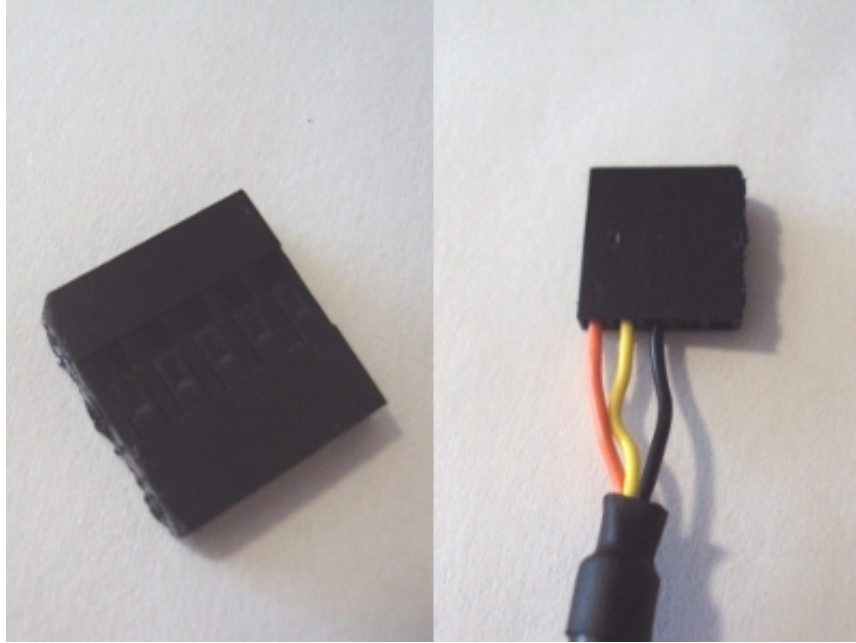
1. Modifying the original cable

1. Remove pins by gently pushing up the tabs and pulling out the pins



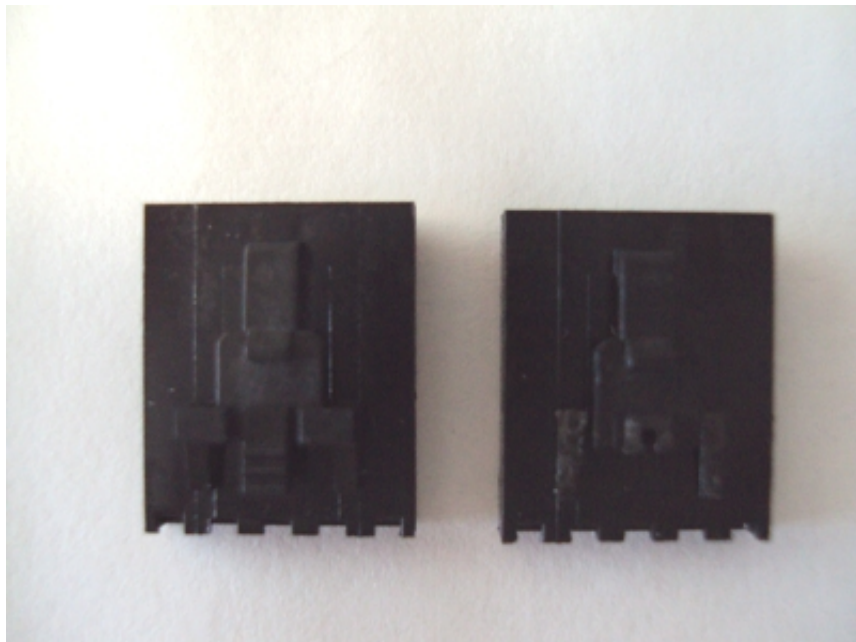
2. Cut one slot off of the connector to make it a 5pin connector instead of 6

3. Cut short all the wires except orange, yellow, and black (reinsert in that order left to right)



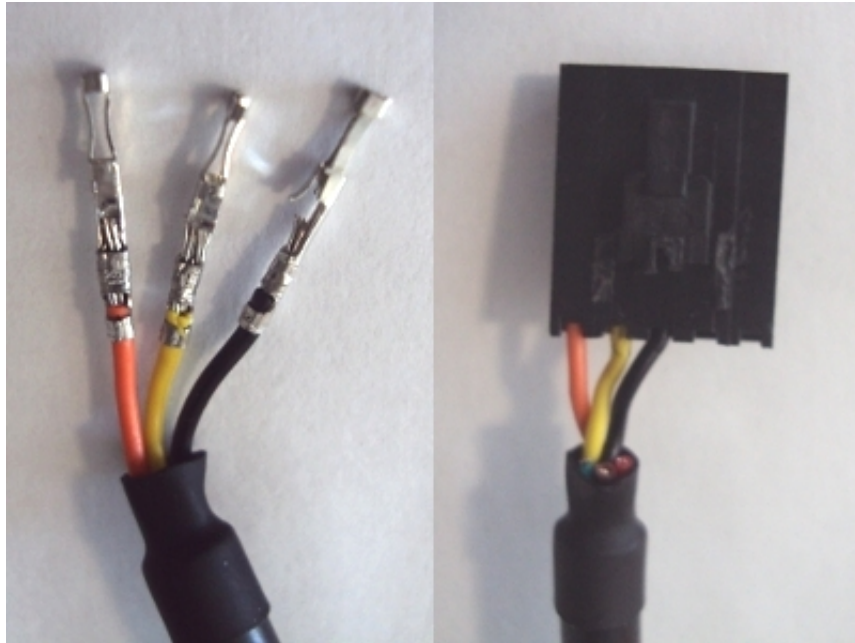
2. Adding a clipping connector to the cable

1. Purchase this [connector](#) and these [crimps](#).
2. Modify the connector to allow clipping by cutting off the tabs on the sides and the extension on top



3. Cut the original header off close to the header so plenty of wire is left
4. Cut short all of the wires except the orange, yellow, and black ones
5. Strip and Crimp these wires

6. Insert pins in order (orange, yellow, and black left to right)



7. To clip, you will need to push the connector all the way into Zeo and then push the connector against the top of the enclosure.

Software

Download and install the dependencies:

- [Python](#) (the library was developed with [version 2.7](#))
- [The pySerial module](#)

Download the library:

- [Zeo Raw Data Library](#)