1. Set up your computer port IP address for correct IP Address range (e.g. 10.0.0.222 if wobbler at 10.0.0.20). Instructions are in user guide for this if need more detail. Default wob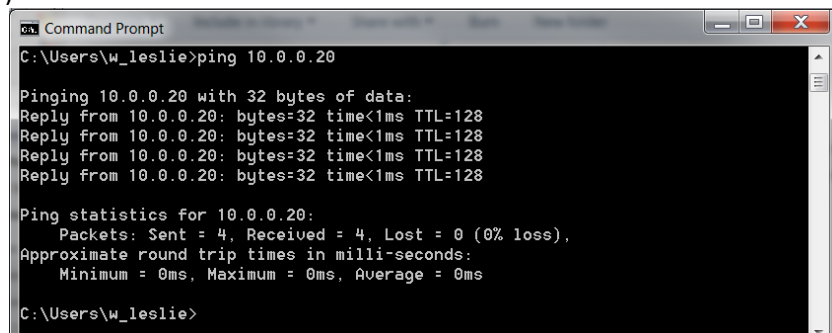bler Navigate to web page of wobbler controller. Note IP address if not 10.0.0.20. Plug into Ethernet Input of Wobbler Controller.

2. **Take Screen shot or otherwise note all user pages in wobbler so they can be checked after suite install to make sure they are kept the same for customer.** Recommended to turn off wobble.
   a. Programs page- note program settings if customer wants to keep them
   b. Configuration page- note all settings
   c. Optics, note orientation, trim, **focal length** and seam track distance/invert.
   d. The Support page shows the currently installed firmware.

3. Turn off wobbler controller power. **Remove 25 D connector to head. Do not unplug head with power on. It is best to update software with head disconnected.** Power wobbler back on.

4. If your pc does not have the "Net Upgrade Utility - NXP" program, Unzip the Utility folder and run "NXPUpgradeUtilitySetup.msi". Follow directions to install the Utility.

5. **Unzip** Software suite (extract all files) and put in folder in convenient place like desktop. **Note that you need the correct suite for D30 or D50 head.**

6. You can **ping 10.0.0.20** or the current Ethernet IP address to verify connection (optional but nice idea)

7. Start Upgrade Utility program
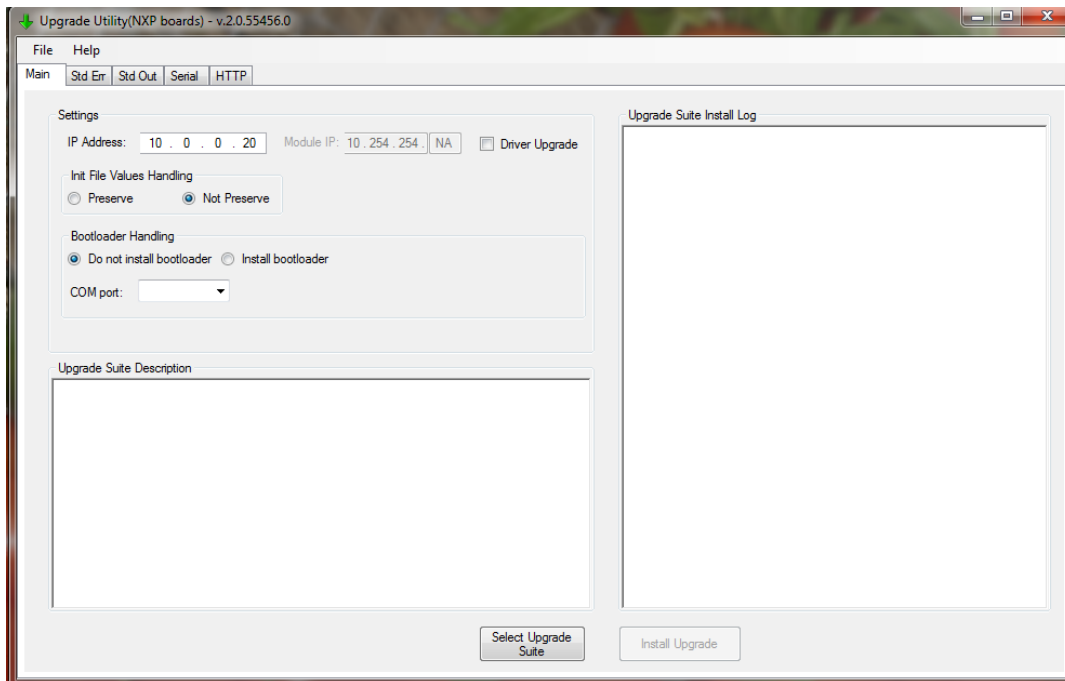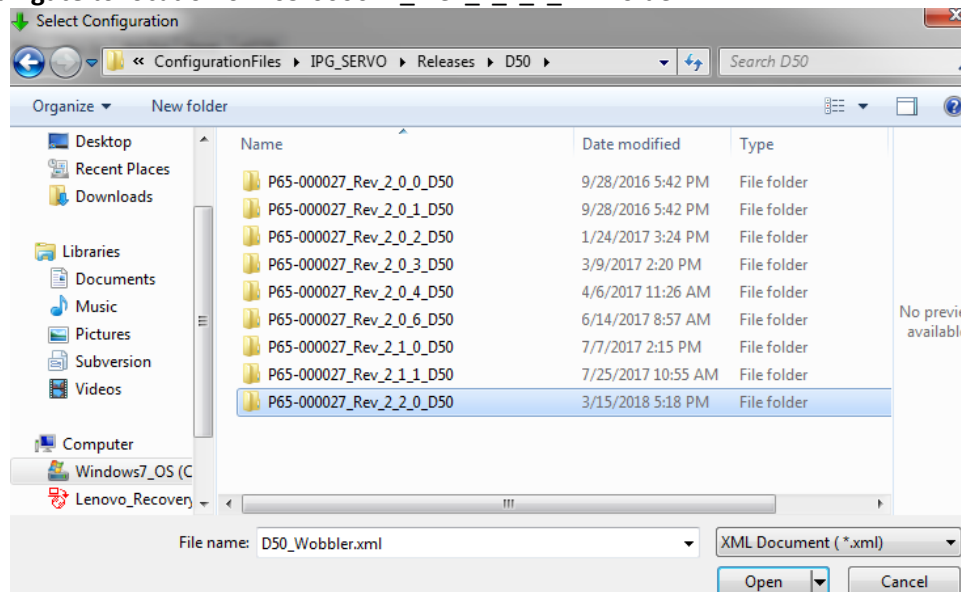8. Set for **Bootloader Present, App Present, Not Preserve**.
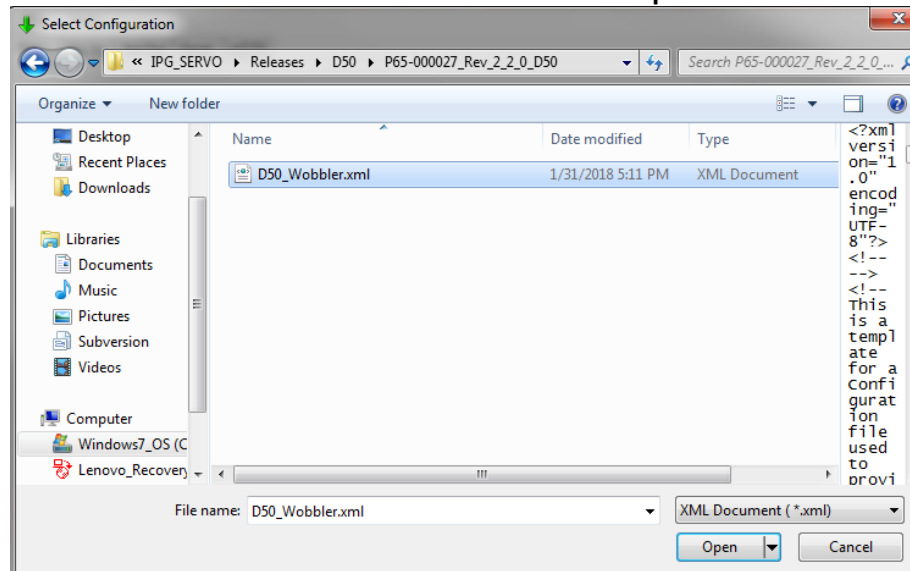9. If IP Address of wobbler is different than the default 10.0.0.20, set installer to current IP address.
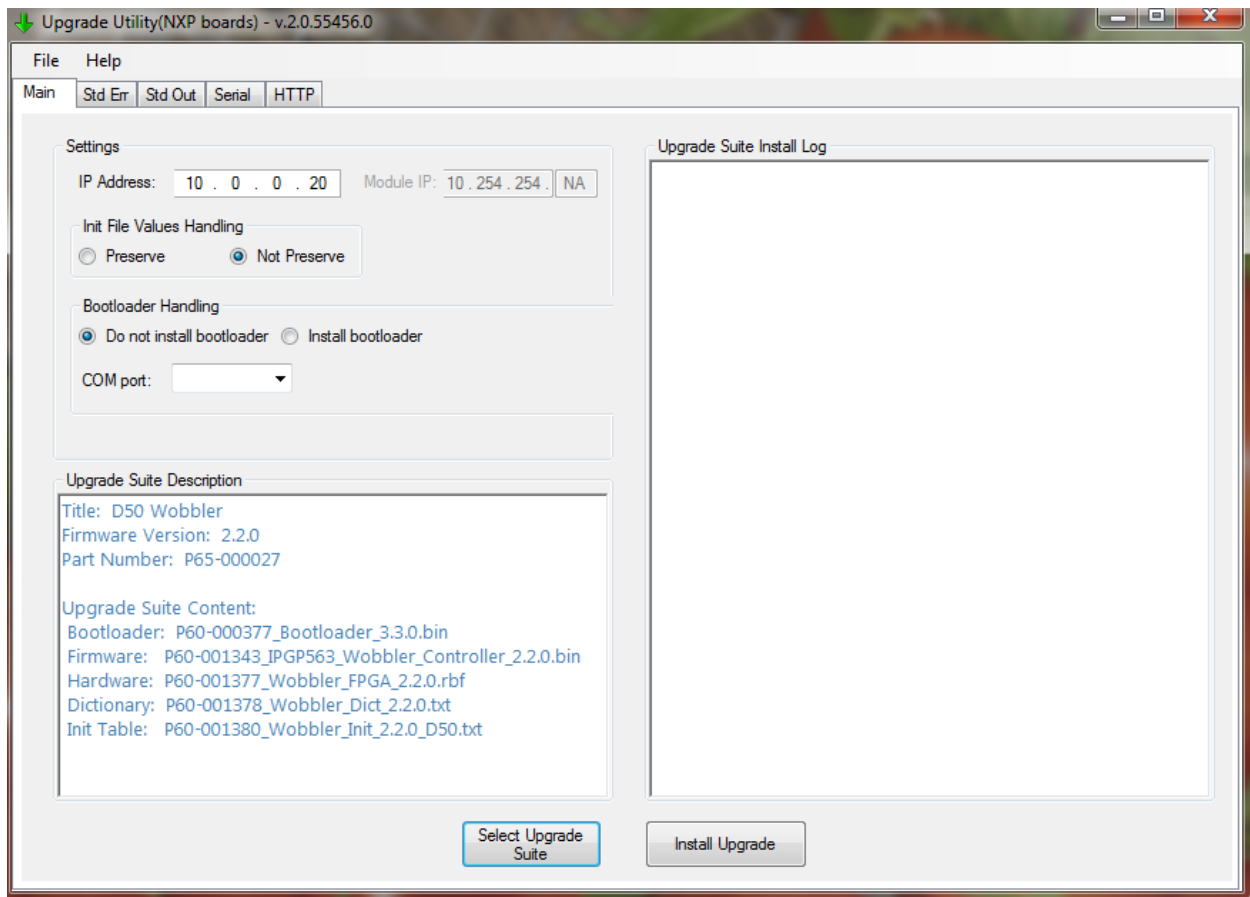

Example of updater

10. Click **Select Upgrade Suite**
11. **Navigate** to location of P65-000027_ Rev_x_x_x_Dxx folder.

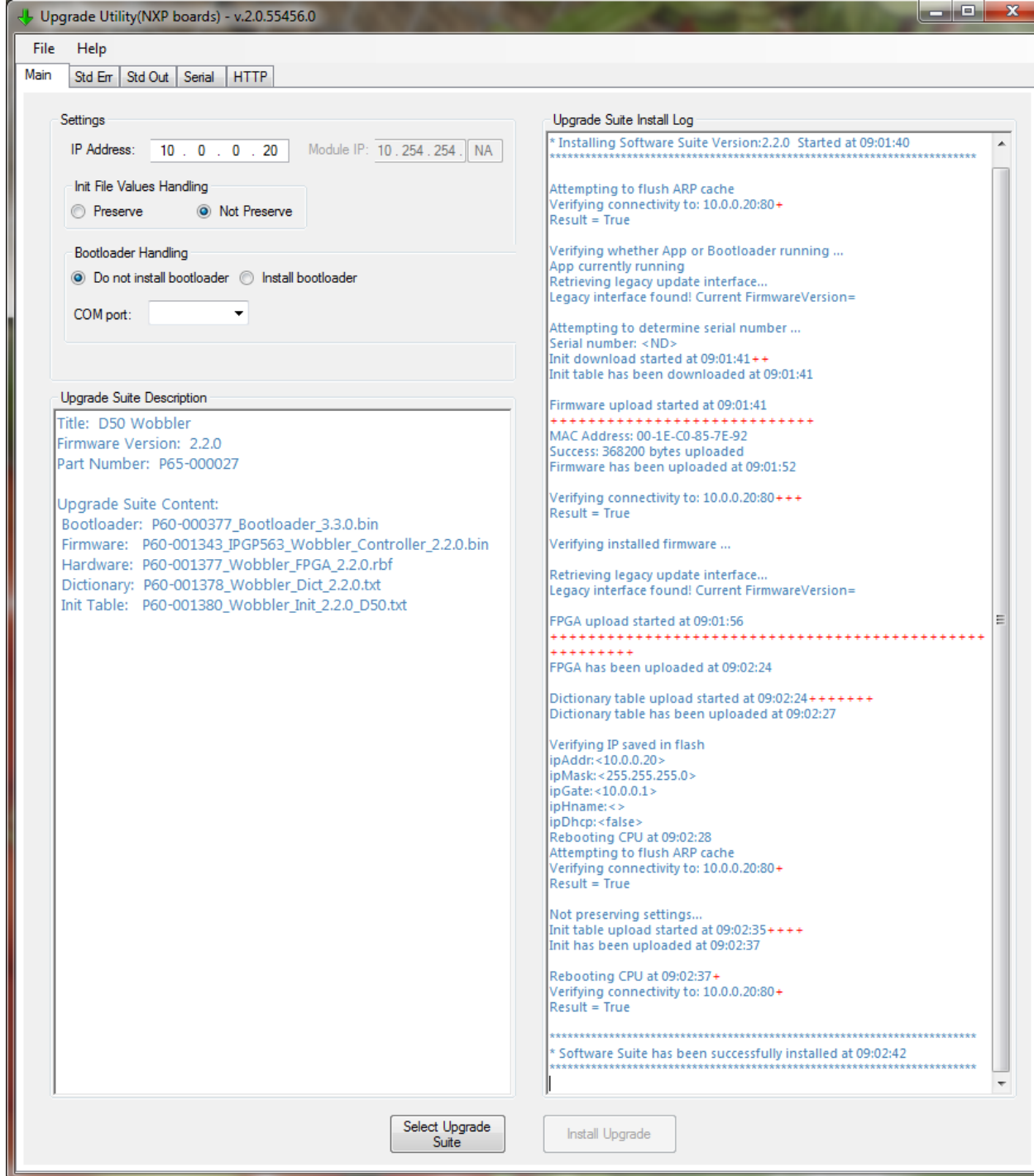12. Click on folder and select the D50 Wobbler.xml file and click **Open**

13. Upgrade Utility now will fill in suite description. **Verify you have correct suite for D30 or D50 depending on head.**
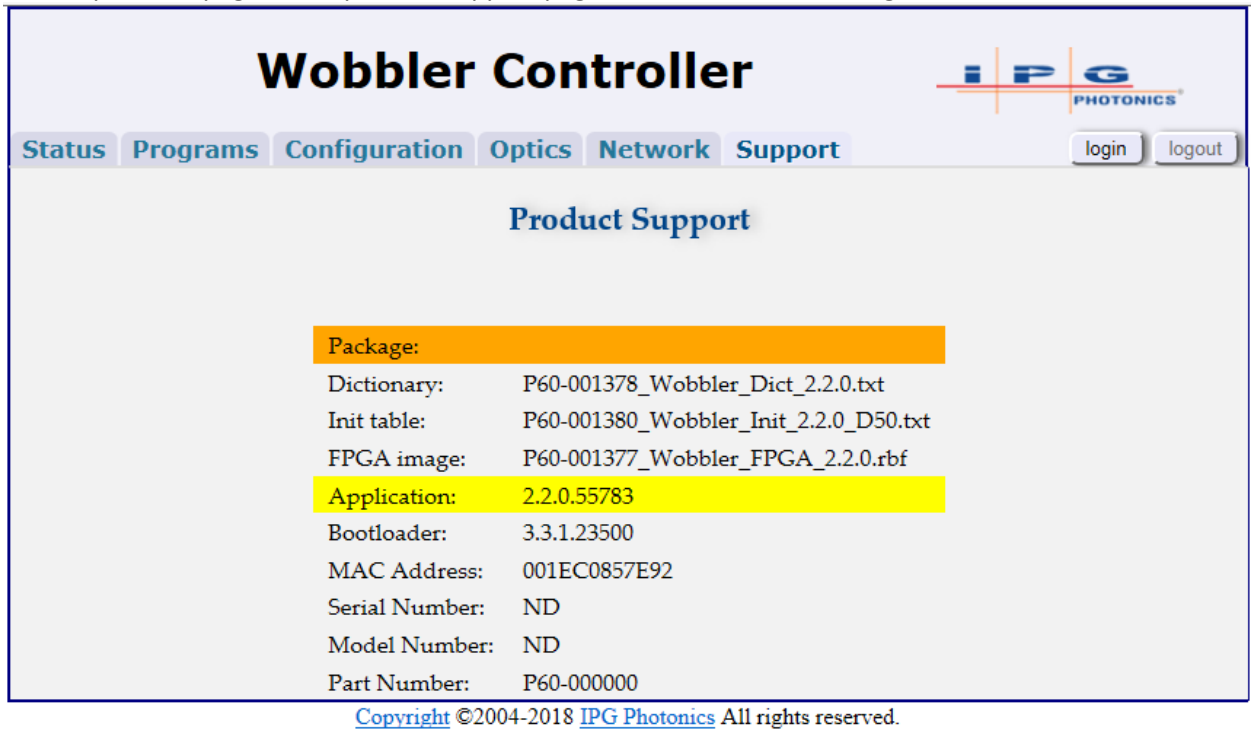
14. Click **Install Upgrade**
     Successful completion looks like:

15. Exit Upgrade Utility.

16. **Power Down, Reconnect Head Connector**, Power Up. **DO NOT HOT PLUG HEAD.**

17. Open web pages. The product support page should reflect the changed code names.
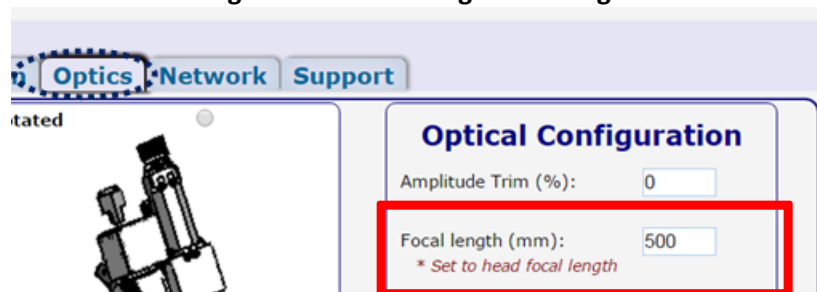

18. Reset Optical, Configuration and Programs web [ages .
    a. **Note Focal length of wobbler head changes to default 300mm, change back to actual head FL if different.   Changing focal length will erase Amplitude, Frequency, and Offset values in Program table so change focal length FIRST.**

19. **Restore customer connections to** Wobbler and test performance
20. End of Procedure.