Vaunix Technology Corporation

Lab Brick® Family of Digital Attenuators

LabView Driver Installation Manual

Revision A1

NOTICE

Vaunix has prepared this manual for use by Vaunix Company personnel and customers as a guide for the customized programming of Lab Brick products. The drawings, specifications, and information contained herein are the property of Vaunix Technology Corporation, and any unauthorized use or disclosure of these drawings, specifications, and information is prohibited; they shall not be reproduced, copied, or used in whole or in part as the basis for manufacture or sale of the equipment or software programs without the prior written consent of Vaunix Technology Corporation.

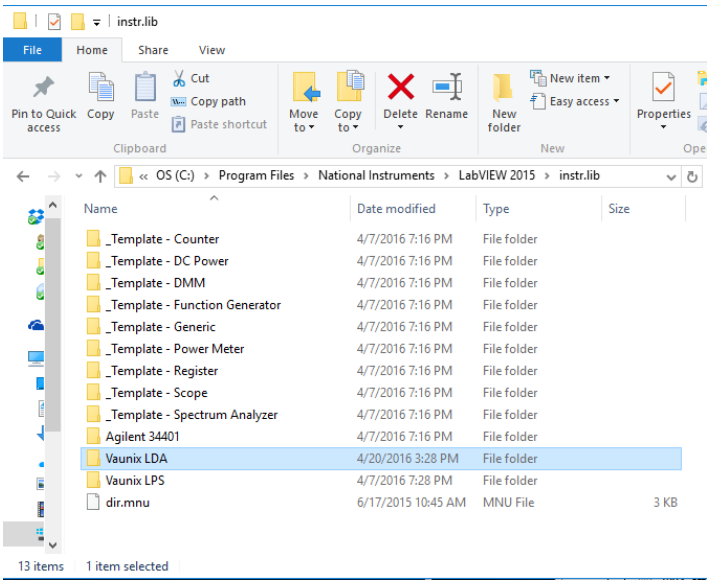
Installing the Instrument Driver

The following steps are required to allow LabView to use the Lab Brick instrument driver via the 'functions' panel. The drivers were saved in LabVIEW 8.2 and will be compatible with any version of LabVIEW that is newer.

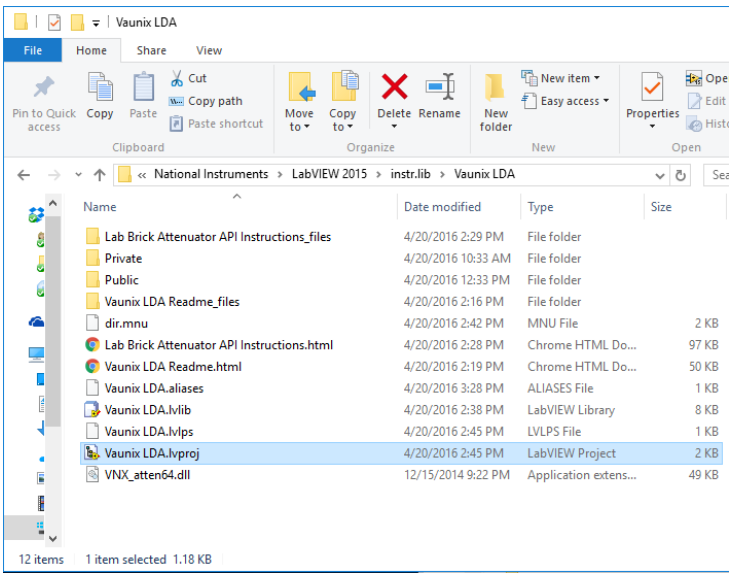
1. Unzip the supplied compressed driver file.
2. Copy the entire uncompressed folder to the following directory:

   32-Bit Driver - C:\Program Files (x86)\National Instruments\LabVIEW XX\instr.lib
   64-Bit Driver - C:\Program Files\National Instruments\LabVIEW XX\instr.lib

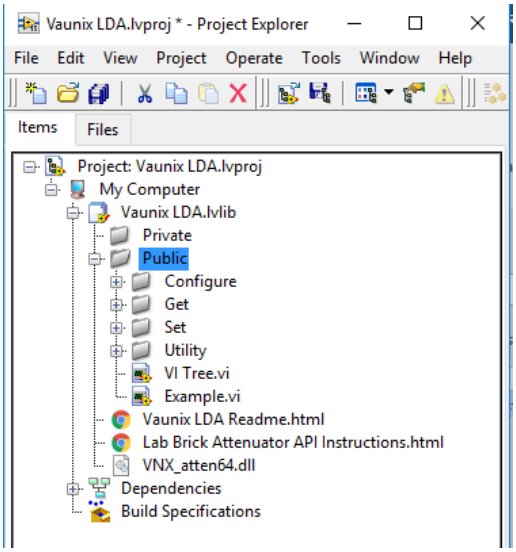
   Note: 'LabVIEW XX' represents the version of LabVIEW you have installed.



3. Open the version of LabVIEW the drivers are intended to be used with.
4. Navigate to the directory above and open the 'Vaunix Lxx.lvproj' file of the driver.

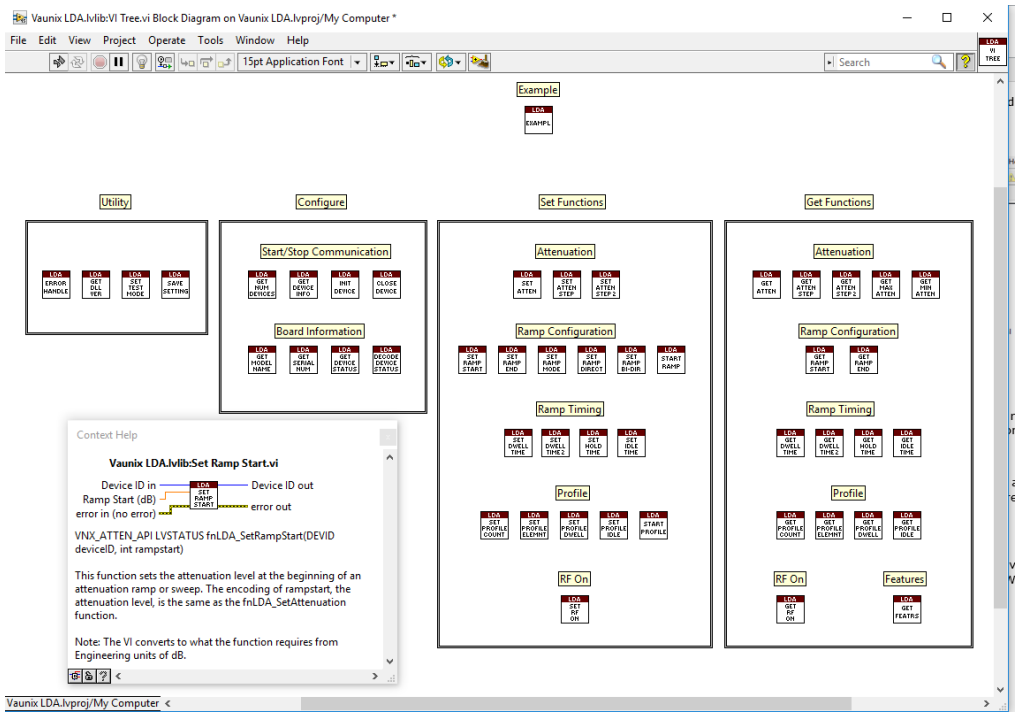


5. In the project navigate to the Vaunix Lxx.lvlib -> Public folder.



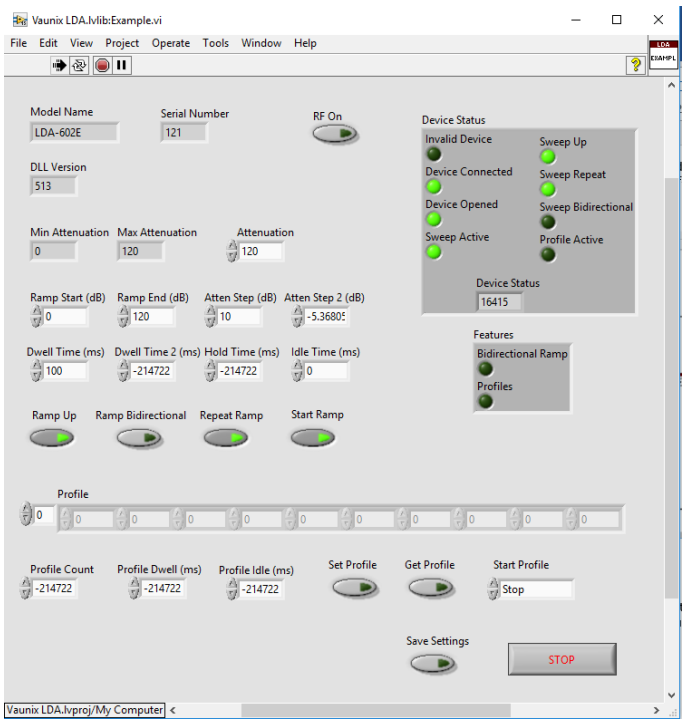
6. Open the VI named 'VI Tree.vi'

   This VI contains all the VIs that allow you to configure and read data from the Lab Brick module. Press CTRL + H to open a help window that will display information about what each VI does.



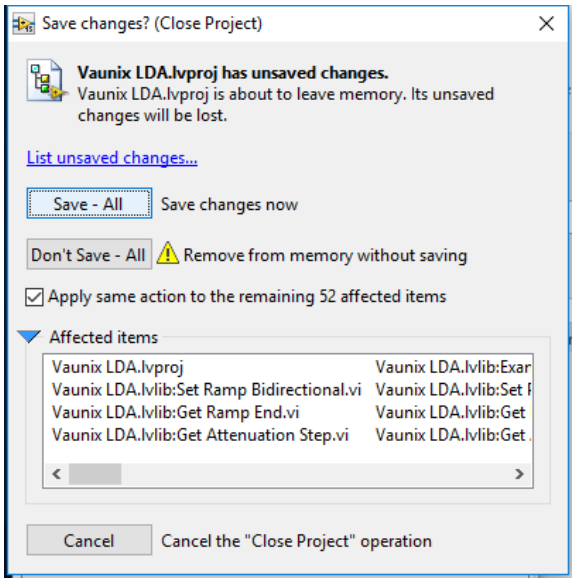
7. Open the VI named ‘Example.vi’

   This VI is a quick demonstration using the driver. Connect an appropriate Lab Brick device to the PC to allow it function. The example allows you to configure and read the Lab Brick modules settings and allows you to quickly evaluate the module.



8. Close the project.

   You will be asked to save changes to the VIs. Click the ‘Save - All’ button to allow LabVIEW to save the VIs that have been converted to the version of LabVIEW you are using.

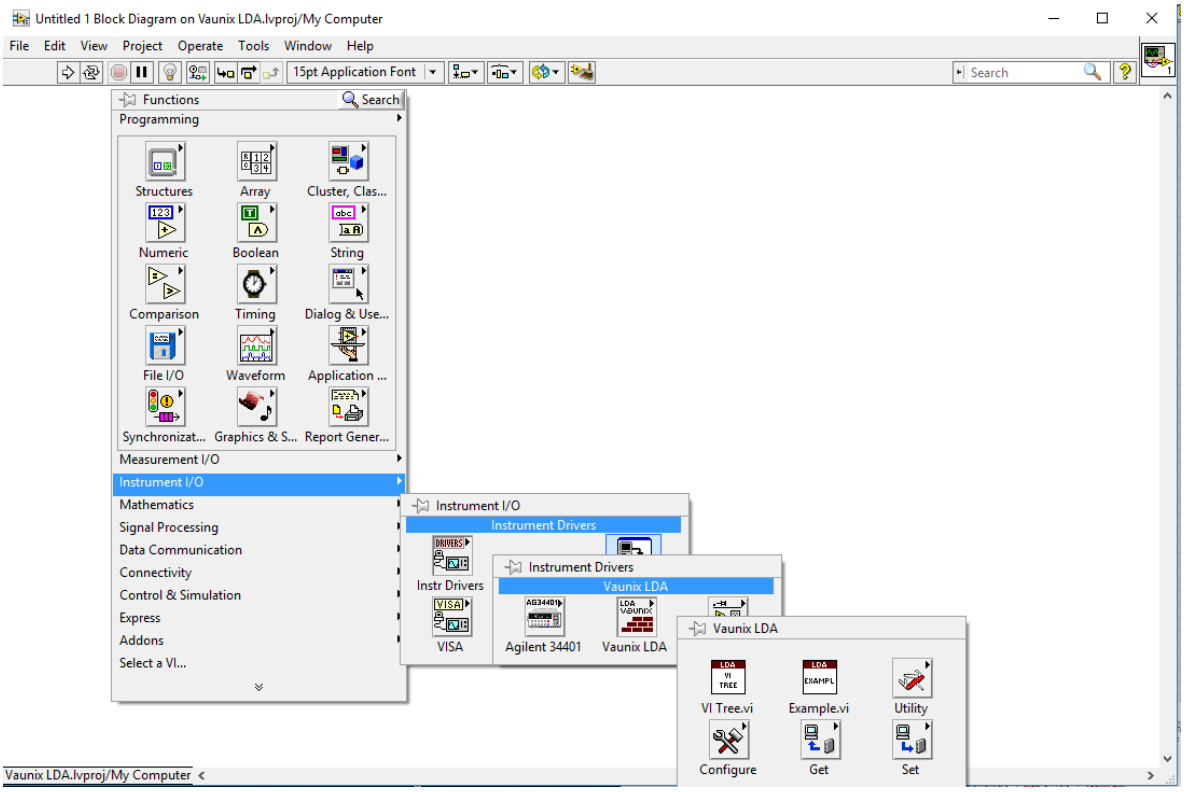


Using the Driver

Once installed you can access the Lab Brick functions using either the 'VI Tree.vi' mentioned above or the functions panel. To access the functions via the functions do the following:

1. Open a new VI.
2. Right click anywhere on the Block Diagram.
3. Navigate to Instrument I/O -> Instr Drivers –> Vaunix Lxx

   Lxx represents the driver that was just installed.



4. All the functions that are in the 'VI Tree.vi' are accessible via this menu.

   Refer to the 'Example.vi' to review how many of the Set and Get functions complement each other and how to use the functions available.

Things to Note About the Driver

In the API manual you will see references to the function requiring the parameters to be multiplied or divided to obtain the proper value that the function either requires or is returning. For example, the power level for the Lab Brick modules is in 0.25dB steps, but the input is an integer so the function requires that the desired power level be multiplied by 4 therefore a desired power level of 5.25 requires an input parameter to the function of 21.

The LabView driver takes care of any of these mathematical necessities and always has an input or returns a value in appropriate Engineering units. The expected units for the VIs is visible in the label name in parenthesis. So using the above example, a VI to either set or read a power level would have a label of 'Power Level (dB)' and the user would set and read 5.25 respectively.