

The LabJack U3 Linux Project

Written by Carl Friis-Hansen

Friday, 15 February 2008 16:59 - Last Updated Sunday, 07 August 2011 23:42

The LabJack U3 Linux Project



LabJack manufactures a nice device with analog and logic inputs and outputs. They also provide a driver for Linux, but very limited software. I found some scripting software for the U9 hardware, but nothing substantial for the U3. This is the reason why I started a fundamental class called u3Base, which is written in C++ and intended for Linux. originally tested on Ubuntu version 6 LTS. The system is now adjusted for new drivers and working with Ubuntu 9.10 LTS, but sit can obviously work with any other Linux style system.

The aim of u3Base is to provide a fairly high level interface without compromising the speed of the hardware too much. Further should it be easy to use for the average technical minded programmer. Last but not least should it be expandable by means of additional classes like one that can interpret Carnot card style language for the logic, a graphical module or for example interfacing to gtk. This is the reason why there are no private variables or methods in this base module, only protected and public.

You can have a brief look et these very small C++ source code [examples](#) before you download manual included in the source archive.

I would love feed-back from any user and I would be more than happy to serve any modules, additions or experiences you might have. You can find my email address in the `{simplifiedownload href=u3Base-20091125r11.tar.gz}source {/simplifiedownload}` codes.

Any number of external monitor programs, written in any language, can interface via shared memory to a main application using the u3Base class.

The u3Base class provides for:

- Boolean equations to determine the logic functionality of the LabJack U3.
- Analog input have lower and upper limits to trigger logic events.
- All logic, both input and output, has intelligent delay timers.
- Software switches for manual stimulation of boolean equations.
- Incorporation of counters into the boolean logic for automatic operations.
- And a lot more...

Hope you will enjoy the u3Base class for LabJack U3. - have a look at the manual in the source

The LabJack U3 Linux Project

Written by Carl Friis-Hansen

Friday, 15 February 2008 16:59 - Last Updated Sunday, 07 August 2011 23:42

archive or you can get the individual files from the Subversion repository:

[_ http://svn.fiskeryd.com/websvn/](http://svn.fiskeryd.com/websvn/)

Package available for download: {simplifiedownload href=u3Base-20091125r11.tar.gz} u3Base-20091125r11.tar.gz {/simplifiedownload}

and a version for the old driver: {simplifiedownload href=u3BaseV20061106.tar.gz} u3BaseV20061106.tar.gz {/simplifiedownload}

In case you did not arrive here from the producer of the LabJack, then please see the [product page](#).

Update August 8th 2011

In Ubuntu, and probably other distributions, there have been a change in:

```
/etc/udev/rules.d/10-labjack.rules
```

The SYSFS is being out-phased and replaced with ATTR, thus you might want to change this ASAP.

You can check beforehand in the boot.log to see if the change apply to you.

The LabJack U3 Linux Project

Written by Carl Friis-Hansen

Friday, 15 February 2008 16:59 - Last Updated Sunday, 07 August 2011 23:42
