

Installations

[Install Java on Windows](#)

Several utilities distributed with the [LCM](#) [1] library require a Java SDK and runtime. Download the installer here:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2...> [2]

<http://download.oracle.com/otn-pub/java/jdk/8u20-b26/jdk-8u20-windows-i586.exe> [3]

Double-click to install and follow instructions.

Add path to Java compiler 'javac' to the system's environment 'Path' variable.

[Install QSerialPort on Windows](#)

Compile and install QSerialPort. Download QSerialPort here:

<https://gitorious.org/inbiza-labs/qserialport/archive/e6e9298711dd39febe15c76cca4f2428210c7631.tar.gz> [4]

Use MSYS shell to unpack and move to development folder. Rename folder inbiza-labs-qserialport. Then open Qt Command Prompt and change directory to inbiza-labs-qserialport
\$ cd /path/to/inbiza-labs-qserialport\$ configure\$ nmake\$ installwin
This creates 'include' and 'lib' in source directory as well as installs qserialport.prf to C:\Qt\4.8.6\mkspecs\features. Move 'include' and 'lib' to C:\msvc2010-libs\qserialport then edit C:\Qt\4.8.6\mkspecs\features\qserialport.prf to reflect.

[Install Yaml-cpp on Windows](#)

```
# USING MSYS SHELL$ cp yaml-cpp-0.3.0.tar.gz /c/Users/gss_windows_dev/development$ cd /c/Users/gss_windows_dev/development$ tar zxf yaml-cpp-0.3.0.tar.gz$ cd yaml-cpp-0.3.0$ mkdir BUILD# CLOSE MSYS SHELL!!!!!!# USING VISUAL STUDIO SHELL$ cmake -G "Visual Studio 10 2010" -DBUILD_SHARED_LIBS=ON ..
```

Then open the generated msvc solution 'yaml-cpp'. Select a 'Release', Win32 build. Select INSTALL solution then build.

Create the directory C:\msvc2010-libs\yaml-cpp-0.3.0 then move C:\include and C:\lib to C:\msvc2010-libs\yaml-cpp-0.3.0.

[Installing Microsoft Visual Studio 2010](#)

Some libraries cannot be compiled with the MinGW compiler. For those libraries we need the default solution for Windows C++ development — Visual Studio. Install the free version of Visual Studio, named Express, from here (registration required):

<http://www.visualstudio.com/downloads/download-visual-studio-vs#d-express-windows-desktop> [5]

You want the 'Desktop' version and it MUST be the 2010 version.

NOTE: YOU CANNOT MIX AND MATCH MSCV AND MSYS! This means you can't link libraries compiled

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with msvc against a msys compiled application or vice versa. For a given application ALL libraries must be compiled using the same compiler.

[Install openCV in Windows](#)

Compile and install Open Computer Vision. Download the self-extracting installer here:

<http://sourceforge.net/projects/opencvlibrary/files/latest/download?source=files> [6]

Extract to C:/msvc2010-libs/

then rename opencv directory to include version I.E. opencv to opencv-2.4.9.

Add C:\msvc2010-libs\opencv-2.4.9\build\x86\vc10\bin to global PATH

[Install Debian Wheezy With a KDE Desktop](#)

Follow the steps in the following section carefully. Most of the options are pre-selected by default, however not all are. If the item is not listed to change, just hit enter or click next through the installation wizard.

**Before beginning, be sure the topside is connected to a monitor, with a keyboard, mouse and an Ethernet cable.*

Ethernet connection is required for many configurations. Do not start the install until Network connection is verified.

1. Debian Installation Wizard Options

Initial as Completed

___ Select : Advanced Options

___ Select: Alternate desktop environment ->KDE

___ Select: Advanced Options

___ Select: Graphical expert Installations

The graphical install wizard will take you through a list of steps. Most of the steps are OK by default. For example, Auto configure is set to yes, so just click Continue or press enter. There are a couple that need to be changed from the default, be sure to verify with the guide before clicking through. The following section in this document will go step by step through each of these steps.

2. Debian Installer Main Menu

Each of the menu steps is configured in order. Though these are very basic steps, they are each included in order to keep the process transparent.

Choose a language:

___ Select English and click Continue

___ Select United States, click Continue

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___ Select us-UTF-8, this will be the default based on the previous selection; click Continue

___ Do not select additional locales; just click Continue (If you press enter the first box will be selected, you have to click Continue for this step).

3. Speech Synthesizer

___ Click Continue

Configure Keyboard

___ Click Continue

___ Select American English; click Continue

4. Detect and Mount CD- ROM

___ Click Continue (will return success message)

5. Load Installer Components from CD

___ Click Continue

___ When installer menu comes up, do not select any, click Continue (all components will be installed automatically)

6. Detect Network Hardware

___ Click Continue

7. Configure the Network

Depending on your Ethernet configuration, this order may vary. The wait time prompt will come up twice, for instance if the Ethernet has two ports.

___ Leave max wait time for network detection at 3 seconds (default) and click Continue

___ If prompted, select Ethernet connection and click Continue

___ Select yes to automatically configure network; click Continue

___ enter a host name for the system (computer name) click Continue

___ Enter domain name as gss.com; click Continue

8. Set Up Passwords

___ Click Continue (A screen will appear with yes as default to enable shadow passwords and yes allow login as root. Click Continue

___ Enter the root password. This is the super user password, with high level admin privileges, do not lose it!

___ Enter a user name for the account, can be the same as the machine name for simplicity.

___ Enter the password for this user. The user can have sudo privileges, but not root. When the computer is rebooted, this is the user name and password prompted combination.

9. Configure The Clock

- ___ Click Continue
- ___ Set the clock using NPT? Default is yes; click Continue
- ___ Use the default NTP server; click Continue
- ___ Select a time zone: select Eastern, click Continue

10. Detect Disks

- ___ Click Continue

11. Partition Disks

- ___ Select guided - use entire disk.
- ___ Click continue, select /home set up
- ___ Look at the table, the partition sizes will vary depending on the HD capacity

it should provide **16G swap, and at least 80 G /root with the rest (at least 150G) /home**. A 64 bit system may ask for a UEFI partition that is bootable, 200 MB is a reasonable size for this. The standard setup for a 500 GB HD is shown below. If the table is not acceptable, follow the next steps.

- ___ Double click the hard drive
- ___ Select YES to create a new partition table.
- ___ Select MSDOS for HD under 2 TB
- ___ All the partitions are primary.
- ___ The partition table will be set up something like this: 16GB swap, 120GB B ext4 / (root), 364GB ext4 /home (the remaining space)

The B shows the boot flag has been set on.

Click finish and write to disk.

**** Be sure to save changes and write to disk- you must change this to YES or the table will not save!!**

- ___ Partition any other disks as needed, using one whole partition using ext4.

12. Install the Base System

- ___ Click Continue (This takes a couple of minutes)
- ___ For kernel, select linux-image-3.2.0-4 686-pae; click Continue

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___ Drivers to include- Select generic: include all available drivers; click Continue

13. Configure the Package Manager

___ Click Continue

___ Include a network mirror is defaulted at yes, click Continue

___ Protocol for file downloads should be http, click Continue

___ Debian archive mirror country defaults to United States; click Continue

___ Debian archive mirror defaults to ftp.us.debian.org [7]; click Continue

___ For the http proxy question leave blank and click Continue

___ Use non-free software **** defaults to no- change this to yes and click continue****

___ Security and release updates , leave as default and click Continue

14. Select and Install Software

___ Click continue

___ Participate in package usage survey- select no and click Continue

___ Install man or mandb - select no, click Continue

___ Choose software to install:

select: Debian Desktop Environment, Webserver, Print Server, SSH Server, Standard System Utilities, SQL Database

15. Install GRUB boot loader on a hard disk

___ Click Continue

___ Install the GRUB boot loader to the master boot record? Yes is the default, click Continue

15. Finish the installation

___ Click Continue

___ Is the clock set to UTC? Yes is default, click Continue

Installation complete

___ Remove cd and click continue

[Install a Moxa on a Linux Machine](#)

The first step is to download the tar file with the Moxa install source code. Check out our downloads section for this file, or visit the Moxa homepage.

Open a command prompt and locate your download. We recommend copying or moving the

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downloaded tar file to your /usr/local/share folder.

To move it, simply type:

```
$ sudo mv <moxa-tar-file> /usr/local/share
```

You must either use sudo or become root to put things in /usr/local/share.

Change to the /usr/local/share directory and untar the file:

```
$ sudo tar -zxvf <moxa-tar-file>
```

Now you can make cd into tmp/moxa to build and install.

```
Your-username/usr/local/share/tmp/moxa$ sudo ./mxinst
```

A message will tell you some status:

Tar files , please wait ... OK !

Building driver ...

If you want to use secure communication with target ,

you might choose [y] to enable the SSL function .

Note : This function support RealCOM with secure mode only .

Do you want to enable secure function ? [y/N].

Type N and enter.

Now cd into to the drivers directory to add the ip and serial ports:

```
Your-username/usr/lib/npreal2/driver$ sudo ./mxaddsvr <ip> <#ports>
```

check /dev to see if your ttyr ports show up. There will be a ttyr0 through the number of ports for the configured moxa.

The last step before testing is to store the port configurations for reboot. Open the rc.local configuration with the nano editor and add the initialization information:

```
$sudo nano /etc/rc.local
```

Add the following and then type cntrl x to save and exit:

```
$/etc/init.d/npreals
```

You are now ready to test.

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[Moxa](#) [13]
[openCV](#) [14]
[Debian Wheezy](#) [15]
[KDE](#) [16]

Source URL: <http://localhost:8888/kb2017/installations>

Links

- [1] <http://greenseainc.com/kb/lexicon/1#lcm>
- [2] <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
- [3] <http://download.oracle.com/otn-pub/java/jdk/8u20-b26/jdk-8u20-windows-i586.exe>
- [4] <https://gitorious.org/inbiza-labs/qserialport/archive/e6e9298711dd39febe15c76cca4f2428210c7631.tar.gz>
- [5] <http://www.visualstudio.com/downloads/download-visual-studio-vs#d-express-windows-desktop>
- [6] <http://sourceforge.net/projects/opencvlibrary/files/latest/download?source=files>
- [7] <ftp://ftp.us.debian.org/>
- [8] <http://localhost:8888/kb2017/tags/java>
- [9] <http://localhost:8888/kb2017/tags/windows>
- [10] <http://localhost:8888/kb2017/tags/qserialport>
- [11] <http://localhost:8888/kb2017/tags/yaml-cpp>
- [12] <http://localhost:8888/kb2017/tags/visual-studio-2010>
- [13] <http://localhost:8888/kb2017/tags/moxa>
- [14] <http://localhost:8888/kb2017/tags/opencv>
- [15] <http://localhost:8888/kb2017/tags/debian-wheezy>
- [16] <http://localhost:8888/kb2017/tags/kde>