

Arena Assistant Installation Guide

Introduction

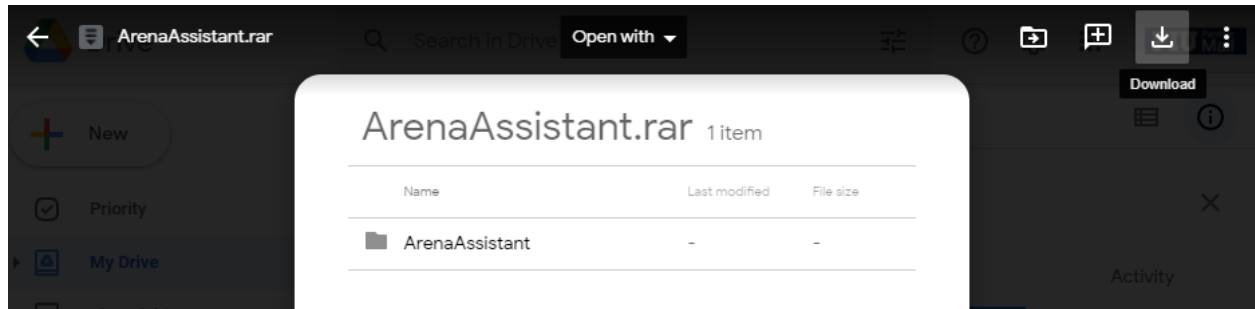
This Arena Assistant installation guide is targeted for the Windows Platform, aimed to help get the developer side of the program set up. If you only wish to use the features of Arena Assistant without having to delve into code, then simply branch off to the 'Camera User' component in the 'Installing Arena View' section.

For any questions, please contact John Robinson at

jrobi090@fiu.edu

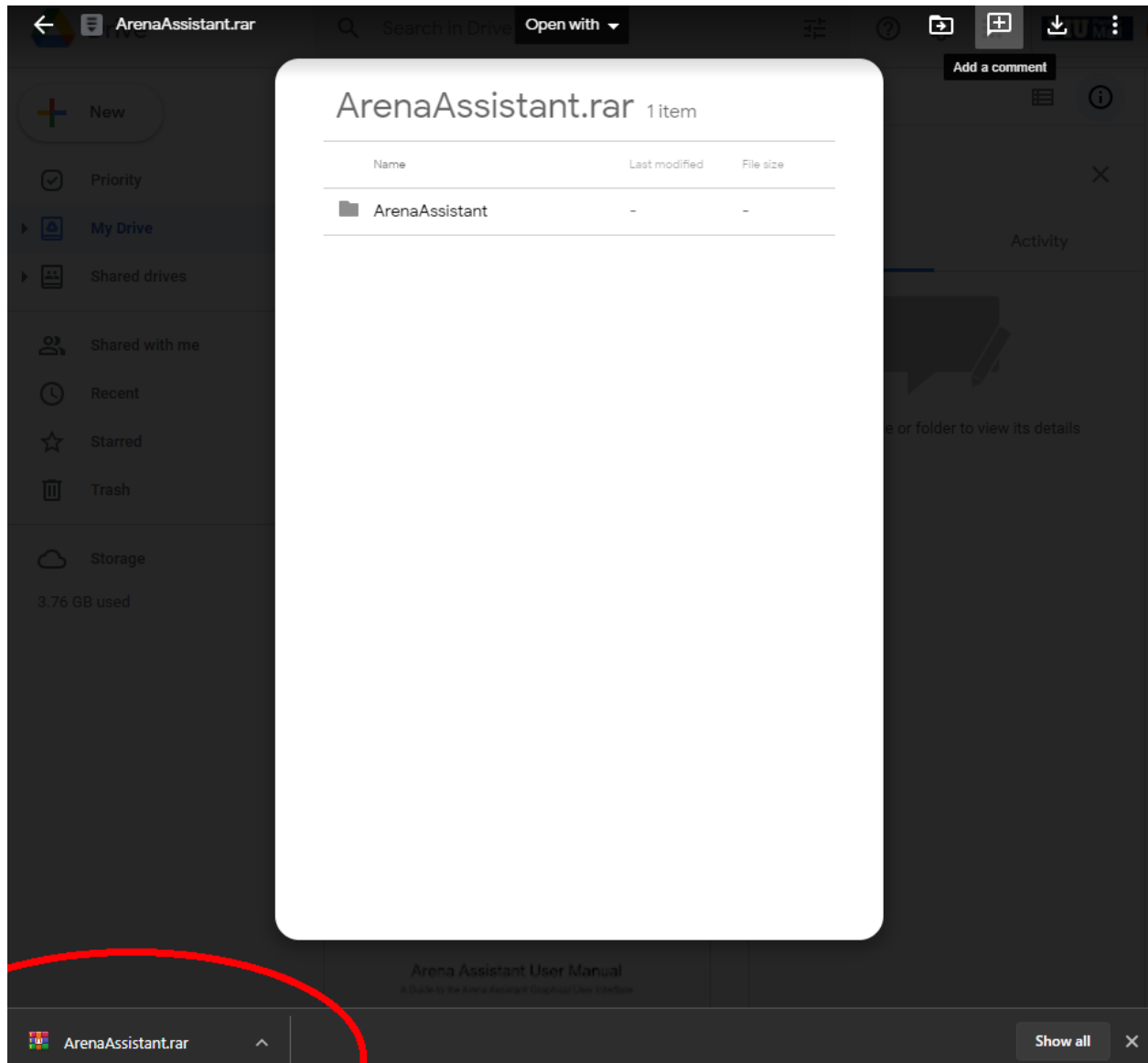
Installing Arena Assistant

Download the *ArenaAssistant.rar* through your preferred browser.

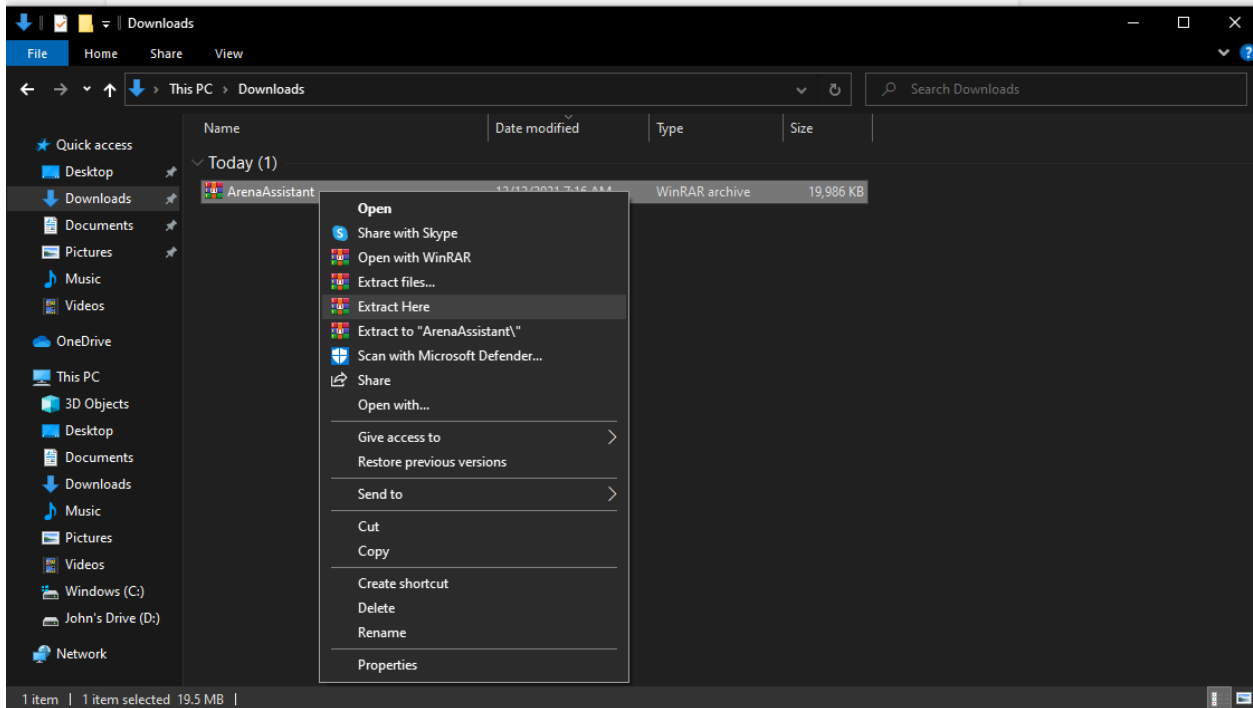


(fig. 01) - How To Download

Depending on your browser and settings, the downloaded file will appear somewhere on your computer. Extract it somewhere you can easily access it.

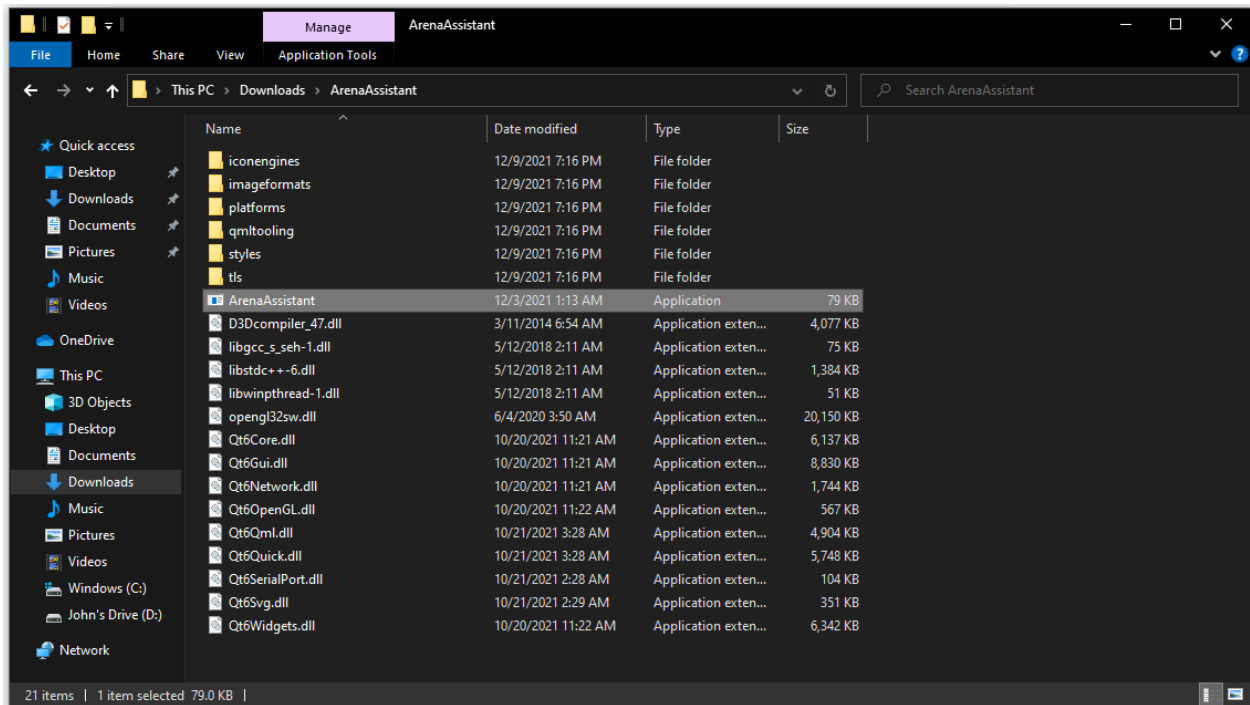


(fig. 02) - Browser Download Location



(fig. 03) - Extracting the .rar File

Once the files have been extracted, the ArenaAssistant application will be located within the new folder.



(fig. 04) - Arena Assistant Location

There should be no errors opening Arena Assistant. However, if you do not have Arena View installed or the Arduino plugged in correctly, there will be limitations on what you can do in the application. Read on to ensure these are installed properly.

Installing Arena View

Arena View is a program provided by Lucid Vision Labs that allows for you to access camera functionality through an easy-to-use GUI. The download link requires a login to access, and is otherwise free for use.

Here is a link to the Downloads page on Lucid's website:

<https://thinklucid.com/downloads-hub/>

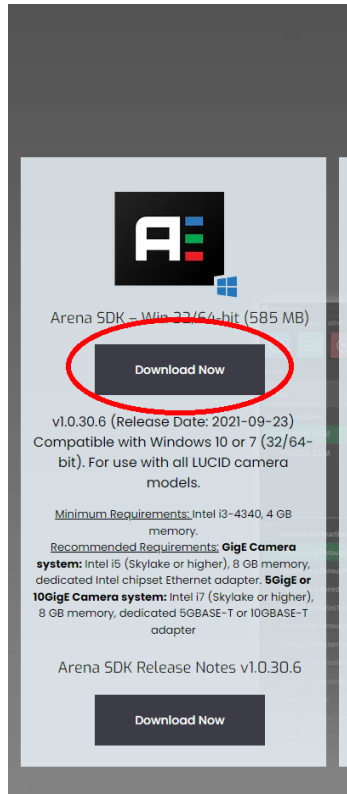
Downloads

Jump To: [Arena SDK](#) | [CAD Files](#) | [Technical Reference Manuals](#) | [Firmware Files](#) | [Detailed EMVA1288 Results](#)

Download Now	Download Now	Download Now	Download Now	Download Now
Arena SDK - Win 32/64-bit (585 MB) v1.0.30.6 (Release Date: 2021-09-23) Compatible with Windows 10 or 7 (32/64-bit). For use with all LUCID camera models. Minimum Requirements: Intel i3-4340, 4 GB memory. Recommended Requirements: 8igt Camera system: Intel i5 (Skylake or higher), 8 GB memory, dedicated Intel chipset Ethernet adapter. 50igt or 100igt Camera system: Intel i7 (Skylake or higher), 8 GB memory, dedicated 50GBASE-T or 100GBASE-T adapter. Arena SDK Release Notes v1.0.30.6	Arena SDK - Linux 64-bit (40 MB) v0.157.0 SDK API Only, (Release Date: 2021-11-03) Compatible with Ubuntu 16.04 and 18.04 (64-bit). For use with all LUCID camera models. Minimum Requirements: Intel i3-4340, 4 GB memory. Recommended Requirements: Single Camera system: Intel i5 (Skylake or higher), 8 GB memory, dedicated Intel chipset Ethernet adapter. Multi-Camera system: Intel i7 (Skylake or higher), 8 GB memory, dedicated Intel chipset Ethernet adapter. Arena SDK Linux Release Notes v0.157	Arena SDK - ARM 64-bit (28 MB) v0.138 (Release Date: 2021-04-13) SDK API Only Compatible with Ubuntu 16.04 and 18.04 (64-bit). For use with all LUCID camera models. Tested on NVIDIA Jetson TX2 Development Kit. Arena SDK ARM Release Notes v0.138	Arena Python Package (411 KB) v2.1.4 (Release date: 2021-04-13) Package includes wheel, examples and documentation. Requirements: Python 3.6 or above Minimum Compatible Arena Versions: Arenac_Win_Version_Min = V1.0.28.3 Arenac_Lin_Version_Min = V0.153 Arenac_Arm_Version_Min = V0.137 Arena Python Release Notes v2.1.4	ArenaFlex Software (3 Files) ArenaFlex SDK Only (34.3MB) v0.11 (Release Date: 2020-03-19) ArenaFlex Custom OpenCV (31.2MB) L4T Image (5.1GB) Requirements: (1) Helios Flex ToF Module, (2) NVIDIA Jetson TX2, (3) Linux Host PC (Ubuntu 18.04 recommended) for flashing Jetson TX2. View plain text instructions or download the Helios Flex Technical Manual below for more detailed information. ArenaFlex Release Notes

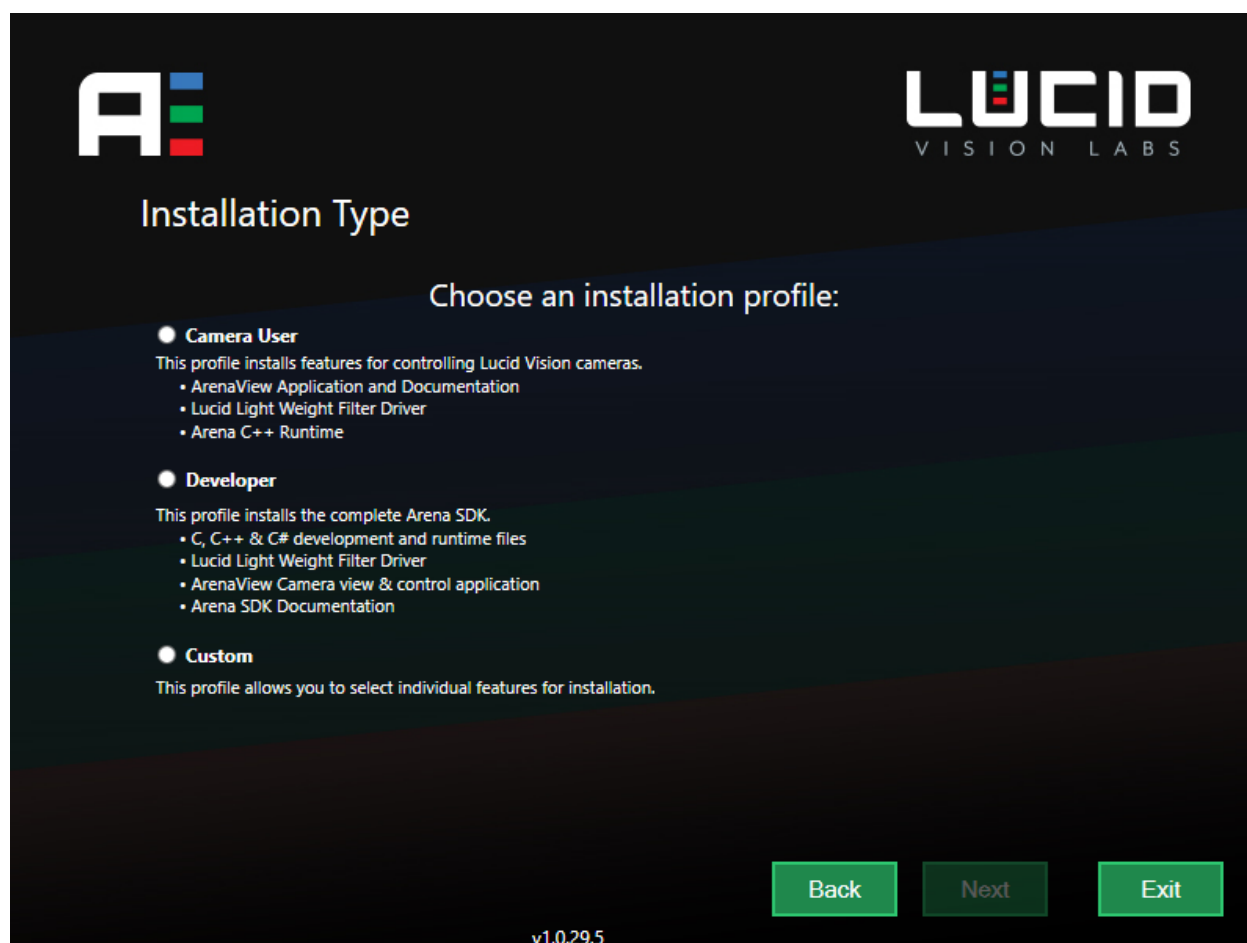
(fig. 05) - Arena SDK Download page

Click on the first section on the left, to download Arena SDK for Windows (this comes packaged with Arena View, the option for installing everything comes with the wizard).



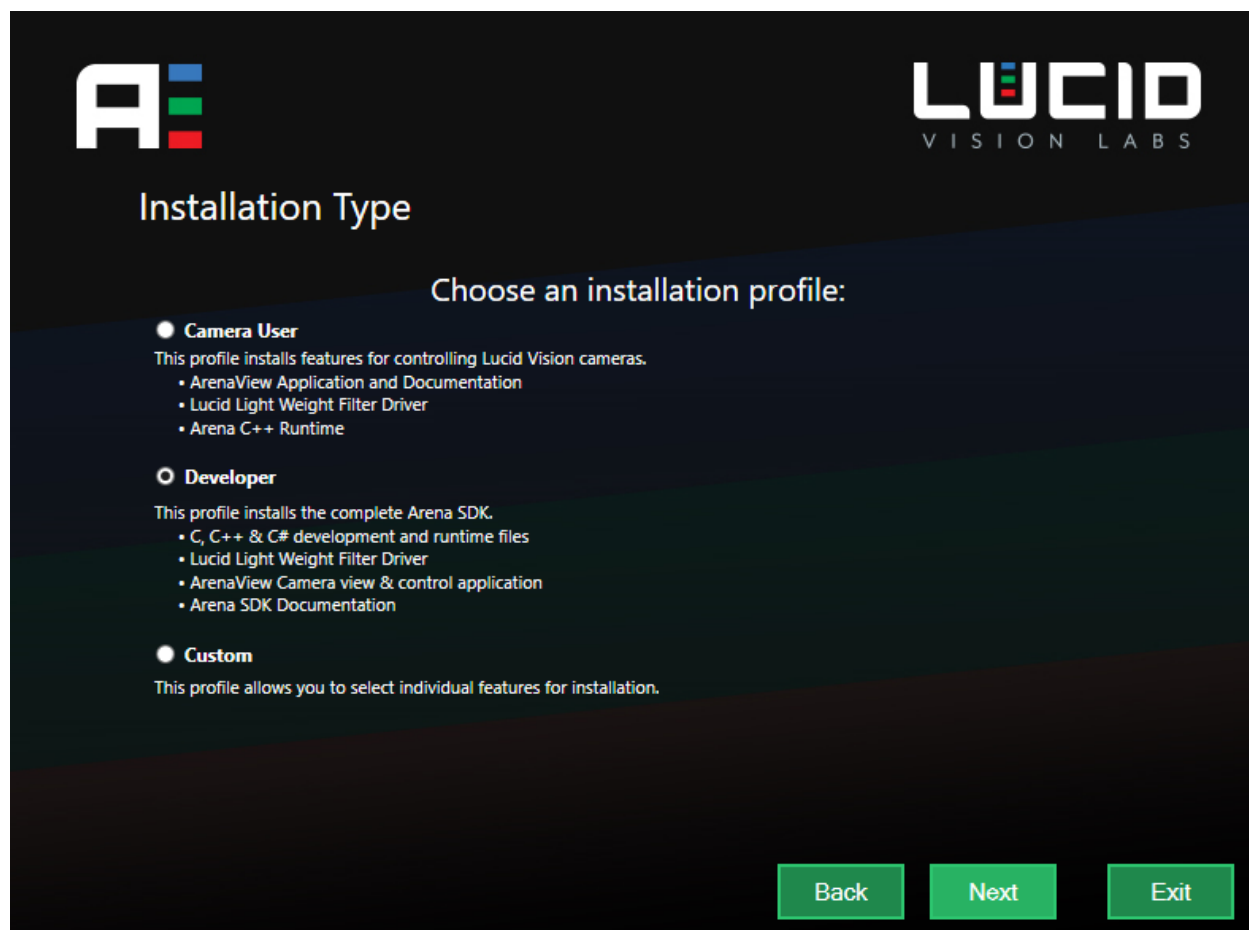
(fig. 06) - Windows Arena SDK Download

Once the download is complete, open up the installer and follow the steps until you reach this screen:



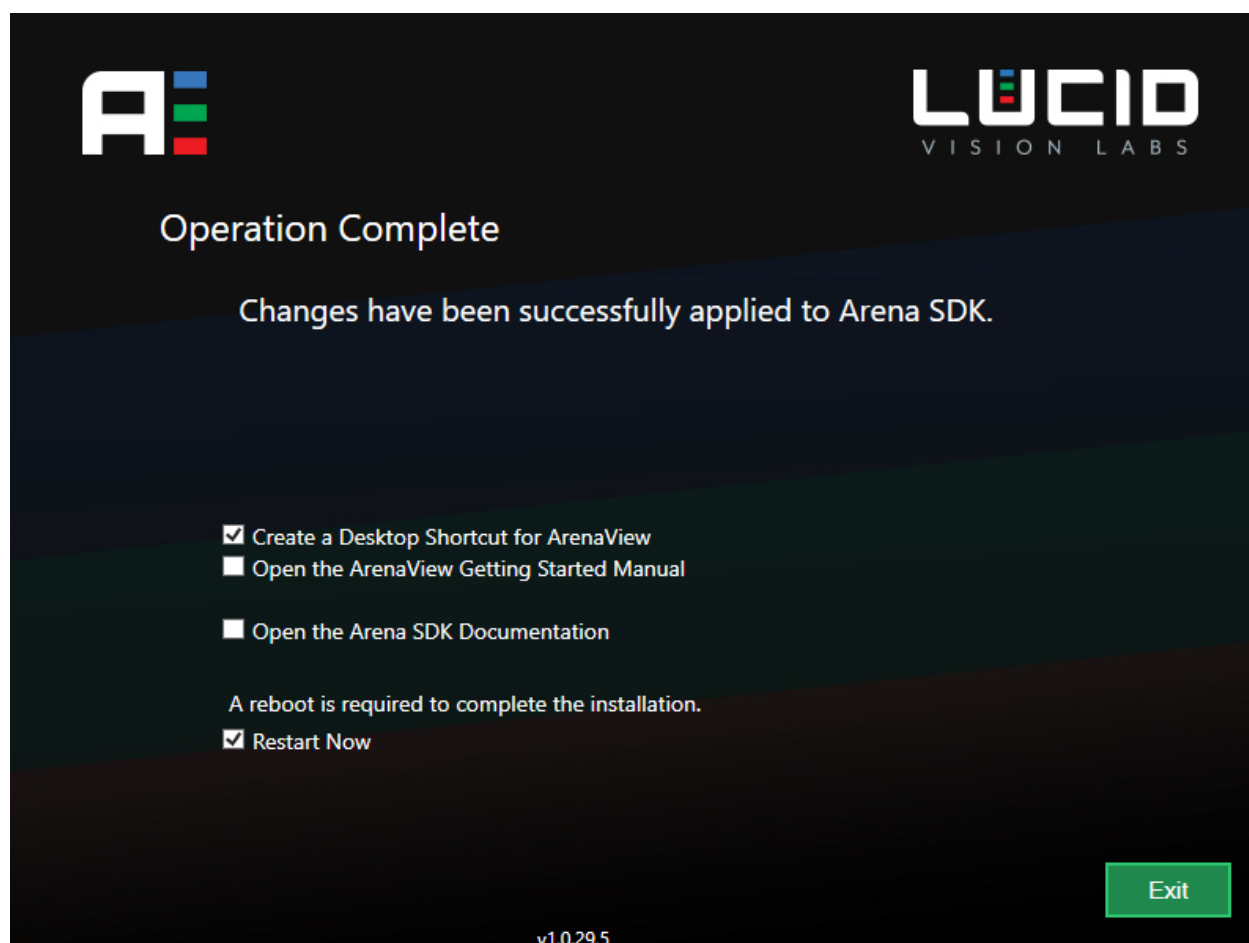
(fig. 07) - Arena SDK Developer/Camera User Options

If you intend to simply use Arena View for its GUI, then it is recommended you install the 'Camera User' option. Otherwise, if you intend to develop with the program, then install the 'Developer' option. For this guide we will install the 'Developer' option and gain access to all features within the SDK.



(fig. 08) - Installing Developer Mode

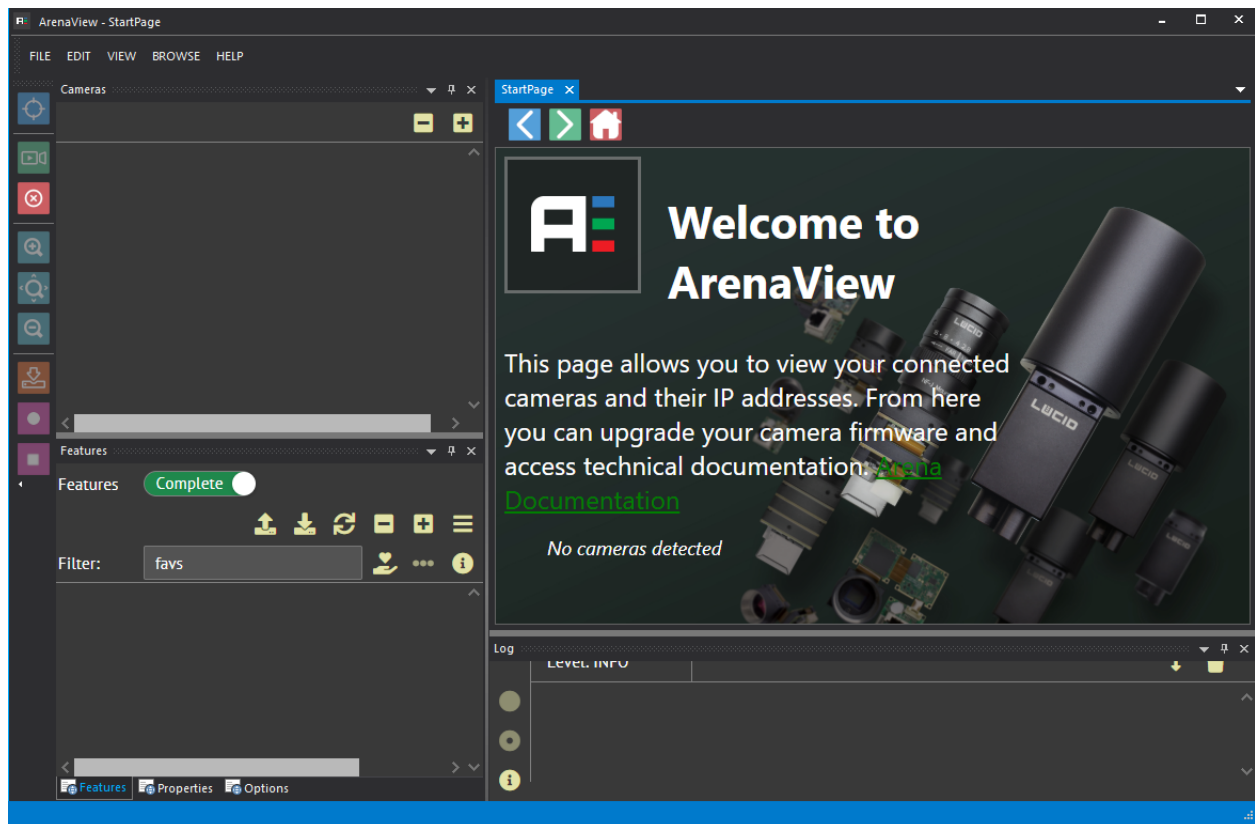
Continue until you reach the following screen.



(fig. 09) - Complete Installation

Choose whether you wish for a Desktop shortcut to be made, as well as whether to open the documentation now. Bear in mind that a restart is required for installation to be complete, so consider having your system reboot immediately upon completion to ensure everything is working properly.

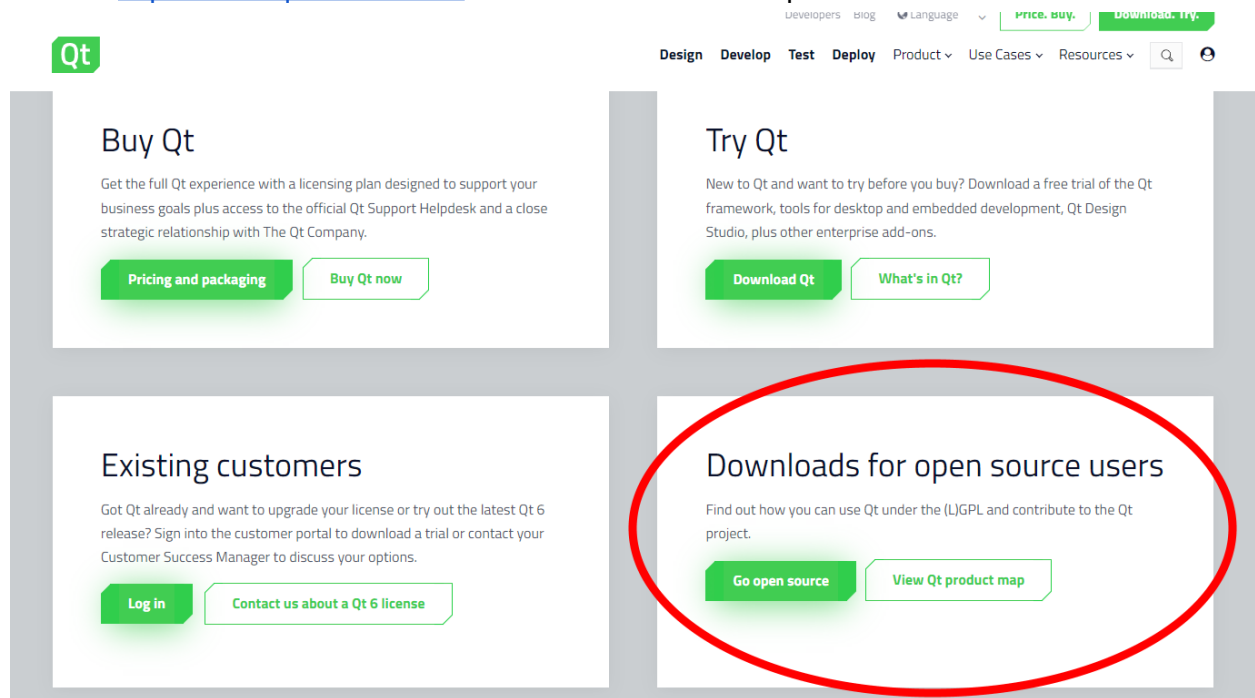
To check if you have Arena View installed, look for the application and attempt to run it. This is how everything should look upon launching it:



(fig. 10) - Arena View Main Menu

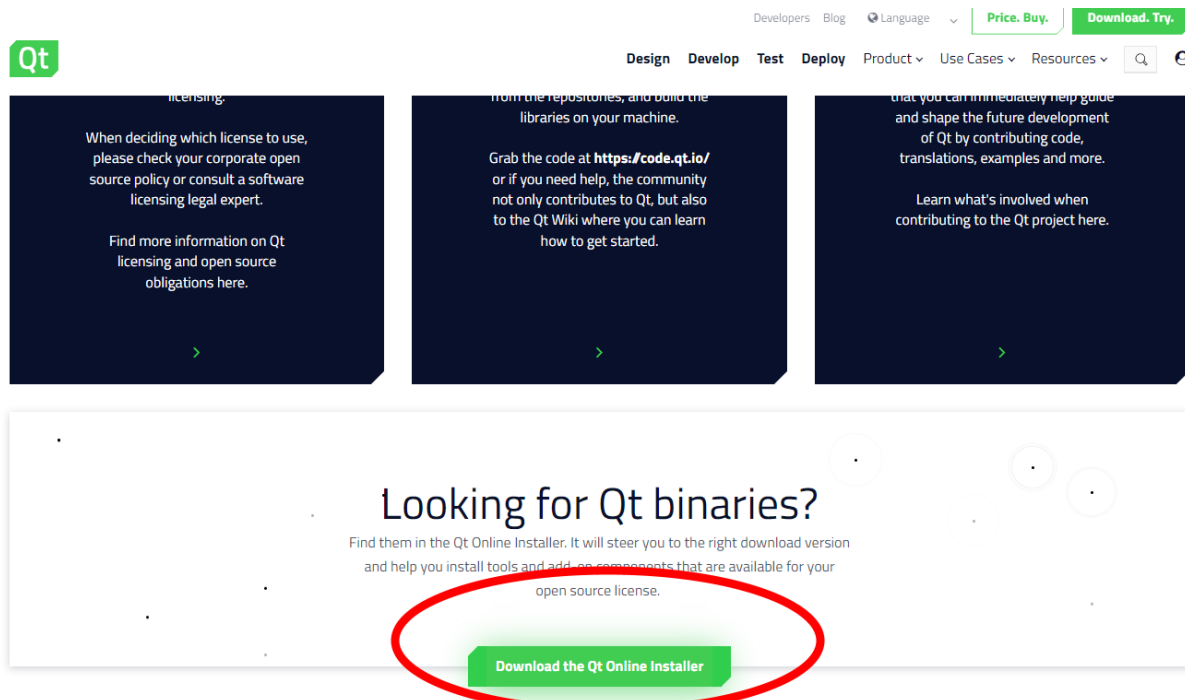
Installing QT

Head to <https://www.qt.io/download> and follow the links for open source users.



(fig. 11) - QT Open Source link

Once on that page, scroll down to the “Download the QT Online Installer” button and click on it.

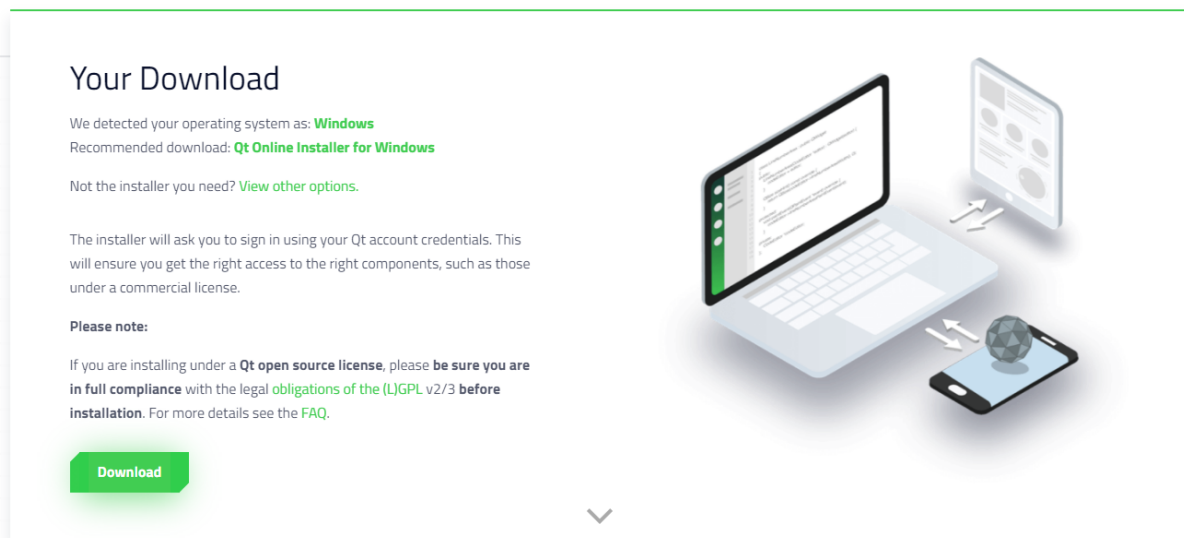


(fig. 12) - QT Installer Button

This will take you to the installer page, which will automatically detect your system and attempt to get you the appropriate version to download. If you need to make any modifications to these suggestions, click View Other Options. Otherwise, click on Download.

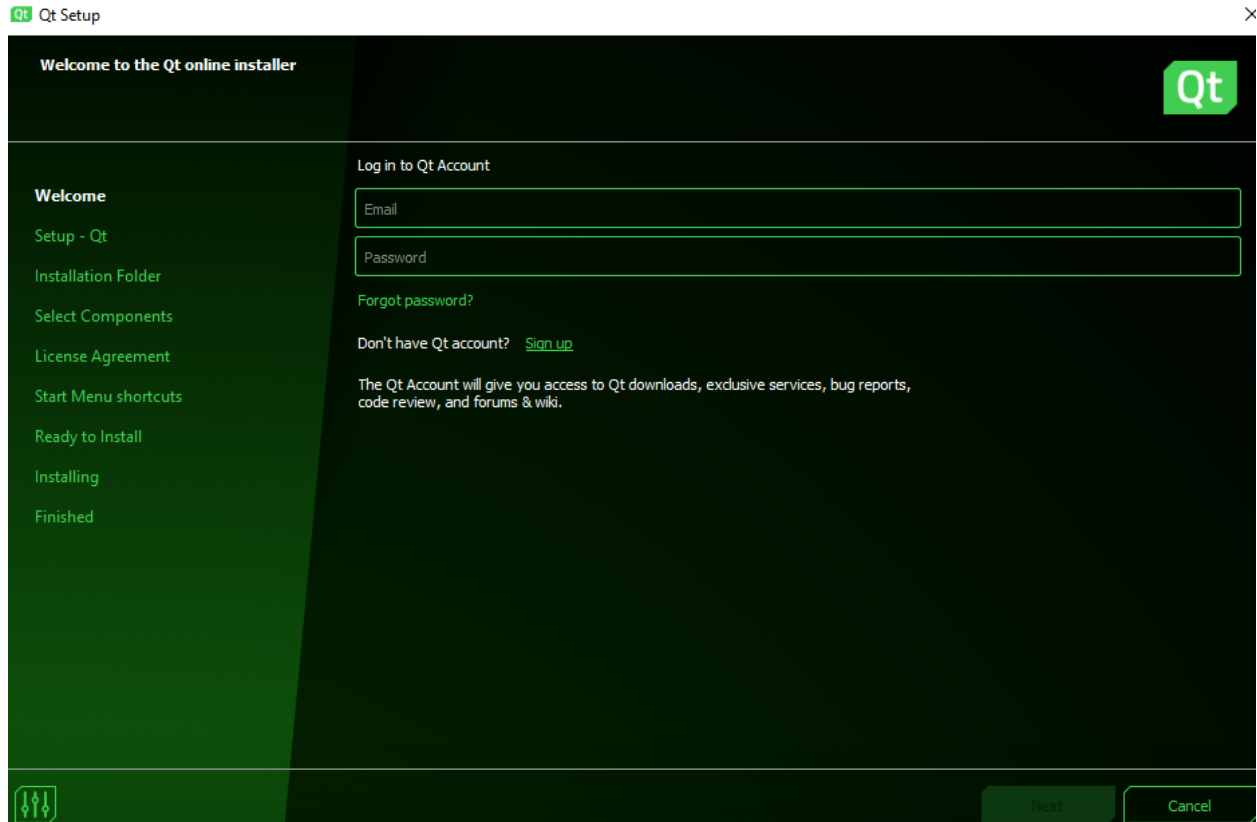
Install Qt

Use the Qt Online Installer for the optimal Qt installation experience. It will guide you to the right download version plus installation of tools and add-on components that are available for your license.



(fig. 13) - QT Version Specific Download

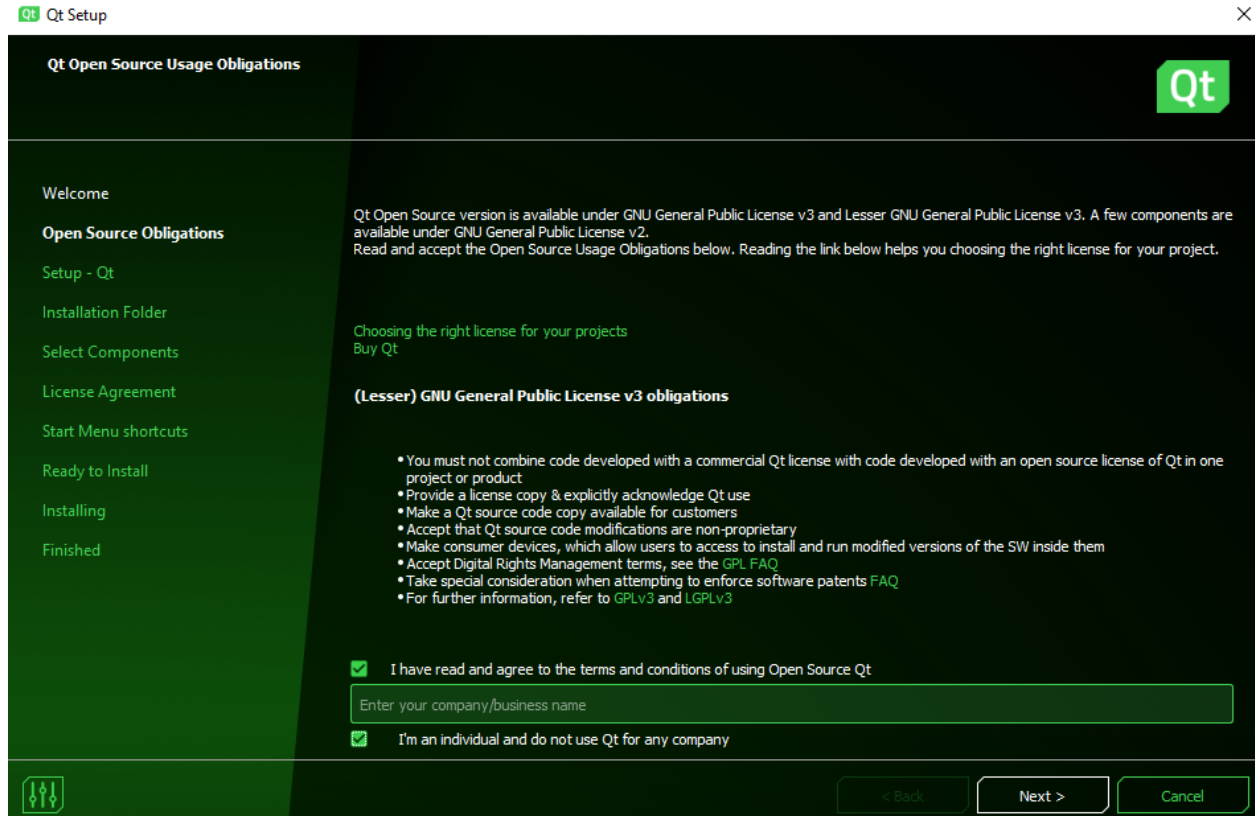
Once the download is complete, open the installer and you should be greeted with this screen:



(fig. 14) - QT Account

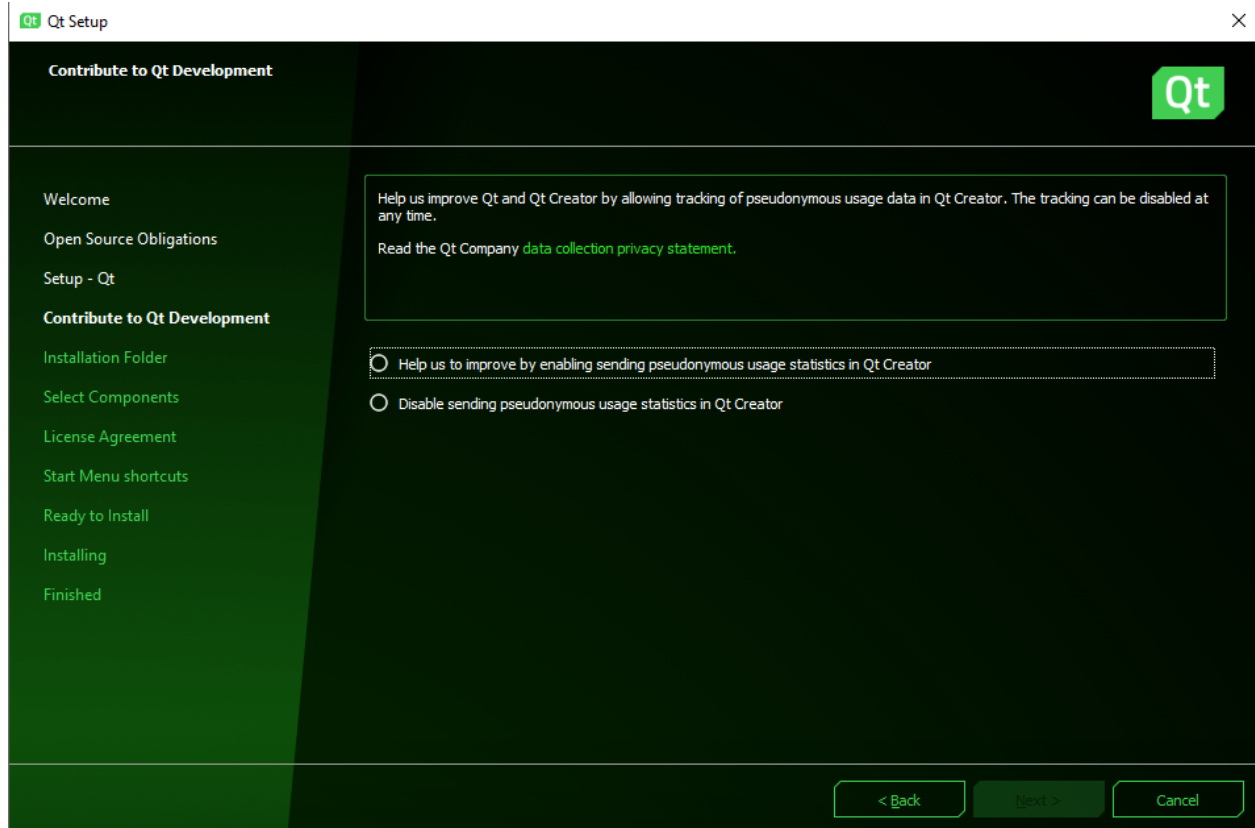
An account is necessary to use QT products, but doesn't require more than a valid email address and agreement to terms. Once you have completed this step, go to the Next page.

Agree to the terms and specify you are an individual not using Qt for a company, then go Next.



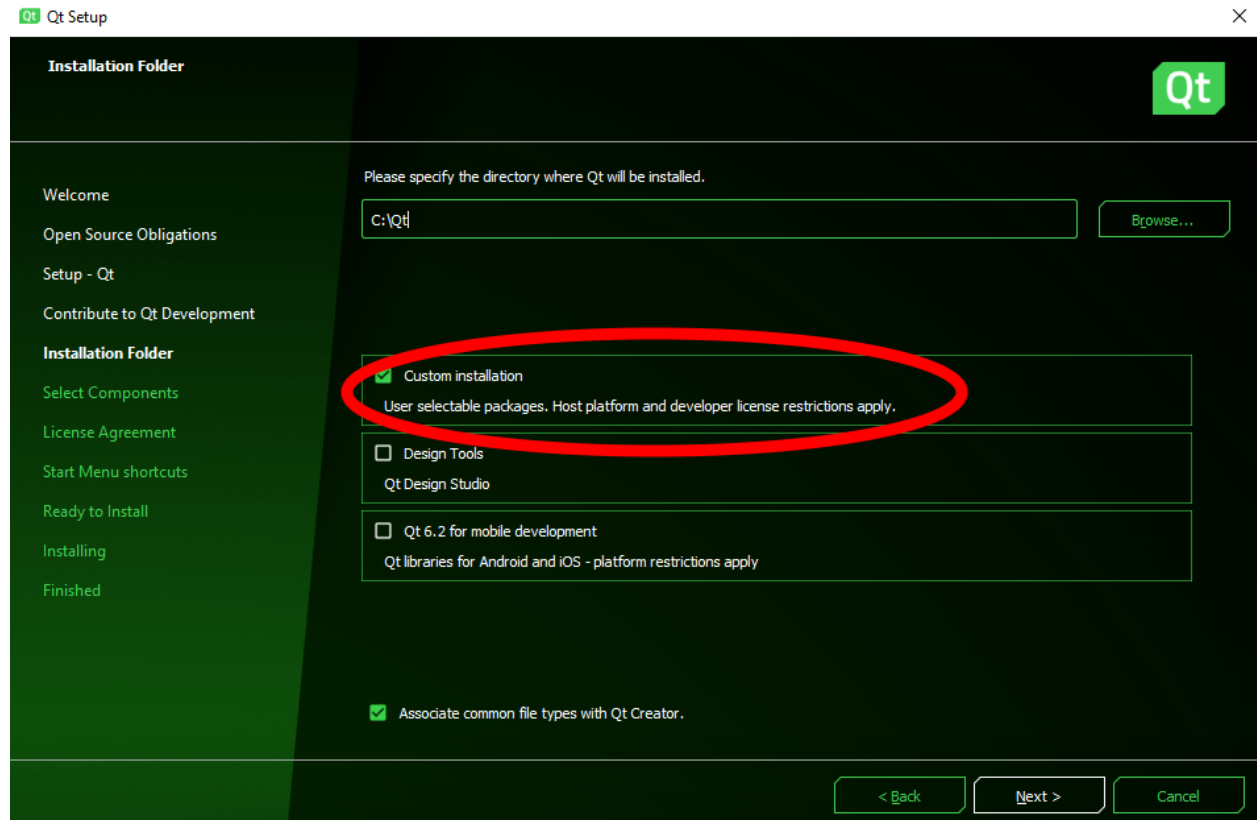
(fig. 15) - QT TOS

Decide whether or not you want to send usage data to QT. Then go Next.



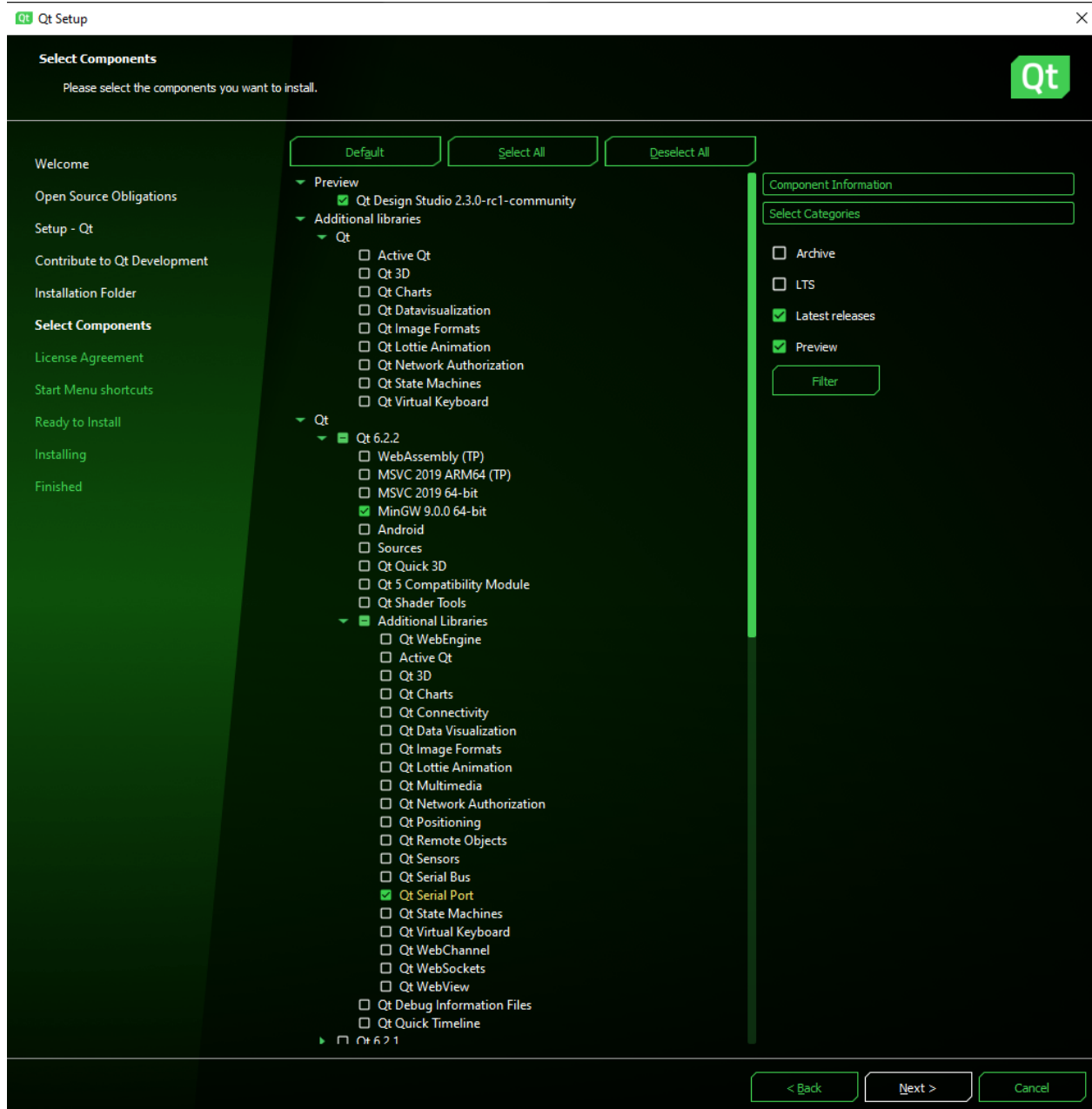
(fig. 16) - QT Data

Next is the installation section of QT. Make sure you have “Custom Installation” ticked off, and proceed to the next section. The path for installation is fine by default, but you can change this if you wish.



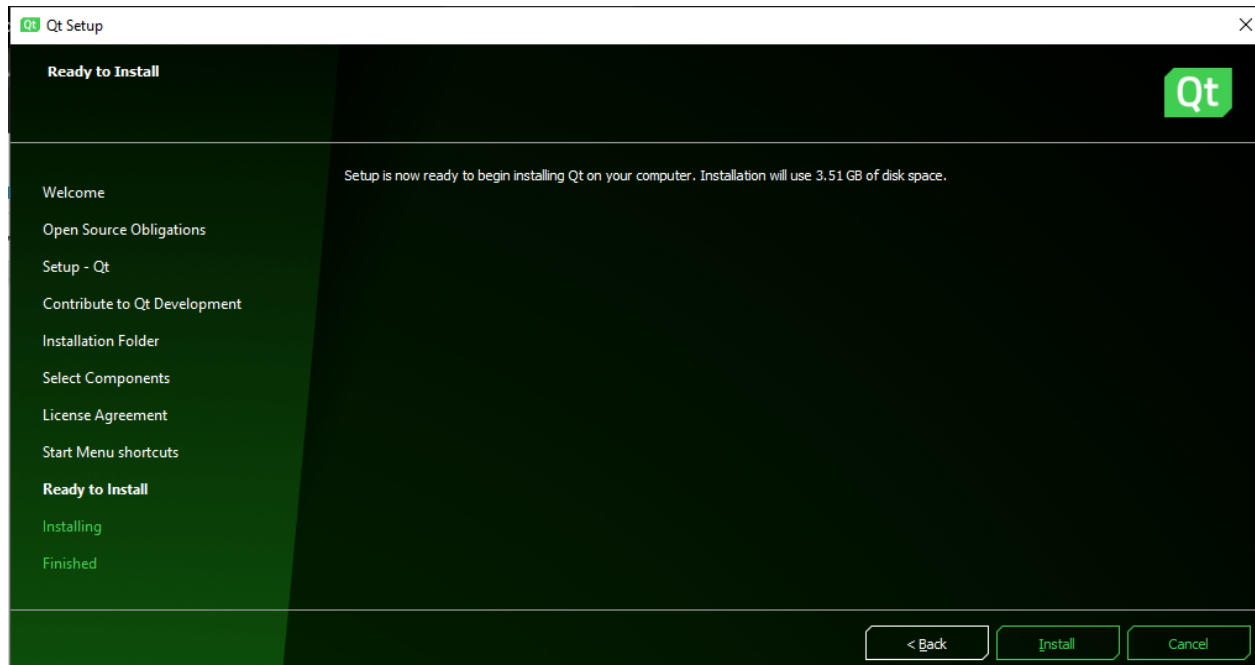
(fig. 16) - QT Installation Setup

Head next to the components installation section. Choose the following:



(fig. 17) - QT Components

Select Next until you reach this screen. Once you have installed QT, the program should allow you to open Arena Assistant's source files.



(fig. 17) - QT Installation Commencing

Arduino IDE Download

In order to test out Arduino functions and edit code, it is required you have the Arduino IDE installed.

This can be downloaded from the Arduino website:

<https://www.arduino.cc/en/software>

Downloads



 **Arduino IDE 1.8.16**

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. This software can be used with any Arduino board.

Refer to the [Getting Started](#) page for Installation instructions.

SOURCE CODE

Active development of the Arduino software is [hosted by GitHub](#). See the instructions for [building the code](#). Latest release source code archives are available [here](#). The archives are PGP-signed so they can be verified using [this](#) gpg key.

DOWNLOAD OPTIONS

Windows Win 7 and newer
Windows ZIP file

Windows app Win 8.1 or 10 

Linux 32 bits
Linux 64 bits
Linux ARM 32 bits
Linux ARM 64 bits

Mac OS X 10.10 or newer

[Release Notes](#) [Checksums \(sha512\)](#)

(fig. 18) - Arduino IDE Download

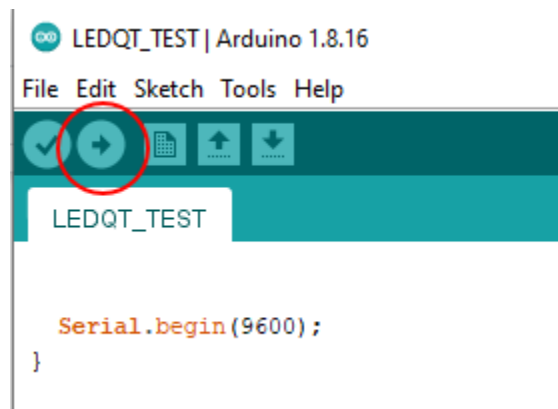
The Windows 7 and newer version should be downloaded if your system is compatible.

Once the installation is complete, open the project file included with the Medical-Imager package on the Arduino IDE.



(fig. 19) - Arduino IDE Project File

This is the code the board will run to test out LEDs on Arena Assistant. First, the code must be uploaded to the board, with the 'Upload' button:



(fig. 20) - Arduino Upload

The board should blink and confirm that it has received the code. Test it out with either the IDE's serial port or Arena Assistant's LED controls.