



Software User Guide (EN)

PGC-1000 Grabber Card

Rev. 1.3.2

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Contents

01	Introduction.....	3
02	Installation of the PGC-1000 Windows Driver	3
03	Deinstallation of the PGC-1000 Windows Driver.....	4
04	Setting up the PGC-1000 Interfaces.....	5
05	Using the PGC-1000 Updater	8
06	Configure VisualStudio 2019 for Libpgc1k.....	10
07	Libpgc1k Documentation.....	11

Table of Contents

Figure 1: Driver Installation	3
Figure 2: Driver Deinstallation	4
Figure 3: ipconfig /all example output.....	5
Figure 4: Set an IP manually	6
Figure 5: PGC Updater	8
Figure 6: PGC Updater Metadata Window	9
Figure 7: VisualStudio 2019 include settings	10
Figure 8: Linker library dependencies.....	11

01 Introduction

This Software User Guide is an extension to the PGC-1000 User Guide and explains the aspects of software installation, updating and accessing the driver from own software applications. Be sure to read the User Guide first.

02 Installation of the PGC-1000 Windows Driver

The PGC-1000 Windows driver can be installed by executing the PGC Driver installer. A reboot after the installation is recommended.

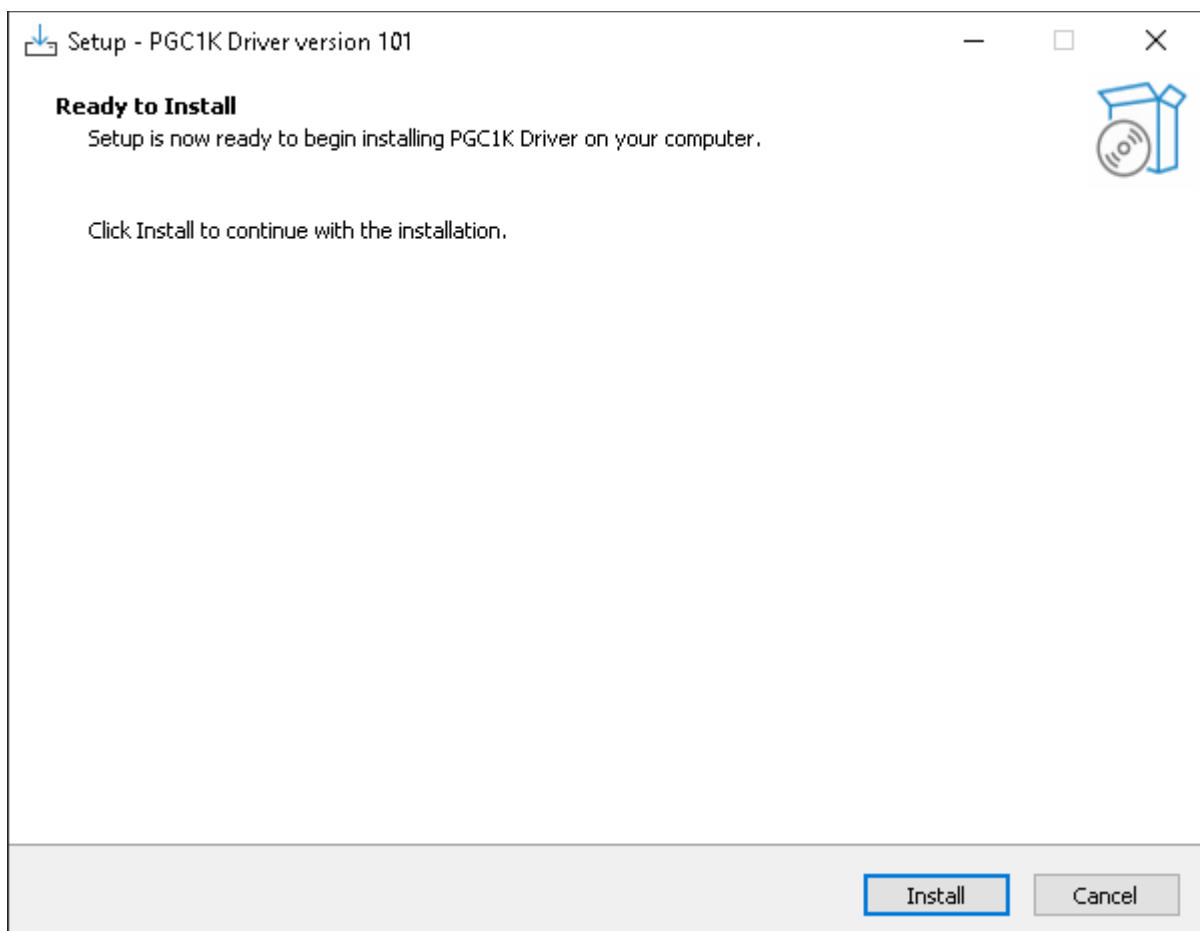


Figure 1: Driver Installation

03 Deinstallation of the PGC-1000 Windows Driver

The driver can be removed by deinstalling it from the Windows »Apps & Features« Settings window or under the Control Panel »Programs and Features« window.

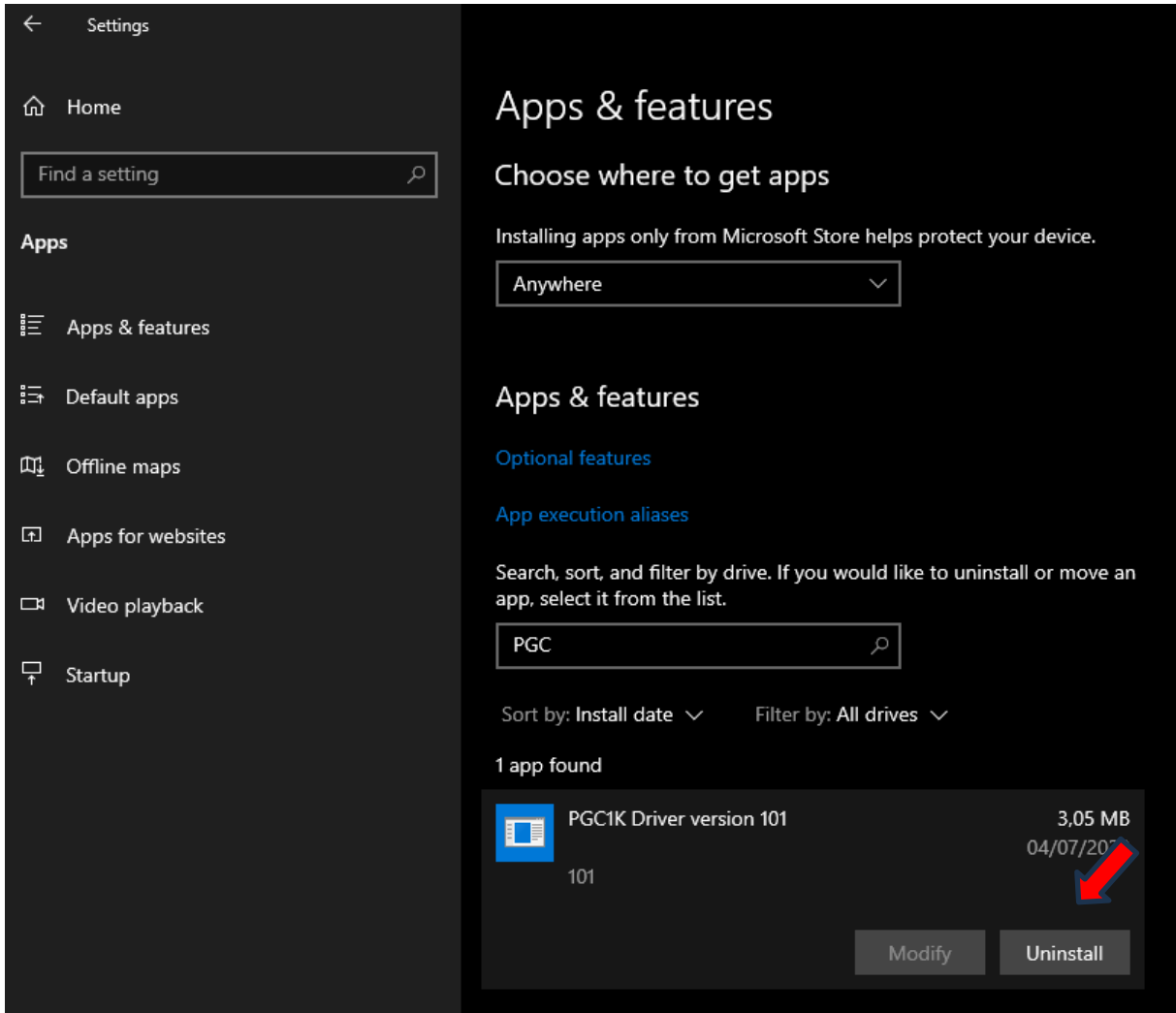


Figure 2: Driver Deinstallation

04 Setting up the PGC-1000 Interfaces

To find out which PGC-1000 interfaces are mapped to which Ethernet adapters in Windows, you have to take a look at the MAC addresses of the available Ethernet adapters and identify the different PGC-1000 interfaces.

To do this, open the Windows command console (cmd.exe) and execute the following command:

```
ipconfig /all
```

A possible output is shown below:

```
Ethernet adapter Ethernet 4:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
    Description . . . . . : PGC1K Device
    Physical Address. . . . . : E8-B4-70-A0-00-00
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . : Yes

Ethernet adapter Ethernet 13:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
    Description . . . . . : PGC1K Device #2
    Physical Address. . . . . : E8-B4-70-A0-00-02
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes

Ethernet adapter Ethernet 16:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
    Description . . . . . : PGC1K Device #3
    Physical Address. . . . . : E8-B4-70-A0-00-01
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . : Yes

Ethernet adapter Ethernet 17:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
    Description . . . . . : PGC1K Device #4
    Physical Address. . . . . : E8-B4-70-A0-00-03
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
```

Figure 3: ipconfig /all example output

In this example, the following Ethernet adapters are mapped to different PGC-1000 interfaces:

PGC-1000 interface 1 -> Ethernet adapter Ethernet 4

PGC-1000 interface 2 -> Ethernet adapter Ethernet 16

PGC-1000 interface 3 -> Ethernet adapter Ethernet 13

PGC-1000 interface 4 -> Ethernet adapter Ethernet 17

When the mapping of the PGC-1000 interfaces is known, the IPs of the interfaces must be set manually, so that a communication with the remote device is possible.

To manually set the IPs, go to the windows network settings, select the Ethernet adapter for which you want to set the IP and click on »edit«.

You can now set your IP, Subnet prefix and gateway. An example is shown in the following image:

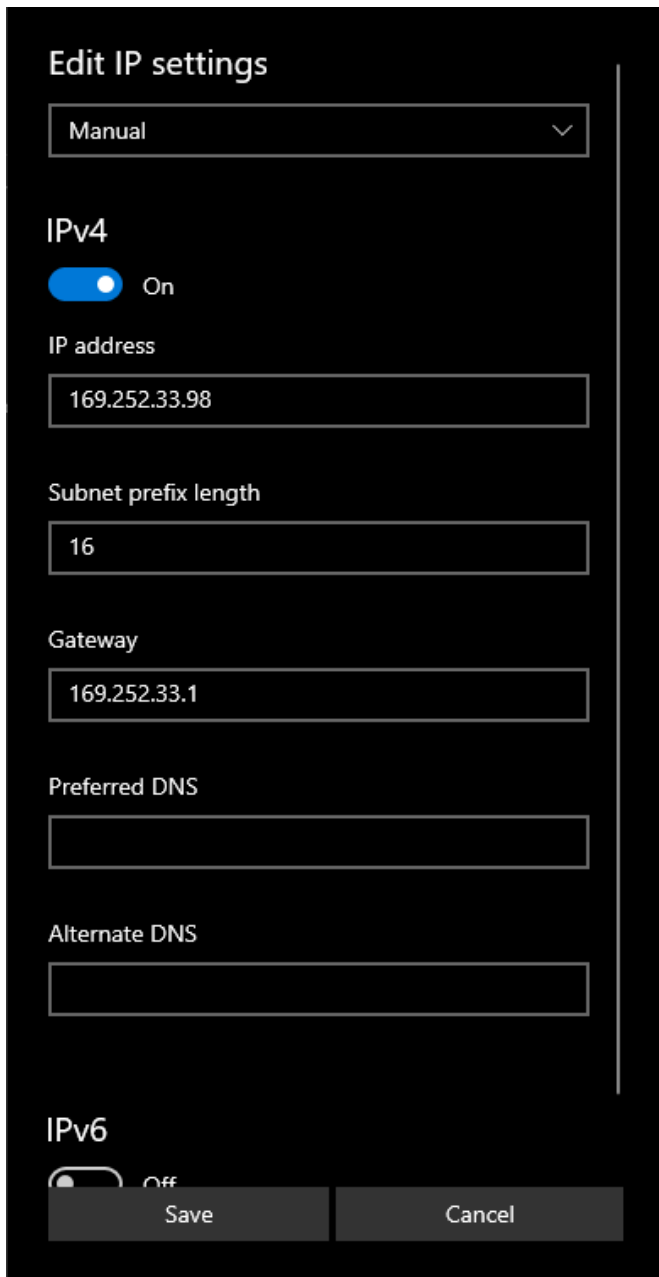


Figure 4: Set an IP manually

You must set the following IP addresses to configure the PGC-1000 card for usage with MHD 2.0 devices:

First interface: 169.252.33.98, Subnet prefix: 16.

Second interface: 169.253.33.98, Subnet prefix: 16

05 Using the PGC-1000 Updater

1. To update the PGC-1000 with the PGC updater tool, open PGC_Updater.exe.

The GUI of the updater tool is shown in the following picture:

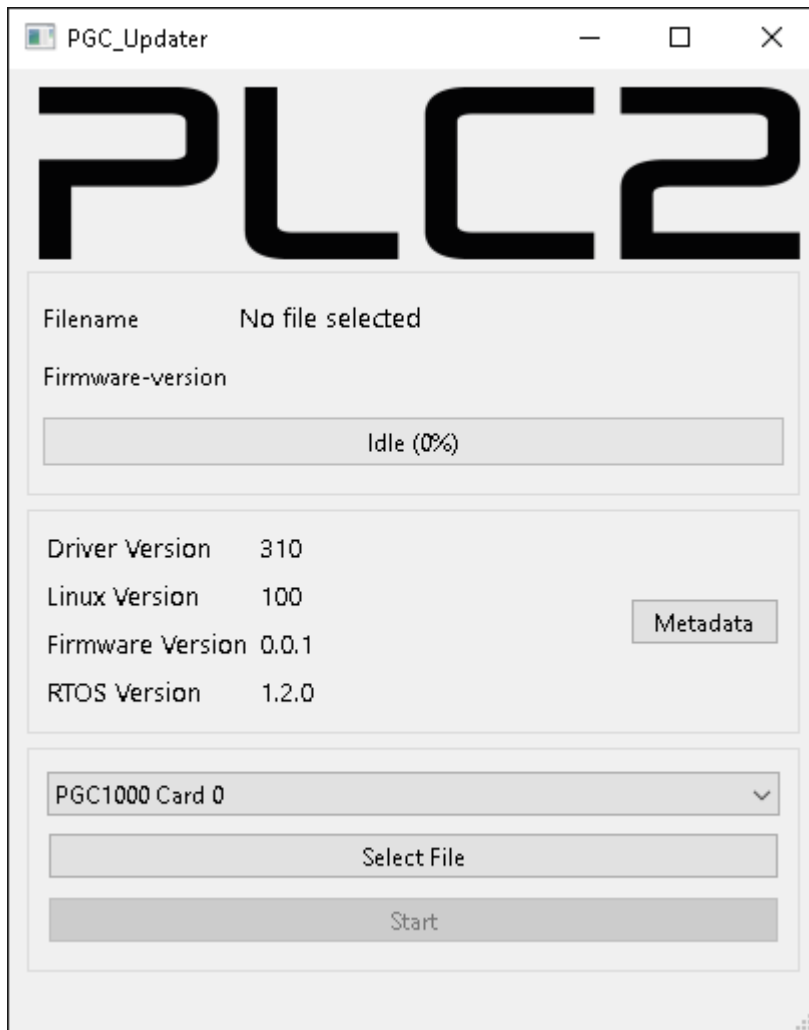


Figure 5: PGC Updater

2. The currently installed driver version and the firmware version of the PGC-1000 is displayed. To update the PGC-1000 click on »Select File« and choose a firmware image file (.img) with which you want to update the PGC-1000.
3. Click on »Start«. The progress of the flashing process is shown.
4. After the PGC-1000 is flashed, it is necessary to power-cycle the system.
5. To check if the PGC-1000 was flashed with the expected firmware version, open the PGC updater tool and check the displayed firmware version.

The EUI-48 hardware address (MAC) of the PGC card interfaces and other device specific information can be viewed by clicking on the Metadata button.

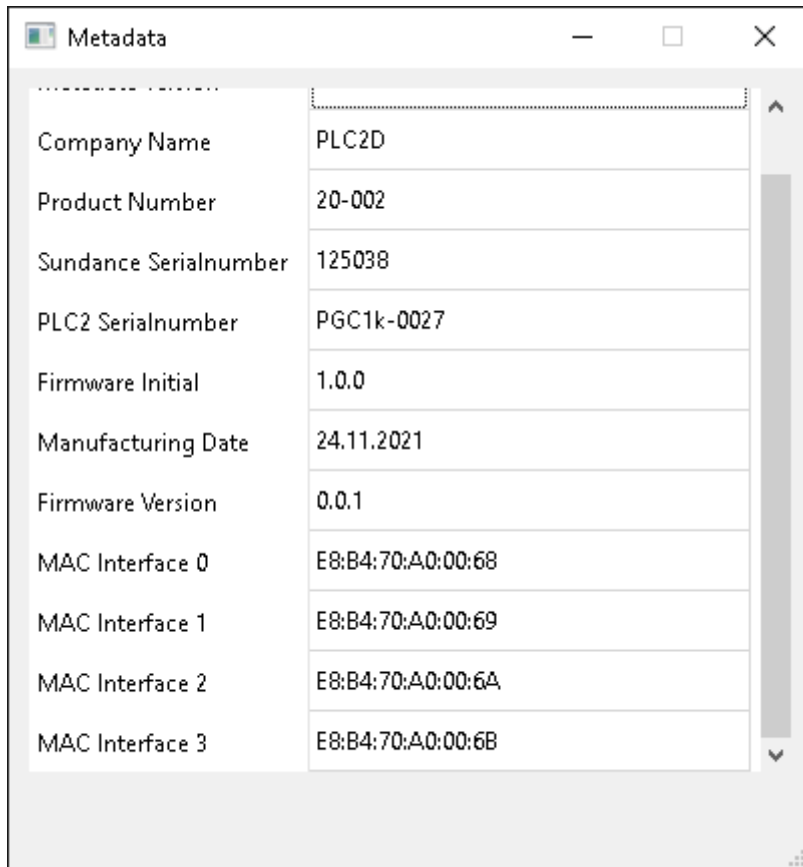


Figure 6: PGC Updater Metadata Window

06 Configure VisualStudio 2019 for Libpgc1k

To use the user-space library, add the include path and the library path to your VisualStudio 2019 project.

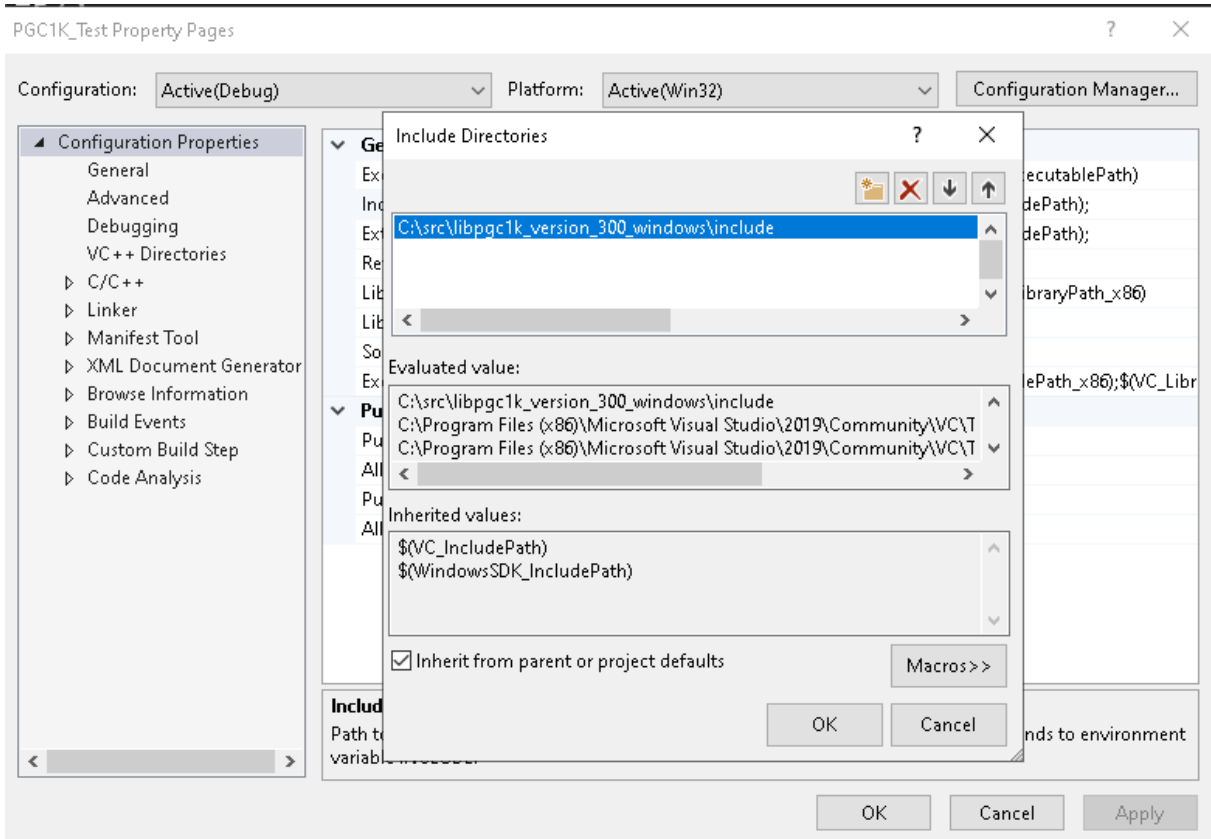


Figure 7: VisualStudio 2019 include settings

After that, you need to add the library to your linker library dependencies.

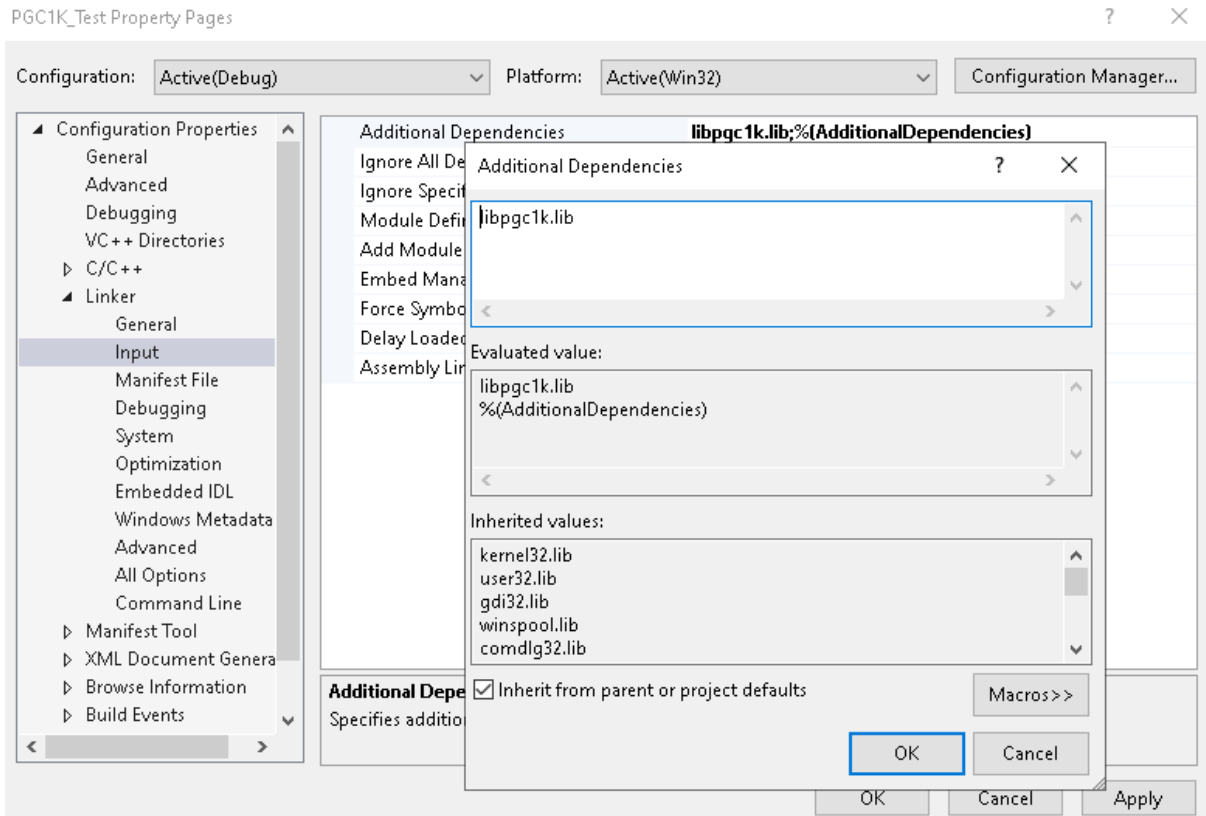


Figure 8: Linker library dependencies

The library uses C++17 features. Make sure to set the C++ language standard in VisualStudio 2019 to »ISO C++17 Standard (/std:c++17)<.

07 Libpgc1k Documentation

Please refer to the Doxygen documentation of the library for a detailed explanation of the libpgc1k functions. You will find the Doxygen documentation in the *Documentation* folder of the shipped library archive. There are also many examples shipped with the library. A good starting point is the *basic_acquisition.cpp* example. It contains a detailed explanation of the basic steps needed to initialize the library and how to retrieve payloads from the camera.