

# 1 Introduction

This document shows how one can use IP Index file to make their component visible to Quartus Platform Designer.

## 1.1 Discovering IP component to Platform Designer

In order to discover IP component to Platform Designer so that it appears under **IP Catalog**, we are going to make one IP Index File. An IP Index File (.ipx) specifies the path where Platform Designer (formerly Qsys) searches for IP components. This section would guide you to create .ipx file and set environment variable to make IP Index file visible to Quartus.

**Note:** Usage of following method helps to make IP component visible to all Quartus versions compared to providing path using **IP Search Path** option in Qsys.

### 1.1.1 Creating an IP Index File

This section will guide you to create an IP Index file.

1. Open Notepad++. (You can use your favorite text-editor as well.)
2. Select **New** from **File** menu.
3. Copy and paste following content in that.

```

<!-- Introduction -->

<!-- An IP Index File (.ipx) specifies the path where Platform Designer (formerly Qsys) searches for IP components. -->

<!-- We request you to refer 'Intel Quartus Prime Pro Edition User Guide: Platform Designer' document for more information. -->

<!-- Adding directory for an IP core in .ipx file -->

<!-- A <path> element in a .ipx file specifies a directory where Platform Designer can search for IP components. -->

<!-- <path> elements allow wildcards in definitions. An asterisk matches any file name. If you use an asterisk as a -->
<!-- directory name, it matches any number of subdirectories. -->

<!-- Ensure to use forward slash while providing location. -->

<!-- Making this .ipx file visible to Quartus -->

<!-- For this, you need to set IP_IPX_PATH environment variable for the directory in which this file resides. -->

<!-- For example, if path for this file is E:\Local\user_components\user_components.ipx, -->
<!-- you need to set IP_IPX_PATH environment variable to E:\Local\user_components\*, -->

<!-- Do not hesitate to write us back if you face any issue. -->

<!-- Tip of the day! -->

<!-- As you would have noticed, you can use this syntax for comment -->

<!-- Introduction ends here. -->

<library>

<!-- Display Message -->

<message>Loading now from user_components.ipx</message>

<!-- Following shows an example to set path for SLS I2C Master IP core. -->

<!-- You can add as many components as you wish in a similar fashion. -->

<!-- Note that forward slash is being used in path. -->

<!-- SLS I2C Master -->

<path path="E:/designs/sls/i_i2cc/trunk/master/soc/rtl/source/top/sls_i2c_mstr_hw.tcl" />

</library>

```

4. Save file as ***user\_components.ipx***

5. Read the introduction section to get some idea about this file.

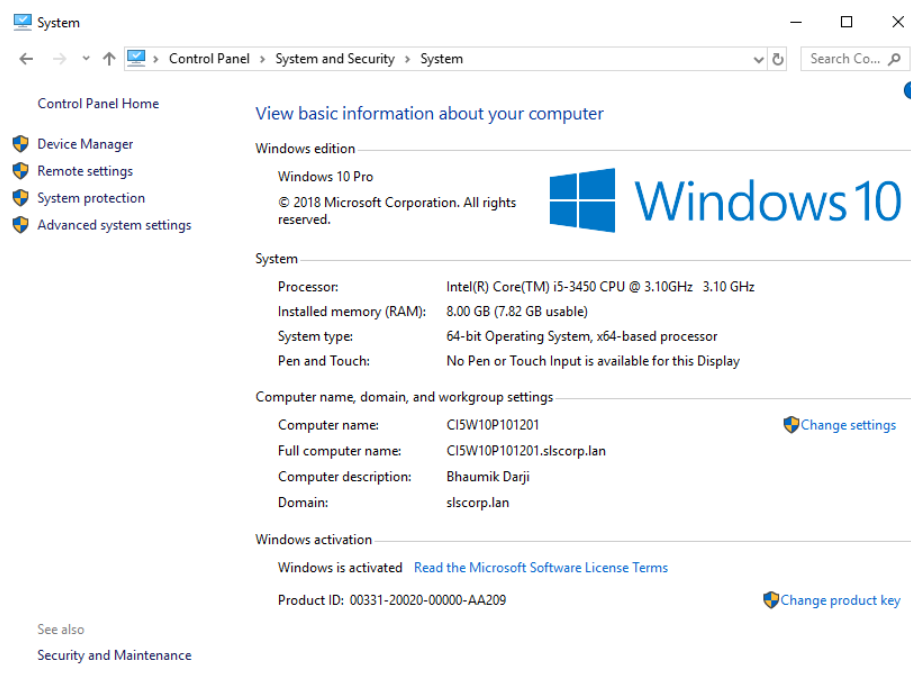
6. Now, in that you need to update text highlighted with yellow color above. You need to set it according to your directory location. (Please **note** that you need to use forward slash in path.)
7. Save this file.
8. That's it. Your .ipx file is ready.

### 1.1.2 Making IP Index File visible to Platform Designer

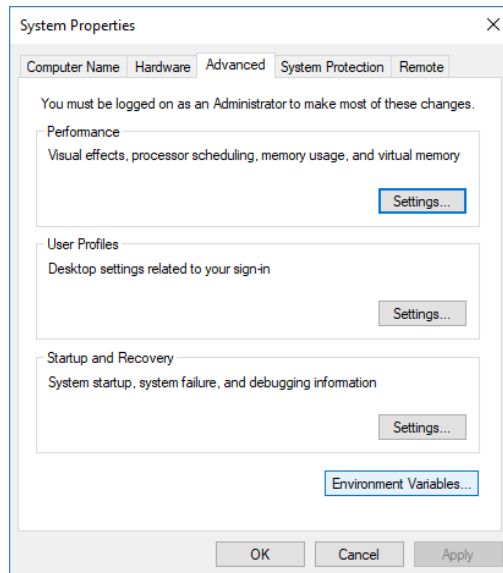
In order to make **user\_components.ipx** file (which was created in previous step) visible to Platform Designer, you need to set **IP\_IPX\_PATH** environment variable for the directory in which this file resides. For example, if path for this file is E:\Local\user\_components\user\_components.ipx, you need to set **IP\_IPX\_PATH** environment variable to **E:\Local\user\_components\\***,

Following section guides you to do this for Windows 10 Pro.

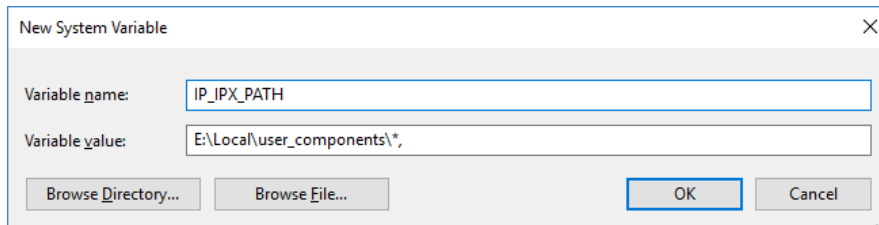
1. Close Quartus if it is open.
2. Open **Control Panel**.
3. Select **System and Security**.
4. Select **System**. It shall open windows similar to shown below.



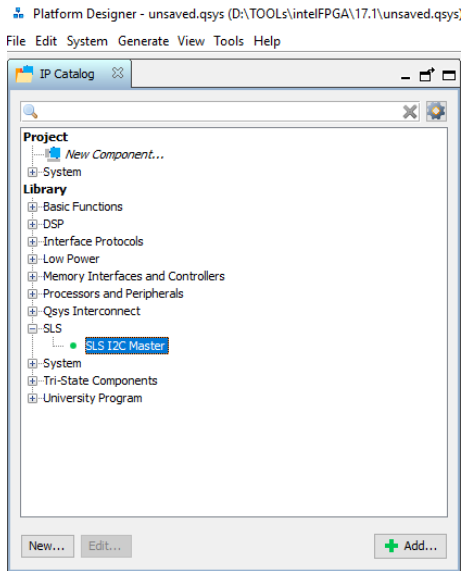
5. Select **Advanced system settings**. It shall open windows similar to shown below.



6. Select **Environment Variables**.
7. In that, under **System Variables**, select **New**.
8. Add following information.
  1. **Variable Name:** IP\_IPX\_PATH
  2. **Variable value:** According to your location of your .ipx file.In following example, we set it to E:\Local\user\_components\\*,



9. Select **OK** three times.
10. Now, you can close **System** window.
11. That's it. Now, when you will open Quartus and Platform Designer (or Qsys), you should be able to find your component in the IP Catalog as shown below.



*Thank you and Have a Cheerful Day!*