High Bandwidth Memory (HBM2) Interface Intel® FPGA IP Design Example User Guide

Updated for Intel® Quartus® Prime Design Suite: **20.1**

IP Version: **19.4.0**

Online Version

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1. About the High Bandwidth Memory (HBM2) Interface Intel® FPGA IP

1.1. Release Information

IP versions are the same as the Intel® Quartus® Prime Design Suite software versions up to v19.1. From Intel Quartus Prime Design Suite software version 19.2 or later, IP cores have a new IP versioning scheme.

The IP versioning scheme (X.Y.Z) number changes from one software version to another. A change in:

- X indicates a major revision of the IP. If you update your Intel Quartus Prime software, you must regenerate the IP.
- Y indicates the IP includes new features. Regenerate your IP to include these new features.
- Z indicates the IP includes minor changes. Regenerate your IP to include these changes.

Table 1.

Item	Description
IP Version	19.4.0
Intel Quartus Prime Version	20.1
Release Date	2020.04.13

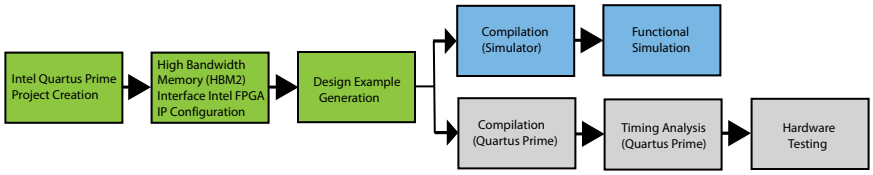
2. High Bandwidth Memory (HBM2) Interface Intel FPGA IP Design Example Quick Start Guide

An automated design example flow is available for the High Bandwidth Memory (HBM2) Interface Intel FPGA IP.

You can use the **Example Designs** tab and the **Generate Example Designs** button in the **IP Parameter Editor Pro** window to specify and generate synthesis and simulation example design file sets with which you can validate your HBM2 IP.

The generated design example reflects the parameterization that you set in the **IP Parameter Editor Pro** window. You can generate a design example to specifically match an Intel FPGA development kit for your evaluation. Or you can generate a design example to match your own actual system requirements, as a starting point for creating your own system.

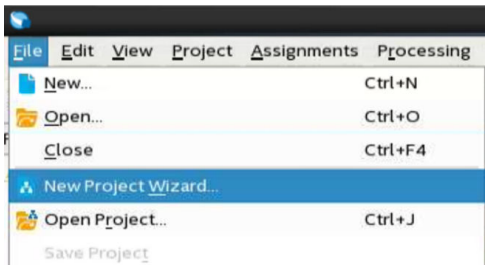
Figure 1. General Design Example Flow



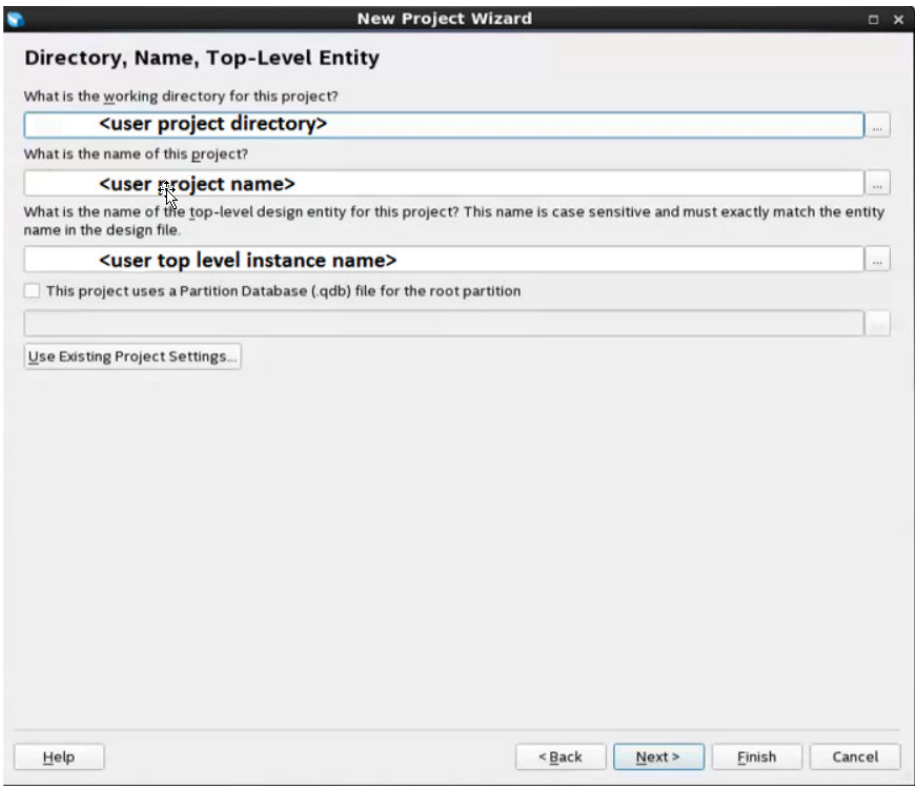
2.1. Creating an Intel Quartus Prime Project for Your HBM2 System

To create a new IP variation, you must have an open Intel Quartus Prime project with a valid device part.If you do not already have an appropriate Intel Quartus Prime project, follow these steps to create an Intel Quartus Prime project targeting a device that supports High Bandwidth Memory (HBM2) Interface Intel FPGA IP.

1. Launch the Intel Quartus Prime software and select **File ➤ New Project Wizard**. Click **Next**.



2. Specify a directory name (<*user project directory*>), a name for the Intel Quartus Prime project (<*user project name*>), and a top-level design entity name (<*user top-level instance name*>) that you want to create. Click **Next**.



3. Verify that **Empty Project** is selected. Click **Next** two times.