

## **ON Semiconductor**

# Create the XGS 12000 X-Celerator receiver block diagram in a Xilinx Vivado project

**User Guide** 

Authors	R. Thys
Issue 1	November 2019; Initial doc.



## UG XGS 12000 X-Celerator BD

Doc. No:

Date: 19/11/2019

Issue: 1

Page: 2/7

## **Contents**

1	DIS	CLAIMER	3
2	DES	SCRIPTION	4
3	PR(	DJECT CREATION	5
	3.1	SOURCE FILES FOLDER STRUCTURE	5
	3.2	CREATE VIVADO PROJECT WITH BLOCK DIAGRAM	ć
	3.2.	I Start the Vivado software	. 6
		2 Execute the script	



#### UG XGS 12000 X-Celerator BD

Doc. No:

Date: 19/11/2019

Issue: 1

Page: 3/7

## 1 Disclaimer

Copyright (c) 2019, ON Semiconductor Inc.

This intellectual property and/or documentation is provided by ON Semiconductor under limited terms and conditions. The terms and conditions pertaining to the intellectual property and/or documentation are available at <a href="www.onsemi.com">www.onsemi.com</a> ("ON Semiconductor Standard Terms and Conditions of Sale").

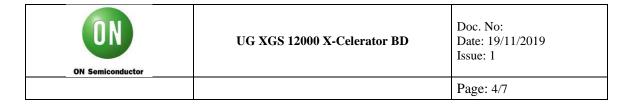
Do not use this intellectual property and/or documentation unless you have carefully read and you agree to the limited terms and conditions.

By using this intellectual property and/or documentation, you agree to the limited terms and conditions.

DEVELOPMENT PRODUCT(S), PROTOTYPE OR OTHER NON-PRODUCTION PRODUCT(S), SAMPLES OF PRODUCTION PRODUCT(S) SOFTWARE AND INTELLECTUAL PROPERTY ARE NOT WARRANTED AND ARE PROVIDED ON AN "AS IS" BASIS ONLY. IN NO EVENT SHALL ON SEMICONDUCTOR BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM INFRINGEMENT OR ALLEGED INFRINGEMENT OF PATENTS, COPYRIGHTS, OR OTHER INTELLECTUAL PROPERTY RIGHTS. THE INTELLECTUAL PROPERTY PROVIDED IS PROVIDED "AS IS".

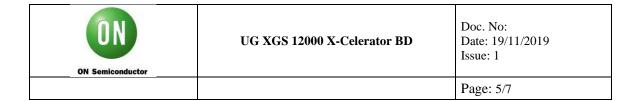
ON SEMICONDUCTOR EXPRESSLY DISCLAIMS ALL WARRANTIES WITH RESPECT TO THE INTELLECTUAL PROPERTY PROVIDED, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF NONINFRINGMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTY OF CONTINUED OR UNINTERRUPTED OPERATION OF THE INTELLECTUAL PROPERTY PROVIDED HEREUNDER.

IN NO EVENT SHALL ON SEMICONDUCTOR BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF USE AND LOSS OF GOODWILL), REGARDLESS OF WHETHER ON SEMICONDUCTOR HAS BEEN GIVEN NOTICE OF ANY SUCH ALLEGED DAMAGES, AND REGARDLESS OF WHETHER SUCH ALLEGED DAMAGES ARE SOUGHT UNDER CONTRACT, TORT OR OTHER THEORIES OF LAW.



# 2 Description

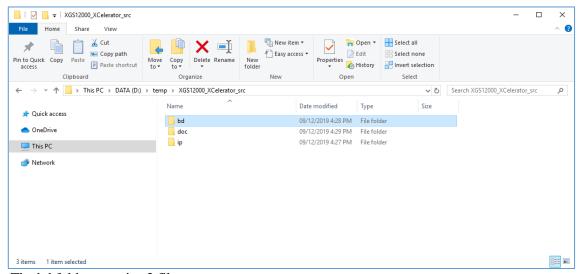
This manual describes the steps to create a Xilinx Vivado project with the XGS12000 X-Celerator receiver block diagram. This project can be used by system developers as a starting point to integrate the different IP cores provided by On Semiconductor.



# 3 Project creation

### 3.1 Source files folder structure

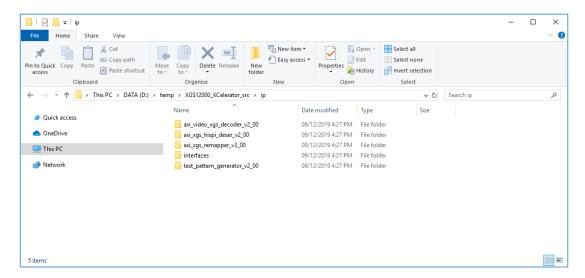
Extract the zip file, it will create a folder 'XGS12000\_XCelerator\_src', with some subfolders. This structure is mandatory to generate the project with the script.

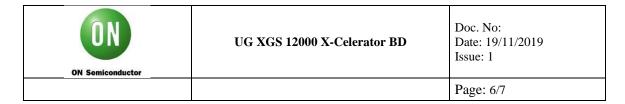


The bd folder contains 2 files:

- BD\_XGS12000\_receiver.tcl : script to generate the block diagram
- create\_XGS12000\_XCelerator.tcl : script to generate the Vivado project, calling the BD script

The ip folder contains the IP cores and interfaces used in the block diagram.





# 3.2 Create Vivado project with block diagram

#### 3.2.1 Start the Vivado software

Info: All development has been done with Vivado 2018.2



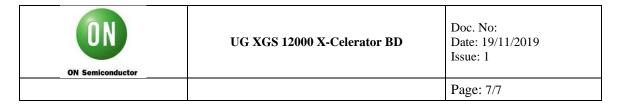
## 3.2.2 Execute the script

Enter this 2 lines in the Tcl Console:

set base\_path "D:/temp" source \$base\_path/XGS12000\_XCelerator\_src/bd/create\_XGS12000\_XCelerator.tcl

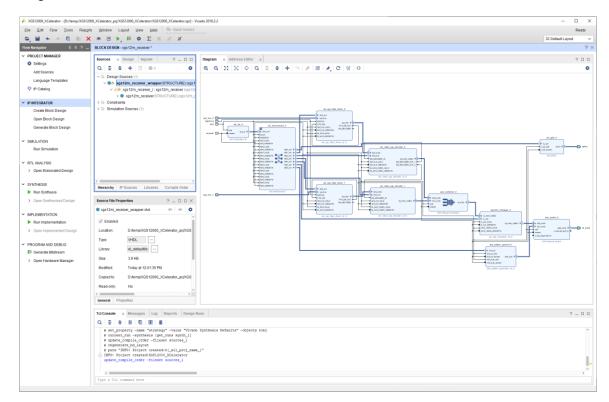


Info: The base\_path setting depends on the place where you stored the folder 'XGS12000\_XCelerator\_src' on your local drive.



Info: By default the Vivado project is generated in the folder "D:/temp/XGS12000\_XCelerator\_prj". In the project create script you can overrule this setting (line: set \_xil\_proj\_dir\_ "D:/temp/XGS12000\_XCelerator\_prj").

After execution of the script, a new project 'XGS12000\_XCelerator' is created with the block diagram.



<EOD>