SDSoC Projects

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TE-SDSoC Platforms

For newest available TE Platforms see:TE Reference Designs Overview. For older SDSoC Version examples check download area.

SDSoC 2018.2

SDSoC Platforms Projects with Examples are available for some Modules, see TE Reference Designs Overview and Trenz Electronic Download Area.

Install Trenz Electronic SDSoC Platform

(optional) Create SDSoC Platform from TE Reference Design

1. Requirements:
    a. SDSoC 2018.2 (Includes automatically VIVADO 2018.2 and Vivado HLS 2018.2)
    b. (optional) Petalinux 2018.2
2. Unzip Reference Design
    a. Do not change base folder name after extraction!
3. Enable SDSOC, set install path of Xilinx tools, set your hardware assembly option in: "design_basic_settings.cmd"
4. Create Reference Design: run "vivado_create_project_guimode.cmd"
5. VIVADO:
    a. TCL-Console type: TE::hw_build_design -export_prebuilt
    b. (optional) find hardware handoff file .hdf under prebuilt folder, build your own Petalinux image using Petalinux BSP provided under os folder and place new images to correct subfolder in prebuilt/os
    c. (optional) TCL-Console type:TE::ADV::beta_util_sdsoc_project -check_only
        i. SDSoC Ready Check without modify project
    d. TCL-Console type:TE::ADV::beta_util_sdsoc_project
        i. Attention: Vivado project will be modified by copying constrain files locally to project. Recreate project with Bachtfile to restore original Vivado project with externally linked constrains.
    e. Wait for project creation:
        i. SDSoC Platform is created on subfolder <design_name>/../SDSoC_PFM/<TE::SHORTDIR>/<design_name>

Variant (a): Set TE SDSoC Platform as Xilinx SDSoC Example Platform

1. Attention wrong modification can damage the SDSoC Installation!
2. Copy SDSoC Platform into the Xilinx <SDSoC install path>/platforms
    a. Attention: local templates from "<SDSoC Platform>/samples/" will be ignored from Xilinx SDSoC tools in this folder!
3. Open <SDSoC install path>/data/SDSoCManifest.xml
    a. Add SDSoC Platform to all sample template which should be visible
    b. <platform name="<SDSoC Project Name>"/>
    Example: <platform name="SK0808_zusys_SDSoC"/>

Variant (b): Set TE SDSoC Platform as local SDSoC Platform

1. Copy SDSoC Platform to your preferred folder
    a. Use SDSoC Platform ZIP from Download or exported from Reference Project (<design name>/../SDSoC_PFM/<TE::SHORTDIR>/<design name>)

Create SDSoC Project

1. Start SDSoC 2018.2
2. Select Workspace
3. Click "Create SDSoC Project"
    a. Choose "Application project" radio button
    b. Set Project Name
    c. Set Platform:
        i. Installed like Variant (a): Select one of built in Platforms: ex. SK0808_zusys_SDSoC
        ii. Installed like Variant (b): Others (Path to Project is: <design_name>/../SDSoC_PFM/<TE::SHORTDIR>/<design_name>)
    d. Select OS: Standalone, Linux or RTOS
    e. Click "Next"
    f. Select Template Application
    g. Click "Finished"

SDSoC 2017.4

SDSoC Platforms Projects with Examples are available for some Modules, see TE Reference Designs Overview and Trenz Electronic Download Area.

Install Trenz Electronic SDSoC Platform

(optional) Create SDSoC Platform from TE Reference Design

1. Requirements:
    a. SDSoC 2017.4 (Includes automatically VIVADO 2017.4)
    b. (optional) Petalinux 2017.4
2. Unzip Reference Design
    a. Do not change base folder name after extraction!
3. Enable SDSOC, set install path of Xilinx tools, set your hardware assembly option in: "design_basic_settings.cmd"
4. Create Reference Design: run "vivado_create_project_guimode.cmd"
5. VIVADO:
    a. TCL-Console type: TE::hw_build_design -export_prebuilt
    b. (optional) find hardware handoff file .hdf under prebuilt folder, build your own Petalinux image using Petalinux BSP provided under os folder and place new images to correct subfolder in prebuilt/os
    c. (optional) TCL-Console type:TE::ADV::beta_util_sdsoc_project -check_only
        i. SDSoC Ready Check without modify project
    d. TCL-Console type:TE::ADV::beta_util_sdsoc_project
        i. Attention: Vivado project will be modified by copying constrain files locally to project. Recreate project with Bachtfile to restore original Vivado project with externally linked constrains.
    e. Wait for project creation:
        i. SDSoC Platform is created on subfolder <design_name>/../SDSoC_PFM/<TE::SHORTDIR>/<design_name>

Variant (a): Set TE SDSoC Platform as Xilinx SDSoC Example Platform

1. Attention wrong modification can damage the SDSoC Installation!
2. Copy SDSoC Platform into the Xilinx <SDSoC install path>/platforms
    a. Attention: local templates from "<SDSoC Platform>/samples/" will be ignored from Xilinx SDSoC tools in this folder!
3. Open <SDSoC install path>/data/SDSoCManifest.xml
    a. Add SDSoC Platform to all sample template which should be visible
    b. <platform name="<SDSoC Project Name>"/>
    Example: <platform name="SK0808_zusys_SDSoC"/>

Variant (b): Set TE SDSoC Platform as local SDSoC Platform

1. Copy SDSoC Platform to your preferred folder

    a. Use SDSoC Platform ZIP from Download or exported from Reference Project (<design name>/../SDSoC_PFM/<TE::SHORTDIR>/<design name>)

Create SDSoC Project

1. Start SDSoC 2017.4
2. Select Workspace
3. Click "Create SDSoC Project"
    a. Set Project Name
    b. Set Platform:
        i. Installed like Variant (a): Select one of built in Platforms: ex. SK0808_zusys_SDSoC
        ii. Installed like Variant (b): Others (Path to Project is: <design_name>/../SDSoC_PFM/<TE::SHORTDIR>/<design_name>)
    c. Select OS: Standalone, Linux or RTOS
    d. Click "Next"
    e. Select Template Application
    f. Click "Finished"

SDSoC 2017.1

- SDSoC Platforms Projects with Examples are available for some Modules, see TE Reference Designs Overview and Trenz Electronic Download Area.
- general description is currently not available.

SDSoC 2016.2

Install Trenz Electronic SDSoC Platform

(optional) Create SDSoC Platform from TE Reference Design

1. Requirements:
    a. VIVADO 2016.2
    b. SDSoC 2016.2
    c. 7-ZIP
2. Unzip Reference Design
    a. Do not change base folder name after extraction!
3. Enable SDSOC and set 7-ZIP path in: "design_basic_settings.cmd"
4. Create Reference Design: run "vivado_create_project_guimode.cmd"
5. VIVADO:
    a. (optional) TCL-Console type:TE::ADV::beta_util_sdsoc_project -check_only
        i. SDSoC Ready Check without modify project
    b. TCL-Console type:TE::ADV::beta_util_sdsoc_project
        i. Attention: Vivado project will be modified permanently. Recreate project with Bachtfile to restore original Vivado project
    c. Wait for project creation:
        i. SDSoC workspace is created on subfolder <design_name>/sdsoc
        ii. SDSoC Platform is created on subfolder <design_name>/sdsoc/<design_name>
    d. (optional) TCL-Console type:TE::ADV::beta_util_sdsoc_project -start_sdsoc
    e. (optional) SDSoC Workspace will be started in subfolder <design name>/sdsoc/

Variant (a): Set TE SDSoC Platform as Xilinx SDSoC Example Platform

1. Attention wrong modification can damage the SDSoC Installation!
2. Copy SDSoC Platform into the Xilinx <SDSoC install path>/platforms
    a. Attention: local templates from "<SDSoC Platform>/samples/" will be ignored from Xilinx SDSoC tools in this folder!
3. Open <SDSoC install path>/data/SDSoCManifest.xml
    a. Add SDSoC Platform to all sample template which should be visible
    b. <platform name="<SdSoC Project Name>"/>
    Example: <platform name="te0726_sdsoc"/>

Variant (b): Set TE SDSoC Platform as local SDSoC Platform

1. Copy SDSoC Platform to your preferred folder
    a. Use SDSoC Platform ZIP from Download or exported from Reference Project (<design name>/sdsoc/<design name>)
    b. Attention: Xilinx templates from "<SDSoC Install Path>/samples/" will be ignored from Xilinx SDSoC tools.

Create SDSoC Project

1. Start SDSoC 2016.2
2. Select Workspace
3. Click "Create SDSoC Project"
    a. Set Project Name
    b. Set Platform:
        i. Installed like Variant (a): Select Platform: ex. te0726_sdsoc
        ii. Installed like Variant (b): Others (Path to Project is: <design_name>/sdsoc/<design_name>)
    c. Select OS: Standalone, Linux or RTOS
    d. Click "Next"
    e. Select Template Application
    f. Click "Finished"

References

- SDSoC Environment - User Guide (UG1027)
- SDSoC Environment User Guide - An Instruction to SDSoC Environment (UG1028)
- SDSoC Environment User Guide - Platforms and Libraries (UG1146)