Linux Graphics & GUI Kit for Programmable FPGAs and SOCs

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Summary

Programmable SoCs are used in a nearly unlimited innovative embedded projects. Driven by smartphones and tablets sophisticated touch screen GUIs and graphics applications are expected for embedded devices requiring a certain amount of user interaction.

To ease developer's life and enable a fast time to market TES provides a complete **Linux Graphics & GUI sub-system Solution for IntelPSG SoCs**. This resource efficient package is based on the silicon and FPGA proven CDC display controller IP core, the D/AVE 2D GPU IP core, Linux drivers, and optionally the Guiliani GUI Framework.

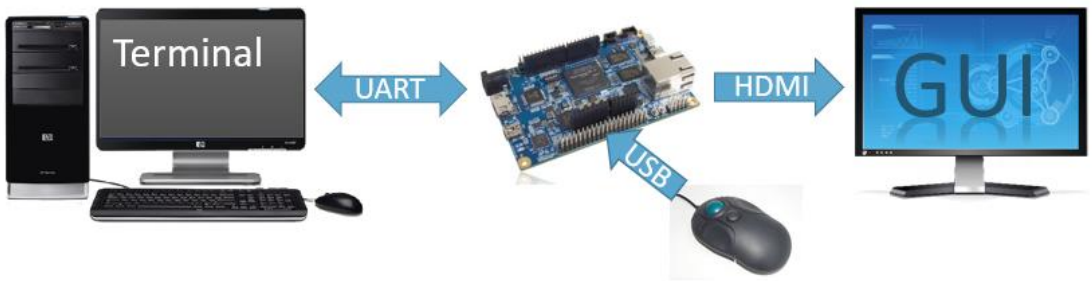
Highlights

- Easy to install: Get the "out of the box" demos and examples up and running within minutes!
- Low footprint: Only 5-6kAMLs required on FPGA side for D/AVE 2D GPU and CDC Display Controller, depending on feature configuration
- Includes Linux SDK with drivers and example source code: Have a quick start with your own graphics applications!
- Enables fast time to market for smart GUIs by Guiliani and its powerful WYSIWYG GUI editor "GSE"

Supported Boards

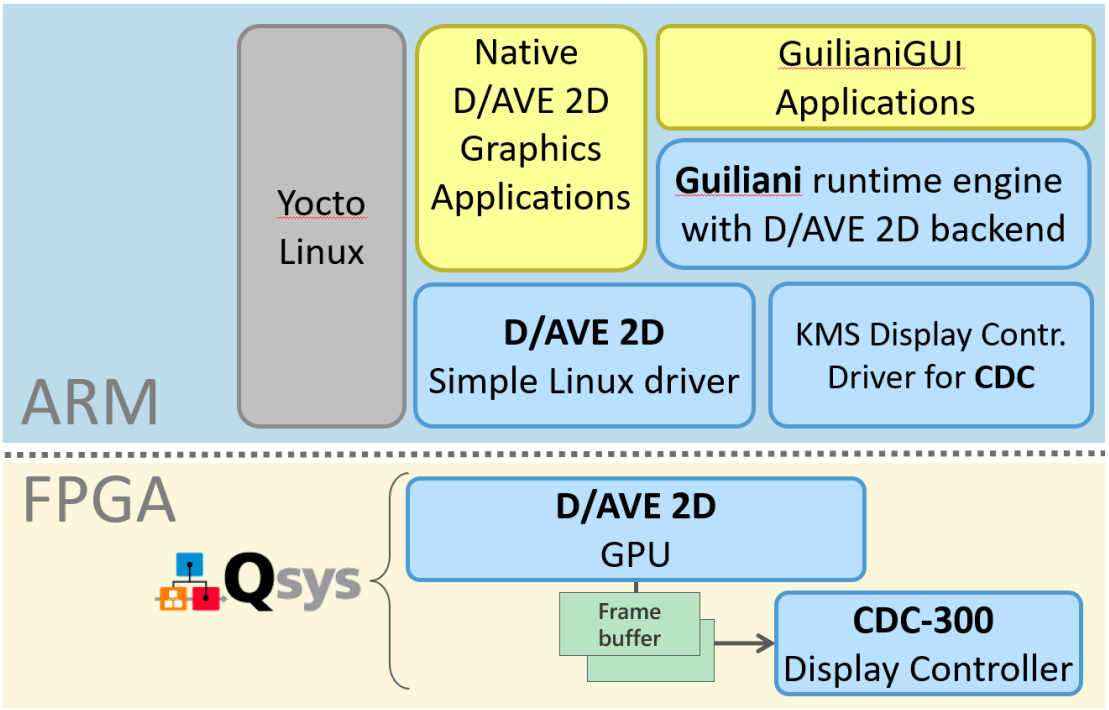
- Terasic D10-Nano Kit including Intel PSG Cyclone V SoC

System Setup



- Insert SD card with preconfigured image containing the FPGA bit-file, all demos and all examples
- The demos can be launched via a PC terminal and controlled via an USB mouse
- Enjoy!

Software System Configuration



- CPU: ARM Cortex-A9 Hard CPU of Cyclone 5 SoC
- OS: Yocto Linux
- GPU: D/AVE 2D Vector Graphics Rendering Engine at 85 MHz, 4383 ALMs
- Display Controller: CDC-500 in 2-layer configuration, 2250 ALMs (*)
    - (*) also configurations with <1000 ALMs possible depending on CDC feature set and number of layers
- Display Output: HDMI
- D/AVE 2D Demo output resolution: 800x600

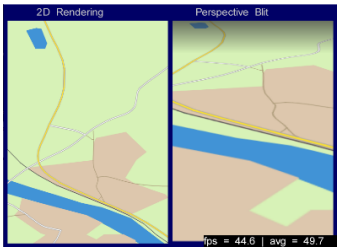
Solution Kit Contents

- Ready to use SD Card image containing FPGA bit-file and all demos as executable
- Quick Start Guide
- D/AVE 2D API Documentation
- Linux SDK (via TES server)
- D/AVE 2D simple Linux driver for evaluation prototyping and proprietary projects as binary
- D/AVE 2D Linux Kernel driver sources on GitHub
- KMS Kernel driver sources for CDC Display Controller on GitHub
- D/AVE 2D native graphics demos as executables and source code (included in Linux SDK)
- Guiliani Demo applications as executables

On request (Contact us at graphics@tes-dst.com)

- FPGA Quartus project on GitHub
- D/AVE 2D and CDC-500 QSys components
- Guiliani Linux SDK supporting Cyclone V-platform including GSE GUI-Editor

Native D/AVE 2D Graphics Demos (selection only)



Find many more D/AVE 2D demos and examples in the solution kit!

Guiliani Demos (selection only)

Coffee Machine

Guiliani Feature Demo

Sales & Marketing Contact

For more information please contact us at **graphics@tes-dst.com**

TES Electronic Solutions Website: www.tes-dst.com
TES Guiliani Product website: www.guiliani.de

Also visit us at LinkedIn