



petalogix™



PetaLinux SDK

Introducing PetaLinux SDK –
The industry standard for Embedded Linux on Xilinx MicroBlaze

At a Glance

- Linux kernel 2.6.31 (MMU)
- Pre-built system images
- Custom BSP generator
- Application generator
- Kernel module generator
- Full System Simulator
- U-Boot bootloader
- CPU optimised kernel, applications & libraries
- C++ application support
- Application Debug
- Thread libraries
- FPU support
- Online support & updates

BSP Selection

- | | |
|-------|------------|
| ML605 | SP605 |
| ML507 | SP601 |
| ML505 | S3ADSP1800 |

PetaLinux is the System Development Kit (SDK) for Embedded Linux on Xilinx FPGAs. It supports all phases of the embedded design flow providing:

Integration with Xilinx EDK for hardware design entry and implementation, a tool that's built to work with your board out of the box.

Complete software platform including Linux kernel, standard libraries and applications, system image builder and custom application and device driver generator.

Full system simulator within the development environment, allowing you to build and test in a rapid cycle time.

Why PetaLinux?

PetaLinux is a complete Embedded Linux SDK specifically targeting FPGA-based System-on-Chip designs. Containing everything you need to build, develop, test and deploy Embedded Linux on your next FPGA project, PetaLinux will help you achieve unparalleled productivity and maximise the time-to-market benefits of programmable logic and Embedded Linux.

PetaLinux Board Support Packages

If you are working with a traditional SoC, then a fixed BSP might make sense. FPGAs, on the other hand are infinitely reconfigurable - therein lies their attraction but also their challenge. PetaLinux was designed with a focus on FPGA platforms, and we've reinvented the idea of BSPs for FPGAs by including multiple supported reference designs across a range of performance and logic utilisation scenarios.

Custom BSP Generator

Your final design will be unique, and you can customise the reference designs to meet your needs. This is where the PetaLinux BSP generator tools come into their own. They keep your hardware and software systems synchronised, making it easier to manage your co-design flow.

SPARTAN⁶

VIRTEX⁶

 **XILINX**
| ALLIANCE PROGRAM

Get it now! <http://www.petalogix.com/petalinux>

Supported IP

Serial

- UART16550
- UARTLITE

Ethernet

- TEMAC
- EMACLITE

Interconnect

- USB Host Controller
- PCI Host Bridge
- CAN Bus

Memory Interfaces

- MPMC(SDRAM/DDR)
- EMC(NOR Flash)
- SPI (Serial Flash)

I/O

- GPIO
- I2C
- SPI

Storage/Configuration

- SystemACE

IP Cores supported by PetaLinux

PetaLinux accelerates your design with support for the major Xilinx Embedded Processing IP cores. PetaLinux supports the Xilinx USB and PCI Host Controllers. WiFi (802.11), Bluetooth and commodity mass-storage (including flash drives and USB hard disks) can all connect directly to your FPGA-based Embedded system, using off-the-shelf drivers and libraries. Don't spend your time trying to hunt down solutions, when it's all there in PetaLinux.

QEMU Full Platform Simulator

A feature that sets PetaLinux SDK apart is the integration of a QEMU Full Platform Simulator incorporating the MicroBlaze soft processor core and device models for common Xilinx IP. You can develop your driver and software application stack, build, boot and test it in PetaLinux, all before your boards are ready! The simulator is seamlessly integrated into the PetaLinux environment to optimise your development cycles.

Get the support you need from PetaLogix

PetaLinux includes a support environment that keeps you moving. When you buy PetaLinux you can be assured that you're getting more than just a great tool. The support you need is available when you need it. Raise support tickets and share files with your PetaLogix support team via our secure Support Portal and keep track of progress with customised reporting tools and email notifications.

Licensing Models that work for you

PetaLinux SDK offers a flexible range of licensing options to suit all development models and budgets. There are no royalty fees for shipping PetaLinux images with your product. From a single developer to an enterprise team, you can purchase per-developer, node locked licenses that include online support, a BSP and get extra incident support if you need it. The License fee is per developer, per 12 month license period, and includes all product updates during that time.

Out of the Box – more good reasons to choose PetaLinux

- Validated system images for your board of choice - boot Linux on your board in about 5 minutes. You don't even need any hardware design skills to get started, just start adding your software applications.
- Get your MicroBlaze Embedded Linux from the people who built it and maintain it. PetaLogix are responsible for the development and maintenance of the MicroBlaze branch of the mainline Linux tree. PetaLinux is based on the latest stable Linux kernel.
- Integrated full system simulator (QEMU) - make changes, rebuild your image, verify and test them all without even having a board! The simulator allows you to go through a rebuild and boot cycle quicker than on the actual MicroBlaze.

PetaLogix Design Services

PetaLinux is the delivery platform for all PetaLogix Design Services. From installable BSPs for Board Bring-up to Custom IP Design and Integration, we deliver custom PetaLinux BSPs, installed in your environment for immediate verification and use.

See our services portfolio at <http://www.petalogix.com/services>

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