



Tools and support for embedded Linux systems

Discover the benefits of Linux!

The rise in adoption of Linux for embedded systems is one of the most exciting changes in recent years. Linux has the **simple** and **elegant** design of UNIX OSs, which guarantee a very **stable**, **robust** and **secure** system. Moreover, it has **excellent performance** and a very good network stack implementation.

Linux is an Open Source project, means that the source code of the OS is freely available to all, and it can be customized to meet your needs. Kernel developers continuously add new features to the kernel and port Linux to new architectures. Besides, a huge number of programs, libraries and tools are **freely available** as Open Source code.

Benefits of using Linux for your embedded system:

- Stable and robust system, reducing the cost of maintenance.
- Good performance even on slow machines, reducing the cost of hardware.
- Free availability of the source code and of some development tools, reducing the overall cost of design.
- IEEE POSIX standard and cross-platform libraries, enhancing portability across different systems.
- Wide range of architectures and devices already supported, reducing the cost of development.
- **No runtime royalties**, increasing the revenue on each product that you sell.

Clearly, **when compared to proprietary solutions, Linux is a better choice!**

Moving to Linux

Market reports currently place the number of existing Linux distributions to over 100, each oriented to a specific market and scenario. Distributions for embedded and real-time systems add further complexity by proposing custom designed kernel changes or improvements. Thus, embedded designers tend to get confused by the heterogeneity of the solutions found in the market.

Evidence is one of the best partners for Linux development! In fact, since 2008, Evidence has been included in the official list of companies that contributed to the development of a Linux kernel*.

We can help you to get a right Linux solution, with support for:

- **Configuration**, customization and tuning of each single component (including kernel).
- **Development of custom drivers** for your hardware.
- Evaluation of all **real-time** and timing requirements of your system.
- Identification and installation of development and **debugging tools**.
- Implementation of optimized configurations tuned for your specific embedded platform.
- Development of applications with **graphical interface using Qt libraries**.
- End-user **training**.

Finally, post development and deployment, we provide maintenance support for our products and keep it up-to-date with updates of your Linux distribution.

* See http://remword.com/kps_result/



Evidence Srl

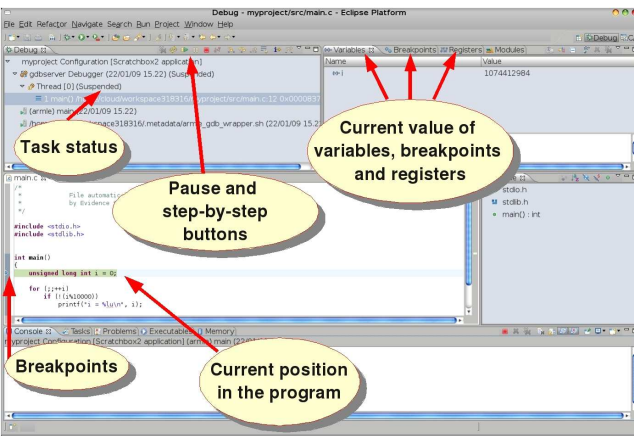
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Easy development!

Evelin SDK is a **development environment** that allows to develop your Linux-based application **very easily**. With Evelin SDK you can **develop, build** and **debug** your application as if it is running on the target platform!

Benefits of using Evelin SDK:

- **Reduces the time-to-market:**
 - **Test early, test often:** the application can be run and tested on the host
 - **Quick setup:** no time wasted manually assembling existing Open-Source tools
 - **Step-by-step documentation**
- **Only one environment for your multiple projects:**
 - Same environment for development, test and debugging
 - **Change target with just one click!**
 - It handles multiple projects with different targets at the same time
- **No worries and no constraints:**
 - **Works on your favorite OS** (Linux and Windows included)
 - On-line technical support



Technical features:

- Automatic cross-compilation based on GNU **gcc**
- **Target emulation** (i.e., automatic execution of target binaries on the host platform)
- Supports **C** and **C++** languages
- GUI based on well-known **Eclipse IDE**
- Designer for graphical applications based on **Qt**
- Allows local and remote debugging
- Supports various microcontrollers (including ARM and SH)



Evelin BSP is a set of **Linux-based distributions for specific embedded architectures**, containing:

- Complete **source code**
- Automatic generation of firmware images
- **Boot-loader U-Boot**
- **Startup scripts**
- **Linux kernel**, including drivers for internal and external hardware
- **Debian packaging**, with a lot of pre-built apps
- **Minimal version** based on Busybox
- Documentation and technical support

As an example, Evidence developed a whole Linux BSP for the GEAM6425 boards featuring:

- Freescale imx25 400MHz
- 64MB DDR2
- 256MB NAND
- 3.5" and 7" LCD touchscreen
- CAN, RS485, Ethernet



Evidence can also develop a **customized BSP to meet your specific needs!**

Kernel drivers

Evidence can develop, port or customize **kernel drivers** for your devices. Evidence engineers have already developed and customized drivers for several devices, including IDE Compact Flashes, SD cards, backlights, DACs, keypads, speakers, RS232 and RS485 serial interfaces, 8250 serial ports, USBs, proprietary Ethernet interfaces, LEDs, etc.

Evidence SRL, established in 2002, is a spin-off company of the ReTiS Lab of the Scuola Superiore S. Anna, Pisa-Italy.

We are experts in the domain of embedded and real-time systems with profound knowledge of the design and specification of embedded software. We keep providing significant advances in the state of the art of real-time analysis, multiprocessor scheduling and much more.

