LINUTRONIX

Training Debian & E.L.B.E. - best for Embedded Systems

Caveats: This is not an introduction in the development process of Linux for embedded devices. It definitely presumes basic knowledge of Linux and C.

Day 1

- **Components of a distribution - Bootloader, Kernel, Open Source Software packages and your applications.** How to find the right bootloader and kernel? How to find the right components?

- **Yocto, Debian, and so on– what should I choose? And why?**

  Short overview about Pros and Cons
  How the distribution does help you to fulfil the licence constraints?

- **Linux toolchain – what is needed for?**

  Minimum requirements, requirements for bigger groups, central or de-central approach,

- **Why Debian for Embedded Systems? Does it really work?**
- **How Debian does works? A deep look inside Debian – packages and dependencies, quality management, build process**
- **What is E.L.B.E. (*E*mbedded *L*inux *B*uild *S*ystem)? And why is E.L.B.E. different?**
- **Build your own Root File System with E.L.B.E. (theoretical)**
- **Generate your own Embedded Image:**

  debootstrap
  E.L.B.E. (Embedded Linux Build Environment)

- **Bootloader and Kernel – how to work with inside of E.L.B.E.?**
- **Develop your own application with E.L.B.E. (simulation)**
- **Hands-On: build your own Debian package**
- **Updates and Debian and E.L.B.E. – how it works together**
- **Security and Debian – how to use for Embedded Systems**

Requirement:
Nothing on Hardware; Programming knowledge with Linux and C

Software:
Linutronix provides an USB HDD with an x86 64-bit based Debian system for the host system, a Debian toolchain and for the target system an ARM Linux, running on a running on an embedded device. The HDD is a gift for the participant and can be taken home for further studies.

Number of participants:
Due to our experience we know that a single instructor could coach a maximum of 6 persons. Our courses are therefore limited to this number of individuals.