Buildroot Tutorial

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Buildroot at a glance

- ▶ Can build a toolchain, a rootfs, a kernel, a bootloader
- ▶ **Easy to configure**: menuconfig, xconfig, etc.
- ▶ **Fast**: builds a simple root filesystem in a few minutes
- ▶ Easy to understand: written in make, extensive documentation
- ▶ **Small** root filesystem, starting at 2 MB
- ▶ **1600+ packages** for user space libraries/apps available
- ▶ **Many architectures** supported
- ▶ **Well-known technologies**: *make* and *kconfig*
- ▶ Vendor neutral
- ▶ Active community, regular releases
    - ▶ The present slides cover *Buildroot 2015.08*. There may be some differences if you use older or newer Buildroot versions.
- ▶ http://buildroot.org

Tutorial: live demo

1. Build and boot a minimal system on the BeagleBone Black
2. Explore the source and build directories
3. Add *dropbear* to the build
4. Use a rootfs overlay
5. Customize the kernel: patches and configuration
6. Generate a *defconfig*
7. Create a new package
8. Post-build script, `BR2_EXTERNAL`

Heavily based on our Buildroot training course, freely available at
`http://bootlin.com/training/buildroot/`