

armbian-next


*"Let me add set -e to
armbian/build..."*

...two years later...

armbian-next

- What? *whirlwind tour*
- How to try out
- Plans for merge

armbian-next - Bash stuff

- `set -e` bash mode (no more `$?`, stops when things go wrong)
- `stdout/stderr` separation
- 100% new logging to `stderr`; levels; 
- trap/cleanup manager; managed `TMPDIR`
- runner utility functions (for `chroot` & `host`)
- 90% cleaner `shellcheck` in `lib/*.sh`
- *many more*

armbian-next - Git stuff

- no more shallow (`--depth=1`) fetches anywhere
- using single, bare, Git repository for all kernels / u-boots
 - via `git worktree`
- kernel tree seeding (~4gb):
 - *fast* via GitHub actions / `ghcr.io`
 - *slow* via `kernel.org` Git Bundles
- be patient on first build

armbian-next - New Docker support

- completely rewritten Docker support
- prebuilt Docker images for arm64/amd64 for each of 4 "host" releases
- Dockerfile is auto-generated & re-used
- Using multiple Docker Volumes for /cache sub-folders

armbian-next - Docker (+Rancher), Apple M1

- Supports
- Linux: `docker.io`, `docker-ce` (Docker Inc)
- Docker Desktop on Mac Intel **and M1**
- **Rancher** on Mac M1
 - using `docker mode`, not `containerd`
- *might just work on Windows with WSL2*

armbian-next - Packages Aggregation in Python

- Standalone Python util for aggregation
- `in`: configuration structure (`config` directories, `packages` files, `packages.additional` etc)
- `in`: RELEASE and board info / extra packages etc
- `in`: desktop configs, appgroups DESKTOP_XXX

armbian-next - Packages Aggregation in Python

- out: *arrays* and *dictionaries* of aggregated packages
 - `debootstrap`, `cli/desktop`, `image`
- out: Markdown docs: "*why is this package included, or not included?*", "*potential paths*"

armbian-next - Patch handling in Python

- apply-patches
- patches-to-git
- git-to-patches
- Markdown patching summaries
- Rebasing patches
- Git Archeology

armbian-next - General Building

- should build most stuff on **arm64** as well as **amd64**
- uses **system toolchains by default** for everything
- sets **CFLAGS** to turn some errors into warnings
- allowing old u-boots to build with newer gcc
- ancient stuff might need small Makefile fixes

armbian-next - Kernel Builds

- KERNEL_MAJOR_MINOR ("5.10", "6.1")
- *fast* rebuilds when working patches
- no more `mkdeb` / `buildddeb`
- instead uses `make install` from `Kbuild`
- packaging and headers handled in `lib/` code now
- (mostly) working header packages when cross compiling
- *finally* no more `headers-byteshift.patch`



armbian-next - u-boot Builds

- Split targets, but not yet UB00T_TARGET_MAP
- Handling Python2/Python3 requirements
- Handling of x86-only tooling under qemu when building on arm64

armbian-next - Image building

- *no more apt-caching* by default (still works)
- local `.deb` caching, works in Docker too
- Aggregation opens path for `mmdebstrap` migration later

armbian-next - Other

- New CLI infrastructure
- `initrd` caching 🐱
- ORAS-based storage foundation
- ...

armbian-next - Stuff that's not ready 😄

- extras buildpkg
- repo management
- EXTRAWIFI=yes

Trying out armbian-next

do not share dir with master!!

```
cd ~ # clone to a new directory!  
git clone --branch=armbian-next \  
    https://github.com/armbian/build armbian-build-next  
  
cd ~/armbian-build-next  
./compile.sh # and off you go  
  
# Later, to update:  
cd ~/armbian-build-next  
git pull --rebase # !!!we rebase!!! use --rebase
```

Trying out `armbian-next`, pt 2

- If using Docker Desktop, turn up Resources (CPU/RAM/Disk), use `VirtIOFS` sharing and Virtualization framework
- Turn up logging
 - `SHOW_LOG=yes` shows output of runner commands
 - `SHOW_DEBUG=yes` a lot of debugging info
 - `SHOW_COMMAND=yes` shows the runners commands cmdline
 - ...
- Grab logs at `output/logs`

armbian-next - Plans for merge

- 200+ commits, +75k -8k
- get developers trying it out
- get Igor to try it out on CI
- fix, fix, fix
- documentation (you're looking at it)
- single PR, ~20 commits, squashed by directory
- use for next release (23.02?)

Go try armbian-next

Thank you!

