GELin 23.10

Release presentation
06. 10. 2023

Ginzinger electronic systems

NEW IN GELIN 23.10

Maintainance release

- ▶ Based on Buildroot 2023.02.5
- ▶ Qt 5.15 / QtCreator 8
- ▶ Enhancements / improvements
- ▶ Bugfixes and security fixes

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COMPONENT UPGRADES

Buildroot 2023.2 → 2023.2.5

▶ Security-, bug-fixes and features

NOTEWORTHY CHANGES AND IMPROVEMENTS

- ► Added support for MariaDB
- ► Added "sox" audio toolkit
- ► Added audio packages
- ► Added firmware-package to support SW8987 WiFi devices
- ► Re-write of many GELin scripts to make them more robust and automatically testable

BUGFIXES

- ▶ Fixed a crash of splashscreen on i.MX8M
- ▶ Fixed a bug that caused ge_update to not flash the whole kernel image
- ▶ Fix invalid paths in meson cross compile file

TECHNICAL DETAILS / SPECIAL TOPICS

MariaDB

► add to your project by adding package "mariadb" to BASE_PACKAGES in gelin_project.conf
► Store databases on your GELin target

QT5Webengine

- ▶ Qt5Webengine is based on old chromium version (83.0.4103.122)
  - » There are known CVEs for this old versions (CVE-2021-38006)
  - » Do not use in production. Contact GE if needed.

Ubuntu 23.04 and newer

- ▶ Ubuntu 23.04 and newer do not support the previously used tftpd
- ▶ Instead it offers to install tftpd-hpa
- ▶ Gelin setup was adapted to also support tftpd-hpa installation and setup (this is done automatically)

UDP support on new Debian/Ubuntu installations

▶ NFS server per default has UDP support no longer enabled. This can cause failure to boot from NFS.

▶ Gelin setup was adapted to re-enable UDP support

▶ For long term compatibility It is recommended to explicitly enable TCP support for nfsboot on your target devices. Run the following commands in U-Boot:

```
1  setenv snfs setenv bnfs rw root=/dev/nfs \
2       nfsroot=${serverip}:${npath},vers=3,tcp
3  saveenv
```

STARTUP TIME AND SIZE COMPARISON

Results from periodic monitoring of system size and startup times
Measurement is done on all processor platforms using GELin's qt-gui and qt-quick templates and most recent linux-5.4.y-ge/5.10-imx-ge kernels

▶ i.MX28 (compared to 23.04)
  » qt-gui → equal memory footprint; equal startup time

▶ i.MX53 (compared to 23.04)
  » qt-gui → equal memory footprint; equal startup time

▶ i.MX6 (compared to 23.04)
  » qt-gui → equal memory footprint; equal startup time
  » qt-quick → equal memory footprint; equal startup time

▶ i.MX6UL (compared to 23.04)
  » qt-gui → equal memory footprint; equal startup time
  » qt-quick → equal memory footprint; equal startup time

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