Android development platform

Collecting information for the planning of a shared **development platform**
...to develop software code that advances the chosen topics of the Android Automotive SIG home.

Git Repository

- https://github.com/COVESA/aasig_dev_platform

What is a "development platform"?

- A well defined version of Android for Automotive development that supports running the individual components that are developed as solutions for specific issues
- A choice of one or more supported hardware boards, for running the basic distribution and programs added to it.
- BSPs and similar support files needed to be added to the Android source code
- Automation tools, build-scripts, configurations and other instructions that orchestrate a build that is repeatable by any involved parties
- A shared repository of the above, stored under GENIVI GitHub

Information and guides

General

- General info on devices in AOSP project: https://source.android.com/setup/build/devices

Automotive-oriented development boards

Renesas R-Car Gen 3 series

- **Supported**: R-Car H3 Starter Kit with Kingfisher board
  - Starter Kit
    - Starter Kits are an automotive orientated compact board series with expansion connectors for connections not on-board and which is aimed at community use.
    - 4GB and 8GByte DDR Starter Kit variants available with eMMC to meet Google GAS requirements
    - Price approx 950 Euro (TBC)
    - Available direct from Renesas.
  - Kingfisher
    - Kingfisher acts as an add-on base board for the Starter Kit adding numerous automotive connectors and on-board peripherals.
    - Kingfisher can be further expanded by dedicated camera boards for GMSL and FPD Link cameras
    - Available from the mfr Shimafuji or Renesas.
  - Boards, documentation and Yocto BSP available without NDA

- **Also likely to work**: R-Car H3/M3 Salvator-XS board
  - Salvator-XS is the R-Car customer reference board.
  - More expensive than Starter Kit, but mentioned here as some participants will have them in-house and Android is available for it.
  - Boards available direct from Renesas.
- R-Car is officially supported within Genivi GDP, AGL and Adaptive Autosar FT-DI/FT-SI teams.
- Renesas maintains support for the Genivi Yocto Baseline and are contributing knowledge and a board farm towards the Genivi Automated Test system.

NXP

- i.MX8 development board, using the Multi-sensory-enablement Kit, MEK, board.
  (GENIVI lab will use MCIMX8QM-CPU for i.MX 8QuadMax processor, other variants might work)

Qualcomm Snapdragon

- **Not supported** out of the box. Community input is welcome.
- Proposal: Qualcomm® Snapdragon™ S820Am v2 Automotive Development Platform

Alternative consumer-oriented development boards

HiKey 960

- **Supported: HiKey 960 development board**
- A repository with device tree definition for HiKey960, and some instructions in README
- A Youtube video walk-through for compiling AOSP for HiKey 960 (very basic and step-by-step)

Dragonboard

- **Not supported** out of the box. Community input is welcome.

- Proposal: Dragonboard 410c and 820c
- A guide for compiling AOSP for Dragonboard 410c and 820c

Emulator / Virtual Machine options

Android Emulator

- **Not supported** out of the box. Community input is welcome.
- Part of Android Studio. Open Android Device Manager and choose emulation. Etc.

VirtualBox

- **Not supported** out of the box. Community input is welcome.
- https://www.fosshub.com/Android-x86.html
- https://www.android-x86.org