

Android Porting Services from AMI

AMI Adept for Android® is a solution provided by AMI to create a natively ported Android OS to a custom hardware design. AMI Adept provides Android OS and can be combined with AMI Aptio V to provide a seamless solution that supports manufacturing, test and customization tools. AMI Adept delivers a native Android operating system that supports Android's latest version developed on Intel® SoC code bases. Supported Intel SoC platforms include Haswell, BayTrail, CherryTrail, CherryHill, Bear Ridge and Braswell.

DUAL OS SUPPORT

Pairing with Aptio V allows a solution that can even support Windows or a secondary OS as an alternative boot option. AMI has created a custom boot screen that can be added and allows users to select between the two OSes during the boot process.

ANDROID OS ON PLATFORM SUPPORT

AMI Adept provides professional services in many areas for Android development. Example services include generic OS porting, driver development, system validation and certification, and basic customization services. Generic OS porting is needed because certain hardware changes require changes in the Android HAL. Driver development is needed if the customer is using a device that is not on the approved vendor list (AVL) for x86 development. Even if the device already has an Android driver, it might only support ARM and needs to be ported to support x86. Validation and certification services from AMI can help customers assure that their platform is ready for production. Basic customization services include changing wallpaper, pre-populating certain apps, pre-populating bookmarks, and many other basic changes.

DESIGNED TO SUPPORT EDUCATIONAL OR PROFESSIONAL ENVIRONMENTS

AMI Adept can be customized to the Android Education SKU or the Android for Work SKU to address customer needs. Android Education SKUs are an education mobility management platform preloaded with apps that are aimed at educational purposes. Similarly, the Android for Work SKUs are an enterprise mobility management (EMM) platform tailored with apps and services to meet enterprise needs.

AMI OTA SUPPORT

Over the Air (OTA) updates are common in the mobile device world. AMI understands that not all OEMs can provide an OTA update solution on their own and can provide OTA services to help OEMs provide OTA updates. AMI's OTA update system allows OEMs a web portal to easily manage their updates and add new ones.

CUSTOMIZATION HIGHLIGHTS:

- System integration and professional services
 - HAL and Driver porting
 - General Android OS development
 - Quality validation
- Security Feature
 - Widevine Level One
 - Secure Boot enabled with signing process
- General Customization
 - Boot up process
 - Preloaded media
 - Preloaded apps or tailored services per customer requirement
- Application Development
 - Manufacturing tool
 - Diagnostic tool
 - Validation tool
 - Customization tool
- OTA Solution
 - Full OTA Client / Server Solution
 - Firmware updates provided via OTA
- Support Additional Requirements
 - LAN access via USB Ethernet dongle
 - Support for locked / unlocked FastBoot boot loader

CTS CERTIFICATION AND GMS/WIDEVINE KEY INTEGRATION

AMI has assisted several OEMs with CTS certification. AMI offers this CTS certification assistance as a service and addresses any issues that come up during the certification process. Once certified, AMI can integrate GMS packages OEMs have received from Google into the Android OS. AMI also has manufacturing tools allowing easy integration of supplied Widevine keys to play copy-protected content on an Android platform.

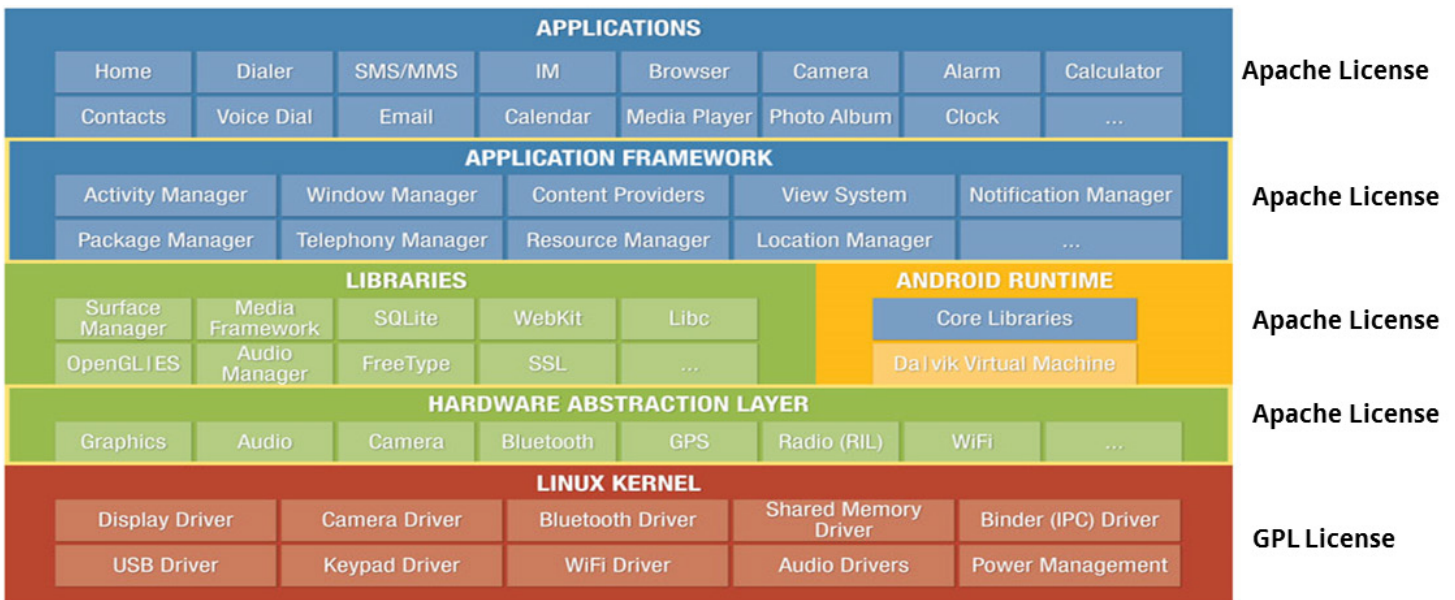
AMI TOOLSET

AMI designs a variety of Android tools to meet time-to-market and provide users with a quality user experience such as:

- Customization Tool allows basic customizations of preloaded apps, preloaded content/settings and basic settings on an Android binary image

- Stress Test Tool puts the system through a test that uses all system hardware to find any hardware issues before they are seen in the field
- Diagnostics Tool tests all hardware in varying orders and verifies all hardware is properly working to make sure there were not any minor hardware defects
- CTS Auto-Run puts the system through a full CTS test run and analyzes any failures for known issues and provides automatic fix information to engineering when available
- Smart Battery Tool is a manufacturing line tool that allows charging the battery to the exact level as the OEM wants before shipment
- Manufacturing Tool provides the ability to provision system with platform specific data like Widevine keys
- Charging OS is a basic operating system that shows charging even when the device is completely off or drained of power

AMI ANDROID SOFTWARE STACK ARCHITECTURE



American Megatrends Inc. | ami.com
 5555 Oakbrook Parkway, Bldg. 200
 Norcross, GA 30093 | 770.246.8600

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For more information: <http://ami.com/>