



Seamlessly Integrate the In-Vehicle Experience

Enable Android Automotive OS Porting with EPAM

In recent years, Android has gone beyond smart phone technology and expanded into wearables and IoT devices. Their next digital frontier involved partnering with Google to develop the Android Automotive OS. Now, the digitization of vehicles is leading to Android Automotive OS integration for a seamless experience with your mobile applications and in-vehicle services.

Android Automotive OS porting refers to the creation and modification of a board support package (BSP) to make it capable of running on a different hardware system platforms designed OEMs. This is applicable with the next generation of automotive technology, allowing for Android Automotive OS integration with vehicle computer systems.

ANDROID OPEN SOURCE PROJECT (AOSP) RELEASE MIGRATION

Android is an open source operating system for mobile devices, and there is a corresponding open source project led by Google—the AOSP. With AOSP releases, some features may depend on the latest versions of Google Mobile Services (GMS) or Google Auto Services (GAS). Other features may become outdated or require the extension of hardware abstraction layers (HALs) or the implementation of new vehicle-specific features.

HOW IT WORKS

Android Automotive OS allows OEMs to leverage existing Android application/services ecosystem natively in the car without connecting a mobile device. Once the car is synced to Android applications and services, they can access a lot of vehicle-specific data (like GPS, route information and much more) that would not be possible from a mobile phone connected to the car in screen mirroring mode.

HOW WE CAN HELP

EPAM can maintain, optimize and repack the Android Automotive OS to meet specific vehicle needs. Our digitally native approach enables porting of all the basic and extended Android features, including the creation of custom launchers, apps like the camera and contacts, plus framework, native libraries and more.

EPAM has the vast experience to cover the full Android technology stack, from bootloader to applications, including:



**PORTING TO NEW
ANDROID VERSION FOR
CUSTOM HARDWARE**



**ANDROID BSP SUPPORT FOR
CUSTOM HARDWARE**



**THIRD-PARTY BINARIES
INTEGRATION**

(e.g. graphic drivers, multimedia codecs, etc.)



**IMPLEMENTING SPECIFIC
DRIVERS/Framework
CHANGES & HALS**



**BOOTLOADER
CUSTOMIZATIONS**



**CUSTOM SECURITY
IMPLEMENTATION**



**RUNNING ANDROID
AS A GUEST VIRTUAL
MACHINE UNDER A
HYPERVISOR SOLUTION**



**SYSTEM UI
CUSTOMIZATION/
IMPLEMENTATION**



**UNIFIED DESIGN FOR
LAUNCHER & SYSTEM
APPLICATIONS**

ADDRESSING FUNCTIONAL SAFETY WITH OPEN SOURCE SOFTWARE

Historically, car manufacturers have shied away from integrating the Android Automotive OS natively because of the functional safety, security and stability risks it presents.

EPAM can mitigate these risks by integrating Android Automotive OS into a virtualized environment on FuSa compliant Xen Hypervisor.

Are you ready to accelerate at the speed of software and open new revenue streams by integrating new, internet-connected platforms with unlimited business potential?

CONTACT US TODAY TO GET THE CONVERSATION STARTED.

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