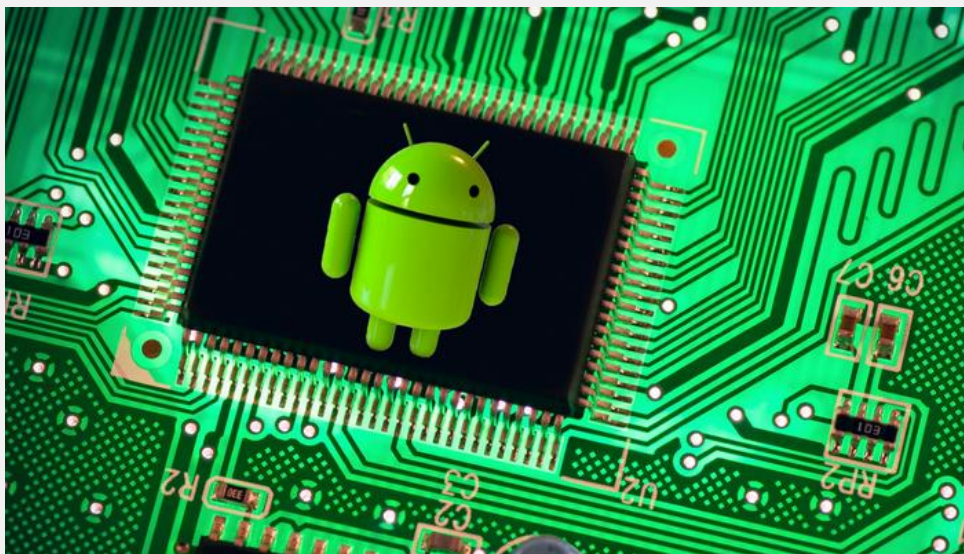




GadgEon
Engineering Smartness



Integration of drivers on Android Custom Board

Worldwide leader in home automation controller needed us to bring up Android on a custom hardware with several peripheral devices

Project Size: 2 members

Project Duration: 3 months

Technology Used: iMx6, Android, Device drivers

Challenge

- Develop/customize device drivers for peripherals with lack of references and minimal support from chip vendors

Outcome

- Identified some compatibility issues for camera module with processor which required re-design of the hardware
- Integrated several the peripherals that required changes in the driver layer and the android subsystem
- Resolved issues with instability in customer supplied code

WHAT DID GADGEON DO?	PLATFORMS/ TECHNOLOGIES USED
<p>1) Device driver development/integration in Android for a custom Hardware based on Freescale iMX6 DualLite processor</p>	<p>Customization of OmniVison camera device driver for the imx6 platform. Identified compatibility issues between camera and processor and customer re-designed the camera hardware with compatible module.</p> <p>Integration of Realtek ALC5672 audio codec in ALSA. Integration with Android. Implemented the required changes for the imx6 SSI driver to record/playback audio using I2S interface for dual microphones and speakers.</p> <p>Driver changes to route the audio through the DSP module within the audio codec chip to enable features like echo cancellation, noise suppression, far field pick up.</p> <p>Integration of WiFi driver for rtl8188 module with Android Marshmallow</p> <p>Integration of Proximity sensor VCNL4020 driver to the Android subsystem</p> <p>Bootloader customization to configure the u boot for 512MB RAM which is present on the custom board.</p> <p>Resolving stability issues with Ethernet. Identified a DHCP timeout issue with Android Marshmallow base code and resolved it.</p>



GADGEON SYSTEMS INC

881 Yosemite Way, Milpitas, CA 95035, USA

CONTACT - USA

Wes Schropp – VP Sales : +1-408-621-2570

CONTACTS - INDIA

Hari Nair : +91 9895 01 58 80 | Sreenandh : +91 9747 08 66 88

GADGEON SMART SYSTEMS PVT LTD

VI 405/E1, Fathima Tower, Malepally Road, Thrikkakara PO, Kochi, Kerala, INDIA, Pin: 682 021

 sales@gadgeon.com