

Accelerate[®] - SPB209A Demo - Quick Start Guide

Introduction

This guide will help you to set-up and run a full demonstration of the SPB209A WLAN, Bluetooth and NFC functionality. The demo is developed for the Freescale imX6 DL platform using a built binary image.

Scope of the Demonstration

On-target Multimedia: Video streaming from webserver over WLAN with audio piped to Bluetooth speakers and movie selection by NFC tag cards

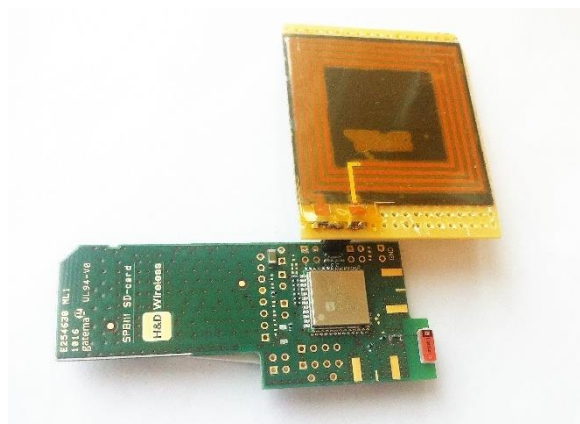
The purpose of the demo is to illustrate video streaming from a server down to the i.MX6 DL platform, present the video on the display and play synchronized sound on an external Bluetooth speaker. Video played is selected with NFC card.

The user scenario is that the user selects movie by placing an NFC tag card close to the NFC antenna. The presence of the NFC tag will trigger a specific movie to be streamed to the i.MX6 DL board from the movie server. Audio is piped to nearby Bluetooth speaker.

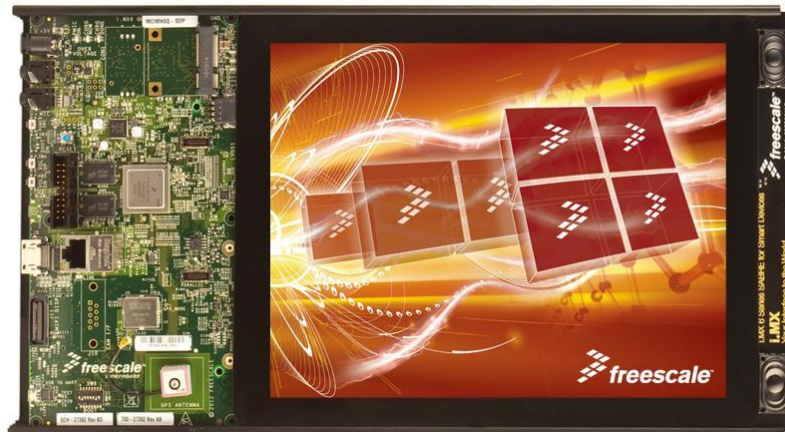
Requirements

Things you need to have:

- The SPB209A EVB (SPB209A mounted on the SPB111 SD carrier card). Using the onboard dual antenna for WLAN and Bluetooth and the NFC antenna.



- A Freescale i.MX6 platform DL



- An external Bluetooth Speaker



- NFC tags



- The Linux Yocto binary image: fsl-image-qt5-imx6dlsabresd-20161108161056.rootfs.sdcard.tar.gz
- SD card, recommended 8Gb
- A Server containing 3 movies (mp4 format)
- An Access Point 802.11 ac

Set-up

The binary Linux Yocto image will need to be loaded to the i.MX6 DL platform using an SD card. Un-pack the Linux Yocto binary image and follow the procedure in the 1453- SPB209A Software Developer Guide section 1.1.4 excluding the copying of the SPB209A driver and firmware to the SD card as the is already prepared. See <http://linux.hd-wireless.se/bin/view/Linux2/DownloadHDG209A>

Configure for Demo

Everything needed for this demo is already installed on the board, but there are some preparations needed as per below.

Insert SD card into SD slot 2 on the i.MX6 DL platform and power-up the board

1. WLAN network configuration:

```
Open /home/root/hdw_demo/wpa_supplicant.txt and replace the strings "ssid" and "password" to match your WLAN network.
```

2. Bluetooth speaker configuration:

```
Edit /home/root/hdw_demo/hdw_demo_config.txt and enter the Bluetooth address of your speakers.
```

3. Movie configuration:

```
Open /home/root/hdw_demo/nfc_media_player.sh and edit the movie_tags array to match your movie files and NFC tag id's.
```

4. Movie server configuration:

```
Open /home/root/hdw_demo/nfc_media_player.sh and edit the SERVER variable to match your movie server path.
```

5. Demo plug'n play activation:

```
Open /etc/udev/rules.d/hdw_demo.rules and remove the leading comments of both rule lines.
```

Preparations are now complete and the board needs to be restarted for the changes to apply.

Run Demo

Running the demo:

```
Power on the board and the Bluetooth speaker.
```

As soon as the board has started and the SPB209A EVB card is connected, the demo will automatically start to run. The board will now connect to the configured WLAN network, the Bluetooth speaker and the movie server and start wait for the user to place an NFC tag at the NFC antenna.

The initial connect procedure may take up to two minutes due to timeouts related to the Bluetooth connection. So be patient!

Once everything is setup for the media player to operate, a boxing bell sound is played

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