

# WWR (Radio Chipset & Solution)

Listen to the World @ anywhere, anytime

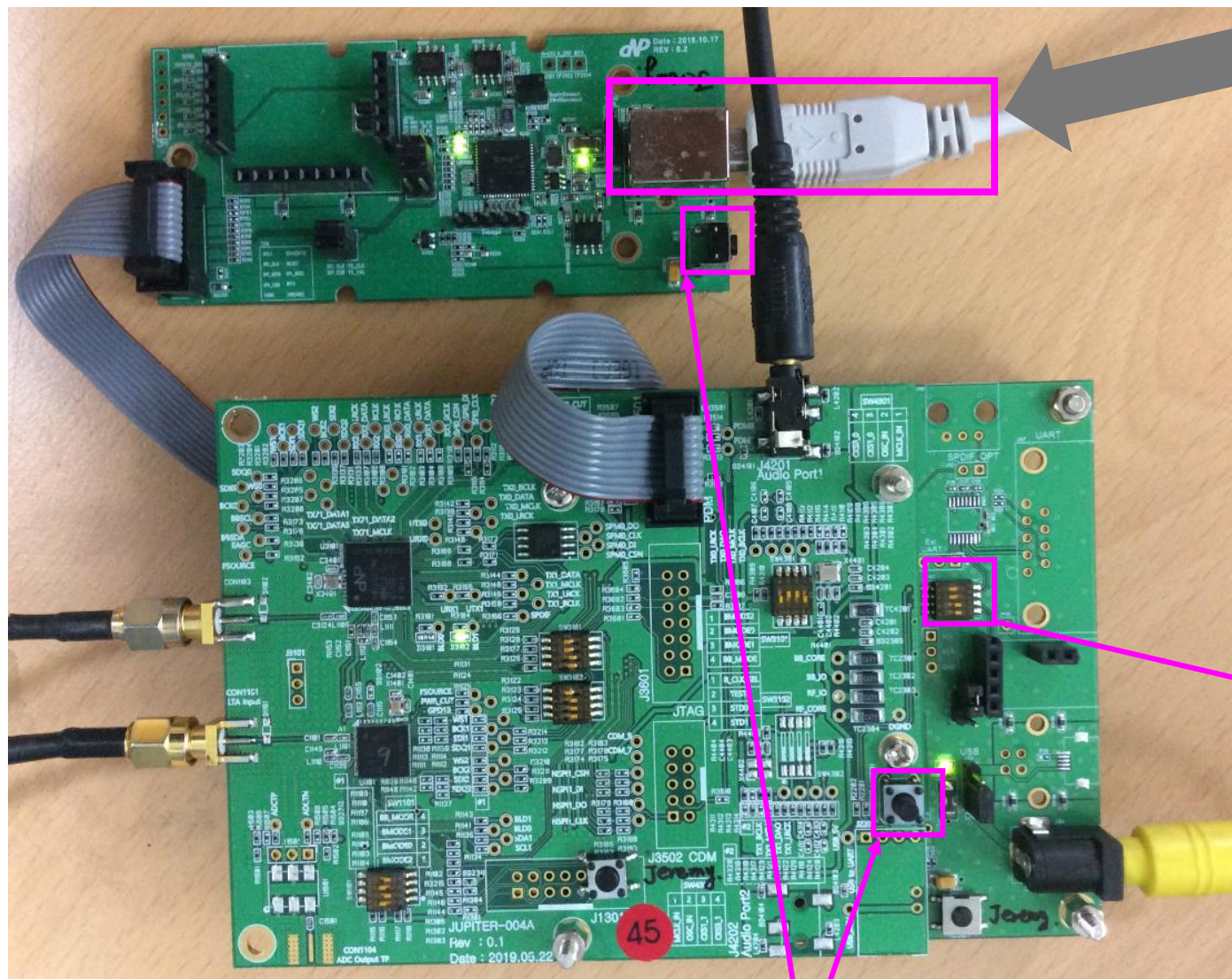


## PAIOS2-AD & PNS3030AD EVAL KIT Quick Start Guide for Harman new SPI V0.1

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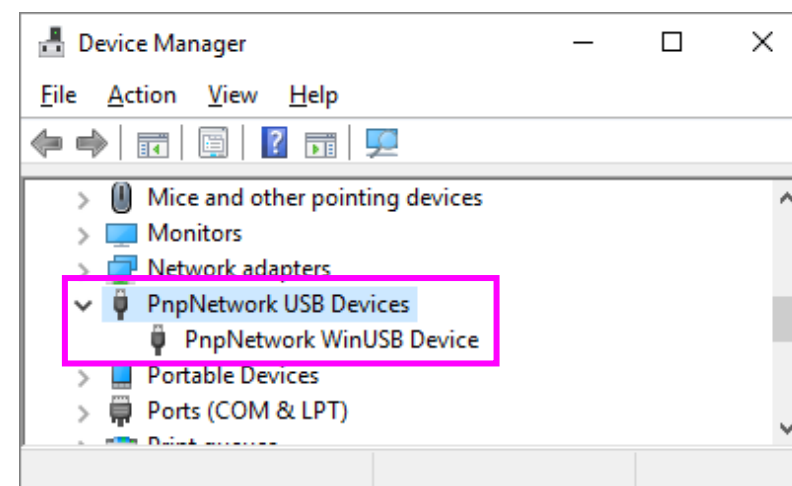
# #1. PC Interface – PDM SPI Adopter and Buttons



PC USB ( A-type to PC)

- For installation of USB driver, please refer to

“PDM\_SPI\_Usb\_Driver\_Setup\_For\_Windows10\_21JUN2019.pdf”

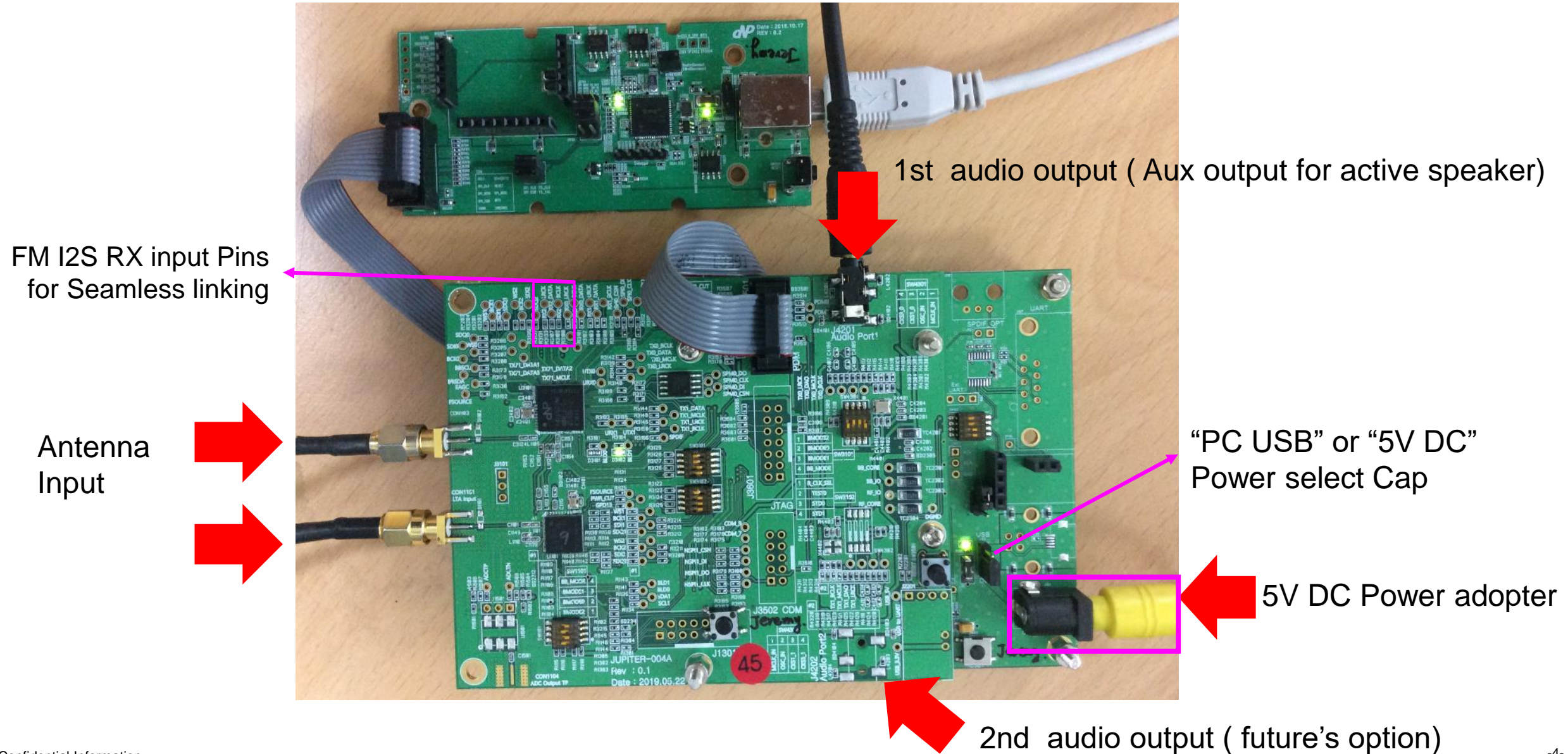


UART Select pin (Don't care)

These Reset Button should be pushed before initializing click button on PC GUI

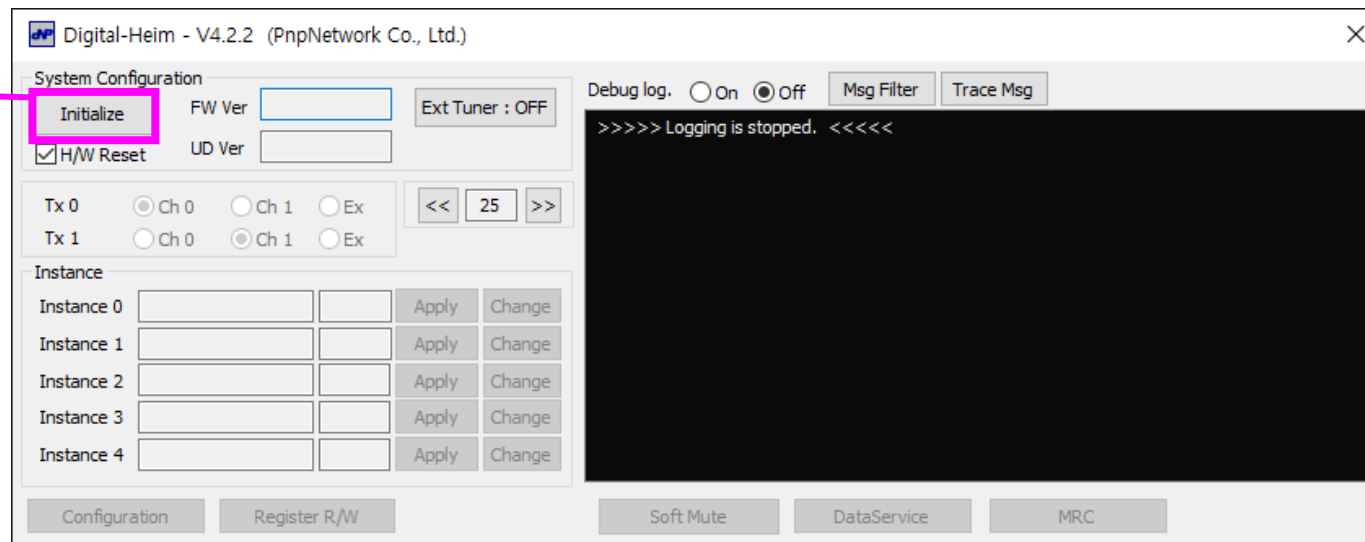


## #2. The other connection

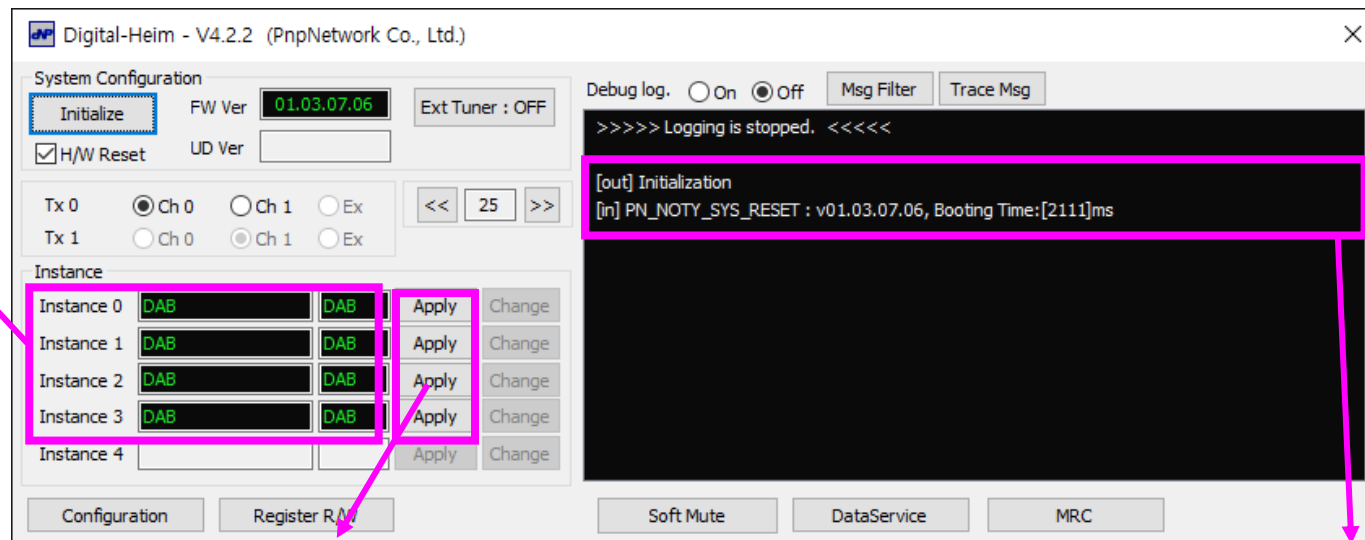


## #3. PC GUI – Initializing Procedure

① Click this “Initialize” button



② If the boot-up is successful, GUI will show the 4 devices instances.



④ The devices control window will be shown after push these two “Apply” buttons

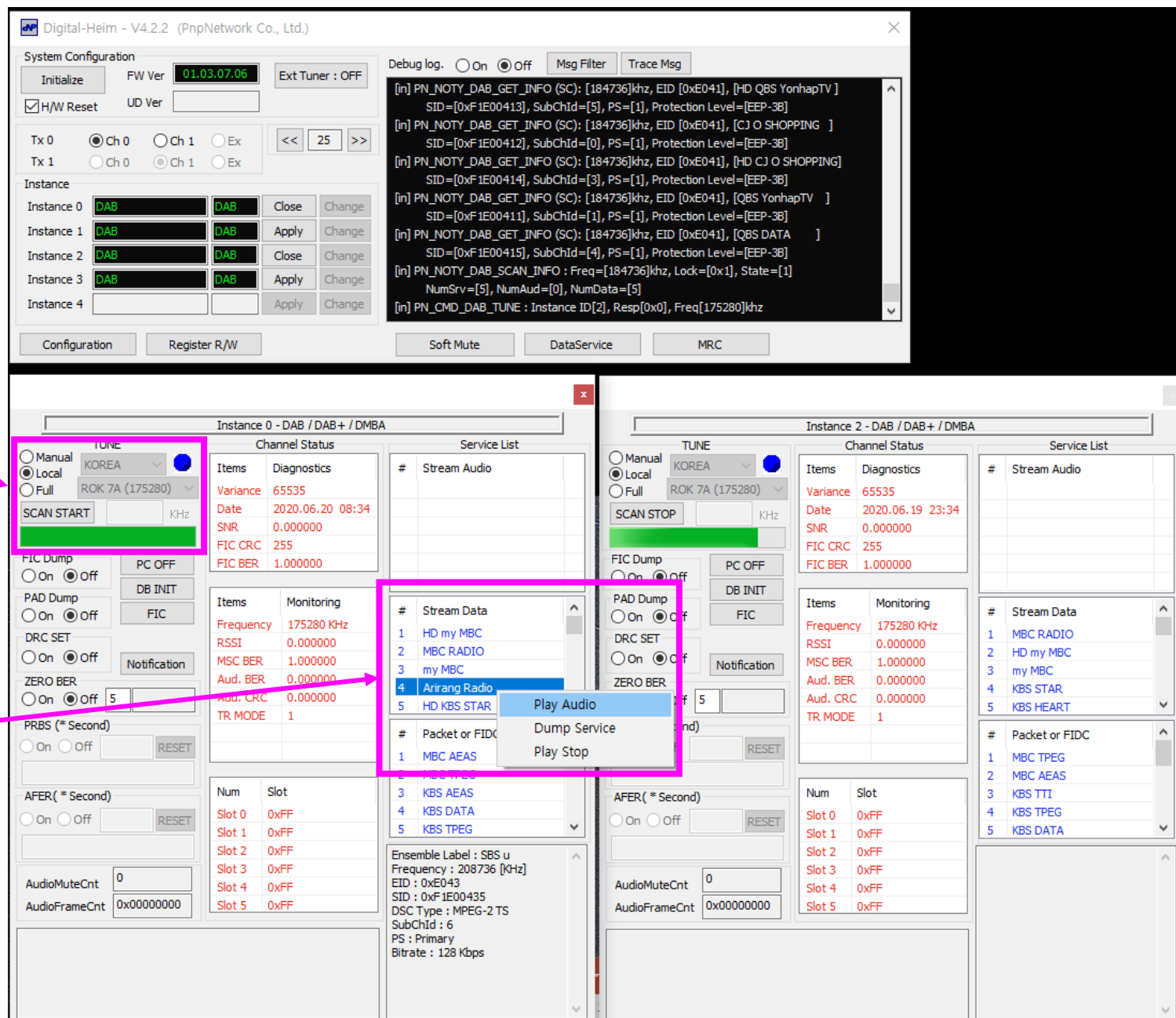
③ the SPI communication is alive!

## #4. PC GUI's Operation is ready!

① Select region[EUROP or KOREA] in "Manual" checked

② push "SCAN START" Button in "LOCAL" Checked

③ Left mouse button click on desired service and click again for "Play Audio"





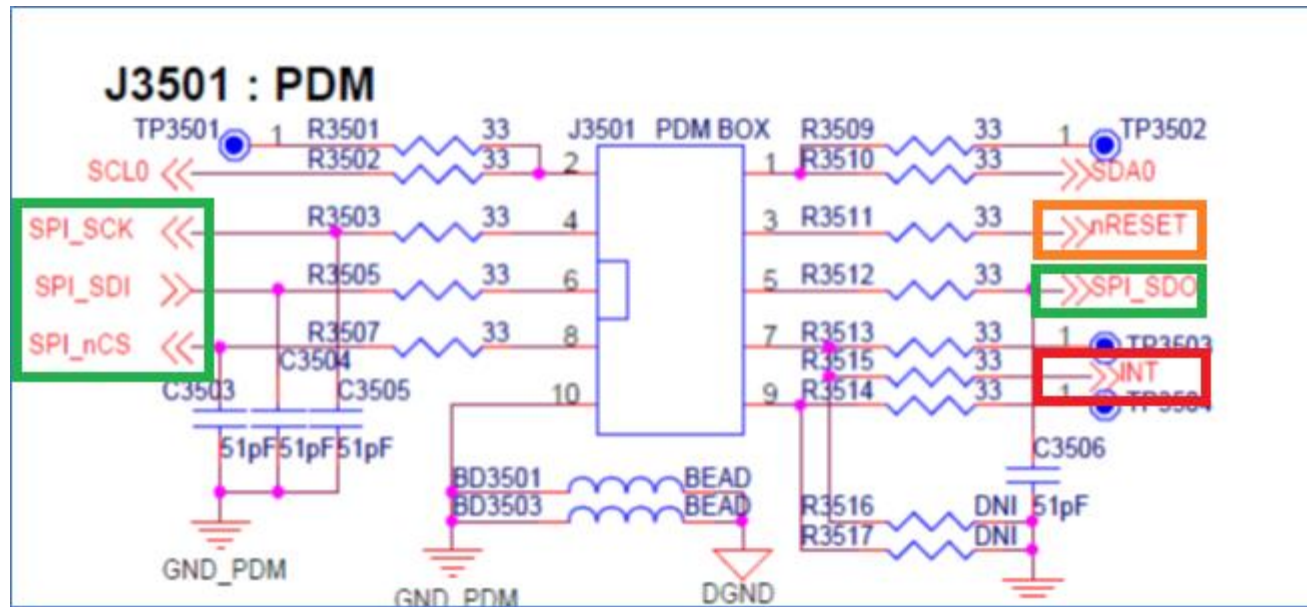
## #5. Maximum Use Case

Two audio decoding + Two DMB Service dump(via SPI to USB) are possible  
From 4 different ensembles simultaneously

The screenshot displays the Digital-Heim V4.2.2 software interface, which is used for configuring and monitoring DMB (Digital Multimedia Broadcasting) services. The interface is divided into several sections:

- System Configuration:** Includes fields for FW Ver (01.03.07.06), UD Ver, and buttons for Initialize, H/W Reset, and Ext Tuner (OFF).
- Debug log:** A text area showing system logs, including SID, SubChId, PS, Protection Level, and various service parameters.
- Instance Configuration:** A table with four instances (Instance 0 to Instance 4) showing their respective DAB/DAB+ status and buttons for Close, Change, and Apply.
- DMB Service Windows:** Four separate windows showing the DMB Service interface for each instance. These windows display a video feed (KMR-AV) and a list of services (e.g., MBC RADIO, MBC TPEG, MBC AEAS, KBS TTI, KBS TPEG, KBS DATA).
- Monitoring and Diagnostics:** Each instance has a detailed monitoring section showing parameters like Frequency, RSSI, MSC BER, Aud. BER, Aud. CRC, and TR MODE. It also includes a list of services and a packet/FIDC list.
- AudioMuteCnt and AudioFrameCnt:** Fields for monitoring audio mute and frame counts.

## Appendix. A SPI and Interrupt port connection Map



J3501

3: Reset

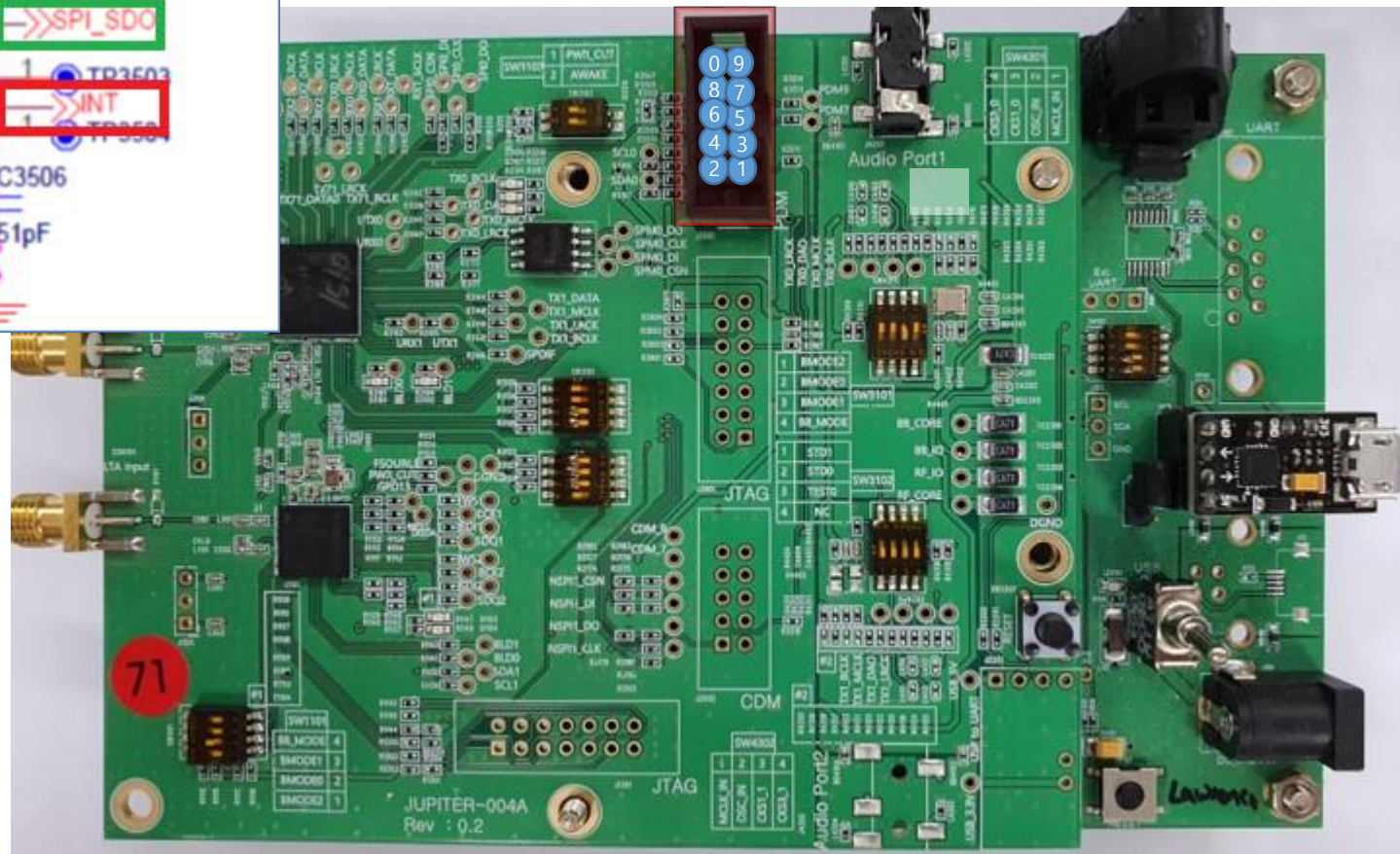
4: SPI\_SCK

5: SPI\_MISO

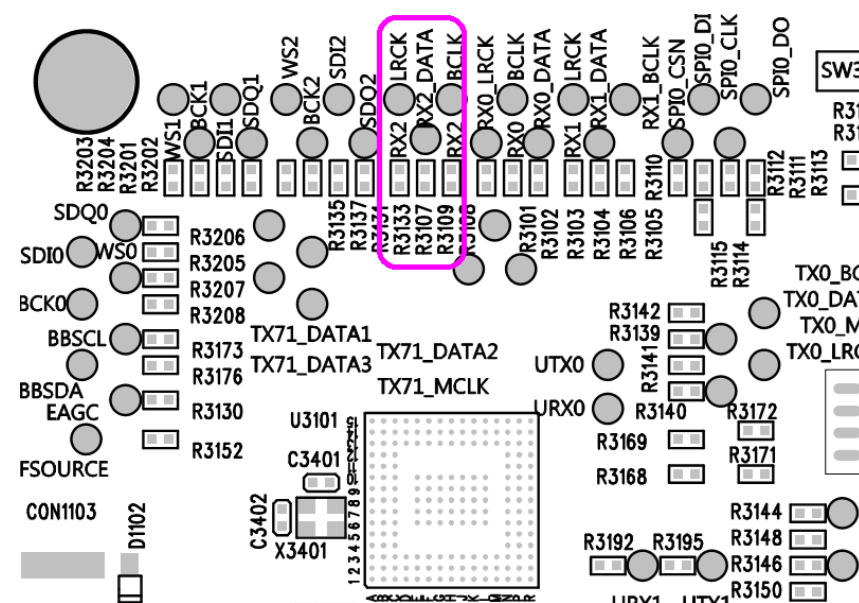
6: SPI\_MOSi

7: Interrupt

8: SPI\_nCS



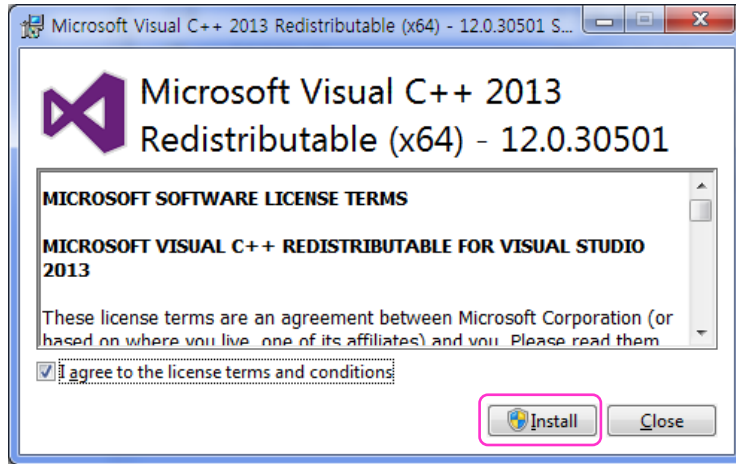




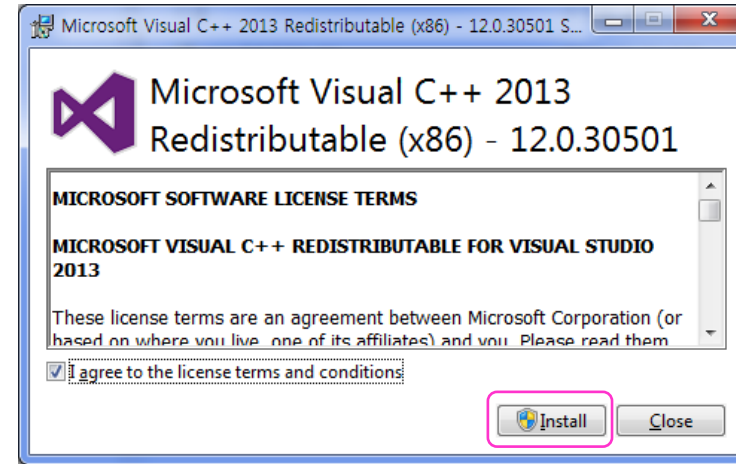
```
R3133 : I2S RX2 LRCK
R3107 : I2S RX2 DATA
R3109 : I2S RX2 BCLK
```

## ■ Appendix.C Installation of Microsoft Visual C++ Redistributable Package

PNP's BRAMD PC GUI requires below Microsoft's redistributable installation package for Visual Studio C++ 2013 according to PC environment.



64Bit Window case = "vcredist\_x64.exe"



32Bit Window case = "vcredist\_x86.exe"

- Some PC environment needs to install both versions but some other case doesn't need this package's installation.
- For installation, please push "Install" button.
- Download link
  - US = <https://www.microsoft.com/en-us/download/details.aspx?id=40784>
  - Japan = <https://www.microsoft.com/ja-jp/download/details.aspx?id=40784>
  - Korea = <https://www.microsoft.com/ko-kr/download/details.aspx?id=40784>



PNP means Plug and Play for Synergy

Thank You

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