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XR1 HDK

User Manual

Ver. A

Contents

Included Items

HDK Board	Battery
Model Name: XR1 HDK	Purpose: Power Source

Function Block

Power on for HDK
- Plug in the Battery Pack
- Press Power Switch

Type C connective
- USB 3.1
  – USB Charging / DP function
- USB 2.0
  – USB OTG support

Micro HDMI connective
- External HDMI display

Volume control
- + HIGH
- - LOW

Battery Charging LED
- Green (90%~100%)
  – Full battery
- Lite Green (50%~ 90%)
  – Charging active l
- Lite Red (30%~ 50%)
  – Charging active
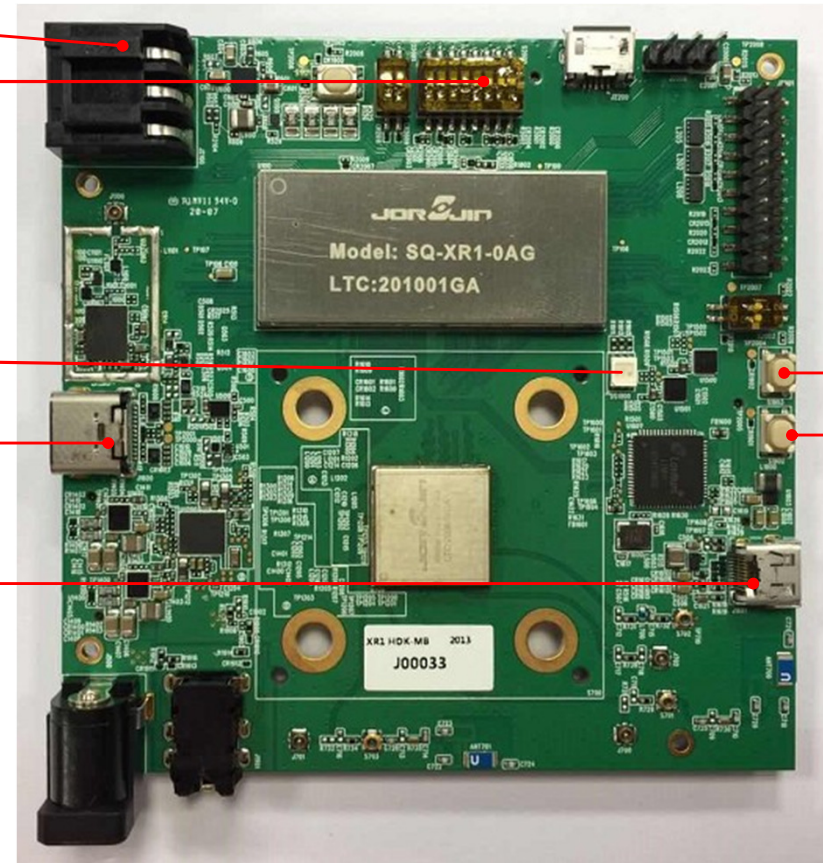- Red (2%~30%)
  – No battery power

Battery in

Power Switch

Charging LED

Type C

Micro HDMI

Volume +

Volume -

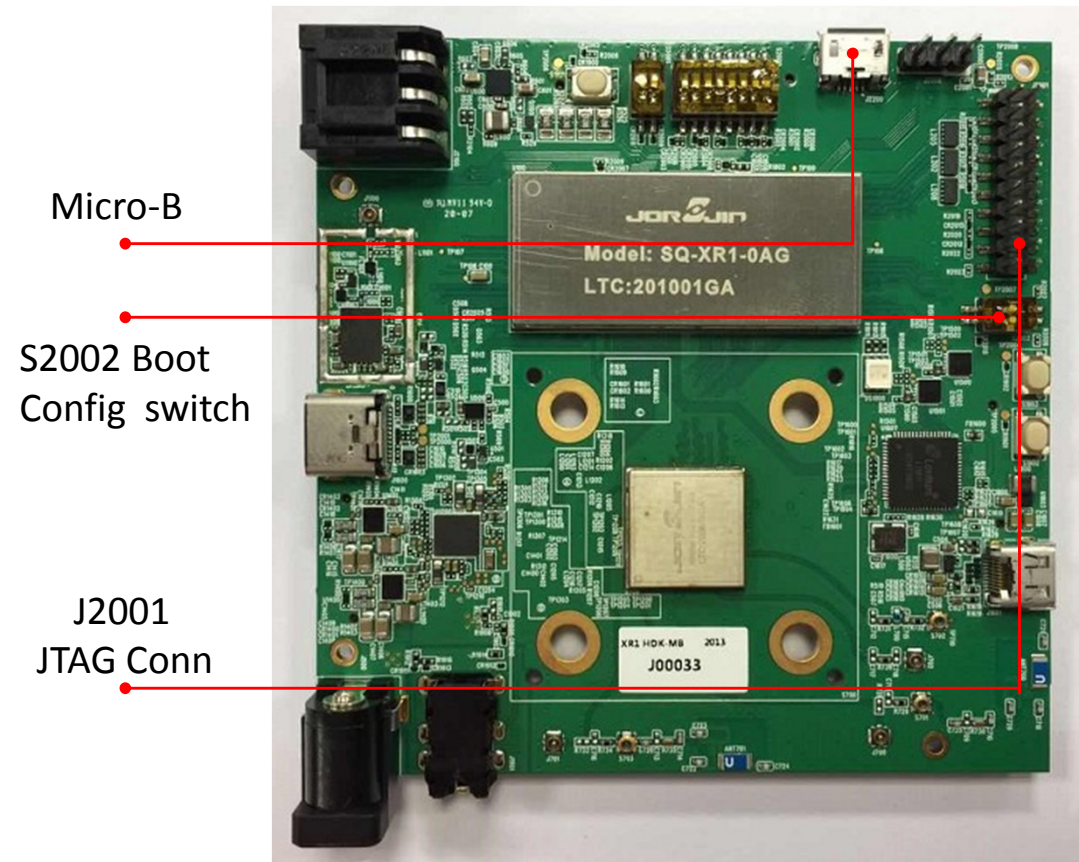Battery Pack

Function Block

Micro-B

- For UART Debug

Boot config switch (S2002)

- S2002
  - FORCE_USB_BOOT

Switch 2 (on)	Switch 1 (on)
JTAG_PS_ HOLD (High)	FORCE_U SB_BOOT (High)

JTAG Conn (J2001)

- Jump J2001
  - Debug UART

Micro-B

S2002 Boot Config switch

J2001 JTAG Conn

Config Switch

Boot config switches (S2000)

- Default → off
- Switch to ON for
  → As Below function

SW 1 (on)	SW 2 (on)	SW 3 (on)	SW 4 (on)	SW 5 (on)	SW 6 (on)	SW 7 (on)	SW 8 (on)
Force USB boot	GRFC4	TS_RESET	LASER_RING_EN	BOOT_CONFIG_3	HAPT_PWM	BATT_THERM	BATT_ID

Config switches (S2001)

- Default
  → off
- Switch to ON for
  → As Below function

SW 1 (on)	SW 2 (on)
CBLPWR_N	USB_VBUS_FORCED_BYPASS

S2001 (off)   S2000 (off)

Boot Config switches

Config switches

Config Jumper

UART jumper 3 PIN
- Debug UART

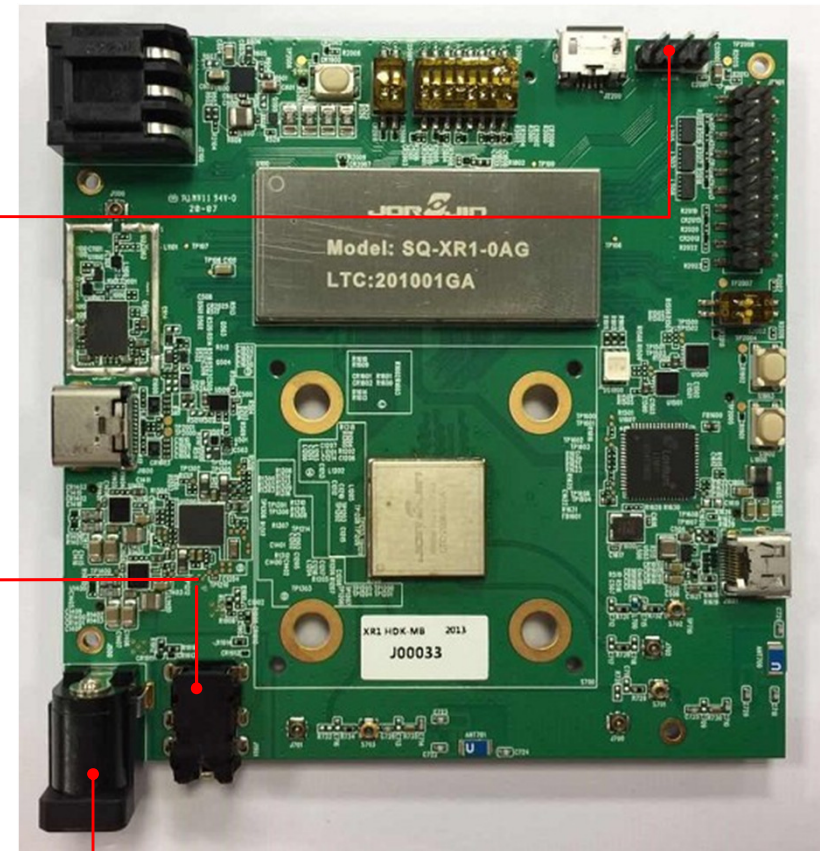| Pin Number	Pin Name	Alt-Function	Type	Function Description
J2000-I01	USB_UART_TX	GPIO_51	D1	QUP 12,lane 3 : UART_TX
J2000-I02	USB_UART_RX	GPIO_52	D0	QUP 12,lane 3 : UART_RX
Power Groun	Power Ground	Power Ground	Power G	Power Ground

Audio connector (3.5mm)
- Speaker out
- MIC

DC in connector
- 12V / 3A Battery charging from DC adaptor

UART Jumper

AUDIO connector

DC IN connector

Extension Connectors

160 Pin connector
- MIPI CSIx3

80 Pin connector
- MIPI DSIx2

80 Pin connector
- SPI X 2 / I2C
- Audio

SD card connector
- SD storage

160 pin connector

SD card connector

80 pin DSI connector

80 pin SPI/Audio connector
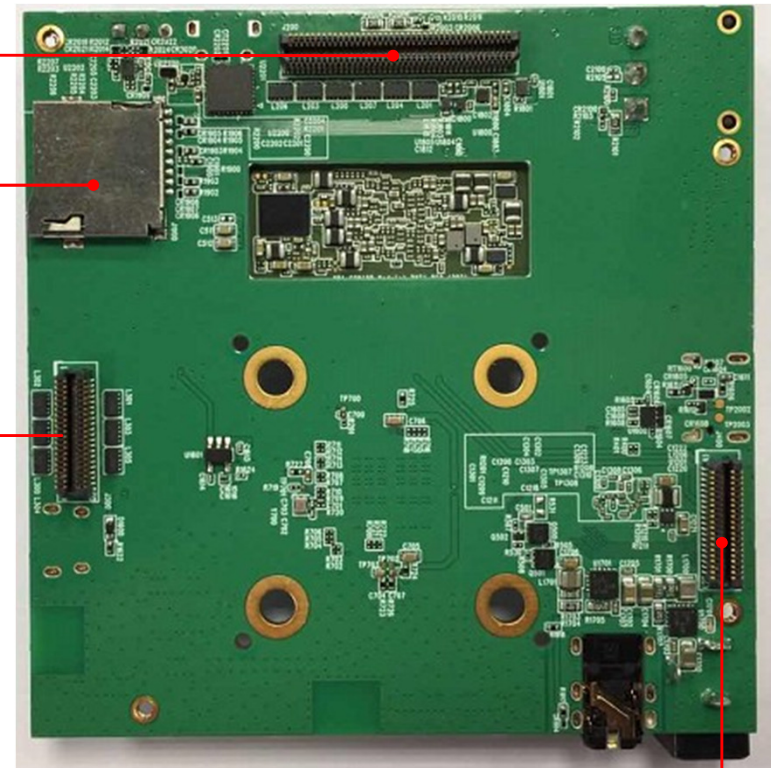
Turn On

1. Connect the battery to battery jack.

2. Press the power button around 2 seconds to turn on the system.

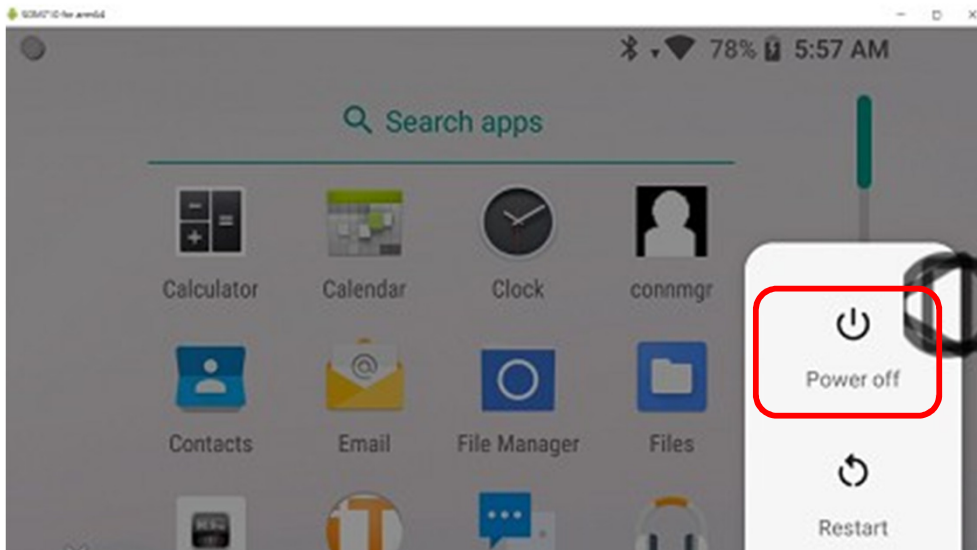3. Connect Type-C cable to Notebook or PC.

4. Run ADB's scrcpy.exe program. press Power Button when screen off.

Power Button

Connect to
Notebook/PC
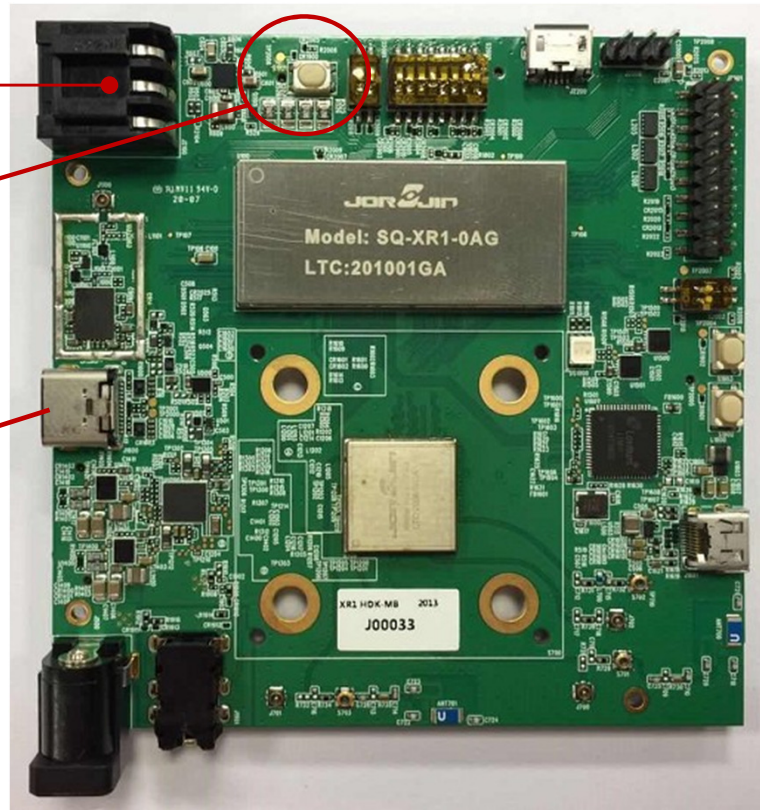
Turn Off

Long press the power button around 2 seconds to turn off the system.

You can see the power off menu as the Android following picture.
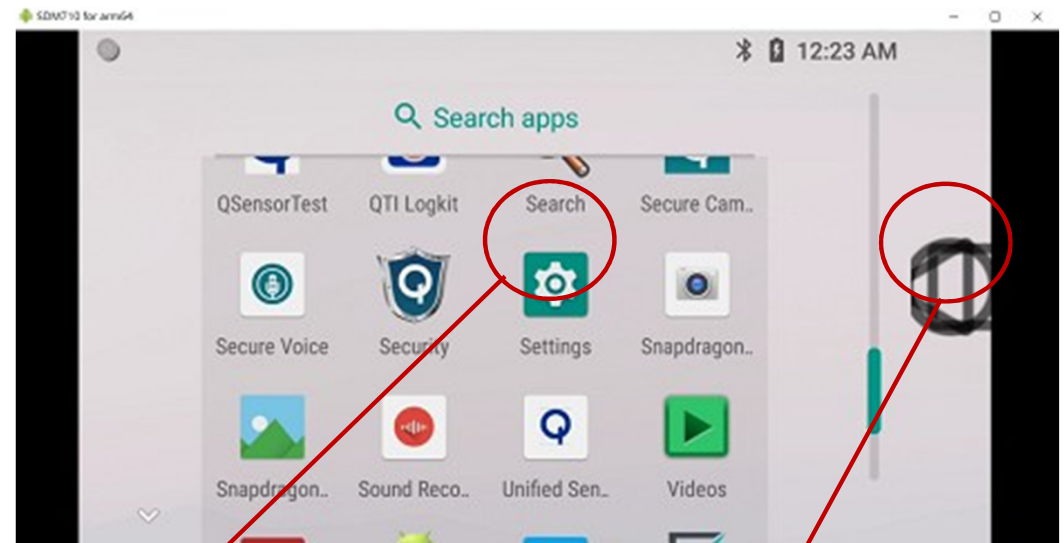
Choose "Power off" to shut down the device.

Press
Power Button
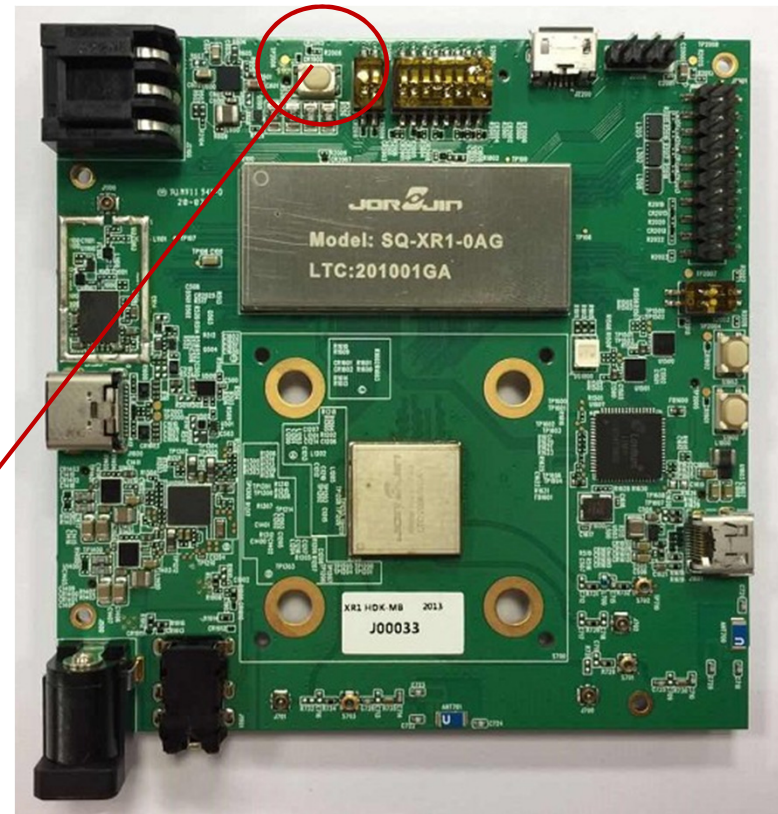
Go to App setting

Select "USB debugging connected" , Enter App icon to select Settings function.
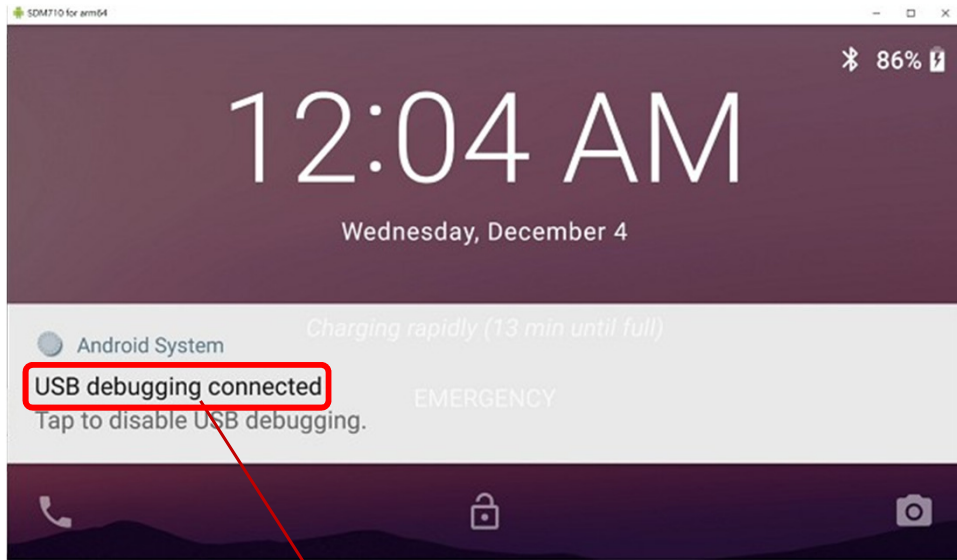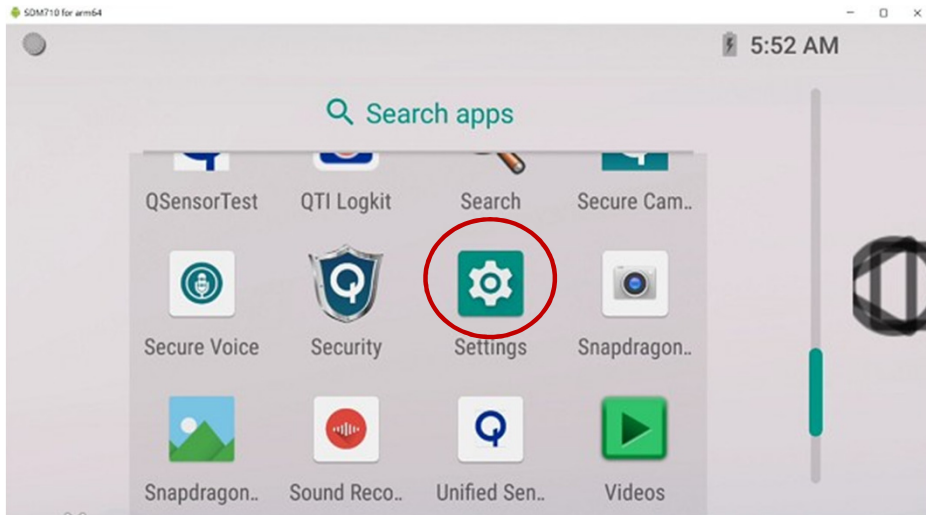

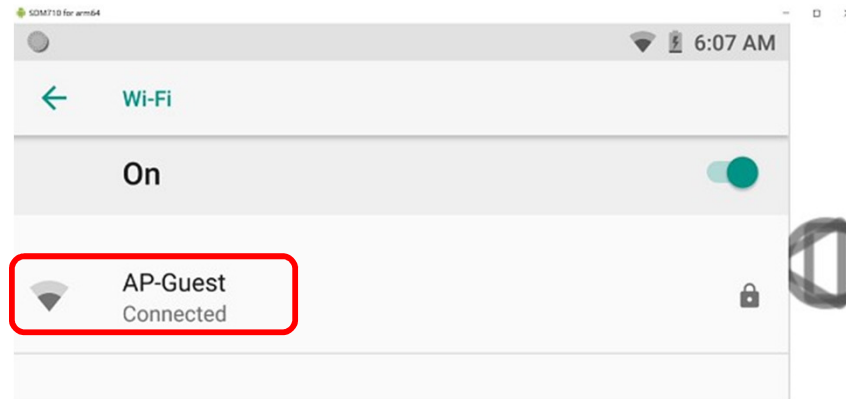
1. Select this function
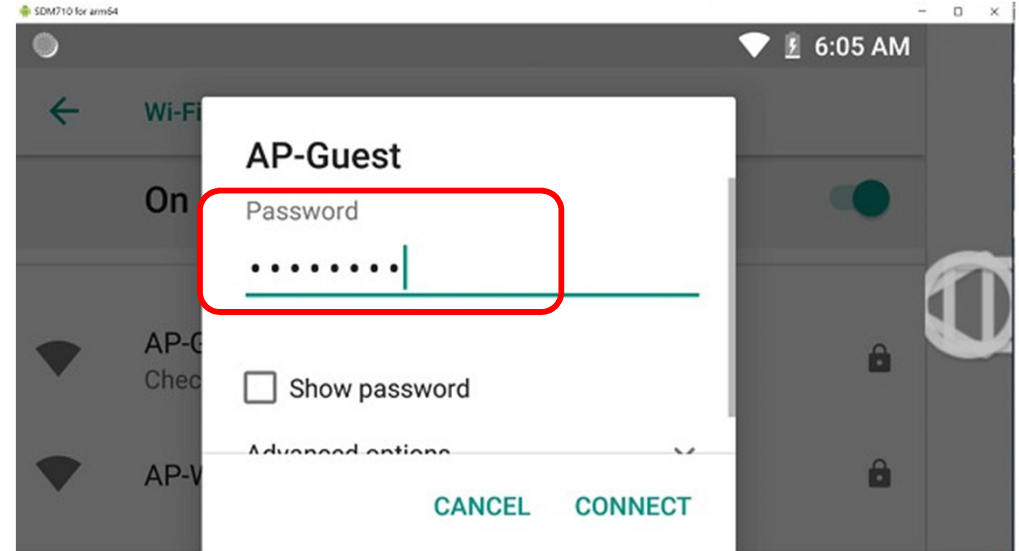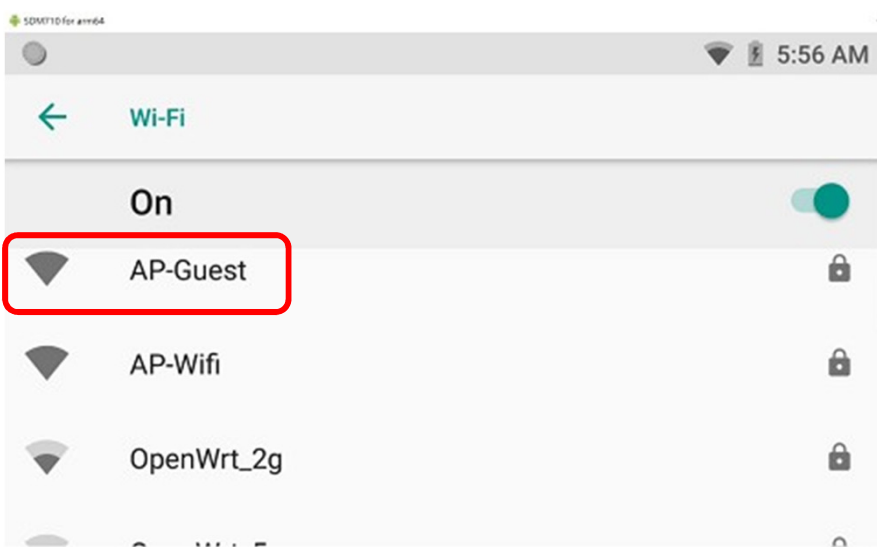
3. Click Settings icon

2. Click on App icon

Connect to WiFi

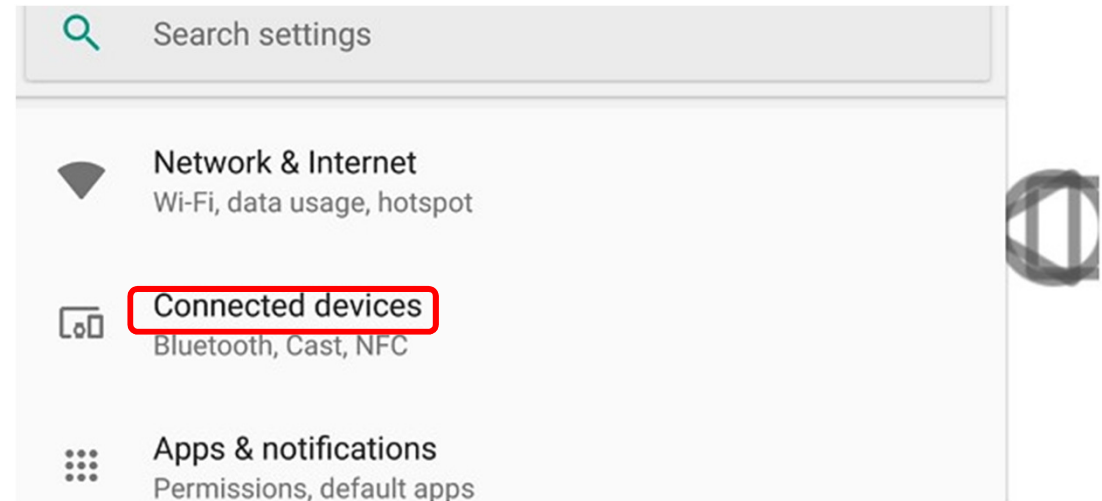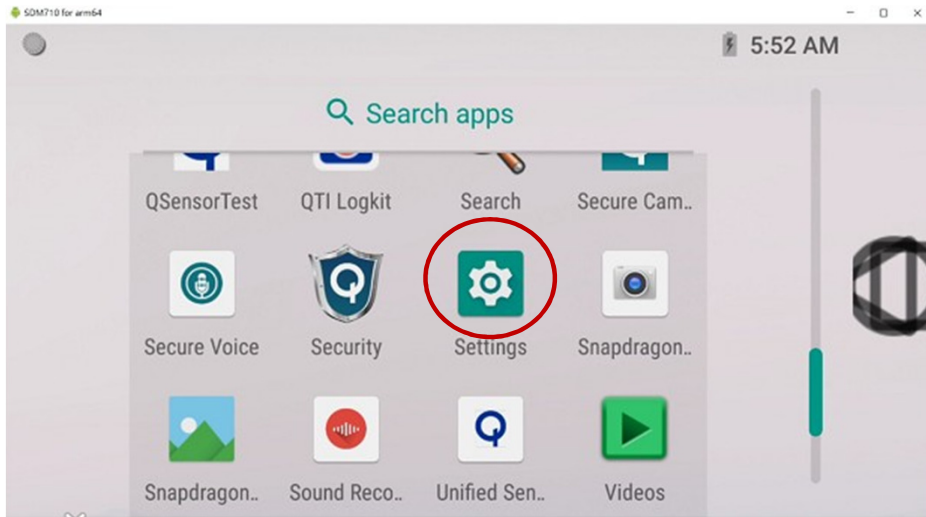Settings > Network & Internet
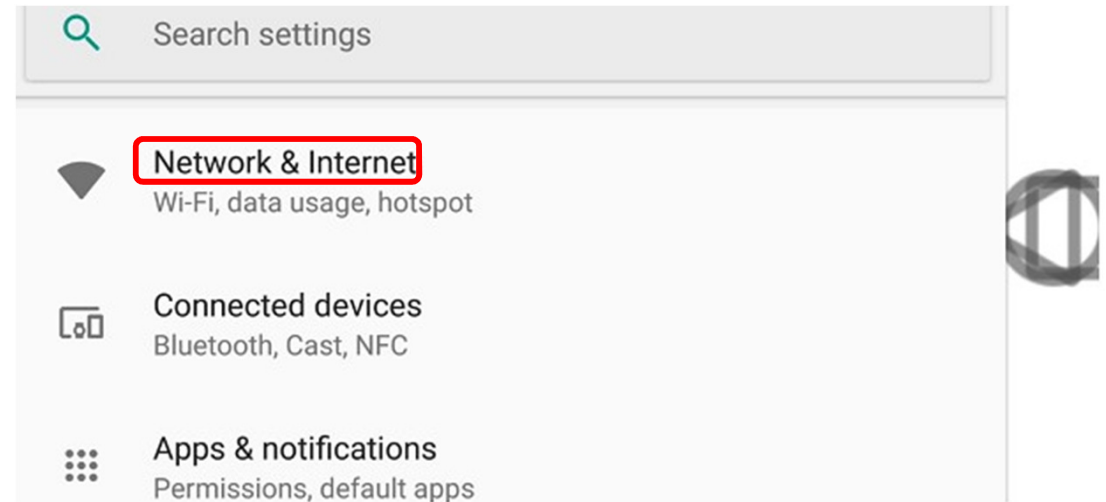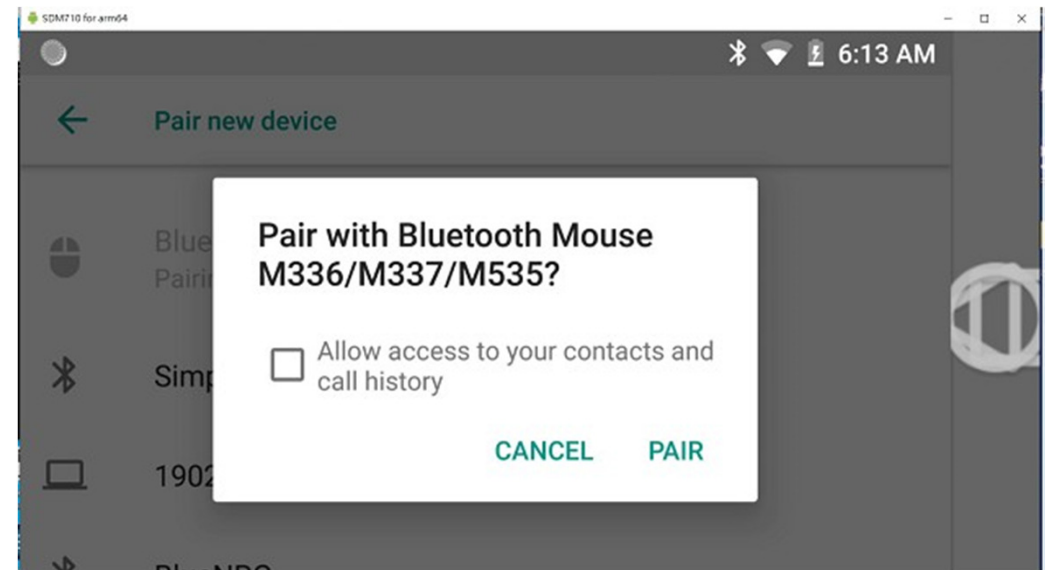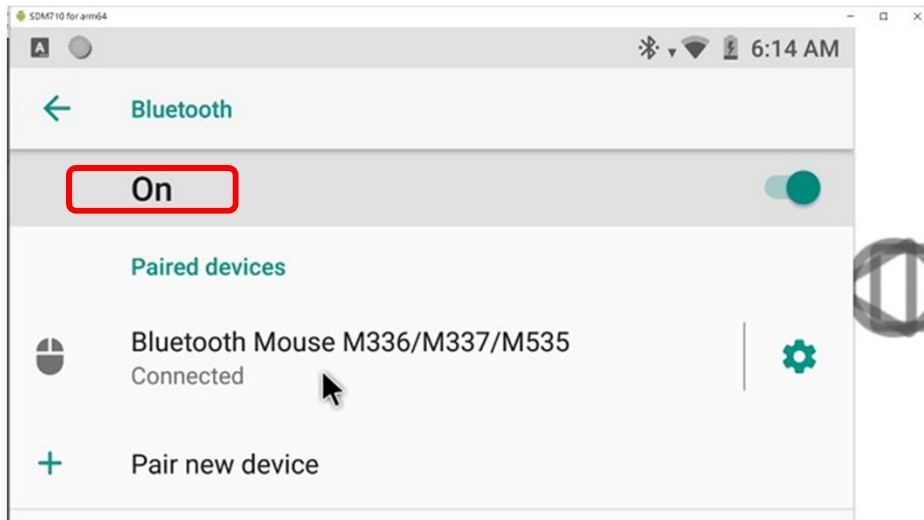
Connect to WiFi

On > Password > Connected
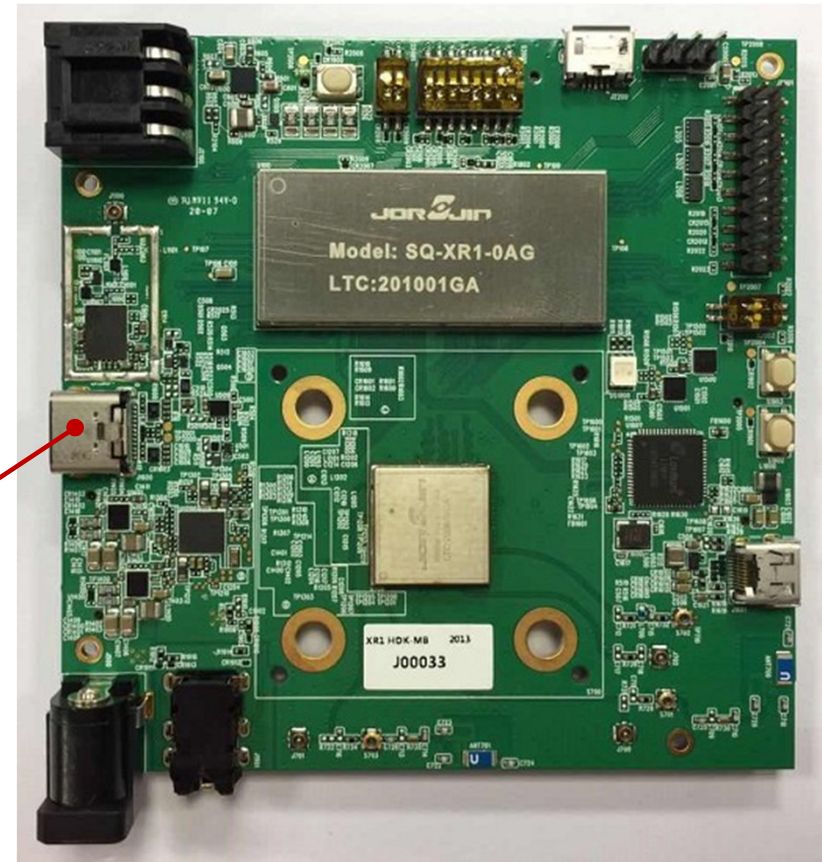
Setup Bluetooth Function

Settings > Connect devices

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Bluetooth > On > Connected

Connect to Smart Glasses

Smart glasses devices > Connect to Type-C port

Connect to Type-C port

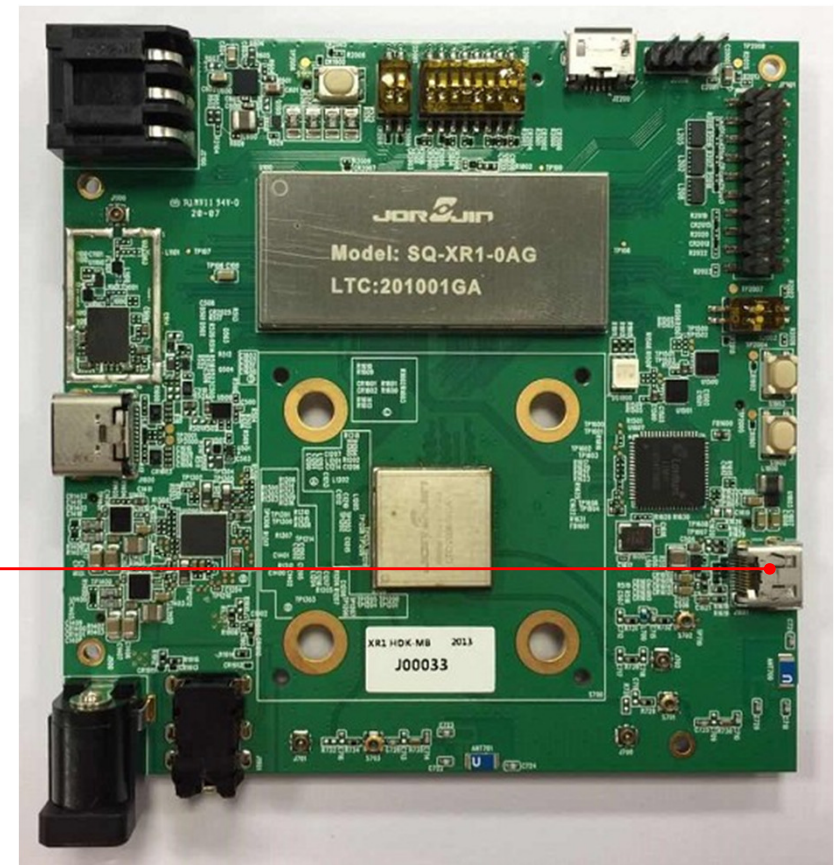HDMI devices > Connect to Micro HDMI port
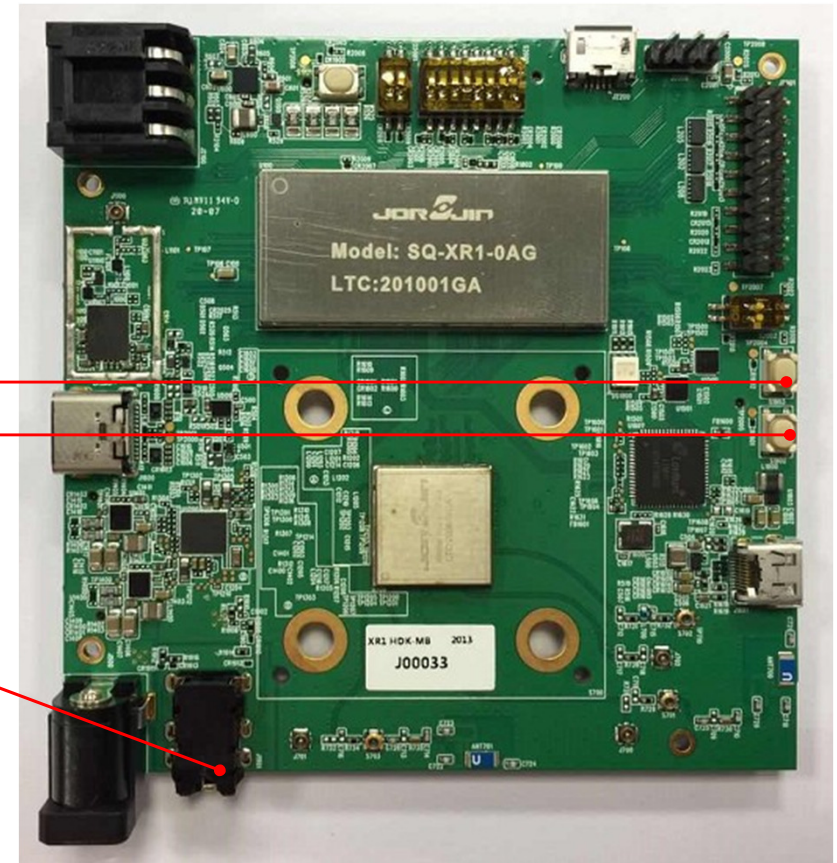

On-Lap Monitor

Connect to
Micro HDMI port

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Audio devices > Connect to Audio port

Volume +
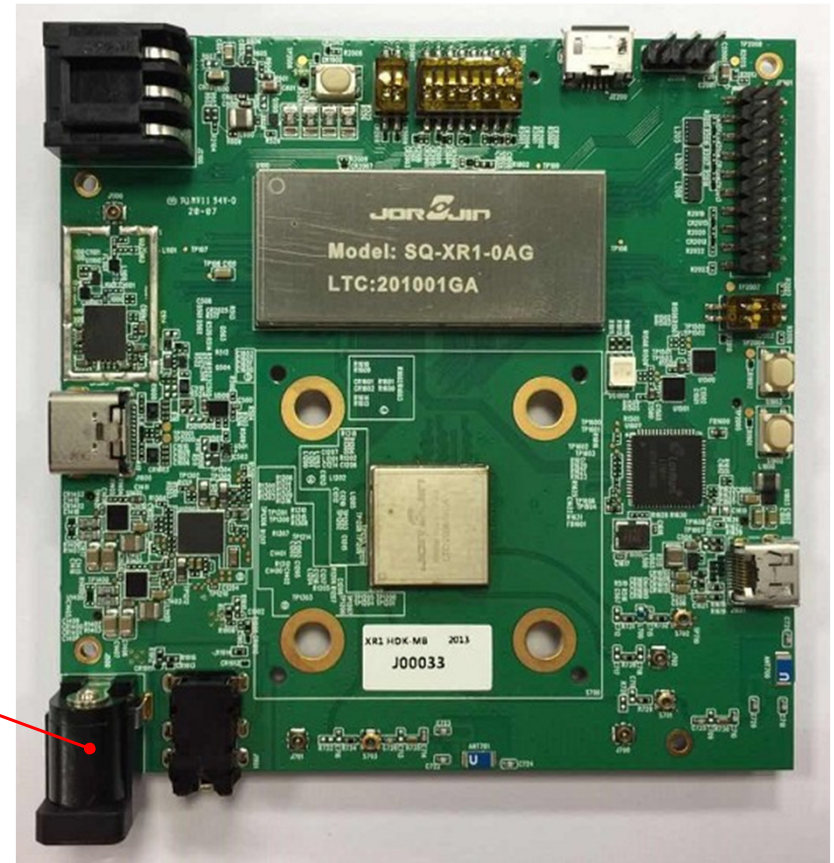
Volume -

Connect to Audio port

Connect to DC Adapter

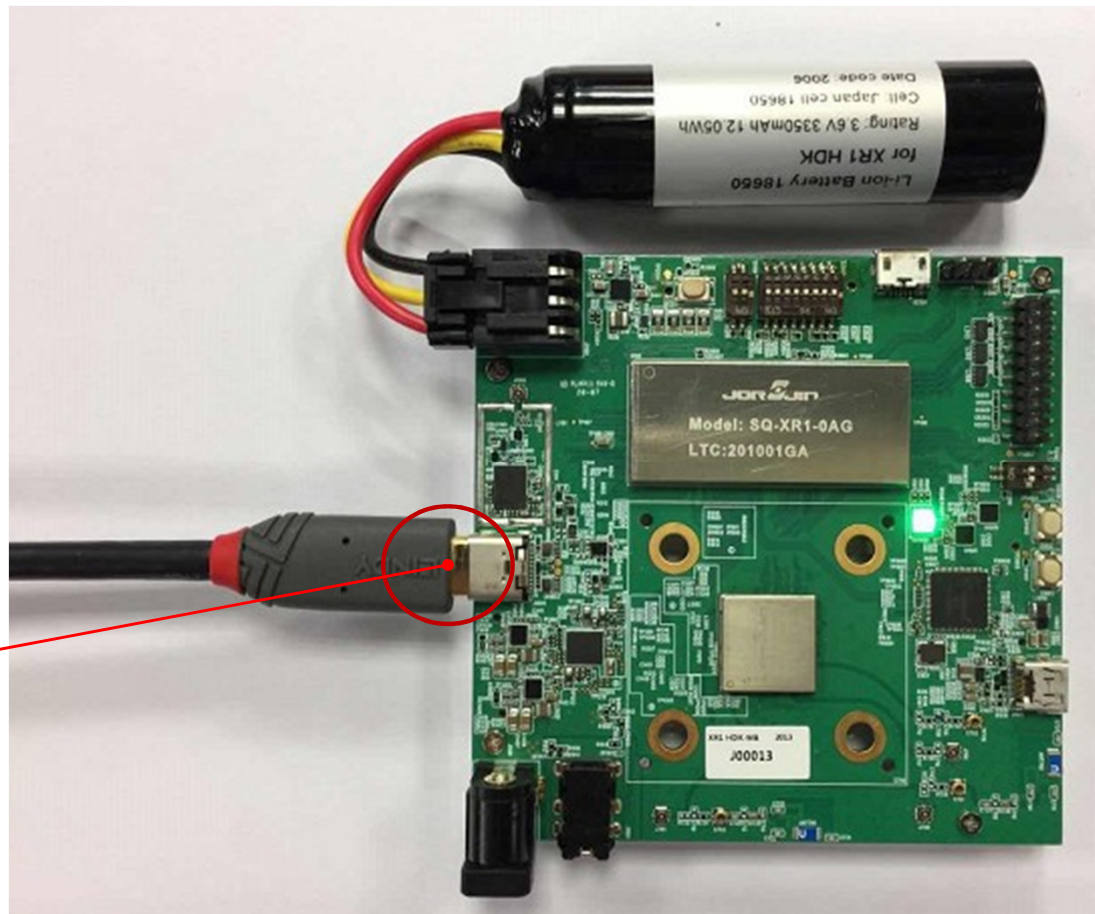DC PWR devices > Connect DC adapter to DC-IN port

Connect to
DC port 12V / 3A
(Option)

Charging the Battery

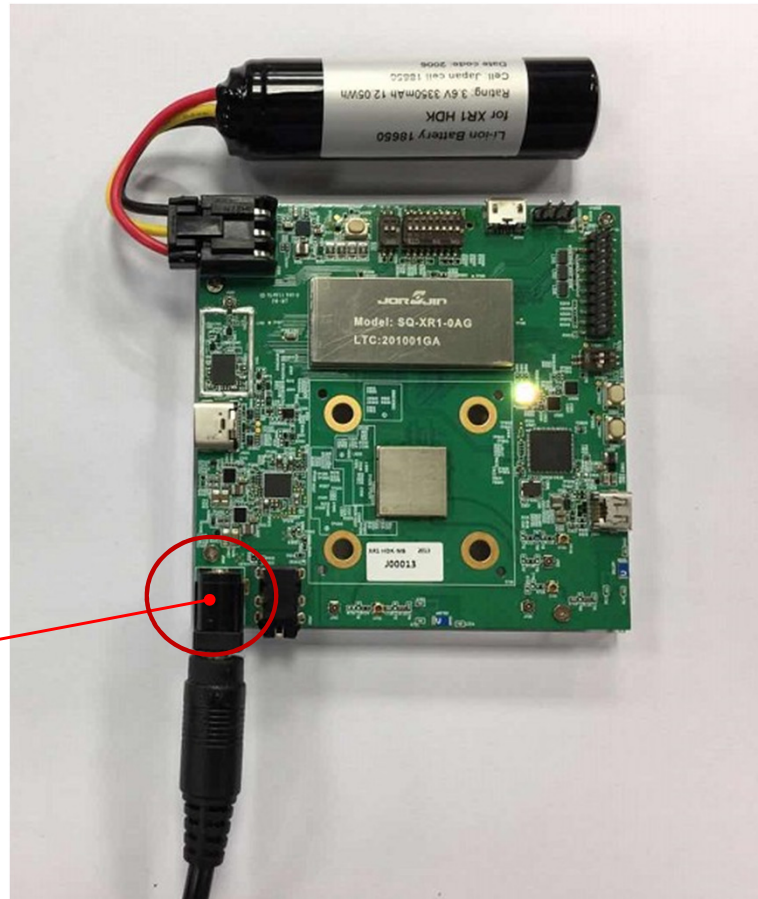**Option 1**. **Type-C** : Connect w / Type-C cable

Type-C
Connector

Charging the Battery

Option 2. **DC jack** : Connect w / DC Adapter

DC-IN Connector

Note:
USB-C DP mode temporarily not functional in this configuration

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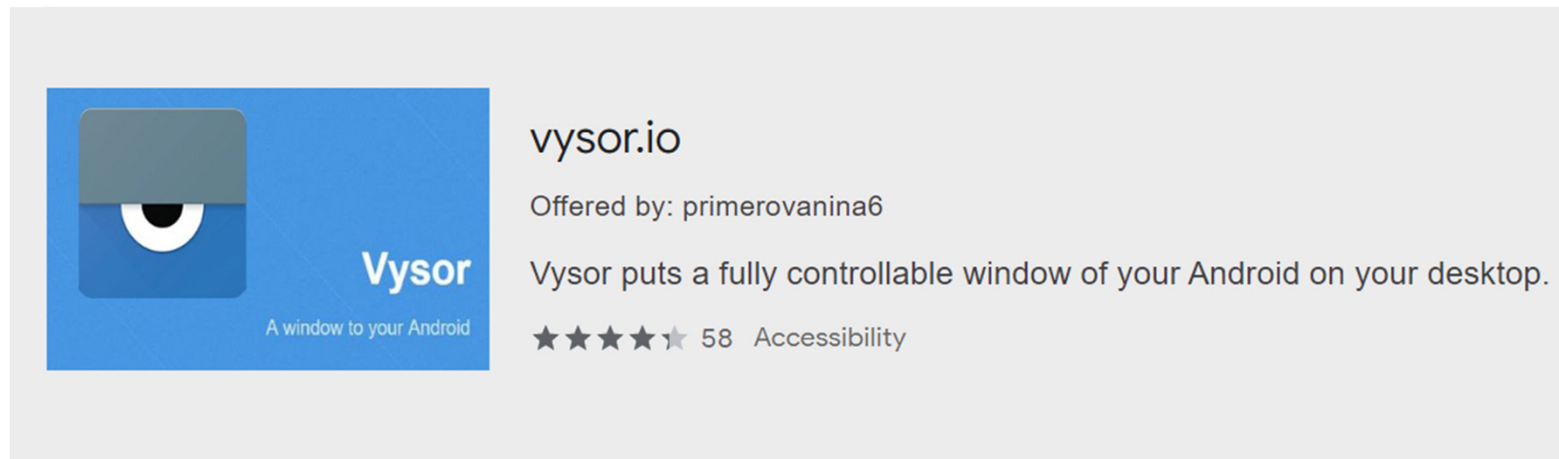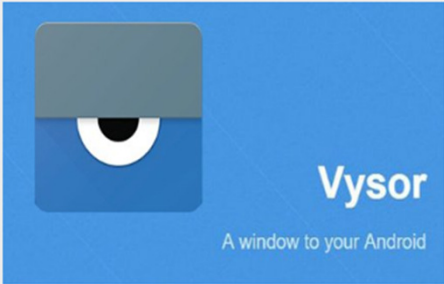
Reminder for charging

1. Priority: only one of Type-C or DC charger can be chosen for charging.
   When using DC charger, Type-C supports data output only (not DP mode)

2. Limitation: If the battery is over discharged (voltage <2.5V), the system can only
   boot up with Type-C and must be charged by USB until it reaches the safe
   value of 3.2V.

3. **Limitation:** DP mode can temporarily be only supported when device is powered
   from the battery.

Control Device by Vysor

Vysor lets you view your Android-based device from your desktop computer. Vysor mirrors the display image of the Android device. It helps developers to view and debug their Android devices more easily.