



SMART SYS6310 Application Ready Platform User Guide

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SMART SYS6310 Application Ready Platform



6310™ Application Ready Platform (SYS6310)

User Guide

003829 Rev A

June 09, 2021

Submit technical questions at: <https://www.smartwirelesscompute.com/techweb/>

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Revision History

Revision	Date	Description	Author
A	09/June/2021	Initial Release	SP

Approval Record

Function	Name	Date
Reviewed By	DJ	09/June/2021
Approved By	PSD	09/June/2021

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SCOPE

This document describes the system setup and usage of Qualcomm Snapdragon SDA450 processor-based 6310 TM Application Ready Platform (SYS6310)

Anti-Static Handling Procedures

SBC has exposed PCB and chips. Accordingly, proper anti-static precautions should be employed when handling the kit, including:

- Use a grounded anti-static mat
- Use a grounded wrist or foot strap

Hardware Identification Labels

Labels are present on the 6310 TM Application Ready Platform (SYS6310). The following information is conveyed on the 6310 TM Application Ready Platform (SYS6310):

- Serial Label
- Ethernet MAC Address
- Wi-Fi and BT MAC Address

HARDWARE SPECIFICATION

INTRODUCTION

The 6310TM Application Ready Platform (SYS6310) can be used to develop, test, and deploy end-user product solutions around the Qualcomm Snapdragon SDA450 processor.

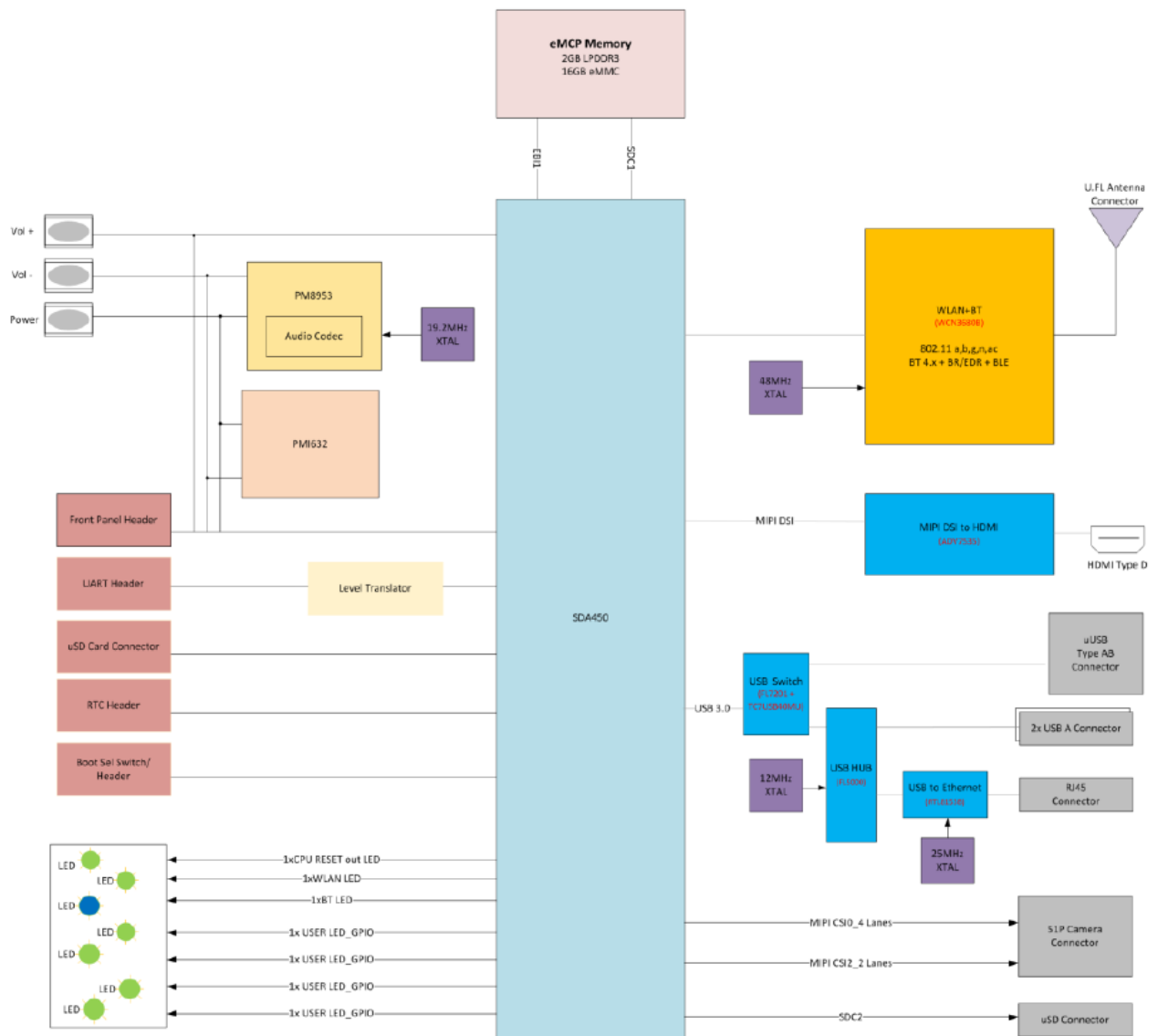
SYSTEM SPECIFICATION

The following table shows the hardware specification of the 6310TM Application Ready Platform (SYS6310)

Processor	
Processor	Qualcomm® Snapdragon™450 Processor (14mm×12mm package)
Memory	
eMCP (16 GB eMMC + 2 GB LPDDR3)	
SBC I/O Interfaces	
Interfaces	1× uUSB v2.0 (Device), 2× USB v3.0 (Host), 1× HDMI Type D, 1× RJ45,1xMicro SD Card slot
Form Factor	
Mechanical	109.05mm x 70.07mm x 30.02mm
Power	
Power Input	12V via DC Jack
Others	
Temperature Specification	0C to +40C

ARCHITECTURE

6310 Application Ready Platform (SYS6310) Block Diagram



FCC

FCC

Bluetooth Classic: 2402MHz - 2480MHz

BLE: 2402MHz - 2480MHz

2.4GHz WIFI:

20MHz BW: 2412MHz - 2462MHz

40MHz BW: 2422MHz - 2452MHz

5GHz WIFI:

20MHz BW: 5180MHz - 5240MHz, 5260Hz - 5320MHz,
5500MHz - 5700MHz, 5745MHz - 5825MHz

40MHz BW: 5190MHz - 5230MHz, 5270MHz-5310MHz,
5510MHz - 5670MHz, 5755MHz - 5795MHz

80MHz BW: 5210MHz, 5290MHz, 5530MHz - 5610MHz,
5775 MHz

CE

CE

Bluetooth Classic: 2402MHz - 2480MHz

BLE: 2402MHz - 2480MHz

2.4GHz WIFI:

20MHz BW: 2412MHz - 2472MHz

40MHz BW: 2422MHz - 2462MHz

5GHz WIFI:

20MHz BW: 5180MHz - 5240MHz, 5260Hz - 5320MHz,
5500MHz - 5700MHz

40MHz BW: 5190MHz - 5230MHz, 5270MHz-5310MHz,
5510MHz - 5670MHz

80MHz BW: 5210MHz, 5290MHz, 5530MHz - 5610MHz

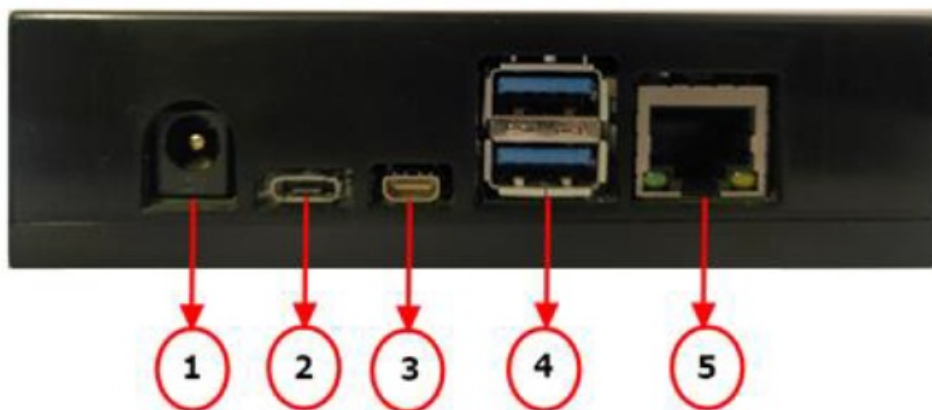
BOARD FAMILIARIZATION

Figure 2: SYS6310 Application Ready Platform

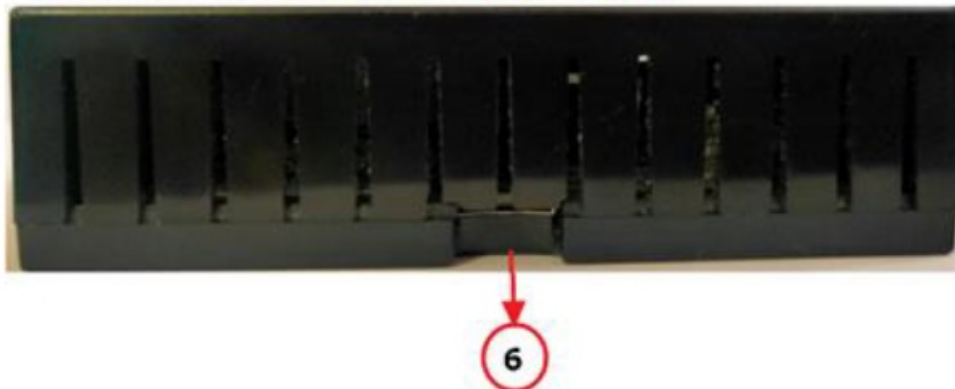


The following figure shows the interface positions of the 6310™ Application Ready Platform (SYS6310)

Real Panel IO Connectors



Front Panel IO Connector



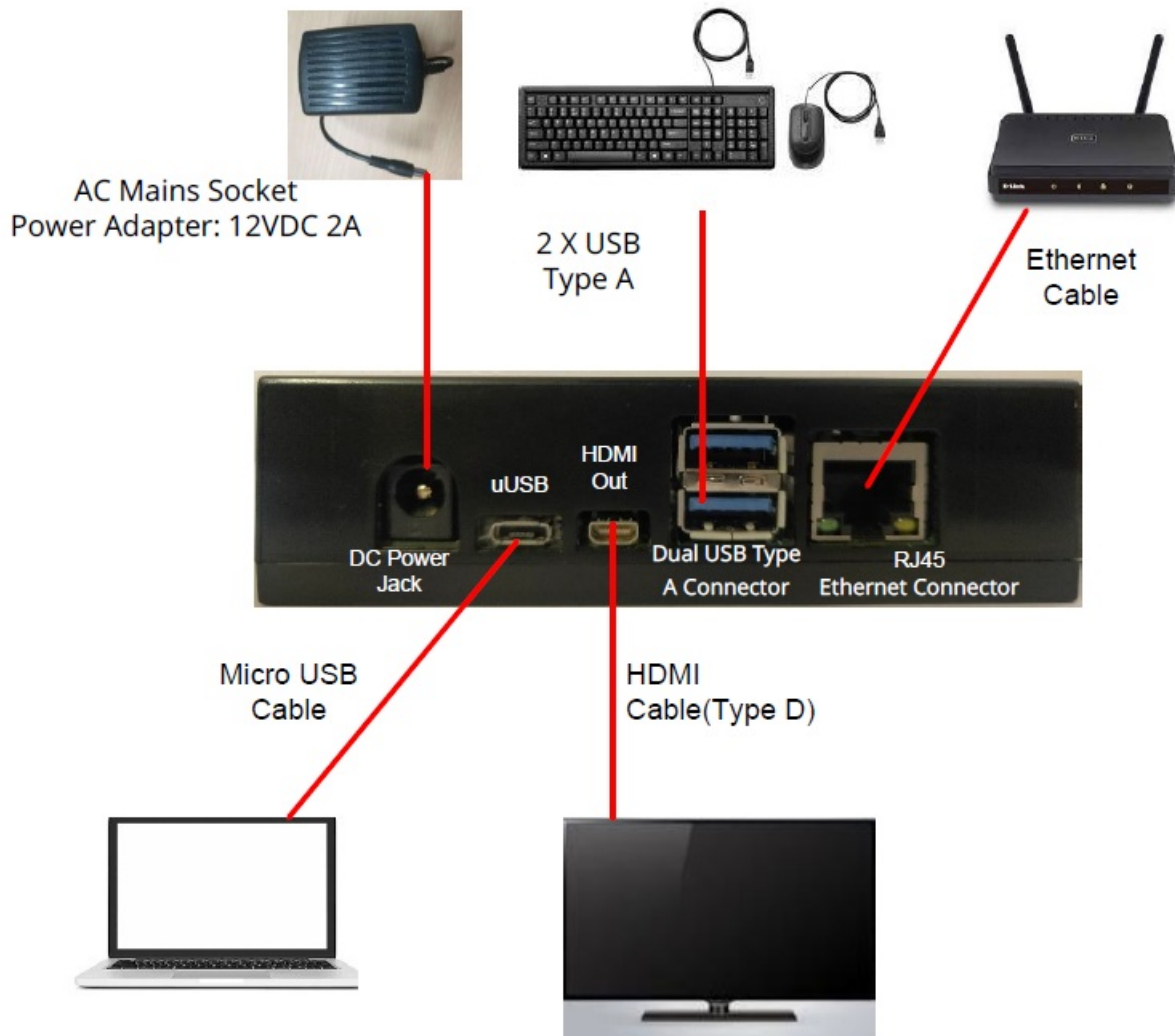
No.	Description
1	DC Power Jack
2	Micro-AB USB Connector (Debug)
3	Micro HDMI Connector (Type D)
4	Stacked USB 3.0 Type A Connector
5	Ethernet – RJ45 Connector
6	Slot for Micro SD Card

SYSTEM SETUP AND USAGE

HARDWARE SETUP

Figure below shows the Hardware setup of 6310 TM Application Ready Platform (SYS6310)

Figure 4: Hardware Setup



HARDWARE OPERATION

STEPS TO BOOT 6310 APPLICATION READY PLATFORM (SYS6310)

Connect the DC power adaptor to the 6310 TM Application Ready Platform (SYS6310)

NOTE: Carefully connect the DC connector to the jack provided on the board.

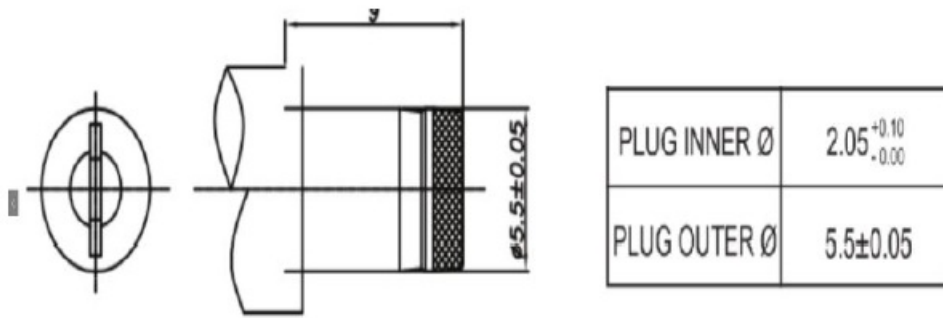
CAUTION: Use 12V, 2A DC Adaptor.

1. Connect the HDMI Out to a compatible display using an HDMI cable.
2. Switch ON the DC adaptor.
3. The board will boot up automatically.

NOTE: First-time booting might take longer time than normal booting. Android Version:
After a few minutes, the “android” logo followed by the lock screen will be displayed on the screen.

Mating Plug Specification for DC Jack

- Current rating 2 A
- Working Voltage: 12V DC



FASTBOOT MODE

Follow the below steps to enter fastboot mode.

1. Connect 6310 TM Application Ready Platform (SYS6310) and host PC using a Micro USB cable
2. Power on the board.
3. Once the device is booted up, open the command prompt in the host PC and enter the following commands

COMPLIANCE DETAILS

CLASS B PRODUCT COMPLIANCE STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

EU COMPLIANCE STATEMENT

The Frequency band(s) in which the radio equipment operates and maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates are shown below

WIFI 2.4GHz:	20MHz: 14.92 dBm EIRP 40MHz: 14.13 dBm EIRP
WIFI 5GHz:	5150MHz – 5250MHz, 5250MHz – 5350MHz, 5470MHz – 5725MHz: 20MHz: 11.61 dBm EIRP 40MHz: 13.77 dBm EIRP 80MHz: 12.40 dBm EIRP
Bluetooth Classic:	9.19 dBm EIRP
BLE:	1.79 dBm EIRP

- The 6310 is in compliance with the essential requirements and other relevant provisions of the RE Directive 2014/53/EU.
- This device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.
- A minimum separation distance of 20cm is required.

FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:


1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation

CONTACT INFORMATION

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Documents / Resources

	<p>SMART SYS6310 Application Ready Platform [pdf] User Guide 6310, 2ADCS6310, SYS6310, Application Ready Platform</p>
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