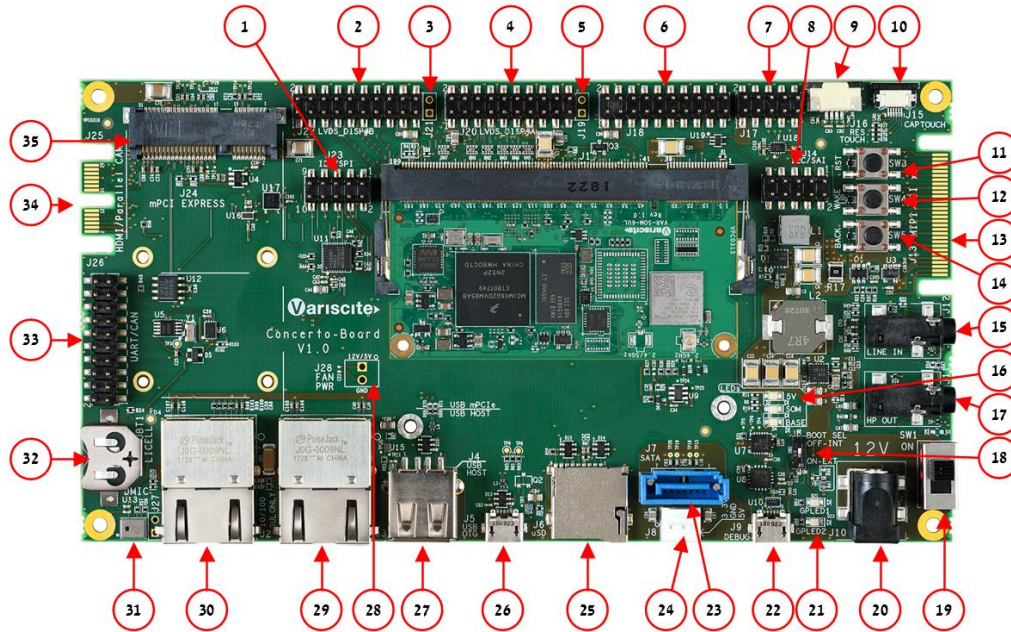# VAR-SOM-6UL based on NXP i.MX 6UltraLite/ ULL Evaluation Kit Quick Start Guide

Features:

1. I2C/SPI Header (J23)
2. LVDS B Header (J22)
3. LVDS B 4th Line Header (J21)
4. LVDS A Header (J20)
5. LVDS A 4th Line Header (J19)
6. DSI/SPI/QSPI Header (J18)
7. Analog Signal Header (J17)
8. I2C/SAI Header(J14)
9. Resistive Touch Connector (J16)
10. Capacitive Touch Connector (J15)
11. Reset Button (SW3)
12. Wake Up Button (SW4)
13. MIPI-CSI2 Camera Connector (J13)
14. Back Button (SW5)
15. Line-In Connector (J12)
16. Power Indication LEDs (D1, D2, D4)
17. HP Out Connector (J11)
18. Boot Select Switch (SW2)
19. Main Power-On Switch (SW1)
20. 12VDC Power Input Jack (J10)
21. General Purpose LEDs (D21, D23)
22. Debug connector (J9)
23. SATA Connector (J7)
24. SATA Power Connector (J8)
25. µSD-Card Connector (J6)
26. OSB OTG Connector (J5)
27. USB Host Connector (J4)
28. Fan Power Connection (J28)
29. Ethernet 2 Connector (J3)
30. Ethernet 1 Connector (J2)
31. DMIC (U13)
32. RTC Lithium Cell Connector (JBT1)
33. UART/CAN Connector (J26)
34. HDMI/Camera Connector (J25)
35. Mini-PCIe Connector (J24)

Evaluation kit initial Setup

1. Carefully remove the 7" LCD and Concerto-Board from the package.
2. Connect the 7" LCD Display and Touch cables to the Evaluation Kit connectors J15, J20 respectively.
   Note:
   Display cable – connect the cable with the red wire on pin 1.
   Touch cable – connect the cable with the metal contacts facing down.

3. Plug the USB type A to micro B cable between the USB debug connector (J9) and a PC USB port.

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Setting the host PC for debug

1. Download any PC terminal software (e.g. Putty).
2. Set the PC terminal software parameters as follows:
   - Baud Rate: 115200
   - Data bits: 8
   - Stop bits: 1
   - Parity: None
   - Flow Control: None

Booting from eMMC

1. For internal boot:
   Set the Boot select switch (SW2) to OFF-Internal position to boot from the VAR-SOM-6UL internal storage.
2. Plug the wall adapter into the 12V power jack (J10) and to a 120VAC~240VAC power source.
3. Set Power ON Switch (SW1) to ON state.
4. Boot messages should be printed within the PC terminal window.

Booting from a micro SD card

The microSD card is supplied within the package. Updated SD card images can also be downloaded from the Variscite FTP server.

See more details in the recovery SD card section in the Variscite Wiki pages.

1. Set Power ON (SW1) Switch to OFF state.
2. Set Boot select switch (SW2) to ON-External position in order to boot from the SD card.
3. Push microSD card into the microSD card slot (J6) of the Concerto-Board.
4. Set Power ON switch to ON state.
5. Boot messages should be printed within the PC terminal window.

(Re-)Installing the file system to eMMC

Please refer to the recovery SD card section in the Variscite Wiki pages.

Links

- o Wiki page:
  https://variwiki.com/index.php?title=VAR-SOM-6UL

- o VAR-SOM-6UL Evaluation kits:
  https://www.variscite.com/product/evaluation-kits/var-som-6ul-evaluation-kits/

- o VAR-SOM-6UL System on Module:
  https://www.variscite.com/product/system-on-module-som/cortex-a7/var-som-6ul-nxp-imx6ul-6ull-6ulz/

- o Concerto carrier board:
  https://www.variscite.com/product/single-board-computers/concerto-board/

- o Customer portal:
  https://varisciteportal.axosoft.com/login

Thank you for purchasing Variscite's product.

For additional assistance please contact: sales@variscite.com