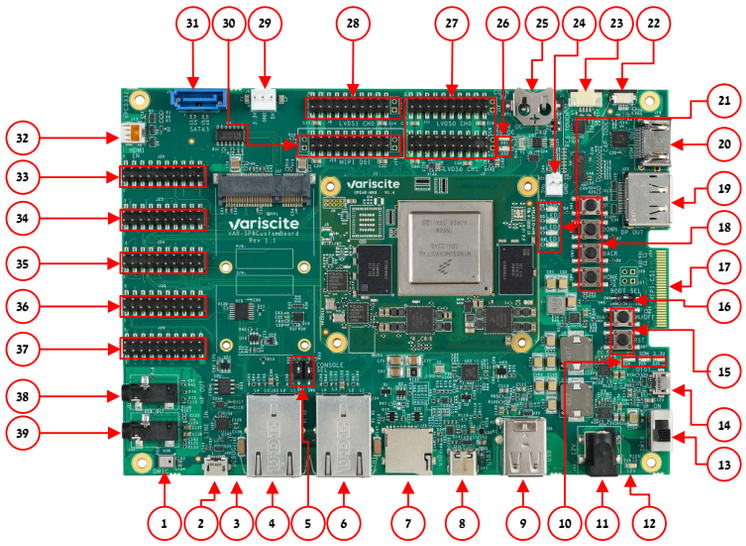
SPEAR-MX8 based on NXP i.MX8
Evaluation Kit Quick Start Guide

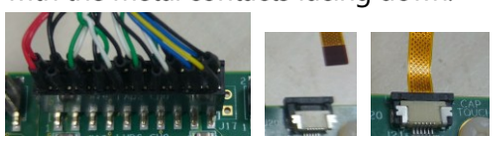


Features

1. DMIC (U38)
2. USB Debug (J40)
3. Mini PCIe (J37)
4. Gigabit Ethernet 0 (J33)
5. Debug port select (SW8, SW9)
6. Gigabit Ethernet 1 (J34)
7. SD-MMC (J36)
8. USB3.0 OTG (J41)
9. Dual USB2.0 Host (J35)
10. Power supply LEDs (D26, D29, D30)
11. 12V DC In (J43)
12. 12V DC In LED (J28)
13. On/Off switch (SW10)
14. USB2.0 OTG (J30)
15. Reset, On/Off button (SW5, SW7)
16. Boot Select Switch (SW6)
17. MIPI CSI-2 Camera Extension(J25)
18. User Buttons (SW1, SW2, SW3, SW4)
19. Display Port (J22)
20. HDMI Port (J19)
21. User LEDs (D3, D5, D6, D8)
22. Capacitive Touch (J8)
23. Resistive Touch (J7)
24. FAN (J21)
25. Coin Cell Battery (JBT1)
26. LVDS Over Current LEDs (D31, D32)
27. LVDS 0 (J11, J12, J17, J18)
28. LVDS 1 (J9, J10)
29. SATA Power (J6)
30. DSI (J14, J15, J16)
31. SATA
32. HDMI In (J13)
33. SPI, M40 (J20)
34. CAN, RS485, SPDIF (J23)
35. MLB, SAI (J24)
36. CAN, UART, I2C (J26)
37. ADC, SNVS (J29)
38. Headphones (J31)
39. Line In (J32)

Evaluation kit initial setup

1. Carefully remove the 7" LCD and VAR-SP8CustomBoard from the package.
2. 7" LCD Display: connect the display cable to J11 with the red wire on pin 1 and the touch cable to J8 with the metal contacts facing down.



3. Plug the USB type A to micro B cable between the USB Debug connector (J40) and a PC USB port.
4. Select A53 Debug Port by setting SW8 to On.
5. Peel off the plastic layer from the heat sink and place the sticky surface on top of the SOC.

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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 (SW6) to eMMC position (On) to boot from the SPEAR-MX8 internal storage.
2. Plug the wall adapter into the 12V power jack (J43) and to a 120VAC~240VAC power source.
3. Set Power ON switch (SW10) 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 (SW10) to OFF state.
2. Set Boot select switch (SW6) to SD side (Off) in order to boot from the SD card.
3. Push microSD card into the microSD card slot (J36) of the VAR-SP8CustomBoard.
4. Set Power ON switch (SW10) to ON state.
5. Boot messages should be printed within the PC terminal window.

(Re-)Installing the file system on the eMMC

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

Support

Visit our support center

Thank you for purchasing Variscite's product.

For additional assistance please contact: sales@variscite.com