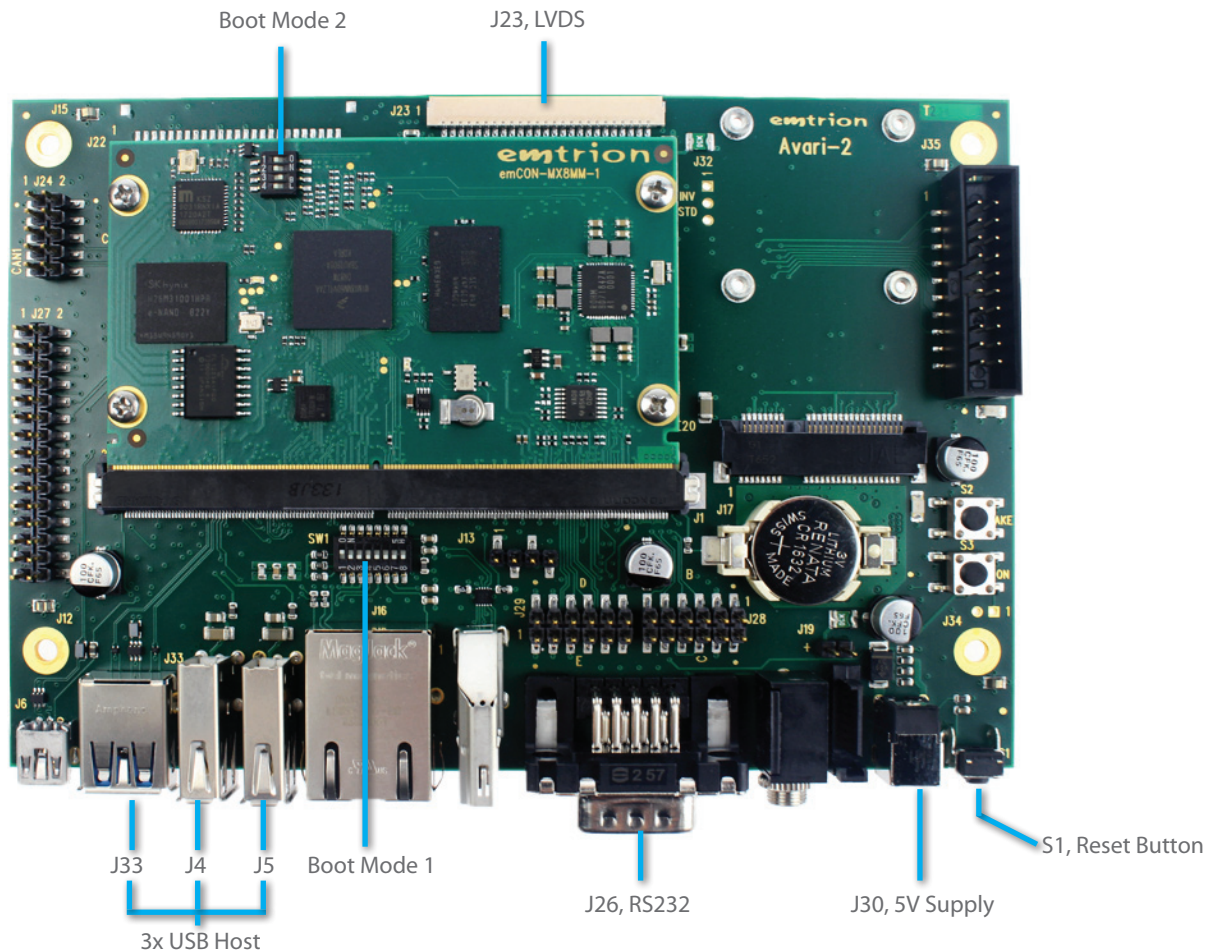


emCON-MX8MMini Developerkit with Linux Yocto

Connecting

Connector Overview



Setting Up the Developer Kit

1. Introduction

The developer kit emCON-MX8MM-Yocto is preconfigured. The CPU module is already mounted on the carrier Board Avari and Yocto Thud (2.6) is installed in the eMMC of the module.

All you have to do is plug in the display with touch interface and a 5 V power supply to the Avari.

After power is switched on the module starts up to Yocto login. The LCD screen and also the console interface show a login prompt. The default username is "root", a password is not needed. After entering the username at the console, the LCD screen output also proceeds to the Weston desktop screen. Touching the small terminal icon on the top left corner of the screen opens a terminal window.

Please watch that the cursor on the LCD screen is controlled by a USB mouse and cannot be moved by the touch interface.

2. Display Connections

The display uses three connectors, the LVDS data interface, the backlight power supply and the touch interface. The LVDS interface and the backlight power share the same cable which must be plugged to J23 of the Avari. The connectors are mechanically coded and cannot be plugged wrong.

2. Display Connections

The touch interface is connected via USB. Any of the three USB-A connectors of the Avari can be used for it. Since the iMX8Mmini processor does not support USB 3.0 there is no need to keep J33 open for future use.

3. Power Supply

The Developer Kit needs 5 VDC +/-5% at maximum 2 A. An appropriate power supply is contained in the kit. The power supply is connected to J30 of the Avari.

4. DIP Switches

A 4-way DIP switch on the emCON-MX8MM CPU module and an 8-way DIP switch on the Avari are used to configure the boot mode. For normal usage the DIP switches of the CPU module must be set to:

| Position | 1 | 2 | 3 | 4 |
|----------|-----|-----|----|-----|
| | Off | Off | On | Off |

From the DIP switches of the Avari only position 1 must be set to On. The other seven switches must be set to Off.

| Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------|----|-----|-----|-----|-----|-----|-----|-----|
| | On | Off | Off | Off | Off | Off | Off | Off |

5. Console, debugging

The console interface of the bootloader and Linux is available at the D-Sub-9 connector J26 of the Avari as standard RS232 interface. The settings for the terminal are 115200 baud, 8 data bits, 1 stop bit, no parity. Flow control is not used.

6. Push Buttons

By pressing the push button S1 a hardware reset of the CPU can be forced. Please watch that the button has to be pressed for more than 4 s.

The push buttons ON and WAKE of the carrier board Avari are currently not supported.

Links to further information

Software Manual

https://www.emtrion.de/de/details_products-accessoires/i.MX8MM-Modul-mit-NXP-MCIMX8M-Mini.html?file=files/content/emtrion/downloads/emtrion-emcon-mx8mm-manual-yocto_v003en.pdf

Hardware Manual emCON-MX8MM

https://www.emtrion.de/de/details_products-accessoires/i.MX8MM-Modul-mit-NXP-MCIMX8M-Mini.html?file=files/content/emtrion/downloads/emCON-MX8MM_HW_V003en.pdf

Hardware Manual Avari

https://support.emtrion.de/en/details_products-accessoires/avari-59.html?file=files/content/emtrion/downloads/emCON_Avari_HW_v006en.pdf