

3AT1023

EVb for SoM 3SM1007 based on **i.MX7**

FEATURES

- Support all SoM 3SM1007 series based on NXP **i.MX7** Solo/Dual ARM® Cortex®-A7 CPU
- Complete and flexible platform
- LCD 10.1 + PCT touch screen
- Camera module 3AT1019



CPU

- Support all SoM 3SM1007 series
- NXP i.MX7 Solo/Dual ARM® Cortex®-A7 CPU + ARM® Cortex®-M4 CPU
- Heterogeneous Multicore Processing architecture
- A7 processors Frequency up to 1200 MHz
- M4 processor Frequency 266 MHz

MEMORY

- Up to 2 GB DDR3L up to 1066MHz (32 bit)

STORAGE / BOOT¹

- SPI Nor Flash for bootloaders
- Up to 512 MB NAND FLASH memory (optional)
- Up to 64 GB eMMC 5.0 (optional)
- µSD card connector

MULTIMEDIA AND HUMAN INTERFACE¹

- Image processing PXP, v3.0
CSC, Resize, Combine, Rotate
HW Dithering, Basic 2D Blit
- LVDS 24 bit display connector (obtained from MIPI-DSI i.MX7 output)
- Parallel 24 bit RGB video port (alternative to WEIM interface)
- MIPI-CSI camera connector (see also Camera module 3AT1019)

I/O PERIPHERALS¹

- USB 2.0 OTG micro USB connector
- USB 2.0 Host type A USB connector (alternative to PCIe port)
- 2 x Ethernet 10/100/1000 connector (second Ethernet port alternative to WEIM interface)
- 2 x FLEXCAN BUS Interfaces on expander connector 3
- 2 x SPI, 8 x ADC input, I2C, uart on expander connector 2
- miniPCIe x1 connector (alternative to USB 2.0 Host)
- SIM Card connector
- Audio line Input connector
- Audio microphone input connector
- Audio headphone input connector
- RS232 connector
- 1x RS-232/422/485 selectable via SW on expander connector 3
- Full WEIM interface on expander connector 1 (alternative to second Ethernet port, Parallel 24bit RGB and QSPI interface)
- Debug micro USB connector (FTDI)

SYSTEM

- Single +12÷24 VDC ±5% supply
- Power consumption depends on MPU clock frequency / state and peripherals in use
- RTC integrated in i.MX7 Application processor. Battery CR1220
- Dimension: 160 x 125.5 x 22mm

TEMPERATURE²

- 0 to +70°C for Commercial version
- -20 to +85°C for Extended version

OPERATING SYSTEMS

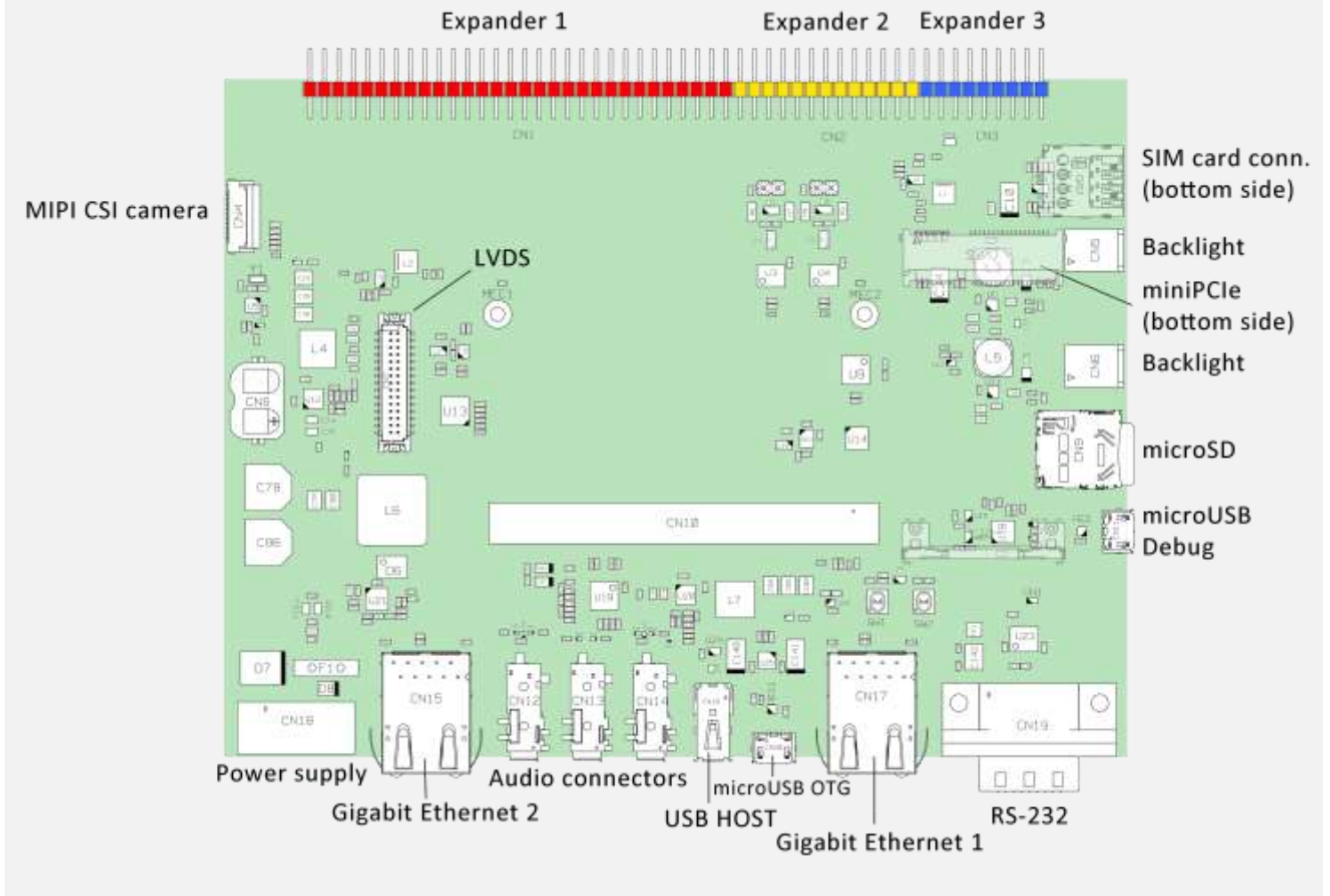
- Linux

¹Please note that all function may not be available simultaneously, due to pin muxing limitation of SOM edge connector restrictions. Function availability depends also on the installed processor part number. For more details refer to processor datasheet.

²Appropriate cooling measures must be provided.



MOTHER BOARD CONNECTORS



ORDERING INFORMATION

Part Number	Description
3AT1023_A01	EVB_SoM 3SM1007 Linux - only mother board 574
3AT1023_B01	EVB_SoM 3SM1007 Linux – with SoM 3SM1007A4D2.1234
3AT1023_C01	EVB_SoM 3SM1007 Linux – with SoM 3SM1007A4D2.124

EVB components list

- SoM code 3SM1007A4D2.1234 (included into 3AT1023_B01)
- SoM code 3SM1007A4D2.124 (included into 3AT1023_C01)
- Display 10.1'' 1024x600 + PCT code BLC1133 (not included into 3AT1023_A01)
- Camera module code 3AT1019 (not included into 3AT1023_A01)
- Display cable (not included into 3AT1023_A01)
- Camera FFC cable (not included into 3AT1023_A01)
- Mother Board code JSF0574_Axx
- MicroUSB cable
- USB key 8GB with SDK linux
- microSD 8GB with linux image
- Power supply 12V 2A