

PicoCore™MX6UL100

Computer On Module with NXP i.MX 6ULL

Characteristics

- NXP i.MX 6ULL applications processor Cortex®-A7 up to 900MHz
- max. 512MB DDR3L RAM, 512MB SLC NAND/ 32GB eMMC
- LCD interface for TFT: 18 Bit RGB/ 24 Bit LVDS
- Touch (resistive or PCAP via I²C, external)
- Audio LINE IN/ OUT/ MIC/ HEADPHONE/ I2S
- 2x Ethernet/ RGMII
- 1x USB 2.0 OTG, 4x UART, 4x I²C, 2x CAN, 2x SPI
- 1x SDIO, PWM, Digital I/O
- Watchdog, RTC, WLAN/BT (2.4/ 5 GHz and 5.0LE)
- SPDIF, 3x SAI (Audio)
- Linux, (WEC2013 is possible)
- 2x 100Pin plug connector
- 35 x 40mm
- 0°C - +70°C up to -40°C - +85°C

Description

The PicoCore™ Computer On Module product family has a new member, based on the NXP i.MX 6 ULL ARM® CPU.

It uses a NXP CPU with ARM® Cortex®-A7 core with 900MHz, making PicoCore™MX7UL100 a very inexpensive COM module. The power loss of only 1W makes it the perfect solution for portable and battery-powered devices. The PicoCore™ standard uses two plug connectors (Hirose DF40C) with 100 pins each. This results in compact size and low board-to-board distance. SLC NAND Flash (high reliability) and eMMC Flash are available for program memory, a SD-Card slot is also available externally. Audio Codec on board offers analog audio signals, as well as digital audio signals. For networking, 2x Ethernet or RGMII can be used. There is also available a WLAN/BT module with antenna connector.

The customized F&S Linux comes with various security functions. PicoCore™ MX6UL100 will be available until minimum 2030.

On-Board Operating System



The F&S Linux BSP (uboot, Buildroot, Yocto, QT, GStreamer) contains the customized kernel and all interface drivers including source.

For a quick start into software development, the following workshops are offered:

Linux on F&S Modules (Standard Workshop)

Additional workshops:

Linux – Qt5 Workshop

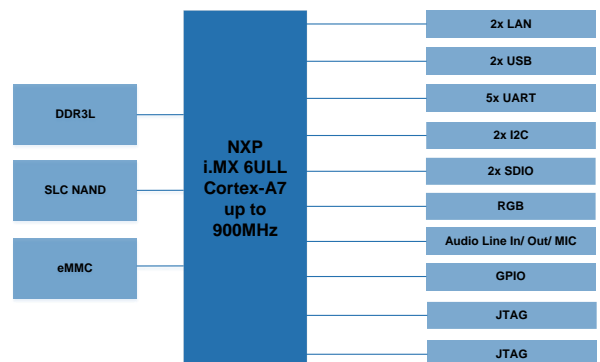
Linux – Asymmetric Multiprocessing

Linux – Secure Boot

Original Size



Block Diagram



Starterkit

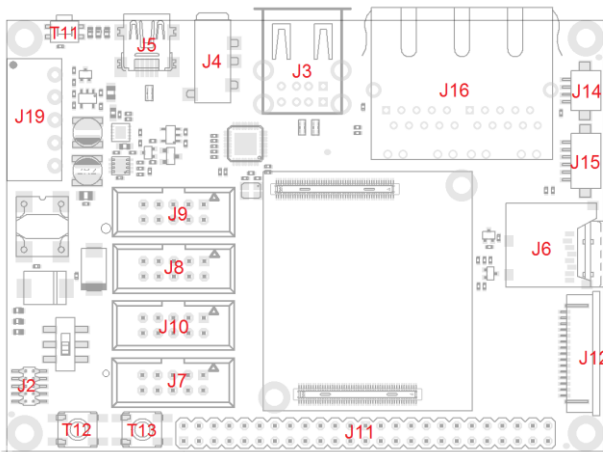
The PicoCore™MX6UL100 starterkit is available with Linux.

The starterkit consists of a base board with plugged on PicoCore™MX6UL, a cable kit and the access data to the F&S download area.

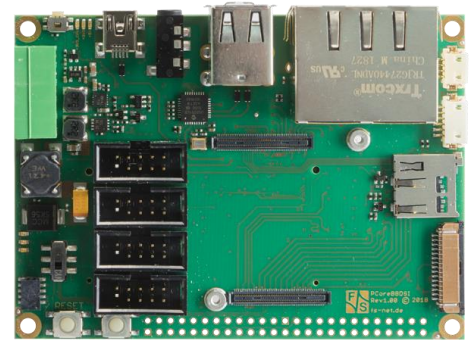
Our support forum with more than 3000 registered customers is always online for help.

Start your development fast and easy by attending one of our workshops.





- J1 : PicoCore
- J2 : JTAG
- J3 : 2x USB Host
- J4 : Audio (HP + MIC)
- J5 : USB OTG
- J6 : µSD
- J7 : CAN
- J8 : UART_A (RXD / TXD)
- J9 : UART_B (RXD / TXD)
- J10 : UART_C (Komplett)
- J11 : GPIO
- J12 : MIPI-CSI (Camera)
- J13 : MIPI-DSI (2CH / 4Lanes)
- J14 : Display (BLPWM...)
- J15 : I2C für Touch
- J16 : 2x ETH
- J17 : MPCle (Bottom)
- J18 : SIM (Bottom)
- J19 : Power
- T11 : On/Off oder Reset
- T12 : Reset
- T13 : BOOTSEL



Accessories

Displaykit RGB 2

7" WVGA Display with RGB interface and touch panel, connection cable (40pol film cable), display adapter and touch cable

PicoCore™ Connector

to connect PicoCore™ modules to the base board.

More accessories can be found on our website.

Technical Data

Power Supply:	3.8..5.5V
Power Consumption:	1 Watt typ.
Interfaces Fix:	2x Serial, 2x Ethernet 1x USB Host, 1x USB Device 1x CAN, 1x I2C Audio Line In/ Out/ Mic/ HP
Display:	RGB 18 Bit, LVDS 24 Bit
Interfaces Flex:	4x Serial, 3x I ² C, 1x CAN 2x SPI, 1x SDIO (w/o WLAN) PWM, Watchdog 1x SPDIF, 3x SAI,
WLA/BT:	802.11 ac/a/b/g/n BT5.0LE
RAM:	DDR3L up to 512MB
Program Memory:	SLC NAND up to 512MB or eMMC up to 32GB
Processor:	ARM Cortex®-A7 900MHz
Temperature Range:	0°C - +70°C, -20°C - +85°C, -40°C - +85°C
Size:	35mm x 40mm x 8mm (LxBxD)
Plug Connector:	2x 100pol Hirose DF40C
Weight:	~10g

Standard Versions/ Order Notations

PicoCoreMX6UL100-V1-LIN

Cortex®-A7 – 900MHz, 512MB RAM, 256MB SLC NAND Flash, Audio (I2S), 1x Ethernet, RTC, RGB, 0°C - +70°C, Linux

PicoCoreMX6UL100-V3I-LIN

Cortex®-A7 – 800MHz, 512MB RAM, 512MB SLC NAND Flash, Audio codec, 2x Ethernet, RTC, LVDS, -20°C - +85°C, Linux

PicoCoreMX6UL100-V4-LIN

Cortex®-A7 – 900MHz, 512MB RAM, 4GB eMMC Flash, Audio codec, 2x Ethernet, RTC, LVDS, WLAN/BT, 0°C - +70°C, Linux

Minimum Order Quantity for Special Versions:

Customer-specific software: 500 pieces
Assembly Variant: 1000 pieces

Standard Versions/ Order Notations

PicoCore™MX6UL100-SKIT-LIN

Starterkit with PicoCoreMX6UL100-V4-LIN, base board cable kit, 7" TFT with PCAP touch, access data to BSP and documentation