

PHYTEC

# phyCORE®-i.MX 6UL/ULL

The phyCORE-i.MX6UL System on Module (SOM) is powered by the NXP i.MX6 UL and i.MX 6ULL. The series expands the phyCORE family of products by adding an ultra-low power and cost-effective solution. This compact module features Direct Solder Connect technology with scalloped edge contacts which reduces manufacturing cost. The industrial phyCORE-i.MX 6UL is PHYTEC's lowest power SOM to date and is well suited for high performance and energy-efficient applications such as HMI, IoT, and other connected devices.



## i.MX 6 UltraLite Processor

- Cost-efficient Low-Power NXP i.MX 6UL, Cortex-A7 supports up to 696 MHz frequency or i.MX 6ULL, Cortex-A7 with up to 792 MHz
- DVFS Power Management
- Extended Hardware encryption technology and Secure Boot

## Direct Solder Connect

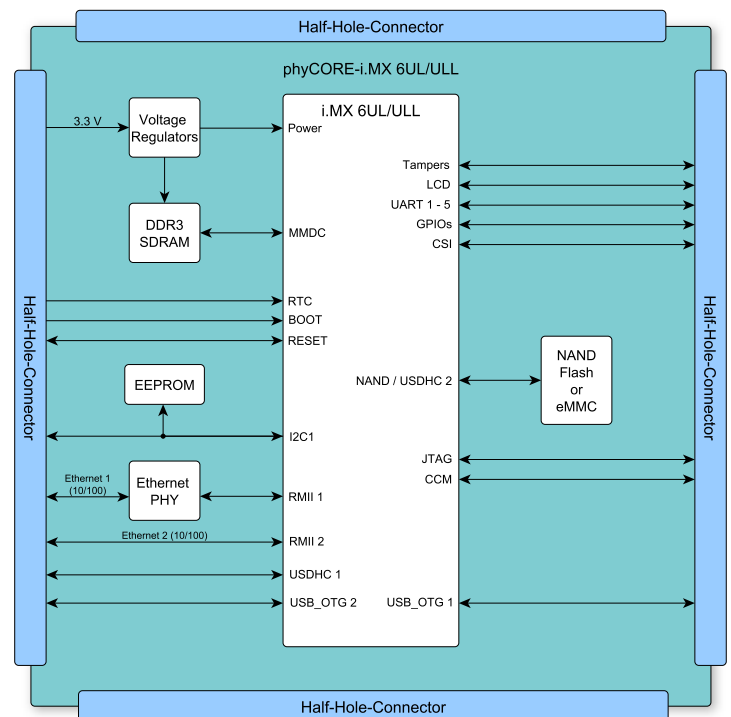
- Scalloped edge contacts further improving manufacturing cost
- Tape and Reel' or tray options available for optimized system assembly

## Features

- Compact form factor: 36 mm x 36 mm
- 159-pin support Dual LAN, Dual USB, Dual CAN, parallel LCD and camera, ISO7816 standard SIM card interface
- SOM customization available at low production volumes

## Product Integration

- Global Technical Support
- Product Life-Cycle Management program
- Production-ready Linux/Yocto BSP
- FCC / CE product reference design
- Carrier Board Full Schematic Review
- Pin Mux Configuration tools
- System Architecture Consulting



## Module Configuration | phyCORE-i.MX 6UL/ULL (PCL-063)

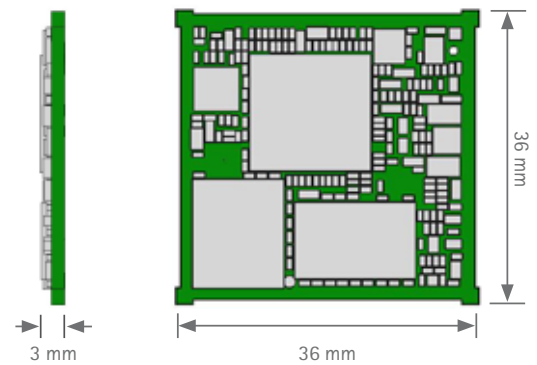
Configuration Order Code	Module Options	Kit Configuration PCL-063-23900Cl.Ax	... with eMMC PCL-063-20920Cl.Ax	Standard with i.MX 6UL-G2 PCL-063-23400Cl.Ax
Processor	i.MX 6UL G1-G3 / 6ULL Y1-Y2	i.MX 6ULL-Y2	i.MX 6ULL-Y2	i.MX 6UL-G2
Cores	ARM® Cortex®-A7	ARM® Cortex®-A7	ARM® Cortex®-A7	ARM® Cortex®-A7
Frequency	528 MHz / 792 MHz	792 MHz	792 MHz	696 MHz
Safety Features	TRNG, Crypto Engine (AES with DPA, TDES/SHA/RSA), tamper monitor, Secure Boot	Basic	Basic	TRNG, Crypto Engine (AES / TDES / SHA), tamper monitor, Secure Boot
eFuse	512 bit / 1024 bit / 1536 bit / 204 8bit	512 bit	512 bit	1536 bit
2D Graphics Acceleration	optional 2D	yes	yes	yes
SLC-NAND FLASH	128 MB bis zu 2 GB	512 MB	-	512 MB
eMMC	4 GB bis zu 128 GB	-	8 GB	-
DDR3	128 MB bis zu 2 GB	512 MB	512 MB	512 MB
EEPROM	4 KB	4 KB	4 KB	4 KB
Ethernet PHY	10 / 100M-PHY	2x 10/100 Mbit/s	2x 10/100 Mbit/s	2x 10/100 Mbit/s
Temperature	0 °C to +70 °C / -40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C
BSP	Linux	Linux	Linux	Linux

\* Please contact us for additional standard SOMs

## SOM Interfaces

Interfaces	Standard	Maximum*
UART	3	8
CAN	1	2
SPI	1	4
I <sup>2</sup> C	1	4
MMC/SDIO	2	2
Ethernet	2	2
USB	2	2
EIM	1	1
PWM	1	8
ADC	1	2
LCD Parallel	1	1
Audio	1	3
Camera Parallel	1	1
Keypad	0	1
SIM	0	2
JTAG	1	1

\* The processor interface functions can be used multiple times through PINMUX. However, not all interfaces will be available at the same time.



## Physical Data

Dimensions	36 mm x 36 mm x 3 mm
Weight	approx. 6.2 g
Operating Temperature	0 °C to +70 °C, -40 °C to +85 °C
Power Supply	VCC 3.3 V ±5%
Connector	159-pin, 1 mm pitch

## Ordering Information Kits

### Part number

KPB-02013-001	phyBOARD-Segin Full Featured Kit
KPB-02013-Video-L01	phyBOARD-Segin Imaging Kit



[www.phytec.eu/en/phycore-imx-6-ul-ull](http://www.phytec.eu/en/phycore-imx-6-ul-ull)