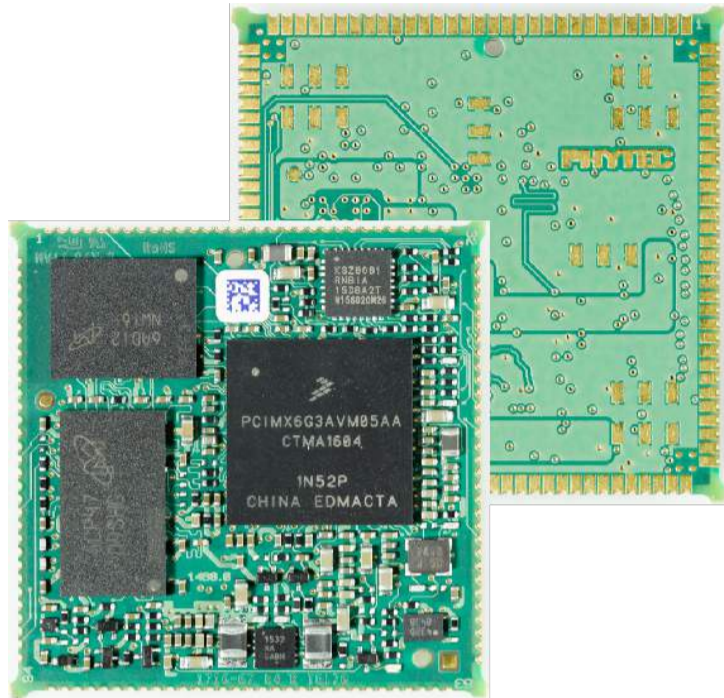# phyCORE® i.MX6UL System on Module

phyCORE-i.MX6UL SOM

Ultra-low power. Cost effective.

phyCORE-i.MX6UL Product Highlights:

// ARM® Cortex®-A7

// Featuring NXP i.MX 6UL / i.MX 6ULL

// Direct Solder Connect scalloped edge interface

// Tape and Reel or Tray orderable options

// Custom SOM configuration available

// Seamless system integration

// Compact form factor: 36 x 36 mm

// Linux/Yocto Project Support

For the new era of highly integrated and low power devices.

The phyCORE-i.MX6UL System on Module (SOM) is powered by the NXP ARM Cortex-A7 i.MX 6UL / i.MX 6ULL product families. The series expands PHYTEC's family of products into low cost ultra-low power based solutions. This compact module features our next generation of Direct Solder Connect(DSC) technology with scalloped edge contacts which reduces manufacturing cost. The industrial phyCORE-i.MX6UL is well suited for high performance and energy-efficient applications such as HMI, IoT, and other connected devices.

Seamlessly integrate the phyCORE-i.MX6UL into your system. Partner with PHYTEC during development and work directly with PHYTEC's industry recognized support team for Linux/Yocto project support, carrier board schematic review, pin mux configuration, and system architecture consulting. Leverage PHYTEC's in house manufacturing capabilities for SOM customization even at low production volumes. Production quantities of the phyCORE-i.MX6UL can be ordered in 'tape and reel' or tray for optimized system assembly and to boost manufacturing bottom line.

PHYTEC SOMs are designed to accelerate product development cycles, while providing cutting edge technologies and product life cycle management solutions to successfully address the ever-evolving challenges in the market. PHYTEC has strategic commitment and decades of experience providing high-quality, high-reliability solutions to OEM's ranging across all vertical markets.

System on Module advantages:

EASIER
Building a new embedded device from the ground up is an enormous challenge and risk. Embedded development can be made much easier by leveraging existing solutions.
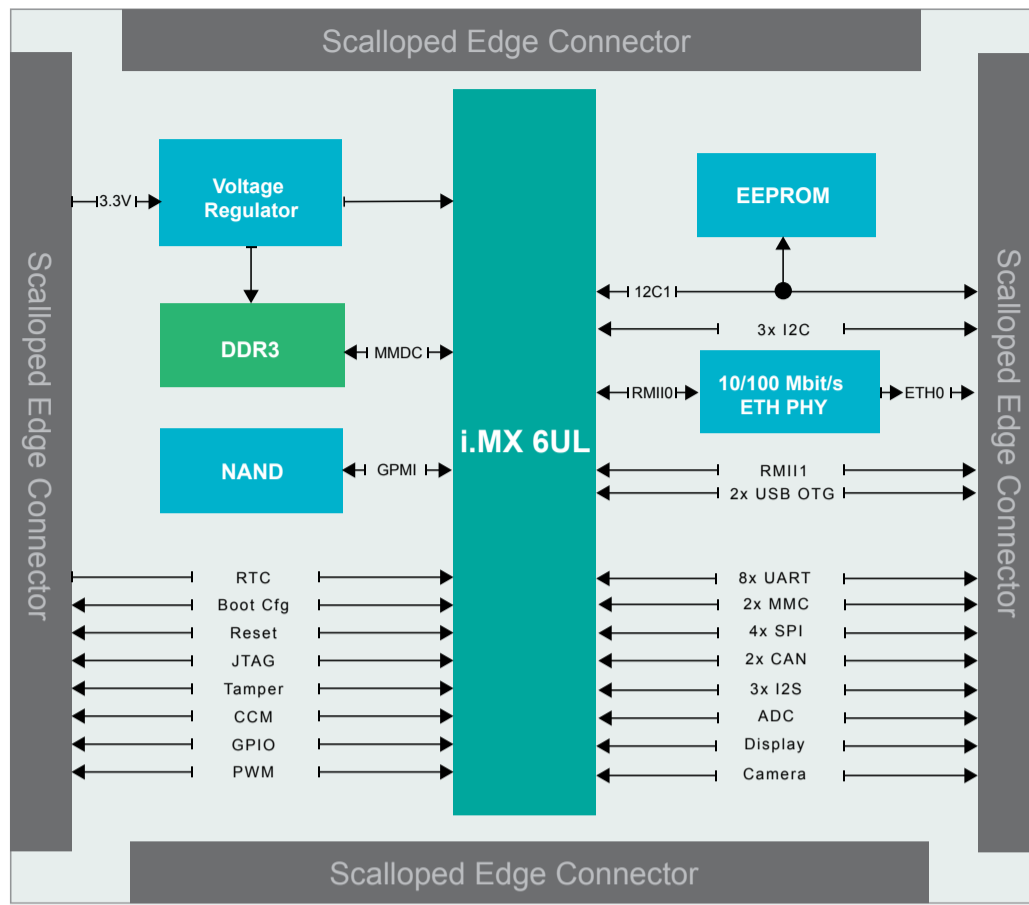
FASTER
Deploy a production-ready SOM and BSP and eliminate 6-12 months from your development timeline.

CHEAPER
Save substantial non-recurring engineering costs by eliminating specification, parts selection, schematic, layout, validation, and Operating System porting efforts. Use an off-shelf SOM and BSP instead.
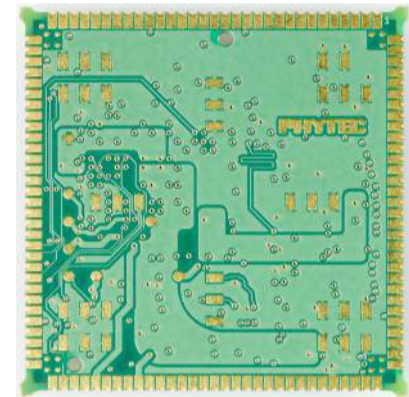
PHYTEC

phyCORE® - i.MX6UL System on Module

phyCORE-i.MX6UL SOM BLOCK DIAGRAM

phyCORE-i.MX6UL Top View

phyCORE-i.MX6UL Bottom View

SOM FEATURES / Part No. PCL-063:

Processor
- NXP i.MX 6UL G0-G3 and i.MX 6ULL Y0-Y2
- ARM® Cortex®-A7
- NEON™ MPE co-processor
- Programmable smart DMA (SDMA)
- Integrated Power Management Unit
- DVFS
- Pixel Processing Pipeline (PXP) for 2D image processing
- Advanced Security: ARM TrustZone, Secure Boot, Secure Storage, hardware encryption, eFUSE, tamper detection

Memory
- Up to 2 GB DDR3
- Up to 2 GB NAND
- EEPROM

Expansion
- 2x SD/SDIO/MMC (eMMC)

Serial
- 8x UARTs, 4x I²C, 3x Audio Ports, 4x SPI, 2x CAN

USB/Network
- 2x USB 2.0 OTG
- 2x 10/100 Mbit/s Ethernet (1x PHY on SOM)

Multimedia / Display
- 24-bit Parallel Display
- 24-bit Parallel Camera

Misc
- 2x SIMv2, 8x PWM, ADC
- Watchdog, GPIO, Keypad, JTAG

Mechanical
- 36 x 36 mm
- Direct Solder Connect Technology
- 1 mm pitch scalloped edge (159 pins)

Supply
- 3.3V

Temperature
- Commercial: 0° to +70°C
- Industrial: -40° to +85°C

Software
- Linux BSP (LTS kernel)
- Linaro Toolchain Support
- Yocto Project Support

Availability
- 15 year long-term availability

SERVICES

Product developers with aggressive timelines or limited resources can employ PHYTEC's full range of design services, which include systems integration support with printed circuit board and software design services, Linux and Android expertise, and in-house manufacturing facilities.

PHYTEC

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