

▶ BL i.MX6ULL/UL



Board - Line

COMPLEX APPLICATION PROCESSOR, AS EASY TO USE AS A MICROCONTROLLER!

The Internet of Things (IoT) requires ever smaller, higher-performing but yet more cost-efficient controller solutions, with maximum demands in terms of computing power, interface variety and driver support. Ever more complex systems have to be developed in ever shorter cycles.

For the price of a microcontroller, the i.MX6 Ultralite processor offers you a high-yield application processor featuring a Arm® Cortex®-A7 core, a clock frequency of 800 MHz and a variably configurable interface landscape.

Get your project started right now with the compact Kontron Electronics SoM pre-installed on the Baseboard. Keep pace with ever shorter development cycles while relying on industry-capable solutions and processor modules with guaranteed long-term availability.

▶ FEATURES

- ▶ Embedded application and control processor
- ▶ 1x Arm® Cortex®-A7 @800 MHz, various memory sizes, variable interfaces
- ▶ Pre-installed embedded Linux operating system including all drivers for communication and LCD/touch interfaces

▶ CLIENT BENEFITS

- ▶ Quick and easy realization of complex processor solutions
- ▶ Low-cost solution possible with using simple Baseboard
- ▶ Custom add-on functions via expansion plug-ins
- ▶ No special know-how needed for DDR3-RAM integration
- ▶ Full Linux toolchain available free of charge
- ▶ Short time to market

▶ APPLICATIONS

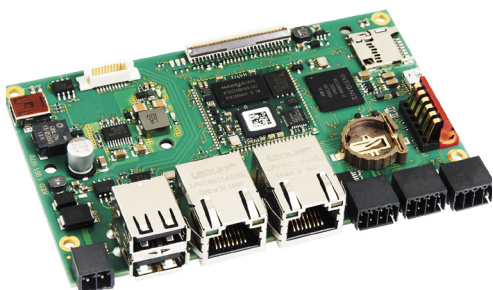
- ▶ IoT/Industry 4.0
- ▶ Medical technology
- ▶ Communications
- ▶ Same processor module for variant-rich Baseboard families
- ▶ Minimum-footprint application

► TECHNICAL DATA

FUNCTION	STANDARD LAYOUT ULL	STANDARD LAYOUT UL	OPTIONS
MICROPROCESSOR			
CPU	i.MX6ULL 1x Arm® Cortex®-A7 @800 MHz	i.MX6UltraLite 1x Arm® Cortex®-A7 @528 MHz	
MEMORY SOM MODULE			
DDR3-RAM	512 MB	512 MB	256 MB
NAND-Flash	512 MB	512 MB	256 MB
NOR-Flash	1 MB	1 MB	
MEMORY SOM BASEBOARD			
eMMC	4 GB	4 GB	Up to 128 GB
SD card	1x microSD Card Slot	1x microSD Card Slot	
nvSRAM	64 kbit	64 kbit	
COMMUNICATION			
Ethernet	2x 10/100 Mbit/s	2x 10/100 Mbit/s	
USB	2x 2.0 Host, 1x 2.0 OTG	2x 2.0 Host, 1x 2.0 OTG	
Serial	1x RS232, 1x RS485	1x RS232, 1x RS485	
CAN	1x CAN 2.0	1x CAN 2.0	
DIO	2x DIO (24 V/up to 800 mA)	2x DIO (24 V/up to 800 mA)	
AIO	2x AIN (0...24 V)	2x AIN (0...24 V)	
DISPLAY / TOUCH			
LCD interface	1x RGB 24-bit up to 1366 x 768 @60 fps	1x RGB 24-bit up to 1366 x 768 @60 fps	
Touch	1x I ² C, 1x USB	1x I ² C, 1x USB	
OTHER			
Power supply	24 V DC ±20 %	24 V DC ±20 %	
Power consumption	Linux running <1.5 W	Linux running <1.5 W	
Temperature range	0 °C...+70 °C	0 °C...+70 °C	
Operating system	Embedded Linux (Yocto Distribution)	Embedded Linux (Yocto Distribution)	
Form factor	105.5 x 67 mm (4.3")	105.5 x 67 mm (4.3")	
External RTC	1x on Baseboard	1x on Baseboard	
RTC buffering	Battery on Baseboard CR1220	Battery on Baseboard CR1220	
Debug	1x Console	1x Console	
Expansion plugs	2x USB, 1x I ² C	2x USB, 1x I ² C	1x SPI instead of nvSRAM
Audio	1x Buzzer	1x Buzzer	
SECURITY			
	Secure Boot, RNG, AES-128	Secure Boot, TRNG, Tamper Detection, Secure Storage (including 32 kb Secure RAM), Cryptographic Accelerators (AES-128, DES 3DES, ARC4, MD5, SHA-1, SHA-224, SHA-256, RSA/ECDSA), Secure Debug, OTP Space	

▶ PRODUCTS BOARD-LINE

PRODUCT NAME	ARTICLE NO.	OPTIONS
BL i.MX6 UL 512 MB/512 MB	40099 191	CODESYS LOW License
BL i.MX6 ULL 512 MB/512 MB	40099 148	CODESYS MED License
AC Connector Set BL/AL/DL	30099 003	Order in addition to BL i.MX6UL/ULL
USB-UART Adapter	40099 101	-



▶ PRODUCTS AUTOMATION-LINE

PRODUCT NAME	ARTICLE NO.	OPTIONS
AL i.MX6 ULL 512 MB/512 MB	50099 037	CODESYS MED License
AL i.MX6 ULL 512 MB/512 MB CODESYS + Webvisu	50099 053	CODESYS MED License
AC Connector Set BL/AL/DL	30099 003	Order in addition to BL i.MX6UL/ULL
USB-UART Adapter	40099 101	-



▶ DEVELOPMENT KIT

PRODUCT NAME	ARTICLE NO.	CONTENTS
DK i.MX6 UL 512 MB/512 MB	50099 061	BL i.MX6 UL, Power Supply, Cables, Debug Adapter
DK 5" i.MX6 UL 512 MB/512 MB	50099 058	BL i.MX6 UL, Touch Display, Power Supply, Cables, Debug Adapter
DK i.MX6 ULL 512 MB/512 MB	50099 046	BL i.MX6 ULL, Power Supply, Cables, Debug Adapter
DK 5" i.MX6 ULL 512 MB/512 MB	50099 042	BL i.MX6 ULL Touch Display, Power Supply, Cables, Debug Adapter



POSSIBILITIES START HERE



► ABOUT KONTRON ELECTRONICS

Kontron Electronics GmbH is a full-service provider in the field of electronics, development and manufacturing services. Our business portfolio includes proprietary and client-specific products, development and design services for complex electronics components, modules and systems, as well as production and assembly services for entire devices. The company is part of Kontron and the technology corporation S&T.

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