

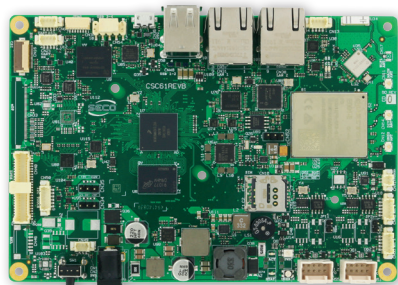
Smart Edge Computing



SBC-C61

SBC with NXP i.MX 8M Mini Applications Processors

Heterogeneous Multi-core Processing Architecture for edge node computing and multimedia



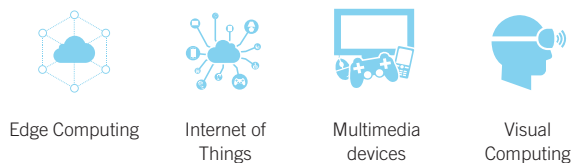
HIGHLIGHTS

CPU NXP i.MX 8M Mini Family	CONNECTIVITY Up to 2x GbE; opt Wifi; up to 2x RS-232 or RS-485 or CAN; opt LTE Cat4 Modem with SIM slot or eSIM
GRAPHICS GC320 2D accelerator + GCNanoUltra 3D accelerator	MEMORY Soldered on-board LPDDR4-3000 memory, up to 4GB



DEVELOPMENT | SAMPLING | PRODUCTION

MAIN FIELDS OF APPLICATION



FEATURES

Processor	NXP i.MX 8M Mini Family based on ARM® Cortex®-A53 cores + general purpose Cortex®-M4 400MHz processor: <ul style="list-style-type: none"> i.MX 8M Mini Quad – Full featured, 4x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Dual – Full featured, 2x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Solo – Full featured, 1x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Quad Lite –4x Cortex®-A53 cores up to 1.8GHz, no VPU i.MX 8M Mini Dual Lite –2x Cortex®-A53 cores up to 1.8GHz, no VPU i.MX 8M Mini Solo Lite –1x Cortex®-A53 cores up to 1.8GHz, no VPU 	Networking	2x GbEthernet interfaces (1 optional) Optional WiFi 802.11 a/b/g/n/ac +BT LE 4.2 module Optional soldered on-board LTE Cat 4 Modem with microSIM slot or eSIM
Max Cores	4+1	USB	2x USB 2.0 Host ports on Type-A socket 2x USB 2.0 Host ports on internal pin header 1x USB OTG port on micro-AB connector (interface shared with the optional on-board modem)
Memory	Soldered-down LPDDR4 memory, up to 4GB total, 32-bit interface	Audio	Digital Mic In connector (2x PDM inputs) Amplified mono Speaker Output
Graphics	GC320 2D accelerator + GCNanoUltra 3D accelerator Embedded VPU (not for Lite processors), able to offer: <ul style="list-style-type: none"> VP9, HEVC/H.265, AVC/H.264, VP8 HW Decoding AVC/H.264, VP8 HW encoding OpenGL ES 2.0, OpenVG 1.1 support	Serial Ports	Up to 2x RS-232 or RS-485 or CAN Serial ports (factory options, shared with GPIOs and SPI interfaces) 2x Debug UARTS
Video Interfaces	LVDS Single/Dual Channel connector or eDP connector (factory alternatives) MIPI-CSI Camera interface connector	Other Interfaces	I/O Connectors with: <ul style="list-style-type: none"> 2xPWM @3.3V GP I2C interface @3.3V 1x Open Drain output (max 12V) 2x GPIOs @3.3V 1xRS-232 or 1x RS-485 or 4x GPIOs / 1x UART or 1x CAN (factory options) 1xRS-232 or 1x RS-485 or 4x GPIOs / 1x UART or 1x CAN + on-board ultra-low power RTC (factory options) Watchdog Dedicated connector for I2C Touch Screen Controller Support Optional Accelerometer + Magnetometer, on-board Onboard Buzzer Optional Ultra Low Power RTC
Video Resolution	Up to 1920x1080p60, 24bpp	Power Supply	+12V _{DC} ÷ +24V _{DC}
Mass Storage	Optional eMMC 5.1 drive on-board, up to 64GB MicroSD slot 2Kb I2C Flash QSPI Flash		

Information subject to change. Please visit www.seco.com to find the latest version of this datasheet



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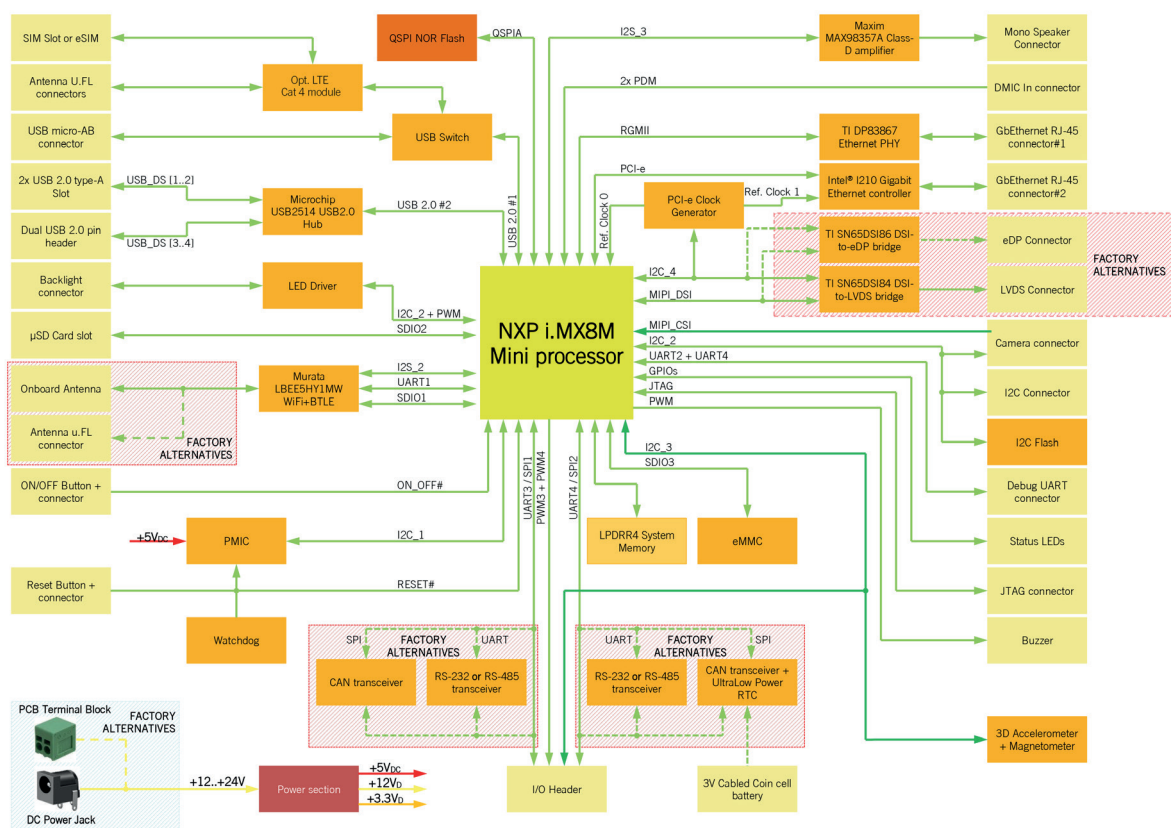
SBC with NXP i.MX8M Mini Applications Processors

FEATURES

Operating System	Wind River Linux Yocto Android
Operating Temperature*	-20°C ÷ +60°C (extended version)
Dimensions	146x102 mm (3.5" form factor)

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.

BLOCK DIAGRAM



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