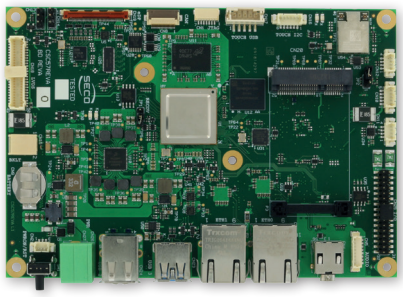
Single Board Computer

SBC-C57

3.5” SBC with NXP i.MX 8X family of SOCs

Ideal for certified performance requirements and safety efficient



HIGHLIGHTS

CPU
NXP i.MX 8X family of Processors

CONNECTIVITY
2x GbE; miniPCI-e slot; 1x USB3.0; 2x USB 2.0; Expansion header

GRAPHICS
GC7000Lite with up to 16 Execution Units

MEMORY
Soldered on-board LPDDR4 memory, frequency up to 1200MHz

Available in Industrial Temperature Range

MAIN FIELDS OF APPLICATION

- Automation
- Industrial Automation and Control
- In-Vehicle Infotainment Systems
- Robotics
- Transportation

FEATURES

Processor	NXP i.MX 8X family SoCs: Dual or Quad ARM Cortex®-A35 Cores + 1x Cortex® M4F core for real-time processing • NXP i.MX8 QuadXplus, 4x ARM Cortex®-A35 Cores + 1x Cortex® M4F core for real-time processing • NXP i.MX8 DualXplus, 2x ARM Cortex®-A35 Cores + 1x Cortex® M4F core for real-time processing
Max Cores	4+1
Memory	Soldered down LPDDR4 memory @ 1200MHz, 32-bit interface, up to 4GB
Graphics	Embedded GC7000Lite GPU Supports OpenGL 3.0, 2.1, OpenGL ES 3.1, OpenCL 1.2 Full Profile and 1.1, OpenVG 1.1, and Vulkan Embedded VPU, supports HW decoding of HEVC/H.265, AVC/H.264, MPEG-2, VC-1, RV10, VP8, H.263 and MPEG4.2t, HW encoding of AVC/H.264 2 independent displays supported
Video Interfaces	Factory options: • eDP 4-lane interface + LVDS single Channel 18-/24-bit interface • LVDS Dual Channel / 2 x LVDS Single Channel interface
Video Resolution	Up to 1080p60
Mass Storage	Soldered onboard eMMC 5.1 Drive, up to 64GB QSPI NOR Flash soldered on-board
Networking	Up to 2 x Gigabit Ethernet ports On-board WiFi 802.11 a/b/g/n + BT 5.0 module, optional
USB	1x USB 3.0 Host ports on USB 3.0 Type-A socket 1x USB OTG Port on micro-AB connector (interface shared with USB 2.0 interface of USB 3.0 Type-A socket) 2x USB 2.0 Host ports on Dual Type-A socket 1x USB 2.0 Host port on miniPCI-e Slot
Audio	I2S Audio codec Mic In + Hp-Out on TRRS combo connector Line Out + 2x Mic-In interfaces on internal connector
PCI-e	Optional mini PCI-e Slot
Serial Ports	1x UART on expansion connector, optionally with RS-232 interface 1x UART on expansion connector, optionally with RS-485 interface 1x CAN port, available at TTL Level on expansion connector or with CAN transceiver on dedicated connector 2x Debug UARTs on dedicated connectors
Other Interfaces	Available on expansion connector: • 16x GPIOs • I2C interface • 2x analog inputs • 1x PWM Power and reset button input on dedicated connector
Power Supply	Factory option, +12VDC or +24 VDC input voltage DC power jack or 2-poles PCB terminal block for voltage supply RTC battery
Operating System	Linux
Operating Temperature*	-40°C ÷ +85°C (Industrial version)
Dimensions	146 x 102 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.

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

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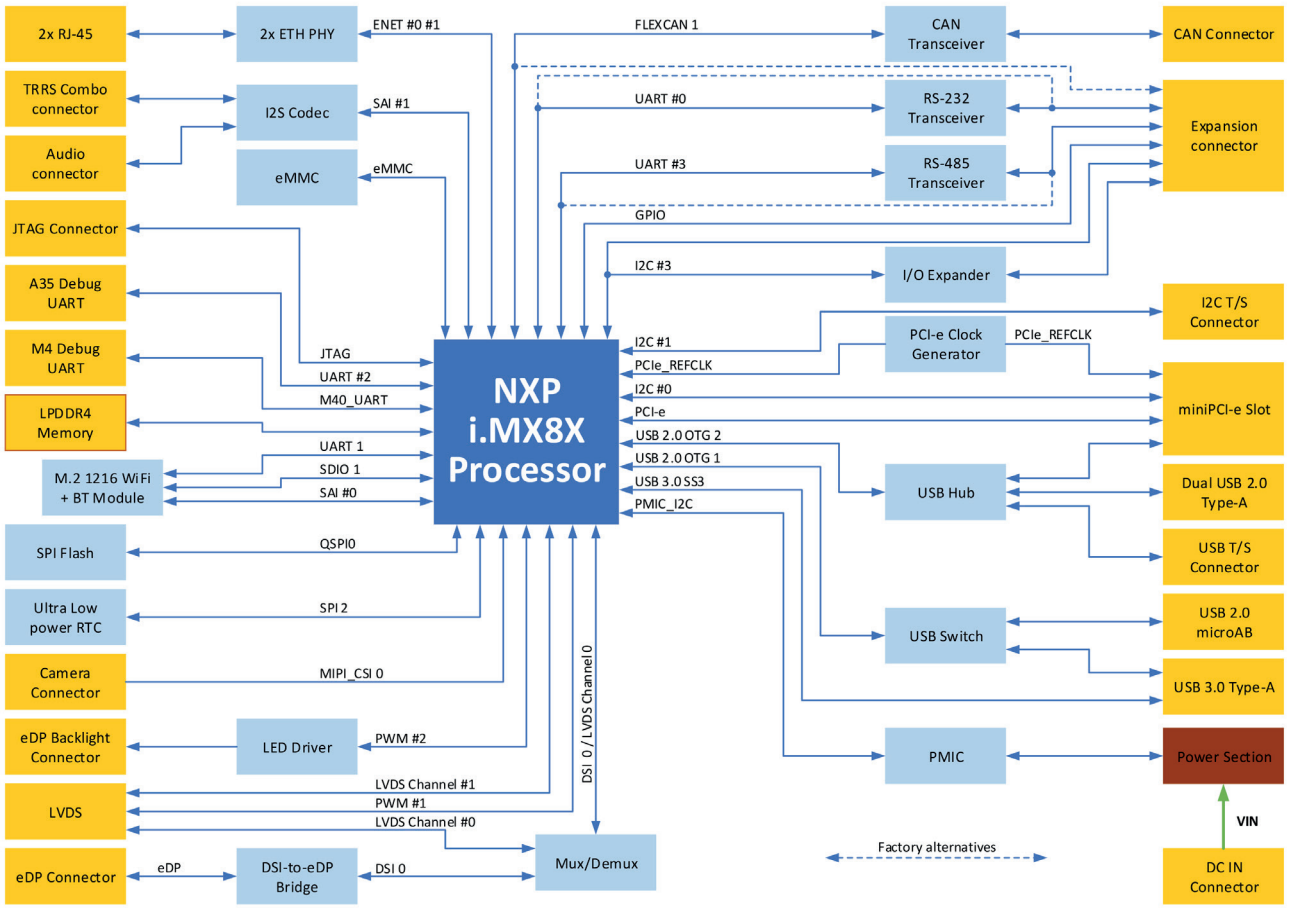
BLOCK DIAGRAM



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