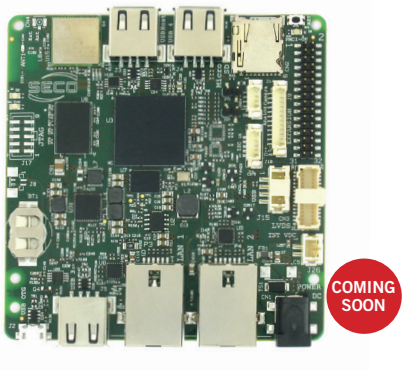
Single Board Computer

SBC-B08 — Single Board Computer with NXP i.MX 6SoloX Processor

All-in-one IoT hybrid computing solution



HIGHLIGHTS

- From the success of DDOO NEO, the SBC born for Industry
- The ideal building block for any IoT project
- Wireless connectivity
- Linux or Android running on the Cortex®-A9 core
- Real-time OS on the Cortex®-M4 core

MAIN FIELDS OF APPLICATION

- Industrial Internet of Things
- Digital Signage - Infotainment
- Home entertainment
- Info Kiosks
- Multimedia devices

FEATURES

Processor	NXP **i.MX6SX SoloX** Processor, Single core Cortex®-A9 @ 1GHz + Cortex®-M4 core @ 227MHz
Max Cores	1 + 1
Memory	32-bit DDR3L memory soldered on-board, up to 1GB
Graphics	Integrated Graphics Vivante GC400T, 2D and 3D HW accelerator OpenGL ES 2.0, OpenGL ES 1.1, OpenVG 1.1 supported
Video Interfaces	Single Channel 18- / 24- bit LVDS connector + Touch Screen (I2C signals) 24-bit Parallel RGB Connector Video ADC input (PAL and NTSC formats supported)
Video Resolution	LVDS: up to 1366x768 @60Hz, 24bpp RGB: up to 1920x1080p @60Hz, 24bpp
Mass Storage	16MB NOR Quad-SPI Flash soldered on-board eMMC soldered on-board, up to 8GB µSD Card slot
Networking	Up to two Fast Ethernet RJ-45 connectors WiFi (802.11 b / g / n) +BT LE combo module + antenna on-board
USB	1 x USB 2.0 OTG port 3 x USB 2.0 Host ports on standard Type-A socket 1 x USB 2.0 Host port on internal pin header
Audio	I2S Audio interface on programmable pin header S / PDIF interface (In and Out) on programmable pin header
Serial Ports	1 x CAN Port with CAN transceiver on dedicated connector, optional 1 x CAN Port reconfigurable as GPIO 3 x UARTS on programmable pin header (optionally available with RS-232 or RS-485 interface)
Other Interfaces	2 x I2C dedicated connectors (one reserved for Touch Screen) 6 analog inputs for A / D Conversion Programmable (*) expansion pin header connector, able to offer: • Up to 26 GPIO • SPI interface • SPDIF Audio interface • I2S Audio interface • CAN interface (TTL level) • 3 x PWM • 2 x I2C • 3 x UARTs (TTL, RS-232 or RS-485 interface) (*) Please note that some of these interfaces are factory options, other configurations are made via SW using the pin multiplexing possibilities of the i.MX6SX processor.
Integrated Sensors	Optional 9-Axis Motion Sensors (Accelerometer, Magnetometer and Digital Gyroscope)
Power Supply	+12V_{DC} nominal voltage Optional additional embedded Low Power RTC
Operating System	Android Linux
Operating Temperature*	0°C ÷ +60°C (Commercial version)
Dimensions	89.5 x 87 mm (3.52” x 3.43”)

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

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BLOCK DIAGRAM