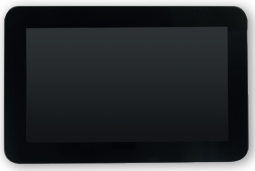
Modular HMI

SYS-B08-7 Embedded Panel with 7” LCD display based on the NXP i.MX 6SoloX Processor

Smart, compact, industrial 7” touch system built for IoT





HIGHLIGHTS

CPU
NXP i.MX6SX SoloX Processor, Single core Cortex®-A9 @ 1GHz + Cortex®-M4 core @ 227MHz

CONNECTIVITY
up to 2x Fast Eth; optional WiFi + BT LE

GRAPHICS
Integrated Graphics Vivante GC400T, 2D and 3D HW accelerator

MEMORY
32-bit DDR3L memory soldered on-board, up to 1GB

MAIN FIELDS OF APPLICATION

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

FEATURES

Processor	NXP **i.MX 6SoloX** Processor, Single core Cortex®-A9 @ 1GHz + Cortex®-M4 core @ 227MHz
Max Cores	1 + 1
Memory	Soldered on-board DDR3L memory, 32-bit interface **SYS-B08-BASIC/D**: 512MB **SYS-B08-FULL/D**: 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 Resolution	LVDS: up to 1366x768 @60Hz, 24bpp RGB: up to 1920x1080p @60Hz, 24bpp
Mass Storage	16MB NOR Quad-SPI Flash soldered onboard µSD Card slot **SYS-B08-FULL/D**: 8GB eMMC soldered onboard
Networking	**SYS-B08-BASIC/D**:1x Fast Ethernet RJ-45 connector **SYS-B08-FULL/D**: 2x Fast Ethernet RJ-45 connector + WiFi (802.11 b/g/n) +BT LE combo module + antenna onboard
USB	1 x USB 2.0 OTG port 3 x USB 2.0 Host port 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 reconfigurable as GPIO 2x RS-232 (Tx/RX signals only) + 1x RS-485 serial ports on expansion pin header
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: • CSI interface input (PAL and NTSC formats supported) • Up to 20 GPIO • SPI interface • SPDIF Audio interface • I2S Audio interface • CAN interface (TTL level) • 5 x PWM • 3 x I2C • 3 x serial ports (2x RS-232 +1xRS-485 interface) Embedded Low Power RTC (*) 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 +3V_{DC} cabled Coin Cell Battery
Operating System	Linux Yocto
Operating Temperature*	0°C ÷ +60°C
Dimensions	189.60 x 121.40 x 28.20 mm

*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.

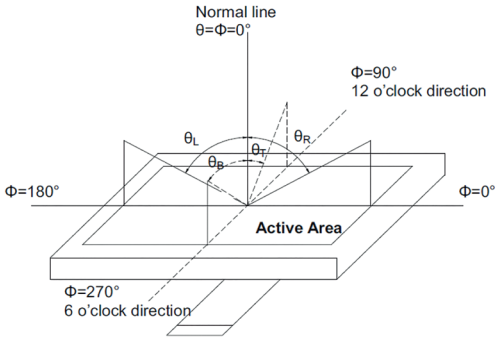
Information subject to change. Please visit www.seco.com to find the latest version of this datasheet

SYS-B08-7 Embedded Panel with 7” LCD display based on the NXP i.MX 6SoloX Processor

TFT LCD MODULE

Touchscreen specifications

- 5-point multitouch
- AsaHi glass with hardness 1.2J at fall-drop condition as 100cm + 130g steel ball



LCD General specifications

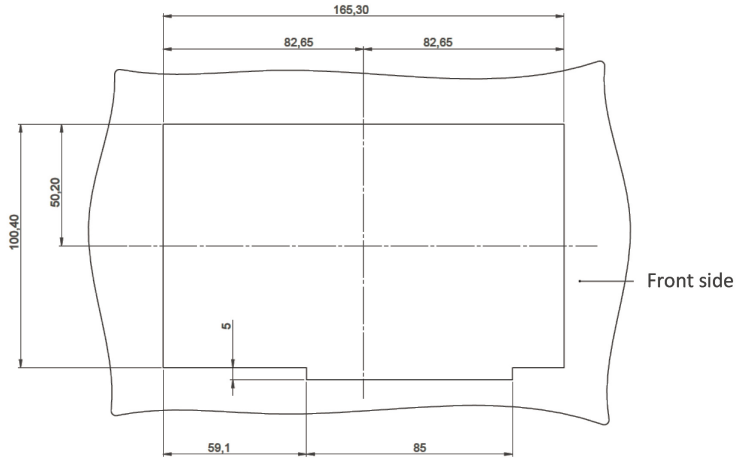
Item	Specification
LCD size	7.0 inch (Diagonal)
Technology Type	a-Si TFT
Resolution	800*480 pixels
Module size (W*H*T)	189.55*121.39*6.50 mm
Active area (W*H)	154.08*85.92 mm
Pixel pitch	0.1926*0.1790
Interface Type	RGB
Backlight Type	LED

Optical specifications

Item	Symbol	Condition	Min	Typ	Max	Unit
Contrast ratio	CR	Θ = 0°	400	500	-	---
Response time	Ton	25°C	-	10	20	Ms
	Toff		-	15	30	
View angles	ΘT	CR≥10	40	50	-	deg
	ΘB		60	70	-	deg
	ΘL		60	70	-	deg
	ΘR		60	70	-	deg
Luminance	L		-	500	-	cd/m²
Uniformity	U		75	-	-	%

Required housing dimensions for the system (mm)

- Suggested thickness 3mm



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