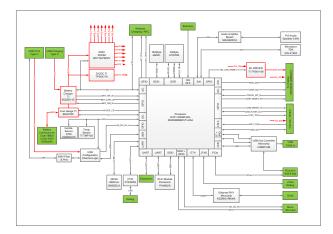Data sheet

The SX Mobile Device Kit
– a platform for mobile enterprise applications

Solectrix has many years of experience in developing professional mobile devices. Supporting our customers in developing their mobile devices is the motivation behind the SX Mobile Device Kit (MDK). Based on the NXP i.MX8M Mini CPU, the SX Mobile Device Kit is designed as a versatile mobile device platform. Special needs of mobile devices like low power consumption or a reliable battery supply and charging operation are considered.

All areas of a product development like electronics, software, design and construction are covered. Focusing on mobile vision applications, the MDK provides the opportunity to be expanded with a set of imaging sensors. Use the MDK to evaluate the imaging sensor that best fits your application!

Board support packages including driver support for all elementary interfaces and components that are present on the MDK are provided. Solectrix offers customized engineering services for the integration of your specific software components.

You can choose to build a mobile device based on the MDK PCBA as it is or to modify the MDK to exactly fulfill the specific needs of your application. In any case, using the MDK can help you achieve shorter development times. Initiating a functional model phase with the MDK enables you to start the software development early. Concurrently, you can develop the prototype according to your detailed requirements.

high end electronics solutions

Technical Specifications - Data Sheet

CPU	NXP i.MX8M Mini
	up to quad-core Cortex-A53, 1.8 GHz
	Single-core Cortex-M4F
	2D/3D GPU (OpenGL ES 2.0)
DRAM	2 GB LPDDR4
Storage	16 GB eMMC Flash
Wireless	Panasonic PAN9028
	802.11 a/b/g/n/ac (2.4 GHz and 5 GHz), 802.11i
	Indoor location and navigation with IEEE 802.11mc
	Bluetooth 5 (includes Low Energy)
Display	4-lane MIPI DSI
	Capacitve touch interface
	5" TFT, resolution 720 × 1280 pixels
Camera	Flexible sensor extension interface
	4-lane MIPI CSI-2
	Power supply for sensor extension boards
	GPIO signals for flash / illumination control
Location	SIMCom SIM33ELA
	High-performance GNSS module (GPS, GLONASS, Galileo, and QZSS)
Audio	Maxim MAX98357A PCM Class D amplifier
	Magnetic Speaker (0.7 W / 88 dB)
	PDM microphone
Connectivity	microSD card slot
	2× USB Type-C (1× charging only / 1× USB OTG)
	PCI Express M.2 2230 Card slot (E key)
	RJ45 1GB Ethernet (optional)
	1× USB Type-A (optional)
	1× UART (expansion interface)
	FT232 USB-to-UART (debug interface)
Power	Power Supply via USB Type-C
	Dual 18650 Li-Ion battery connector
	TI BQ25611D 3.0-A battery charger on-board
	TI BQ27520 battery fuel gauge on-board
	Wireless Charging expansion connector
Operating systems	Android 11
	Yocto Linux BSP
	Debian Linux BSP (on request)
PCB dimensions	125 mm × 78 mm