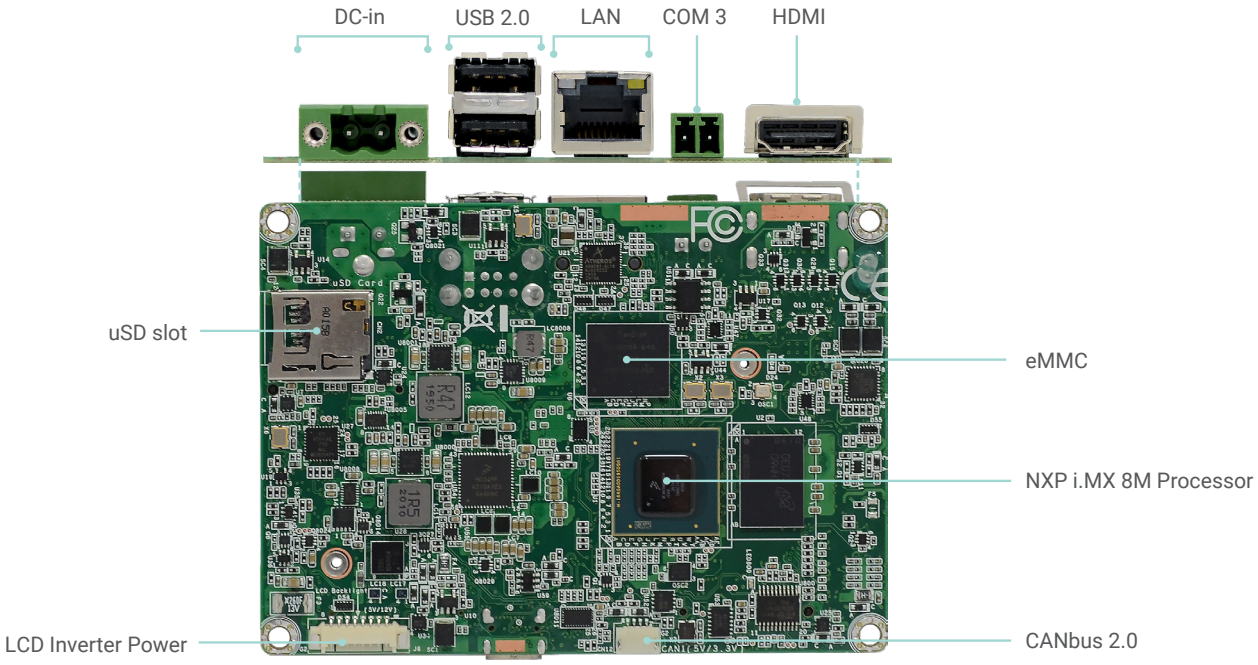
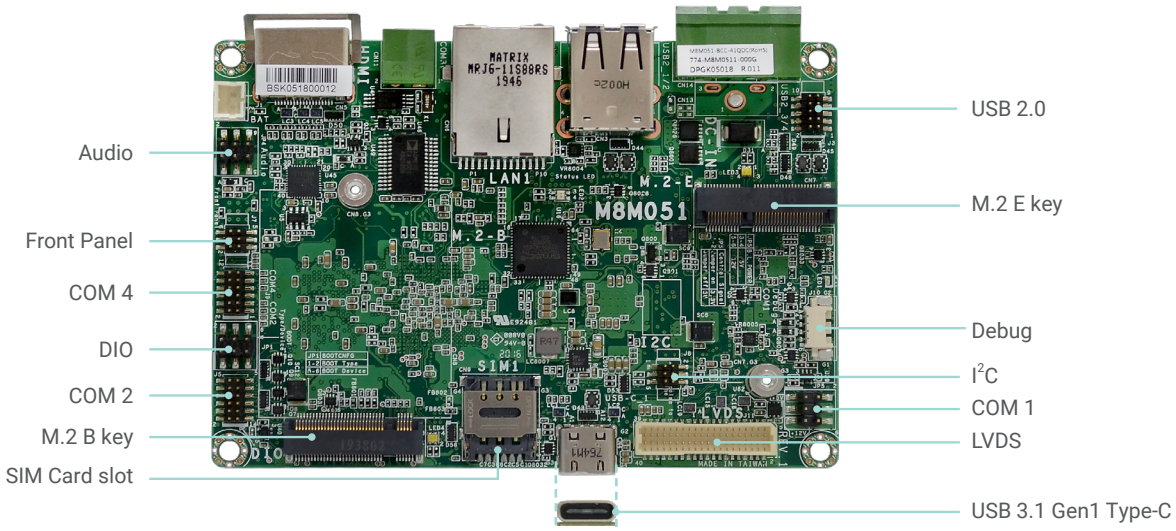
M8M051 ARM

NXP® i.MX 8M Series
2.5" SBC



Bottom View



Top View

KEY FEATURES

LPDDR4

1 LPDDR4 3200MHz SODIMM

4K High Resolution

Supports 4K/2K resolution

Display

1 HDMI/1 LVDS

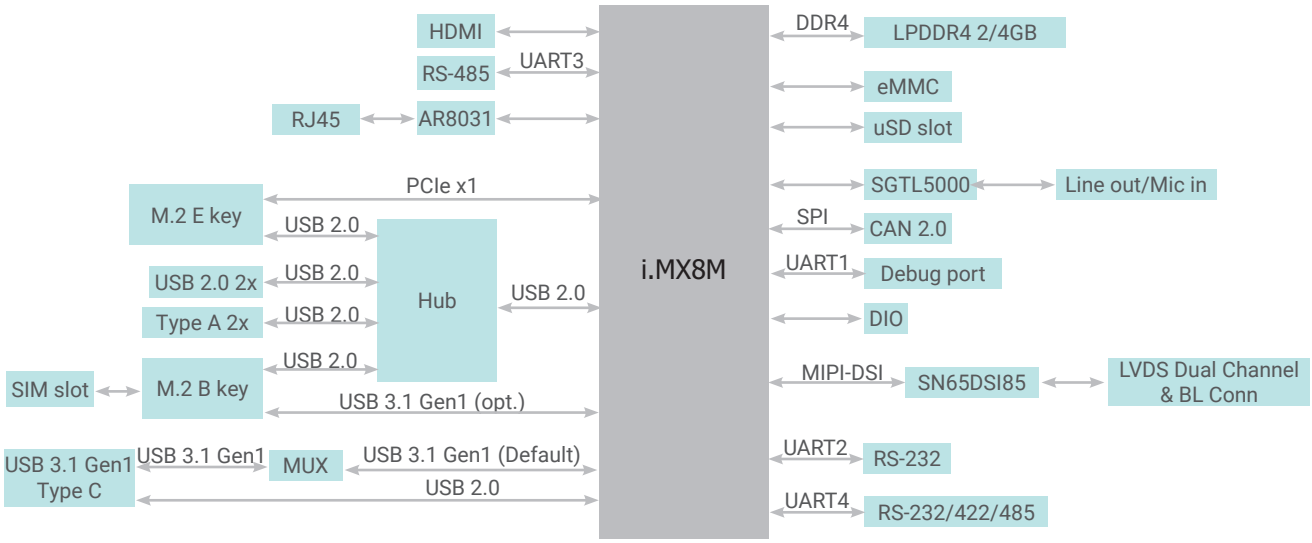
Multiple Expansion

1 M.2 B Key,
1 M.2 E Key

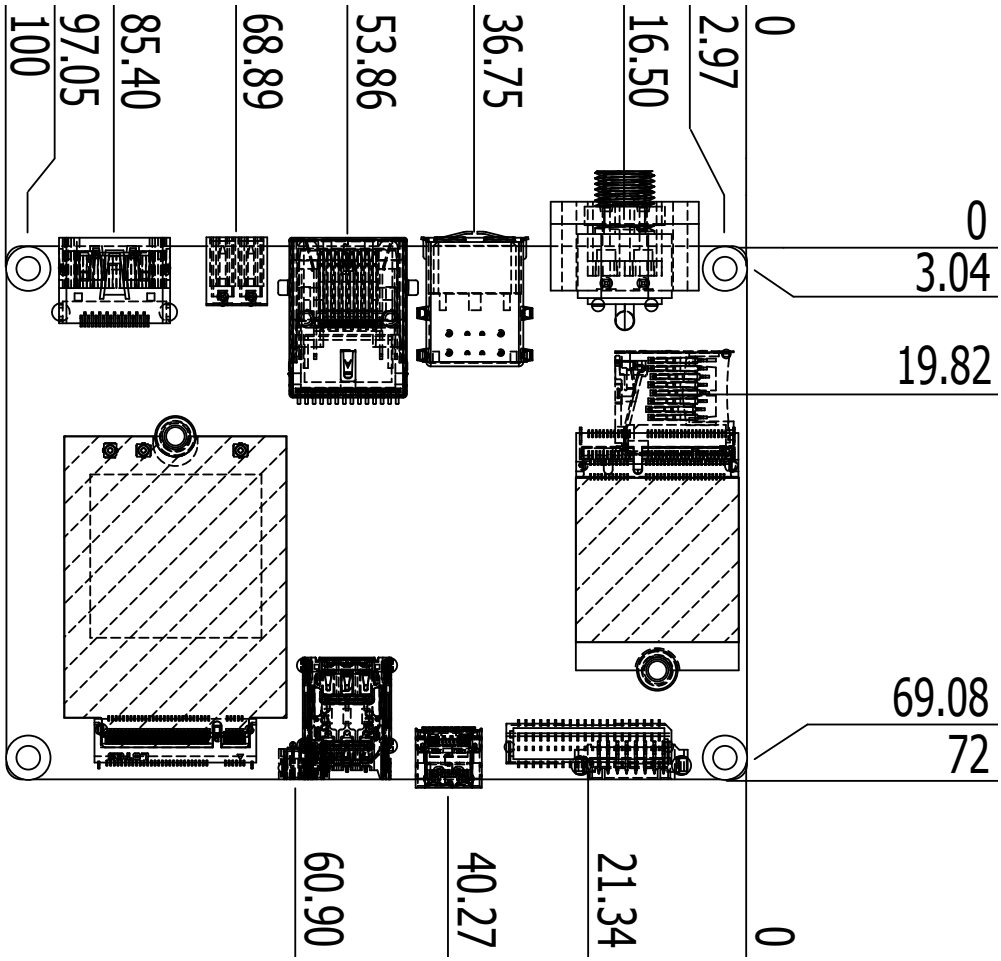
Rich I/O

1 Intel GbE, 3 COM,
1 USB 3.1 Gen1,
4 USB 2.0

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

System	Processor	NXP i.MX 8M Quad Cortex-A53, 1.5GHz NXP i.MX 8M Dual Cortex-A53, 1.5GHz
	Memory	2GB/4GB Memory Down
		Single Channel LPDDR4 up to 3200 MHz
Graphics	Controller	GC7000 Lite
	Feature	OpenVG 1.1, OGL ES 3.1, Vulkan, OCL 1.2 FP
		VPU Decode: 4Kp60 HEVC H.265, VP9, 4Kp60 H.264
	Display	1 x HDMI
		1 x LVDS
		HDMI: resolution up to 4096x2160 @60Hz
		LVDS: resolution up to 1920x1080 @60Hz
	Single Display	HDMI or LVDS
Expansion	Interface	1 x M.2 B key 3042/2242 (default: USB 2.0, opt.: USB 3.1 Gen1*) *USB 3.1 Gen1 channel is mutually exclusive with that of Rear I/O USB 3.1 Gen1 Type C. Nano SIM slot support (available upon request)
		1 x M.2 E key 2230 (PCIe x1/USB 2.0)
Audio	Audio Codec	SGTL5000
Ethernet	Controller	1 x ATHEROS AR8031 Ethernet (10/100/1000Mbps)
Rear I/O	Ethernet	1 x GbE (RJ-45)
	Serial	1 x RS485
	USB	1 x USB 3.1 Gen1 Type C (USB 3.1 Gen1/USB 2.0)
		2 x USB 2.0
	Display	1 x HDMI
Internal I/O	Serial	1 x RS232
		1 x RS-232/422/485 (2 x 6 pin header, 1.27mm pitch)
	USB	2 x USB 2.0 (1.27mm pitch)
	Display	1 x LVDS LCD Panel Connector 1 x Backlight Power
	Audio	1 x Audio (Line-out/Mic-in, 2.00mm pitch)
	eMMC	Support eMMC 5.1 16GB on board (default) Support up to 64GB (opt.)
	SD	1 x Micro SD Slot
	DIO	1 x 8-bit DIO (2 x 6 header, 1.27mm pitch)
	I^2C	1 x I^2C (1.27mm pitch)
	CANBus	1 x CANBus 2.0
Watchdog Timer	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
Power	Type	Single 12V +/-10% DC
	Connector	2-poles Terminal Block (default) DC Jack (available upon request)
	Consumption	TBD
	RTC Battery	CR2032 Coin Cell
OS Support	OS Support (UEFI Only)	Yocto 2.5 on eMMC (default)
		Android 9.0
Environment	Temperature	Operating: -5 to 65°C; -30 to 80 °C
		Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH
		Storage: 5 to 90% RH
	MTBF	TBD
Mechanism	Dimensions	2.5"" SBC Form Factor 100mm (53.94"") x 72mm (2.83"")
	Height	PCB: 1.6mm
		Top Side: 15mm
		Bottom Side: 4mm
Standards and Certifications	Certifications	CE, FCC, RoHS

ORDERING INFORMATION

Model Name	P/N	Processor	Memory	eMMC	GbE	RS-485	RS-232	RS-232/ 422/485	USB 2.0	Power	Thermal	Temp.
M8M051-BCC-41QDC	770-M8M0511-000G	Quad core	4 GB	16 GB	1	1	1	1	4	12V DC 2-pole thermal block	Fanless	-5 to 65°C
M8M051-BCC-21DLC	770-M8M0511-100G	Dual core	2 GB	16 GB	1	1	1	1	4	12V DC Jack	Fanless	-5 to 65°C

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