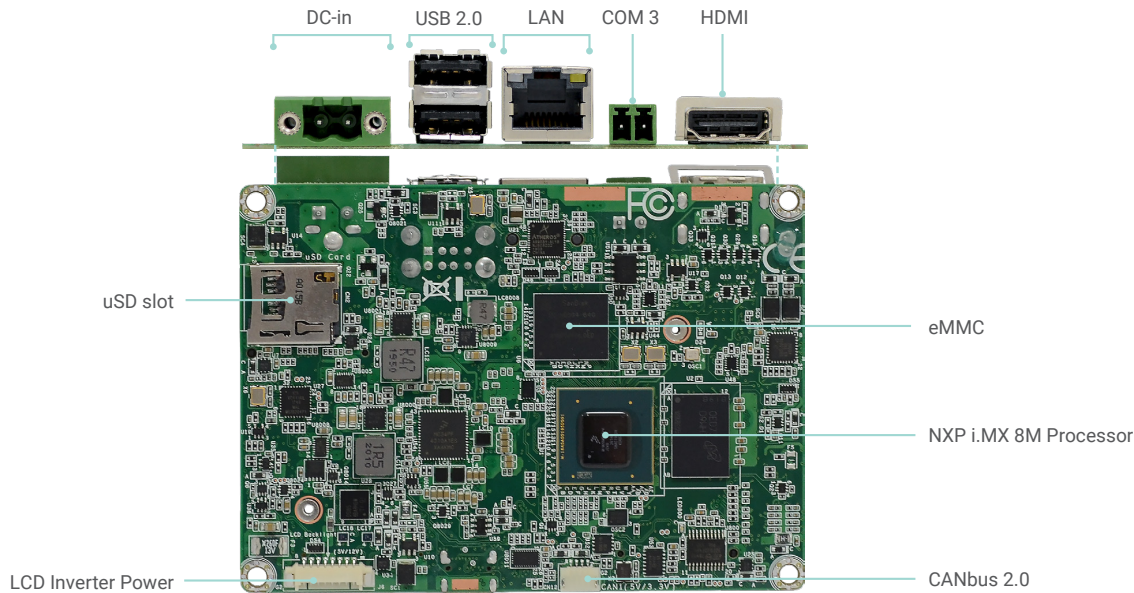


M8M051

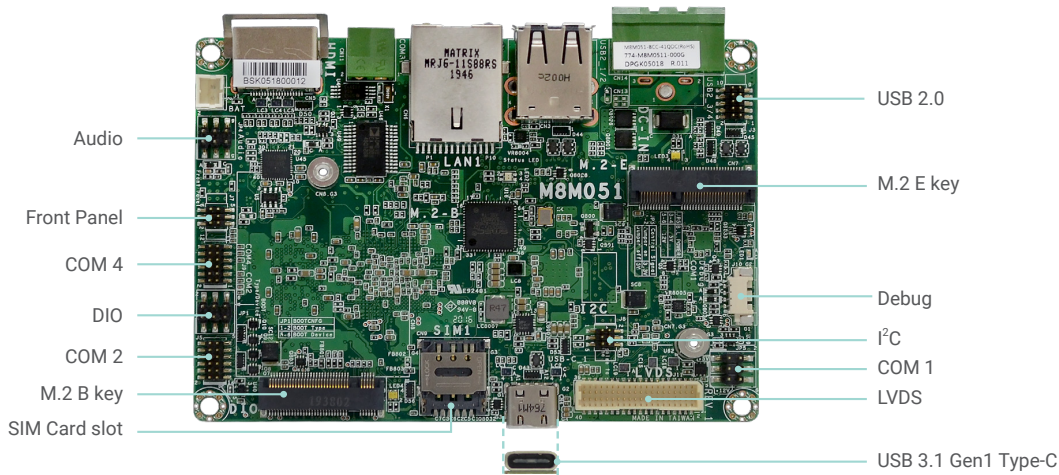
ARM



NXP® i.MX 8M Series
2.5" SBC



Bottom View



Top View

KEY FEATURES



LPDDR4

1 LPDDR4 3200MHz
SODIMM



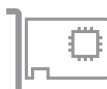
4K High Resolution

Supports 4K/2K resolution



Display

1 HDMI/1 LVDS



Multiple Expansion

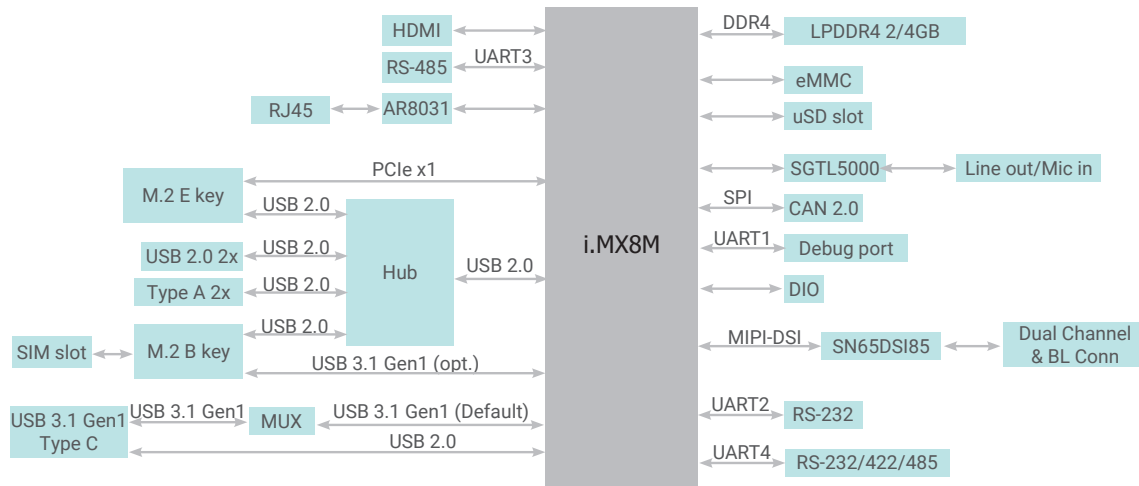
1 M.2 B Key,
1 M.2 E Key



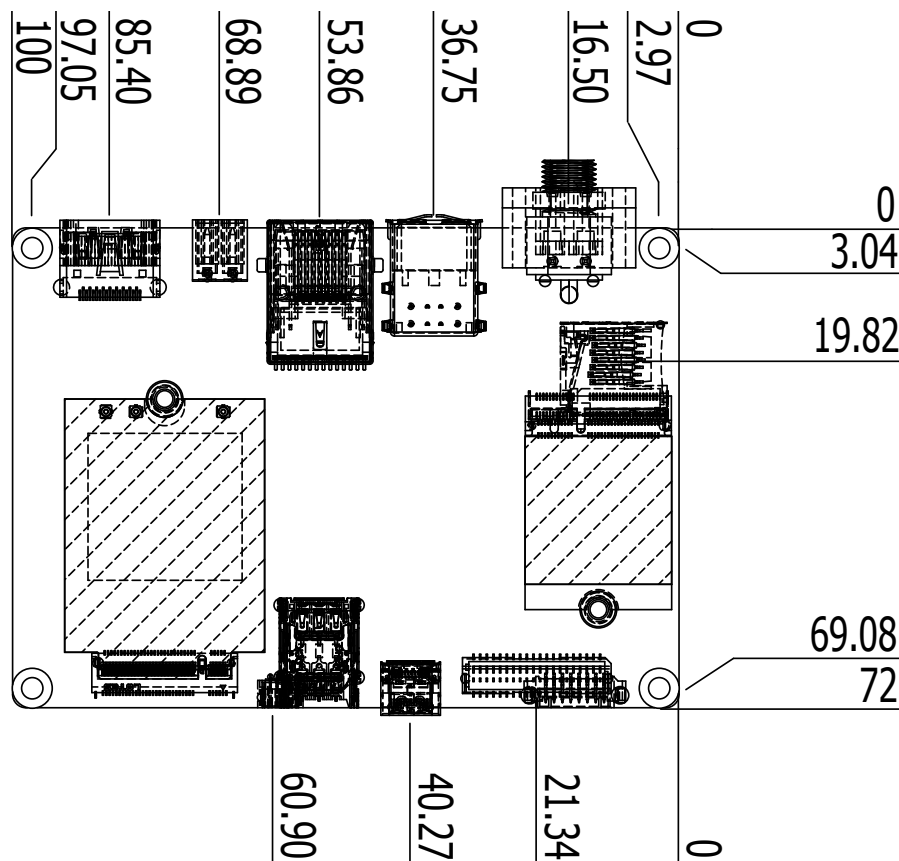
Rich I/O

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
		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 ² C	1 x I ² C (1.27mm pitch)
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
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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US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660