

8MM053

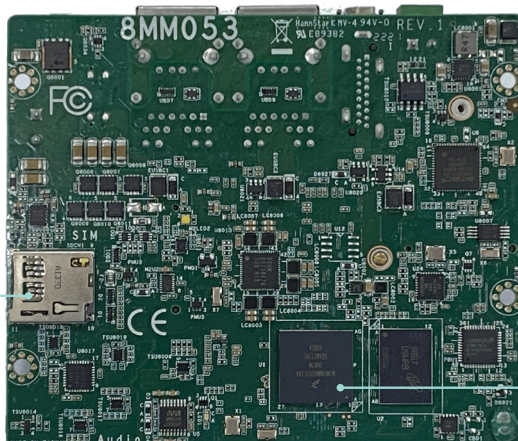
ARM



NXP® i.MX 8M mini Series



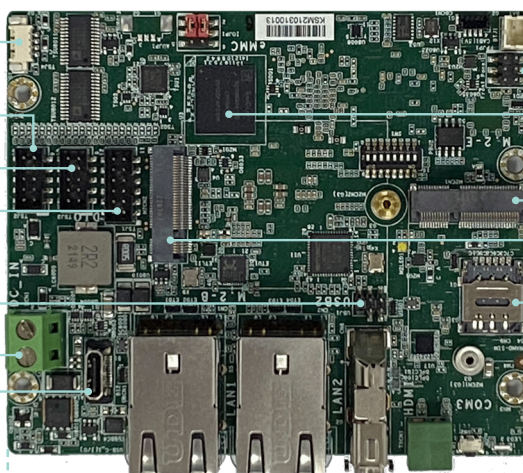
uSD slot



NXP i.MX8M Mini Processor

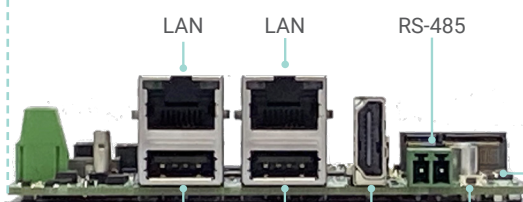
Bottom View

I²C
COM1
COM2
RS-422&DIO
USB 2.0
DC-in
OTG USB



Front Panel
eMMC
M.2 E-Key
M.2 B-Key
Nano SIM

Top View



LAN LAN RS-485
USB 2.0 USB 2.0 HDMI Reset

Status Led

KEY FEATURES



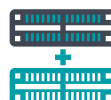
LPDDR4

1 LPDDR4 3200MHz
memory down



FHD High Resolution

Supports FHD resolution



Multiple Expansion

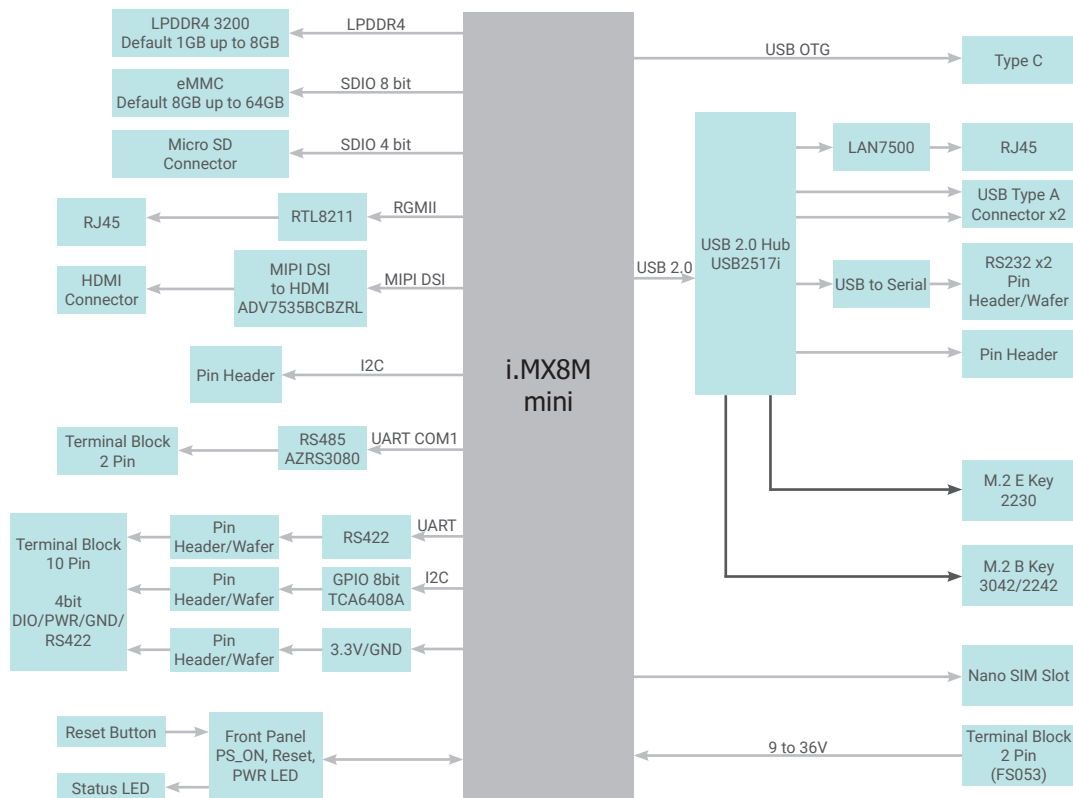
1 M.2 B Key,
1 M.2 E Key



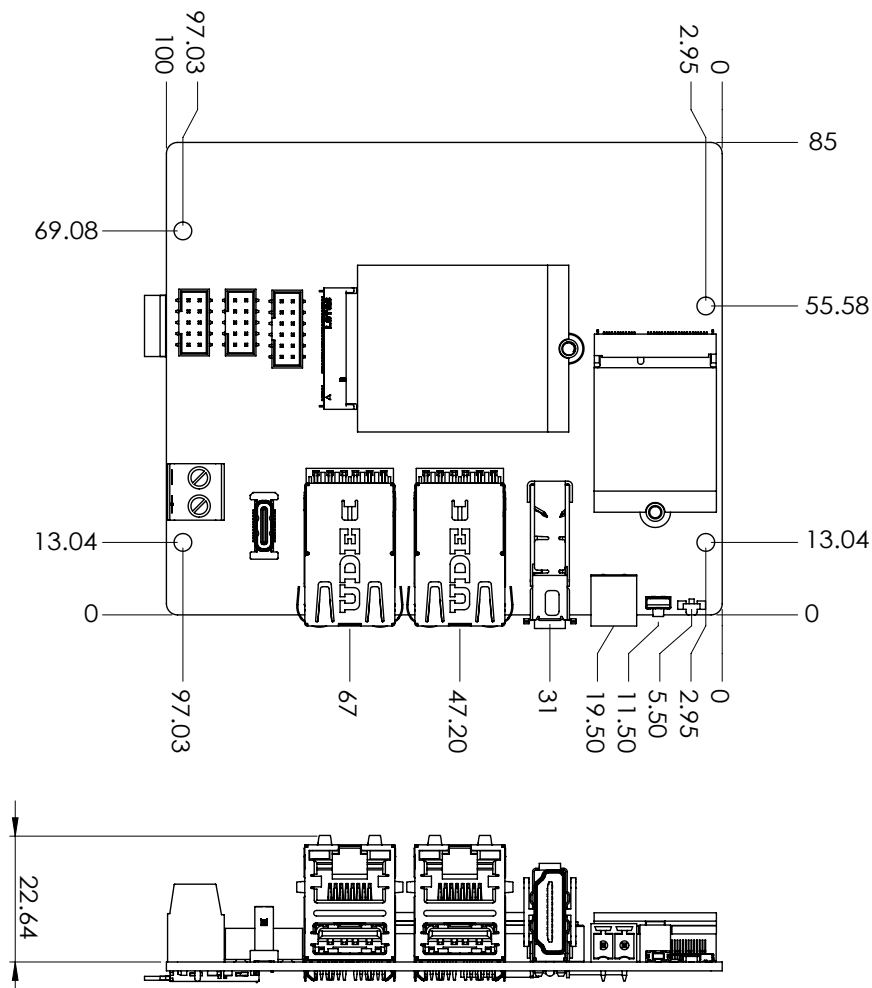
Rich I/O

2 GbE, 2 USB 2.0
1 RS-485, 2 RS-232,
RS-422, DIO

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

System	Processor	NXP i.MX 8M mini applications processors NXP i.MX 8M mini Quad Cortex-A53 1.8GHz (Consumer) NXP i.MX 8M mini Quad Cortex-A53 1.6GHz (Industrial)	
	Memory	4GB Memory Down (1GB/2GB by project support) Single Channel LPDDR4	
Graphics	Controller	2D-GC320 3D-GC NanoULTRA	
	Feature	OpenGL® ES 2.1 VPU Decode: 1080p60 HEVC, H.264, VP9, VP8 VPU Encode: 1080p60 H.264, VP8	
	Display	1 x HDMI (default)	HDMI: resolution up to 1920x1080 @60Hz
	Single Display	HDMI	
Expension	Interface	1 x M.2 B key 3042/2242 (USB 2.0), Nano SIM slot support 1 x M.2 E key 2230 (USB 2.0)	
Ethernet	Controller	1 x RTL8211 Ethernet (10/100/1000Mbps)	
Rear I/O	Ethernet	2 x GbE (RJ-45)	
	Serial	1 x RS-485(2 poles terminal block)	
	USB	2 x USB 2.0 1 x Reset Button	
	Display	1 x HDMI	
Internal I/O	Serial	2 x RS-232 (2 x 5 header, 2mm pitch)	
	USB	1 x USB 2.0 (2mm pitch)	
	DIO and RS-422	DIO (4 DIO/PWR/GND) and RS-422(4pin) (2 x 6 header, 2mm pitch)	
	SD	1 x Micro SD Slot	
	I²C	1 x I²C (1.25mm pitch)	
	eMMC	Support eMMC 5.1 8GB on board (default) Support up to 64GB (opt.)	
Watchdog Timer	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
Power	Type	DC 9V to 36V	
	Connector	2-poles Terminal Block (default)	
	RTC Battery	CR2032 with cable	
OS Support	OS Support	Yocto 3.3 on eMMC (default)	
Environment	Temperature	Operating: -5 to 65°C; -40 to 80°C Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH Storage: 5 to 90% RH	
Mechanism	Dimensions	100mm (3.94") x 85mm (3.35")	
	Height	PCB: 1.6mm	
		Top Side: 22.64mm	
		Bottom Side: 4mm	
Standards and Certifications	Certifications	CE, FCC Class A, RoHS	

ORDERING INFORMATION

Model Name	P/N	Processor	Memory	eMMC	Temp.	OS
8MM053	770-8MM0531-500G	Quad Cortex-A53 1.6GHz	4GB	8GB	-40 to 80°C	Yocto 3.3 (Kernel 5.10)

PACKING LIST

• 1 8MM053 MB
• 1 Heat Spreader(Height)
• 1 2-Pole Terminal Block for RS-485

OPTIONAL ITEMS

10 poles terminal for RS-422/4-bit DIO, L=100mm	A81-009670-016G
10-Pole Terminal Block for RS-422/4-bit DIO	342-361101-100G
Power Jack Cable, L=115mm	A81-004013-000G
Power adapter 60W,12V, DC Jack	671-106012-000G
COM port cable	A81-015019-004G