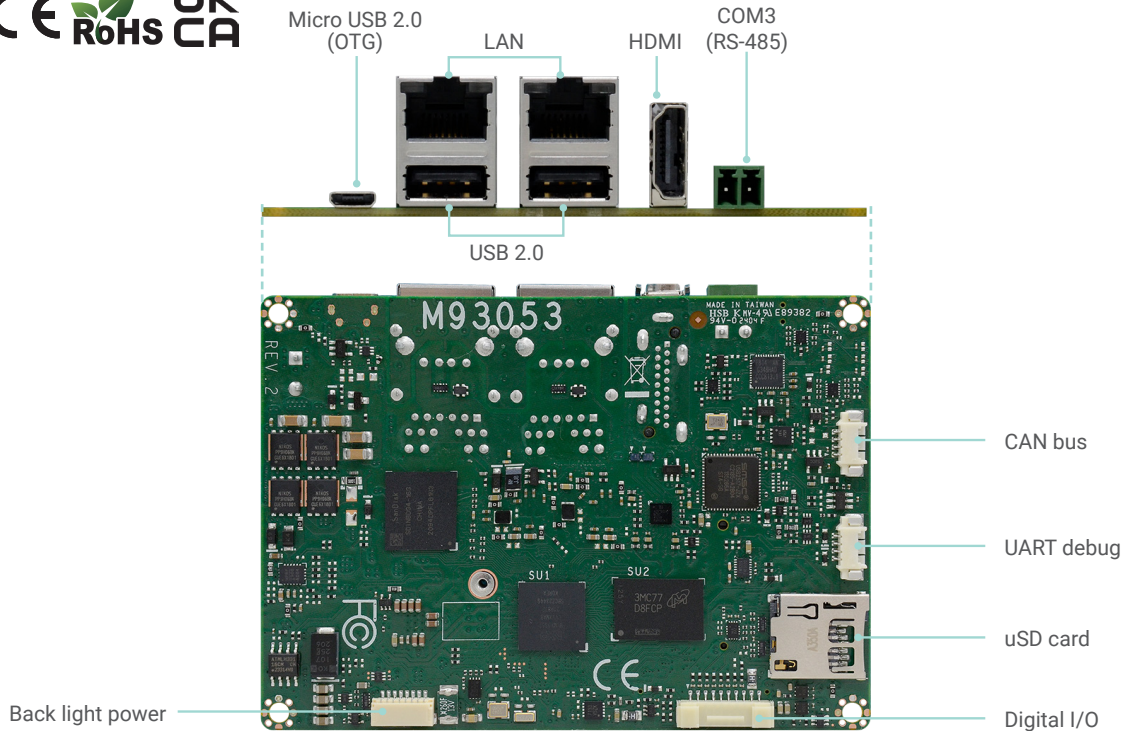


# M93053

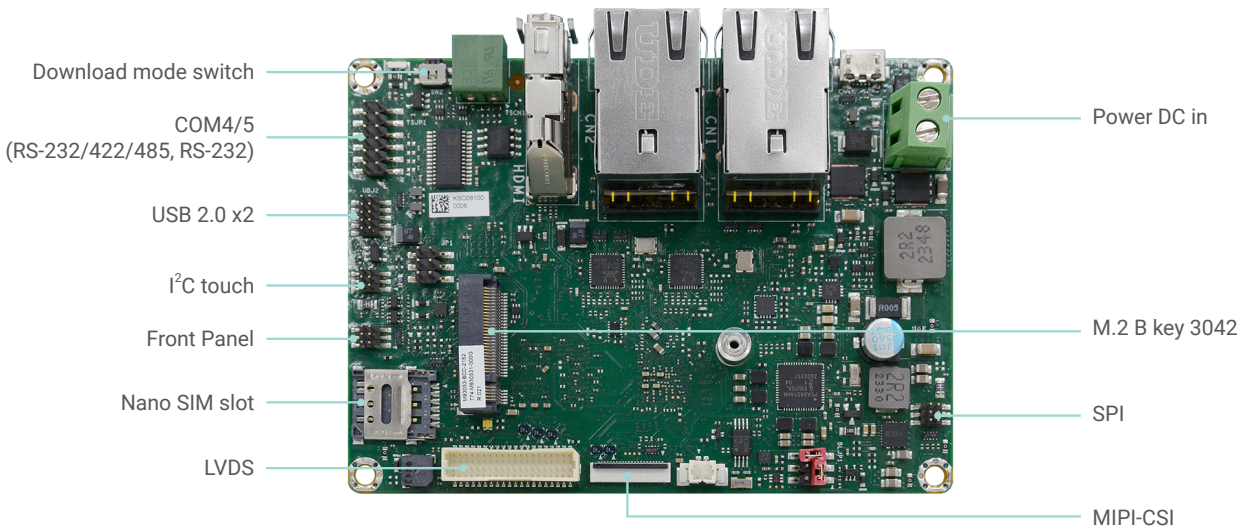
ARM



NXP i.MX93 series  
2.5" SBC

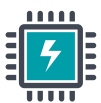


Bottom View



Top View

## KEY FEATURES



### NXP i.MX93 platform

Target on entry level application



### Wide Voltage

Support 9~36VDC



### 2 GbE LAN

For automation application



### CAN bus

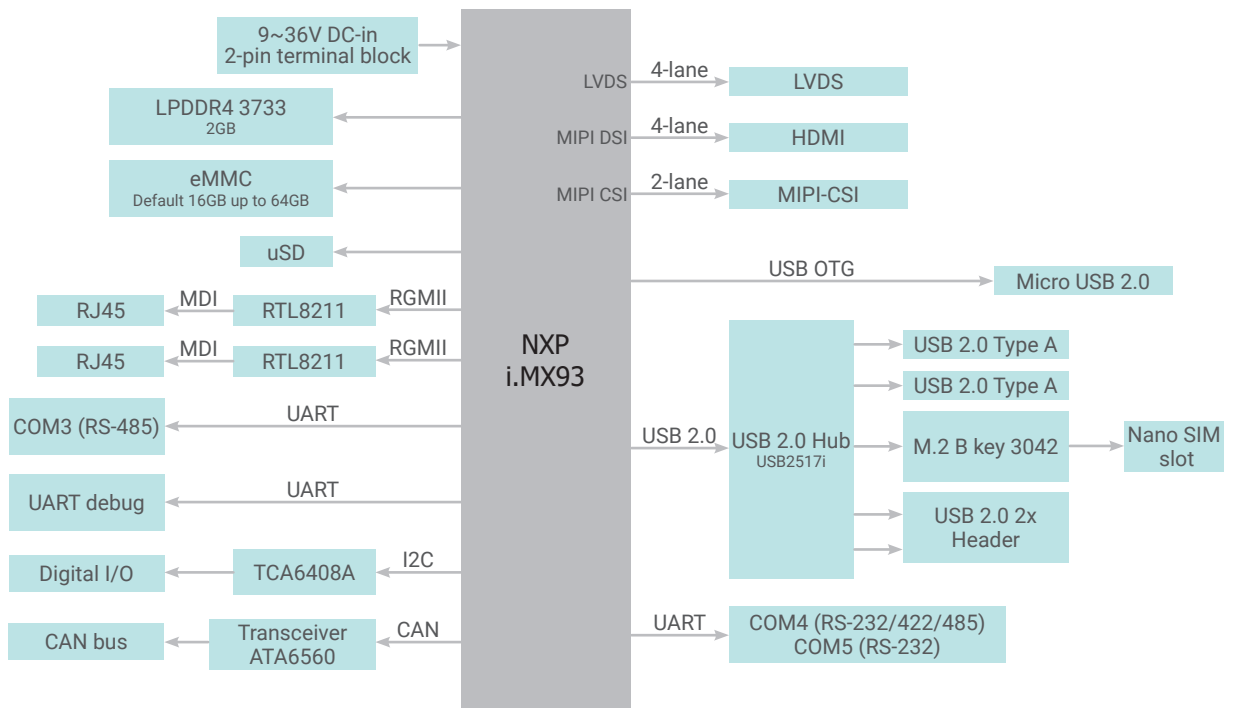
For automation equipments integration



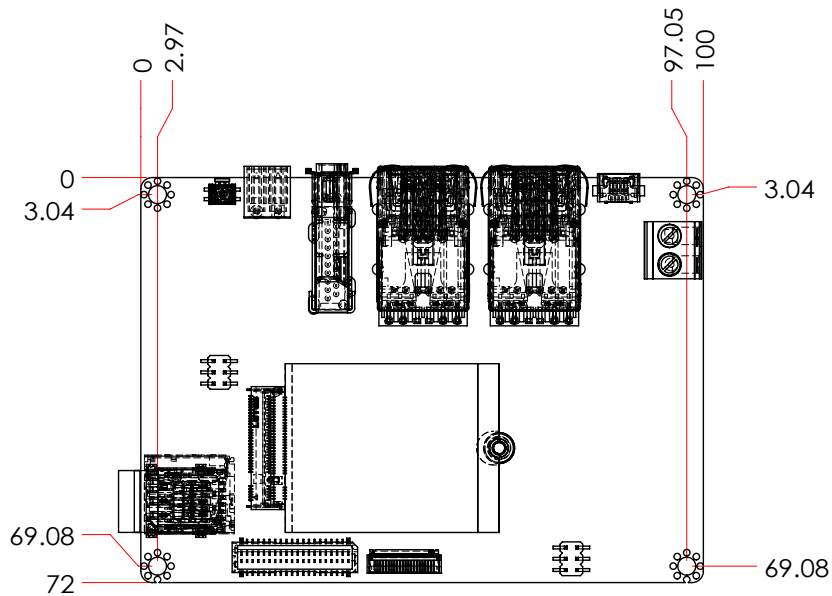
### M.2 Expansions

1 M.2 B key 3042

# BLOCK DIAGRAM



# MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	Processor	i.MX 93 applications processor MIMX9352CVVXMAB, Dual core, 1.7GHz, NPU, -40°C~105°C
	Memory	2GB LPDDR4 Memory Down
GRAPHICS	Controller	2D Graphics: PXP Engine
	Feature	Blending/Composition, Resize, Color Space Conversion
	Display	1 x HDMI 1.4 1 x LVDS <b>HDMI:</b> resolution up to 1920x1080 @60Hz <b>LVDS:</b> resolution up to 1366x768 @60Hz
	Single Display	LVDS or HDMI
STORAGE	eMMC	1 x eMMC 5.1 with default 16GB (up to 64GB)
EXPENSION	Interface	1 x M.2 B key 3042 (USB 2.0) 1 x Nano SIM slot
ETHERNET	Phy	RTL8211
REAR I/O	Ethernet	2 x GbE (RJ-45)
	Serial	1 x RS485 (2-wire)
	USB	2 x USB 2.0 1 x Micro USB 2.0 (OTG)
	Display	1 x HDMI
	Download Mode Switch	1 x Download mode switch
INTERNAL I/O	Serial	1 x RS232, 1x RS232/422/485 on 2x6 header
	USB	2 x USB 2.0
	Display	1 x LVDS LCD Panel connector (Default: 12V/Opt.: 5V) 1 x LCD Backlight Power (Default: 5V/Opt.: 3.3V)
	SD	1 x uSD card
	DIO	1 x 8-bit DIO
	I <sup>2</sup> C	1 x I <sup>2</sup> C / Touch
	CANBus	1 x CAN bus 2.0b
	Camera	1 x MIPI-CSI for 2-lanes camera, reference to RPI-CAM-MIPI Camera adapter (AR0144 Sensor)
Others	1 x SPI, 1 x Front Panel, 1 x UART debug	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
POWER	Type	Wide Range 9~36VDC
	Connector	2-pole terminal block
	Consumption	<b>Typical:</b> 9V @ 0.28A (2.52Watt); 36V @ 0.10A (3.60Watt) <b>Max.:</b> 9V @ 0.36A (3.24Watt); 36V @ 0.11A (3.96Watt)
	RTC Battery	CR2032 Coin Cell
OS SUPPORT	Linux	Linux Yocto 4.2 (Kernel 6.1.36)
ENVIRONMENT	Temperature	<b>Operating:</b> -5°C ~ 65°C, -40°C~85°C <b>Storage:</b> -40°C ~ 85°C
	Humidity	<b>Operating:</b> 5% ~ 90% RH <b>Storage:</b> 5% ~ 90% RH
	MTBF	MIMX9352CVVXMAB, Dual core: 778,719 hrs @ 25°C; 497,925 hrs @ 45°C ; 331,500 hrs @ 60°C; 247,941 hrs @ 70°C <b>Calculation model:</b> Telcordia Issue 4 <b>Environment:</b> GB, GC – Ground Benign, Controlled
MECHANISM	Dimensions	2.5" SBC Form Factor 100mm (3.94") x 72mm (2.83")
	Height	<b>PCB:</b> 1.6mm <b>Top Side:</b> TBC <b>Bottom Side:</b> TBC
STANDARDS AND CERTIFICATIONS	Certifications	CE, FCC, RoHS, UKCA

## ORDERING INFORMATION

Model Name	P/N	Processor	Memory	eMMC	GbE	RS-485	RS-232	RS-232/422/485	USB 2.0	Power	Thermal	Temp.
M93053-BCC-2152	770-M930531-000G	Dual core	2 GB	16 GB	2	1	1	1	5	9~36VDC	Fanless	-5°C~65°C
M93053-ECC-2152	770-M930531-100G											-40°C~85°C

## PACKING LIST

1 M93053 board	
1 Terminal block for RS485 (COM3)	342-361021-000G
1 Heat spreader (Height: 11mm)	A71-808354-000G

## OPTIONAL ITEMS

2 pole terminal to DC jack cable	A81-004013-000G
Power adapter (60W, 12V, DC Jack)	671-106012-000G
USB 2.0 cable (Length: 200mm)	A81-001084-016G
COM port cable (Length: 250mm, COM4/5 port)	A81-015088-016G
Debug console with cable (Length: 500mm)	770-IMX8M1-000G
Heat sink (Height: 17.7mm)	A71-008358-000G