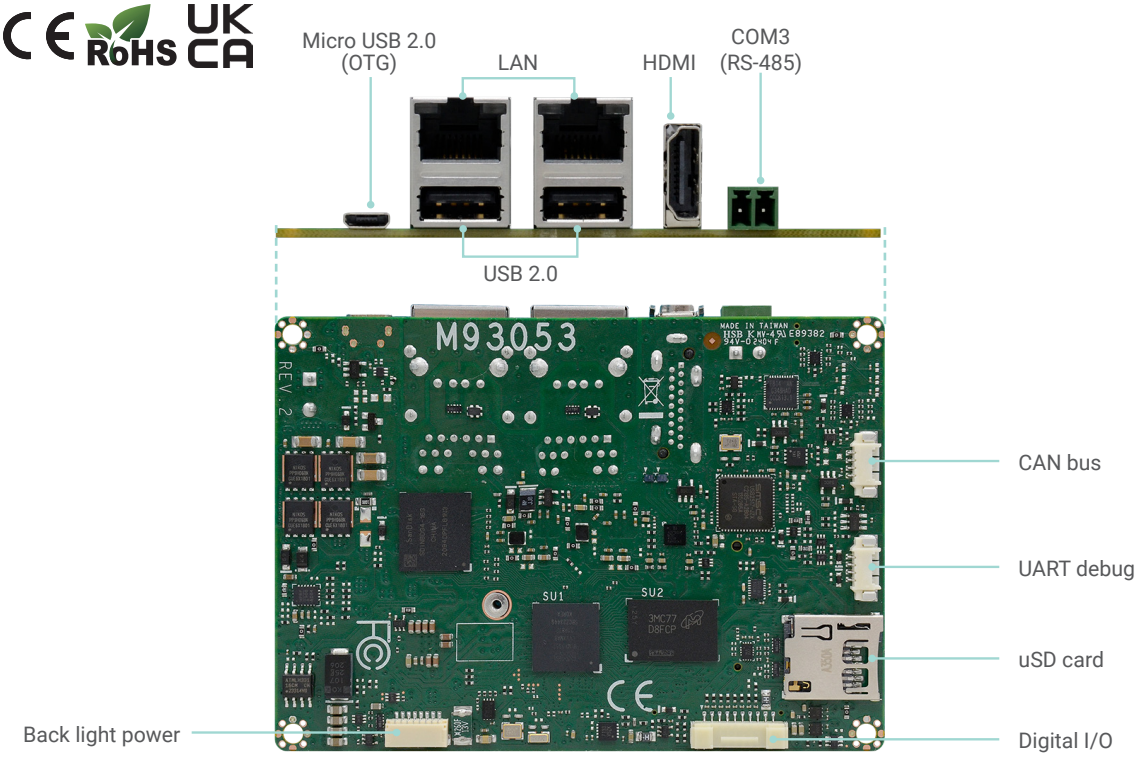
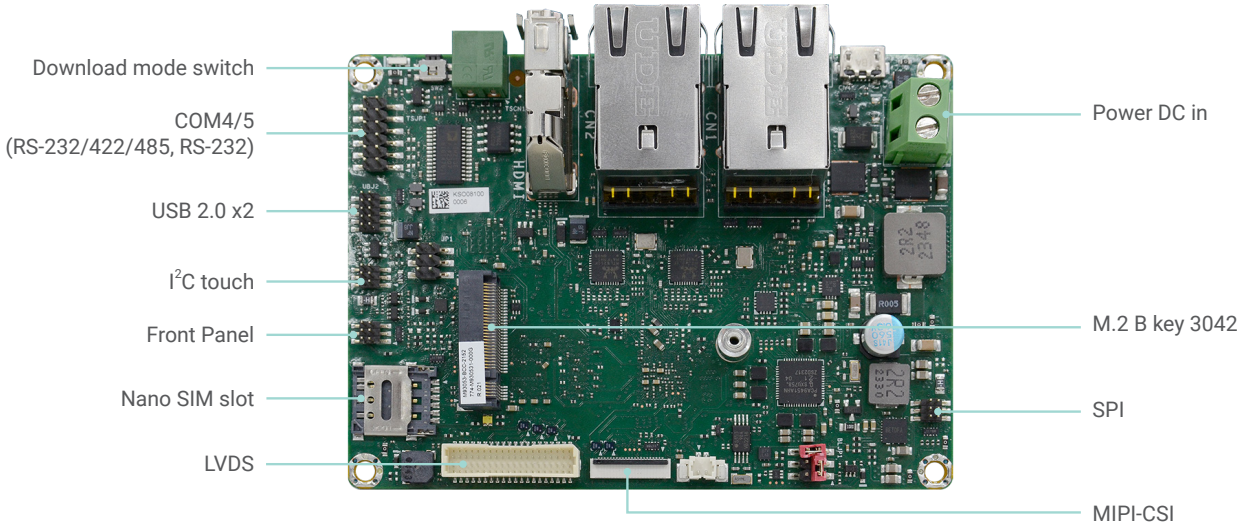
M93053

ARM

NXP i.MX93 series
2.5" SBC



Bottom View



Top View

KEY FEATURES

NXP i.MX93 platform
Target on entry level application

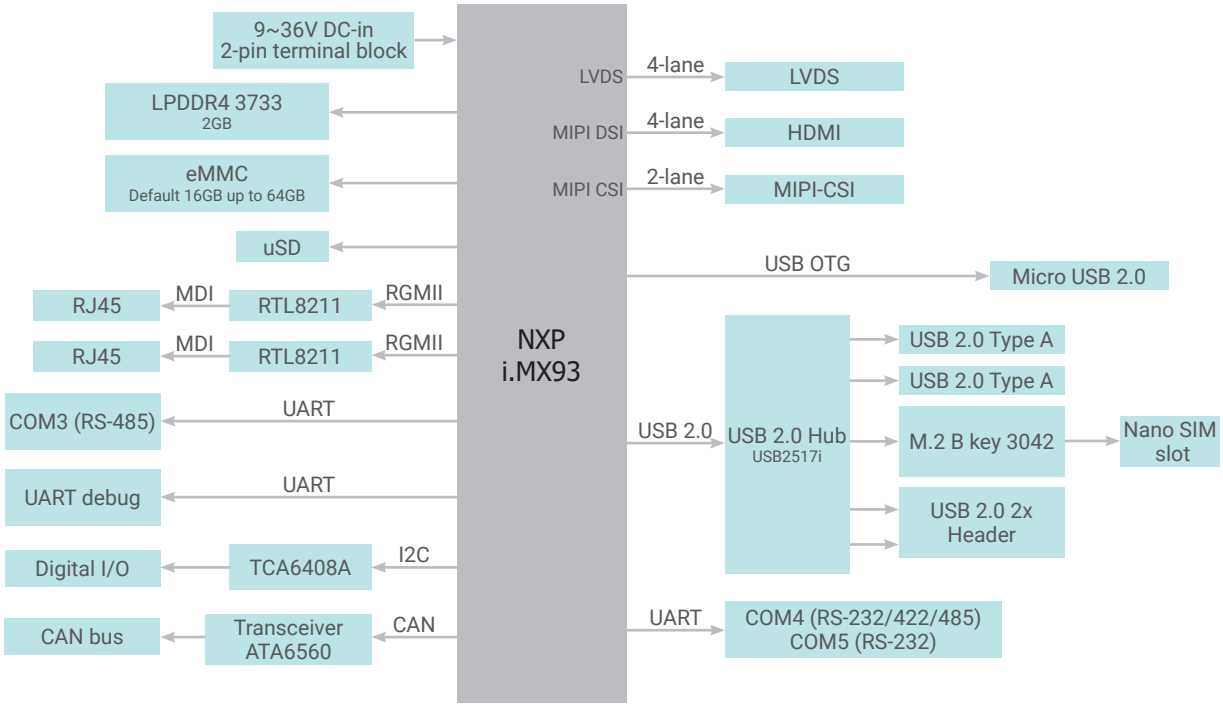
Wide Voltage
Support 9~36VDC

2 GbE LAN
For automation application

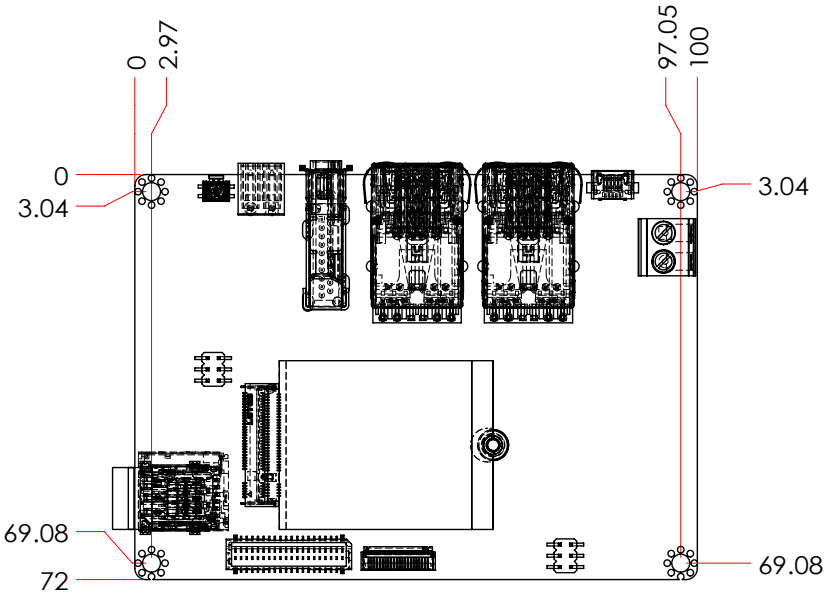
CAN bus
For automation equip-ments integration

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 **HDMI:** resolution up to 1920x1080 @60Hz **LVDS:** 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^2C	1 x I^2C / 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	**Typical:** 9V @ 0.28A (2.52Watt); 36V @ 0.10A (3.60Watt) **Max.:** 9V @ 0.36A (3.24Watt); 36V @ 0.11A (3.96Watt)
	RTC Battery	CR2032 Coin Cell
OS SUPPORT	**Linux**	Linux Yocto 5.0 (Kernel 6.6.23)
ENVIRONMENT	**Temperature**	**Operating:** -5°C ~ 65°C, -40°C~85°C **Storage:** -40°C ~ 85°C
	Humidity	**Operating:** 5% ~ 90% RH **Storage:** 5% ~ 90% RH
	MTBF	MIMX9352CVVXMAB, Dual core: 1,470,688 hrs @ 25°C; 716,436 hrs @ 45°C ; 418,703 hrs @ 60°C; 295,368 hrs @ 70°C; 178,343 hrs @ 85°C **Calculation model:** Telcordia Issue 4 **Environment:** GB, GC – Ground Benign, Controlled
MECHANISM	**Dimensions**	2.5" SBC Form Factor 100mm (3.94") x 72mm (2.83")
	Height	**PCB:** 1.6mm **Top Side:** 21.08mm **Bottom Side:** 3.70mm
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

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