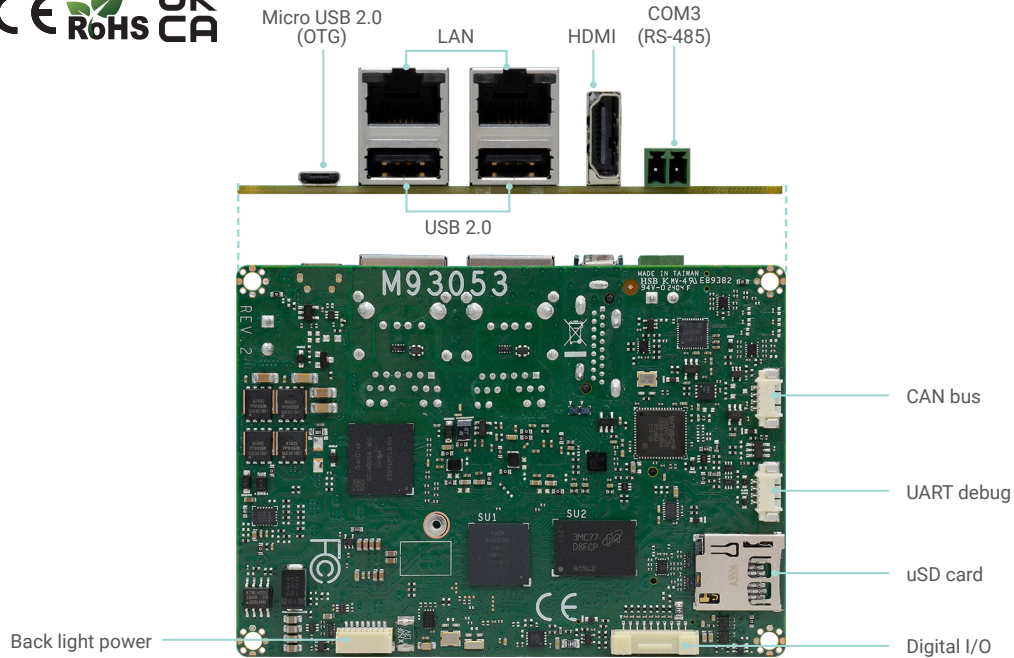


M93053

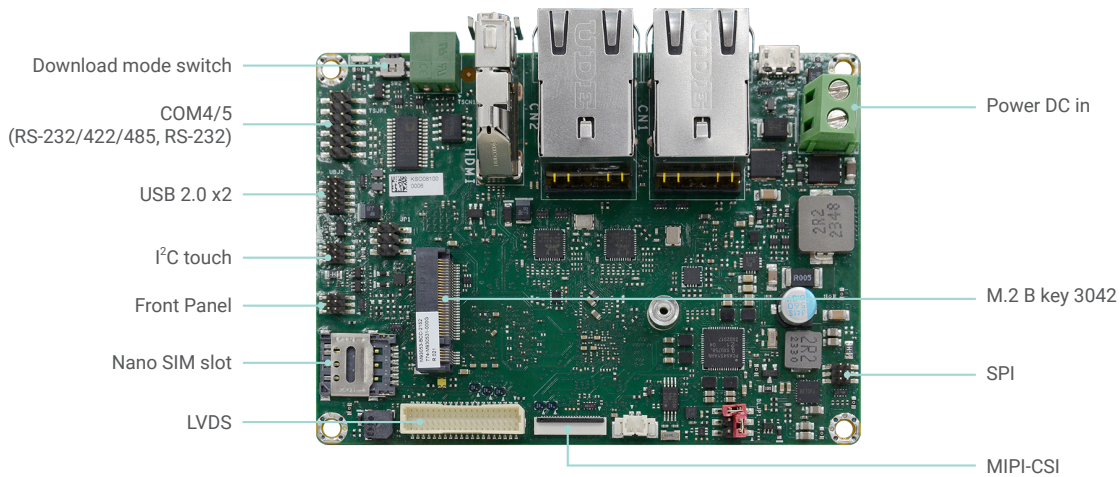
ARM



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

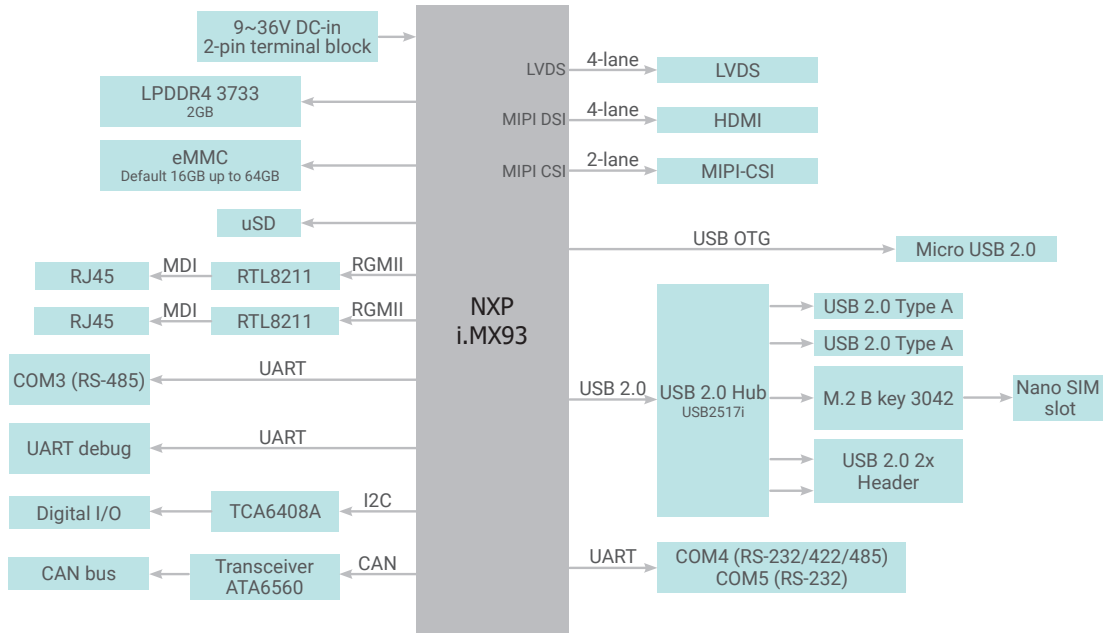
For automation equipments integration



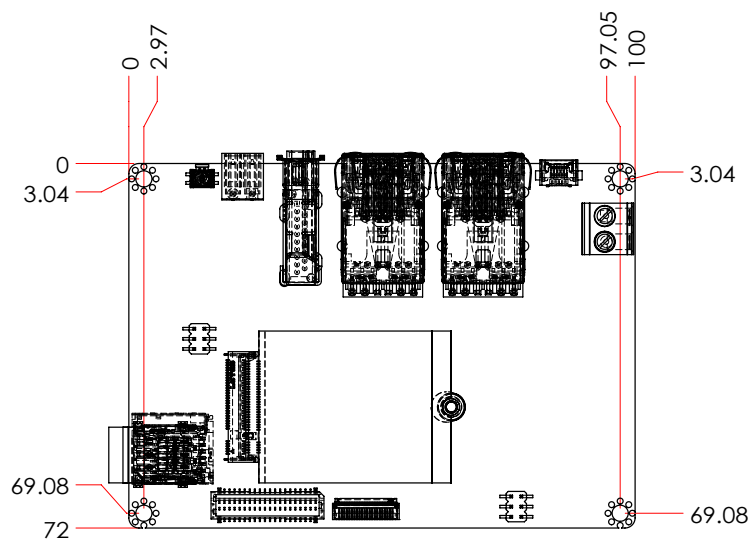
M.2 Expansions

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 | HDMI: resolution up to 1920x1080 @60Hz |
| | | 1 x LVDS | 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 ² C | 1 x I ² 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 | TBC | |
| | RTC Battery | CR2032 Coin Cell | |
| OS SUPPORT | Linux | Linux Yocto 4.2 (Kernel 6.1.36) | |
| ENVIRONMENT | Temperature | Operating: -5°C ~ 65°C (-30°C ~ 80°C, TBC) | Storage: -40°C ~ 85°C |
| | Humidity | Operating: 5% ~ 90% RH | Storage: 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 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: TBC | |
| | | Bottom Side: 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-ETC-2152 | 770-M930531-100G | Dual core | 2 GB | 16 GB | 2 | 1 | 1 | 1 | 5 | 9~36VDC | Fanless | -30°C~80°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 |

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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