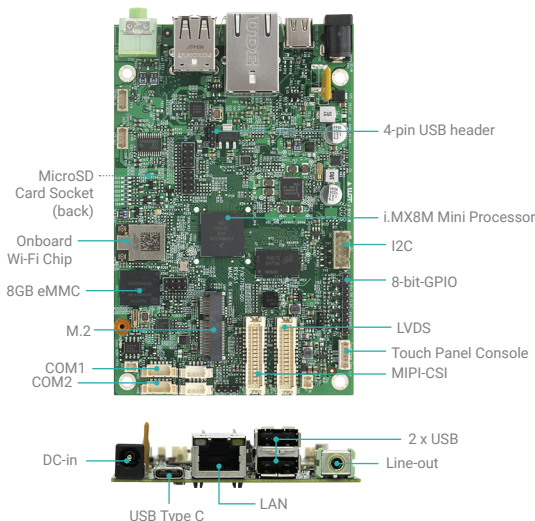


### Features

- NXP i.MX8M Mini 4x Cortex®-A53 cores and 1x Cortex-M4 processor
- Optional AR8MXMN - i.MX8M Nano Processor (4x Cortex®-A53 cores and 1x Cortex-M7 core)
- 1GB Onboard DDR4 Memory (expandable up to 2GB Max)
- Onboard 8 GB eMMC Flash, 1 x MicroSD Card Slot
- GC NanoUltra 3D (1 shader) + GC320 2D, OpenGL ES2.0
- 1 x LVDS and 1 x MIPI-CSI
- Wolfson® WM8960 Ultra Low Power Audio Codec
- TI® TPA2008D2 3-W Stereo Class-D Audio Amplifier
- Optional AzureWave® AW-CM389NF 802.11 a/b/g/n/ac + BT 4.0 via SDIO
- Onboard I/O: MIPI-CSI, LVDS, 2 x RS-232 COM, 1 x 4-pin USB, 2 x I2C, I2C
- Back I/O Panel: RJ-45 LAN, USB Type C OTG, Line-out, DC-in, 2 x USB
- 1 x M.2, 5V DC Input
- Compact size (4.72" x 3.07") (palm size)



### Specifications

System	
CPU	NXP i.MX8M Mini Processor onboard: 4x Cortex-A53 core platforms up to 1.8GHz per core 32KB L1-I Cache/ 32 kB L1-D Cache 512 kB L2 Cache 1x Cortex-M4 16 kB L1-I Cache/ 16 kB L2-D Cache  Optional in i.MX8M Nano Processor: 4x Cortex-A53 core platforms up to 1.5GHz per core 32 kB L1-I Cache / 32 kB L1-D Cache 512 kB L2 Cache 1x Cortex-M7 core up to 750MHz 512 kB on-chip RAM (OCRAM)
System Memory	1GB Onboard DDR4 Memory (expandable up to 2GB Max)
Storage	Onboard 8 GB eMMC Flash. 1 x MicroSD Card Slot
Expansion	1 x M.2 Socket (not available on AR8MXMN (i.MX8M Nano))
Audio	Wolfson® WM8960 Ultra Low Power Audio Codec
Amplifier	TI® TPA2008D2 3-W Stereo Class-D Audio Amplifier
Ethernet	1 x Micrel® KSZ9031
RTC	Optional Seiko® S-35390 External RTC
Wireless	Optional AzureWave® AW-CM389NF 802.11 a/b/g/n/ac + Bluetooth 4.0 Through SDIO
Supported OS	Android 9. Linux 4.14.98 kernel. Ubuntu 18.04, 4.14.98 kernel
Display	
Chipset	AR8MXMM (i.MX8M Mini): GC NanoUltra 3D (1 shader) + GC320 2D OpenGL ES2.0  AR8MXMN (i.MX8M Nano): 3D GPU GC7000UL (2x shader, OpenGL ES 2.0/3.0/3.1, OpenCL 1.2, Vulkan)
Video Playback	AR8MXMM (i.MX8M Mini): 1080p60 VP9 Profile 0, 2 (10-bit) decoder, HEVC/H.265 decoder, AVC/H.264 Baseline, Main, High decoder, VP8 decoder. 1080p60 AVC/H.264 encoder, VP8 encoder
Interface	1 x LVDS Through MIPI to LVDS Bridge

External I/O	
Audio	1 x Line-Out
USB	1 x USB Type C OTG 2 x USB (2 x USB not available on AR8MXMN (i.MX8M Nano))
LAN	1 x RJ-45
DC-in	1 x Barrel Type Connector
Internal I/O	
Display	1 x LVDS Header 1 x MIPI-CSI Header
USB	1 x 4-pin USB Header for internal USB device (not available on AR8MXMN (i.MX8M Nano))
COM	2 x RS-232 COM Ports
Audio	Mic-in, Line-out
MIO	2 x I2C, I2C Touch Panel Connector, 1 x 8-bit GPIO, 1 x Front Panel
Mechanical & Environment	
Power	5V DC Input
Operating Temp.	0°C ~ 60°C (32°F ~ 140°F)
Storage Temp	-20°C ~ 80°C (-40°F ~ 176°F)
Operating Humidity	5% ~ 95% Relative Humidity, Non-condensing
Form Factor	Custom, Small Form Factor
Dimensions	4.72" x 3.07" (120mm x 78mm)

Ordering Info	
AR8MXMM	NXP i.MX8M Mini processor onboard, with M.2, 2 x USB ports at rear IO, 1 x 4-pin USB header
AR8MXMN (OEM Only)	NXP i.MX8M Nano processor onboard

\* All product specifications and images are subject to change without notice. Last update: 2021/06/09

