

WAFER-IMX8MP

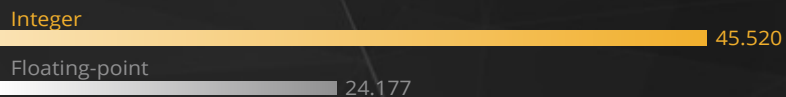
3.5" SBC supports NXP i.MX 8M Plus Processors with 4GB LPDDR4 memory & 16GB eMMC NAND FLASH on board default, dual display and MIPI_CSI, I²C , GPIO, dual GbE Lan, USB 3.2 Gen 1, Full RS-232, 0°C ~70°C and RoHS

CPU

► NXP i.MX 8M Plus Quad (Quad-core Cortex-A53 up to 1.8 GHz)

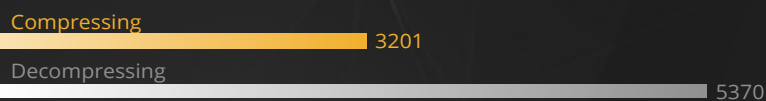
Single core

nbench



Multi core

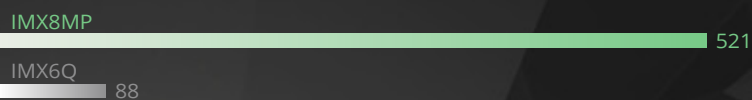
7zip



GPU

► GC7000UL

glmark2



NPU

► 2.3 TOPS support INT8/INT16/INT32/FP16/FP32

Inference tests	i.MX 8M Plus
TensorFlowLite benchmark tool CPU-1 thread	141 ms
TensorFlowLite benchmark tool CPU-4 thread	39 ms
TensorFlowLite benchmark tool NPU	2.6ms
TensorFlowLite Classification NPU	3.1ms
TensorFlowLite Detection NPU	13.5ms

Linux support framework

TensorFlowLite ONNX PYTORCH DeepViews

Android support framework

TensorFlowLite

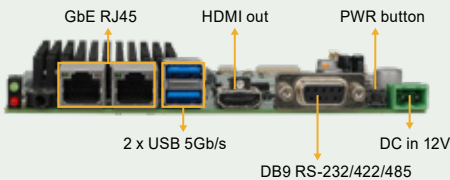
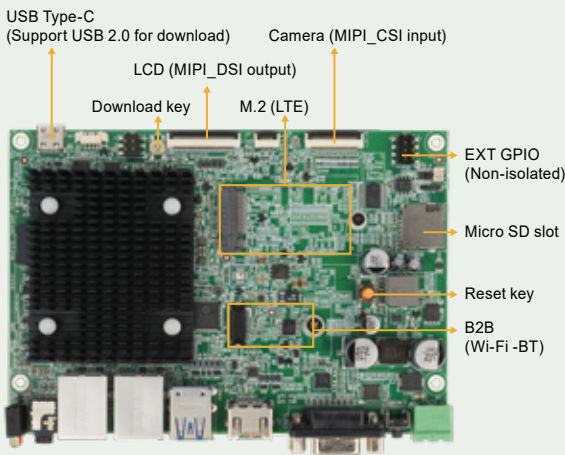
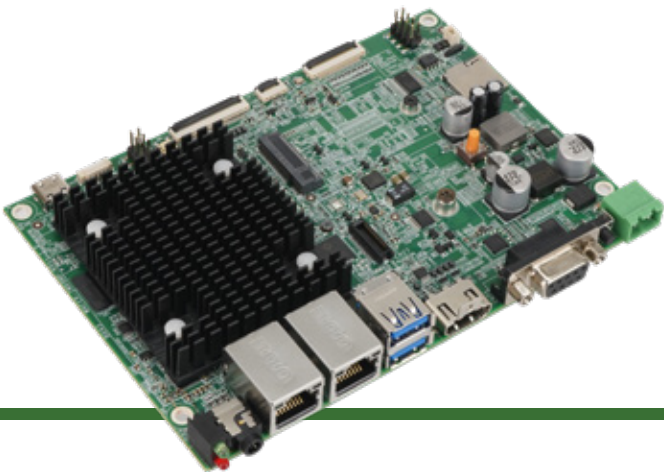


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WAFER-IMX8MP

3.5" SBC supports NXP i.MX 8M Plus Processor with 4GB LPDDR4 memory & 16GB eMMC NAND flash on board, dual display and MIPI CSI, I²C, GPIO, dual GbE LAN, USB 3.2 Gen 1, full RS-232, 0°C ~70°C and RoHS



- 3.5" SBC with NXP i.MX 8M Plus Quad processor on-board SoC
- 4GB LPDDR4 memory (up to 8GB) & 16GB eMMC NAND flash (up to 128GB)
- Dual displays with HDMI, MIPI DSI and camera MIPI CSI input
- Rich I/O: GbE RJ45, USB 5Gb/s, full RS-232/422/485, micro SD slot
- M.2 B Key Slot (optional for 3G/LTE/5G module)
- Optional Wi-Fi 5 / Wi-Fi 6 / Bluetooth 5.0
- OS supports Android / Yocto platform

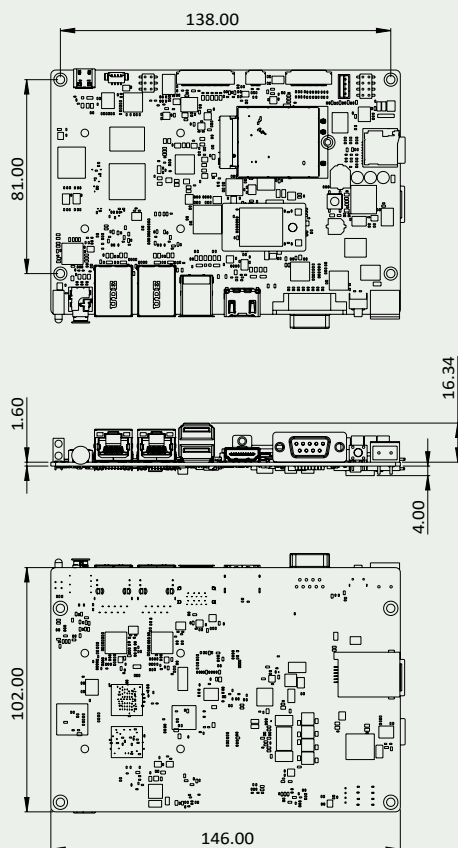
Software Support

Android Features	
Framework	NEW KOTLIN based GPIO APP UART APP
Security	Fully SELinux enabled DM-Verify enabled
System	A/B partitions System Update Engine (New A/B OTA) Device Tree Overlay (Dynamic change hardware configuration)
Wireless	1. WiFi STA/AP mode 2. WiFi Direct 3. Concurrent mode 4. Bluetooth classic 5. Bluetooth LE 6. LTE networking
Nerual Network	TensorFlow-Lite (CPU, NPU)
Video support format	MP4, AVI, MKV, WEBM, 3gp
Audio support format	WAV, MP3, AAC
Yocto Features	
Framework	XWayland display framework QT5 based application Python v3.8 Custom meta-layer SYSTEMD architecture
System	Weston Desktop AI demos libgpiod openssl modem manager
Wireless	WiFi STA/AP mode WiFi Direct Concurrent mode Bluetooth classic Bluetooth LE LTE/5GNR networking
Nerual Network	elQ framework (NPU, CPU, GPU) Tensorflow-Lite (NPU) OpenCV Caffe (CPU)
Video support format	MP4, AVI, MKV, WEBM
Audio support format	WAV, MP3, AAC

WAFER-IMX8MP Block Diagram



Dimensions



Specifications

Model	WAFER-IMX8MP
Processor	NXP i.MX 8M Plus Quad (Quad-core Cortex-A53 up to 1.8 GHz)
GPU	GC7000UL 3D (2 shaders), GC520L
NPU	up to 2.3 TOPS
RAM	4GB LPDDR4-3200, up to 8GB
Flash	16GB eMMC NAND flash, up to 128GB SD card 1 x Micro SD slot Others
Expansion	1 x PCIe x1 Gen3
Audio	1 x 3.5mm Audio Jack (Mic-in & Line out)
Speaker	2 x Speaker (3W/8Ω)
Display	1 x MIPI DSI 4 lanes (40-pin 0.5mm FPC 90°)
Camera	1 x MIPI CSI 4 lanes (30-pin 0.5mm FPC)
HDMI	1 x HDMI output 2.0a Type A, up to 4K
Wi-Fi	Wi-Fi 5/6 (optional board to board IEI module)
Bluetooth	Support Bluetooth V5.0
LTE	M.2 B key connector for 4G LTE
I/O	2 x GbE RJ45 2 x USB 5Gbps Type A 1 x Full RS-232/422/485 (DB9 Port) 1 x RS-232/RS-485 (2x3 pin header) 1 x I ² C (for Touch, 8-pin 2.0mm FPC) GPIO 8 bit (4 in / 4 out, pin header)
Button	Power key
LED Indicator	1 x Power 1 x Reserved (Programmable)
Dimensions (LxW) (mm)	146 x 102
Input	12V DC
Operating Temperature	0°C – 70°C (with air flow)
Storage Temperature	-20°C – 80°C
Humidity	10% – 99% (non-condensing)
EMC & Safety	EMC Class B
Supported OS	Android 12 / Yocto 4.0 (Linux Kernel 5.10)

Optional accessories



23T00-01010AW01-RS



7I001-COD631A5SFE-RS



19800-026300-100-RS



32102-045100-100-RS



iWB-AP6275SDSR-R10

Ordering Information

Android Platform	
WAFER-IMX8MP-A/BD	3.5" SBC supports NXP i.MX 8M Plus Processors with 4GB LPDDR4 memory & 16GB eMMC NAND Flash
Yocto Platform	
WAFER-IMX8MP-Y/BD	3.5" SBC supports NXP i.MX 8M Plus Processors with 4GB LPDDR4 memory & 16GB eMMC NAND Flash

Optional Accessories

23T00-01010AW01-RS	Lcd Bonding Touch; 10.1"; All Win; 800*1280; 340 cd/; LED; TQ101AJ02TP; MIPI 8BIT; Touch windows; Capacity type [Projected Capacitive]; COF; WeidahiTech; WDT8913; RoHS
32408-000203-100-RS	FFC touch CABLE, 8PIN, ;P=0.5MM, T=0.3MM, L=220mm, RoHS
32440-001300-100-RS	FFC LCD CABLE, 40PIN, P=0.5MM, T=0.3MM, L=250MM, RoHS
7I001-COD631A5SFE-RS	Camera; Image Module; CCM; 2592*1944; Truly; COD631-A5SF-E; 1/4"; 8.5 X 14.5 X 5.45mm; I2C; sensor type: OV5640; RoHS
19800-026300-100-RS	Speaker+Cable Module; 3;150mm/350mm; 28AWG (A) Speaker: 36.6*14*10.4MM, 8Ω, 2W*2 (B) JST PHR-4 P=2.0; ASH; RoHS
32102-045100-100-RS	Wire cable; Power Cable;1;100MM;20AWG (A) DC jack 5.5*2.5+NUT; RoHS
iWB-AP6275SDSR-R10	Radio Frequency Card, AP6275S, WIFI6E+BT5.1, FCC, RoHS

*Please order two units of cable (P/N: 32408-000203-100-RS and 32440-001300-100-RS) along with the LCD module order