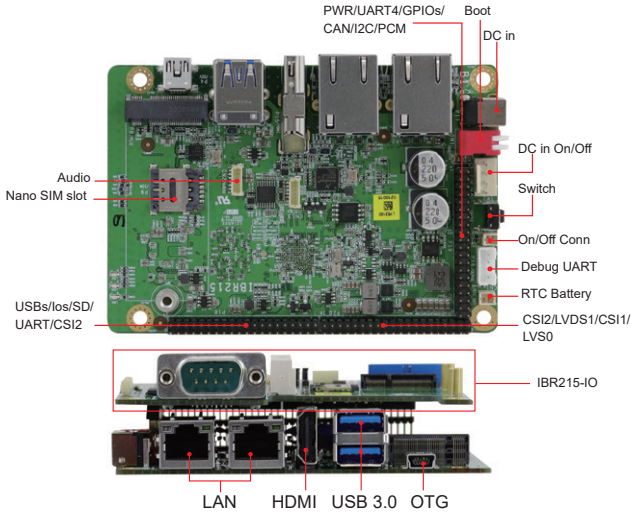
IBR215

NXP i.MX 8M Plus Quad - ARM Cortex-A53 Quad Core Processor





Features

- NXP i.MX 8M Plus Quad - ARM Cortex-A53 Quad Core 1.6GHz Processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- Integrated NPU with up to 2.3 TOPS for edge AI inference
- 1x HDMI 1.4a, 2x USB 3.0, 1x Mini-USB OTG, 2x Gb Ethernet
- Supports M.2 B-Key (3052) for 5G module
- IBR215-IO expansion board for Wi-Fi/BT, 4G/LTE, COM, LVDS, MIPI-CSI camera, CAN-FD
- Supports Android 14 & Yocto 5.0
- Wide-range operating temperature (-40°C~85°C)

Specifications

CPU	NXP i.MX 8M Plus Quad: 4x Arm® Cortex®-A53 up to 1.6GHz (Industrial Grade), 1x Arm® Cortex®-M7 up to 800MHz
AI Performance	2.3 TOPS (NPU)
PCH	N/A
Memory	3GB LPDDR4 on board, Non-ECC
BIOS	N/A
Watchdog Timer	256 levels, 0~128 Secs
H/W Monitor	N/A
Storage Device Interface	16GB eMMC on board 1x SD socket (UHS-I SDR104, up to 104MB/s)
Expansion Slots	1x M.2 B-Key (3052) with Nano SIM socket for 5G module 1x M.2 E-Key (2230, SDIO & UART) for Wi-Fi/BT (on IBR215-IO)
Mini Type Slots	1x Mini PCIe (USB 2.0, SIM, PCM) for 4G/LTE/Wi-Fi (on IBR215-IO)
Graphics Controller	Vivante GC7000UL 3D GPU & GC520L 2D GPU
Video Output	1x HDMI 1.4a 1x Dual-channel LVDS with backlight control (on IBR215-IO)
Ethernet	2x Gigabit Ethernet (RJ45)
I/O Chipset	N/A
Serial Port	1x RS232/422/485 (DB-9, on IBR215-IO) 1x Debug UART (4-pin header)
USB 2.0	1x USB 2.0 Mini-USB (OTG)
USB 3.X	2x USB 3.0 Type-A, 2x USB 3.0 via 2x10-pin header (on IBR215-IO)
Serial ATA	N/A
Audio	1x Audio Line-in and Line-out in a 6-pin header
TPM	N/A
Others	VPU: 1080p60 H.265/H.264/VP9/VP8 decode, 1080p60 H.265/H.264 encode 2x MIPI-CSI, 2x CAN-FD, capacitive touch interface (on IBR215-IO) 2x I²C / 4x GPIO (shared 6-pin header), RTC 12/24VDC-IN jack and internal header
Dimensions (L x W)	105mm x 72mm (4.13" x 2.83")
Power Consumption	NXP i.MX 8M Plus Quad 1.6GHz w/ 3GB LPDDR4 (Onboard) +12V: ~0.75A
Operating Temperature	-40°C ~ +85°C (-40°F ~ +185°F) with heat sink
Storage Temperature	-40°C ~ +85°C (-40°F ~ +185°F)
Relative Humidity	10% ~ 90% (non-condensing)

Ordering Information

IBR215-01	ARM-based IoT Gateway, NXP i.MX 8M Plus Quad Cortex-A53, 1.6GHz, 3GB LPDDR4, 16GB eMMC
IBR215-IO	Expansion Board for IBR215
HSIBR215-A	Heat sink

Dimensions and Drawings

