

Huameishi Technology

IBR215 Single Board Computer

IoT Gateway and High Performance Ruggedized Embedded System

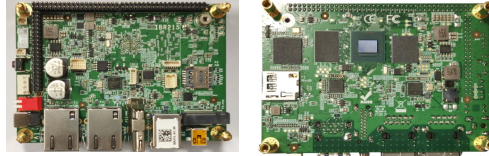
NXP i.MX 8M Plus Quad Cortex™-A53 1.6GHz, Cortex™-M4 with NPU up to 2.3 TOPS

Single Board Computer

NXP i.MX 8M Plus Quad Cortex™-A53 1.6GHz, Cortex™-M4, and machine learning accelerator up to 2.3 TOPS.

Features

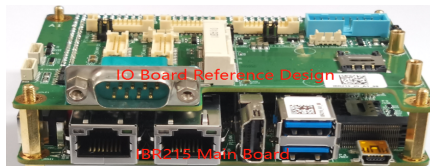
- NXP Cortex™-A53, i.MX 8M Plus Quad 1.6GHz processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- External connectivity including USB, HDMI, Ethernet
- Supports M.2 Key-B (3052) for 5G module
- Rich IO expansion signals for IO board design to support WiFi/BT, 4G/LTE, LCD, Camera, NFC, QR-code etc.
- Ruggedized and Fanless Design



I/O Top and Bottom View

Specifications

System Main Board	IBR215-Q316I SBC
Processor	NXP Cortex™-A53 i.MX 8M Plus Quad, 1.6GHz, NPU up to 2.3 TOPS
System Memory	3GB LPDDR4 on board (optional 1/2/4GB)
Storage	16GB eMMC on board (optional up to 128GB)
Display	HDMI 2.0a Edge connector LVDS 2-ch through IO expansion header
Video codec	Decode: 1080p60, H.265, H.264, VP9, VP8 Encode: 1080p60, H.265, H.264
Graphics	Open VG 1.1, Open GL ES 3.1, Vulkan, Open CL 1.2FP
Watchdog	256 Levels, 0~128 Secs
Front I/O	1x HDMI 2.0a 2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG
Side I/O	1x On/Off button 1x 12~24V DC-in Jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switches (boot from eMMC or SD)
Expansion Slots	1x M.2 3052 Key-B with SIM socket (PCIe, USB3.0 for 5G module) 2x I ² C/ 4x GPIO 6-pin header 1x Audio Line-in and Line-out 6-pin header 1x DC power in 4-pin header 3x IO expansion 2mm pitch 2x20 pin headers with following features(Please contact us for IO board design reference with RS232/422/485, 4G/LTE, WiFi/BT support): 1x PCM (for M.2 or mPCIe) 2x UART(RX,TX) 1x SDIO 1x UART(Tx,Rx,CTS,RTS) 2x USB 3.0 1x USB 2.0 (for mPCIe for 4G/LTE modules) 1x LVDS 2-ch with Back light control 1x I²C 2x PWM 3x GPIO 1x Cap touch IF 2x MIPI-CSI for cameras 2x CAN-FD 1x 5V DC
Fanless	Yes
Dimensions (WxDxH)	105mm x 70mm x 20 mm
Operating Temperature	-40°C~ 85°C with heat sink or through housing design -40°C~ 65°C without heatsink
Relative Humidity	0%~ 90% (non-condensing)
Certification	CE/ FCC Class B
Operating System	Yocto v3.0 Android 11 Other OS supports by request



Ordering Information

IBR215-Q316I	ARM-based IOT Gateway, NXP Cortex™-A53, i.MX 8M Plus Quad 1.6GHz, 3GB LPDDR4, 16GB eMMC
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