2025 — 2026 Edition

RISC-Based Embedded Solutions

iBASE

www.ibase.com.tw

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About IBASE

HQ
Taipei, Taiwan

Stock Code
TPEx 8050
(Since 2003)

Chairman
C. S. Lin

Capital
US$
66.2M

Revenue
US$
161M
(2024)

Employees
1,010
(Group)
770
(IBASE HQ)

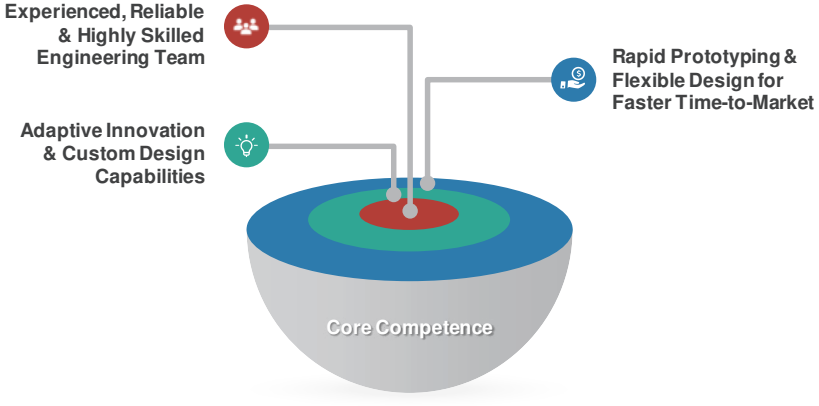
Design and Manufacturing of Robust Computing Platforms

Company Profile

IBASE Technology specializes in the design and manufacture of robust industrial PC products and has been serving the global market since its establishment in 2000. All manufacturing and quality control operations are conducted in IBASE's own facilities in Taiwan, which are certified to ISO 9001, ISO 13485, ISO 14001, and ISO 27001 standards. The company's current product offerings include x86 and RISC-based industrial motherboards, embedded systems, Edge AI computers, panel PCs, network appliances, and digital signage players. IBASE is publicly listed on the Taipei Exchange (TPEx: 8050) and has become a leading global provider of innovative industrial and embedded computing solutions.

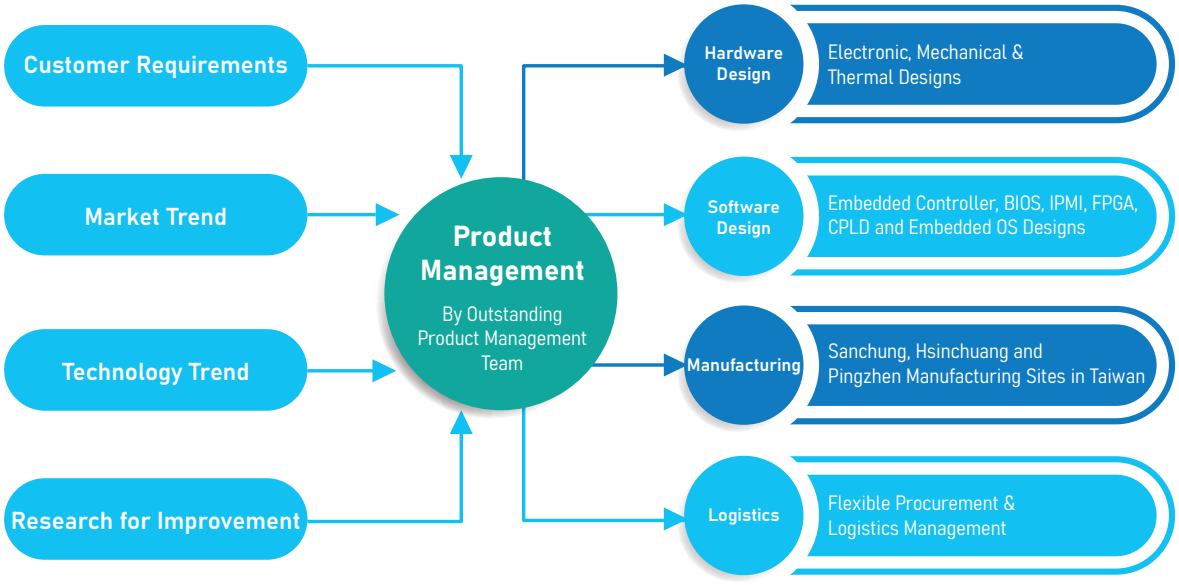
Core Competence – R&D Design Capabilities

IBASE excels in delivering advanced R&D design capabilities through a team of experienced, reliable, and highly skilled engineers. Our core expertise lies in adaptive innovation and customized design solutions tailored to diverse industry requirements. By leveraging rapid prototyping and flexible design processes, we help customers accelerate time-to-market and gain a competitive edge in today's fast-evolving technology landscape. From concept to completion, IBASE prioritizes precision, efficiency, and reliability—making us a trusted partner for businesses seeking advanced industrial computing solutions.



Design & Manufacturing Services

Established to become a leading global provider of embedded board and system solutions, IBASE manufactures and supplies cutting-edge products based on the latest technologies to meet market demands. Our R&D and product management teams have the expertise to design and develop innovative products that meet customer requirements and design specifications. We place great importance on research and development, investing heavily in manpower and resources to consistently deliver high-quality, innovative products. IBASE is also committed to environmental compliance by working to prevent pollution through the avoidance of banned or restricted substances in our production processes and products, helping our customers address their environmental challenges.



IBASE Manufacturing Sites

IBASE Manufacturing Sites in Taiwan

18,481 m² / 5,591 Ping

Pingzhen

- Board Production
- System Assembly
- Validation

6,070 m2 / 1,840 Ping

Xinzhuang

- System Assembly
- Validation

3,124 m2 / 945 Ping

Sanchong

- Board Production
- Validation

Total Size

297,891 Square-feet
(27,675 m² / 8,376 Ping)

Capacity

- SMT Line x 7
- DIP Assembly Line x 4
- System Assembly Line x 10
- Cleanroom x 2
- Burn-in Room x 20

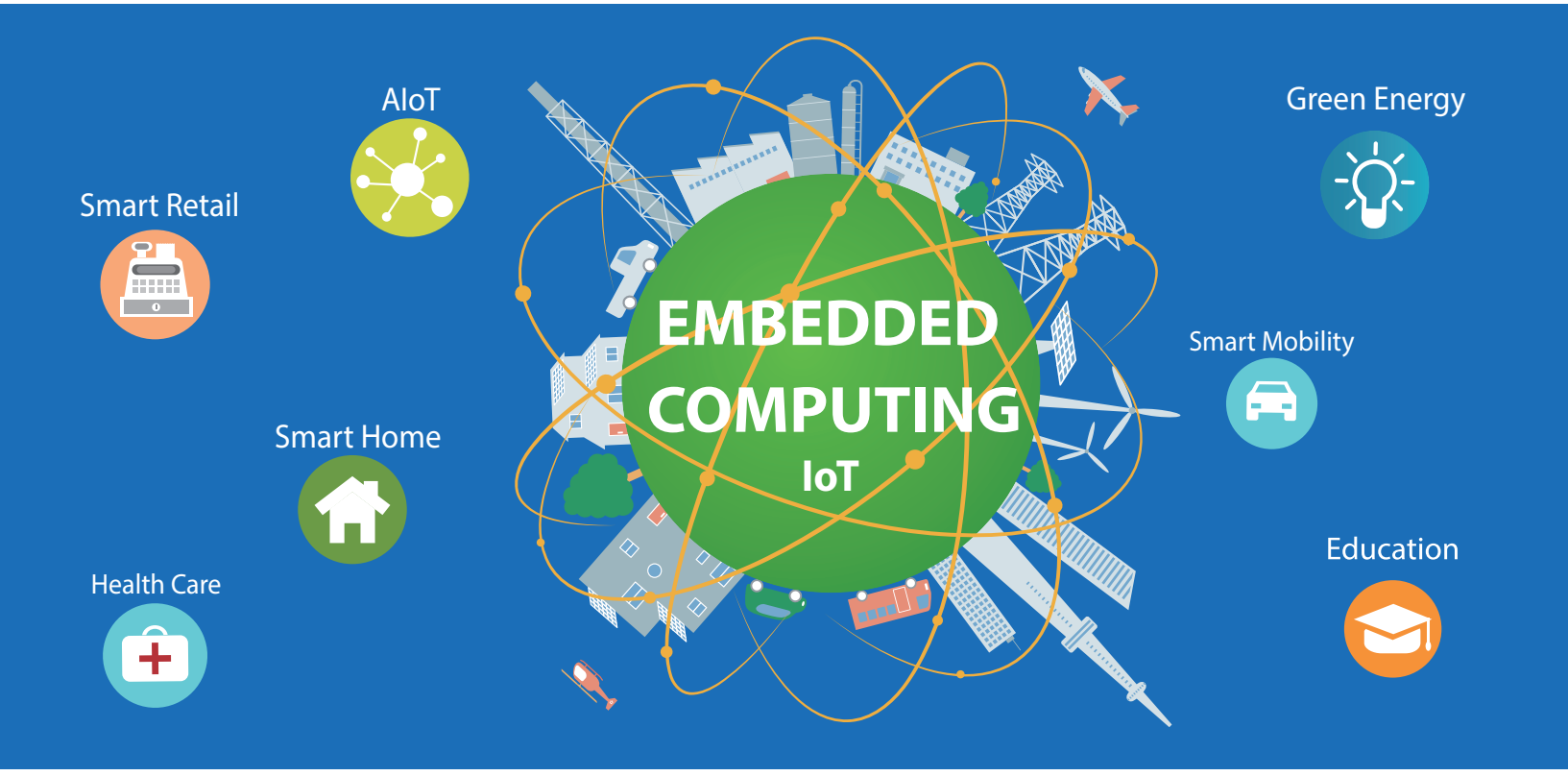
PCBA
80K/month
In-house Production+ Outsourcing

System Assembly
50K/month
In-house Production+ Outsourcing

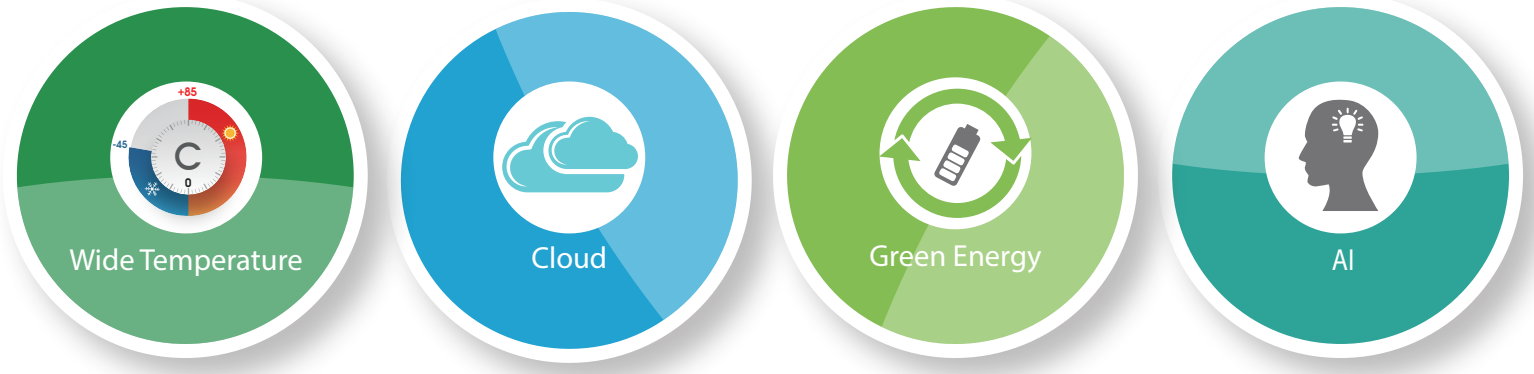
Certifications

ISO 9001 ISO 14001 ISO 13485 ISO 27001

Powering IoT with RISC-Based Computing Platforms



Global industries across various verticals are rapidly adopting edge computing technologies to power next-generation Internet of Things (IoT) networks. At the heart of this transformation are intelligent embedded computing solutions engineered for reliability, energy efficiency, and compact design. This shift creates a Signficant opportunity for solution providers to deliver innovative, ARM-based computing platforms. Renowned for their low power consumption, minimal heat generation, and cost-effectiveness, ARM and RISC architectures are already embedded in countless devices today. Be part of the thriving ARM ecosystem and help shape the future of edge computing.



RISC-Based Embedded Solutions

SMARC/SOM Module

IBASE provides a wide range of SMARC/SOM solutions that support the Qualcomm IoT Chipset series and NXP i.MX series, offering powerful multimedia capabilities and versatile features.

The SOM module consists of a small processor module with CPU bus accessibility and standard I/O functionality, making it easy to customize for specific engineering needs. The SOM and SMARC modules are designed specifically for developing extremely compact, low-power, richly featured, and high-performance platforms. They also support scalable and future-proof solutions for long-term availability, offering high configurability and helping customers reduce time-to-market.

SMARC module PCBs feature 314 edge fingers that mate with a low-profile 314-pin, 0.5 mm-pitch right-angle connector. Designed to be used as building blocks for portable and standalone edge computers, these modules incorporate circuits for DRAM, boot flash, power sequencing, USB 2.0/3.0/OTG interface, Ethernet, LVDS, HDMI, and TTL display.

In addition to SMARC/SOM modules, IBASE also offers evaluation kits that include carrier boards such as RP-1xx Series, as well as other hardware components such as panels, MIPI-CSI cameras, wireless, GPS, and 5G/4G/LTE modules to accelerate the development of ARM-based solutions. This modular approach enhances scalability, reduces time to market, lowers power consumption, and allows for small form factor designs. It also enables implementation of additional features such as audio codecs, touch controllers, and wireless devices using carrier boards.

3.5”/2.5” SBC

IBASE offers ARM-based SBCs that support the NXP and NVIDIA/ MediaTek GPU series with a variety of display and I/O interfaces including LVDS/HDMI, RS-232/422/485, and USB ports, as well as Mini PCI-E and M.2 for expansion connectivity.

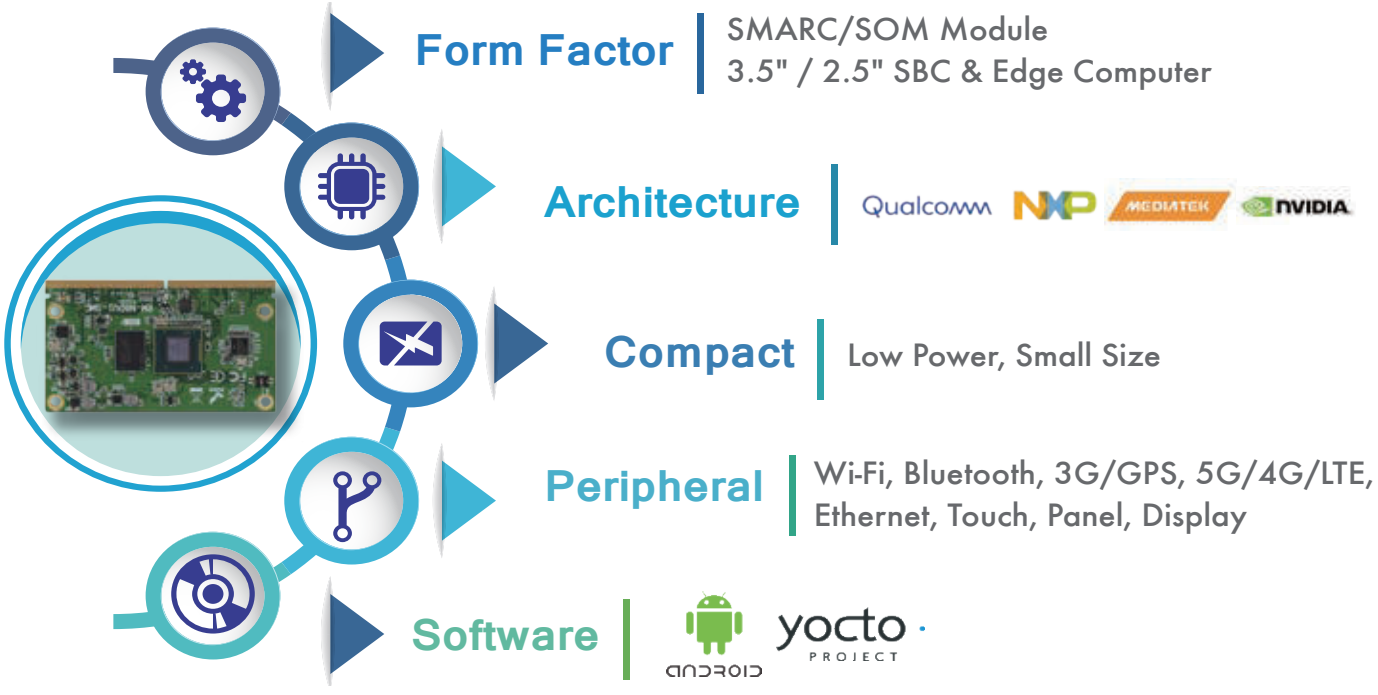
These SBC solutions are designed for rugged applications and feature low power consumption with a wide operating temperature range of -40°C to 85°C. For software development, IBASE provides GUI images for popular operating systems such as Ubuntu, Yocto-Linux, and Android, allowing for performance testing and ensuring that applications meet functional requirements. Additionally, a standard Board Support Package (BSP) is available to assist software developers in creating, evaluating, and testing their applications before release—enabling fast and optimized application development.

Edge Computer

In addition to our board-level products, IBASE also offers a wide range of system-level ARM-based edge computing. Our system-level products are designed to deliver exceptional performance while minimizing power consumption, making them ideal for demanding applications in edge computing and digital signage.

Leveraging the latest technologies from NXP and NVIDIA, our solutions provide advanced capabilities for AI inference, machine learning, computer vision, and other data-intensive tasks.

IBASE is committed to providing innovative and reliable solutions for our customers’ ARM-based needs. With our extensive product development experience and partnerships with leading technology vendors, we are able to provide solutions that are ready for today’s evolving requirements.with leading technology vendors, we are able to provide cutting-edge solutions that enable our customers to stay ahead in today’s rapidly evolving technology landscape.



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Comparison Table

SMARC/SOM Module					
Model	**RM-H8MP-S**	**RM-QCS6490-S**	**RM-QCS610**	**RM-N95**	**RM-N8MPL**
Form Factor	SOM Module	SOM Module	SMARC™ 2.1	SMARC™ 2.1.1	SMARC™ 2.1
Processor	NXP i.MX8M Plus Quad Cortex-A53 processor	Qualcomm® QCS6490	Qualcomm® QCS610 SoC with Qualcomm® Kryo™ 460 Octa-core (2x gold 2.2GHz and 6x silver) processor	NXP i.MX 95 Six Cortex-A55/ Cortex-M33/ Cortex-M7 processors	NXP Cortex®-A53, i.MX 8M Plus Lite Quad processor
System Memory	3GB LPDDR4 on board (Option: 1GB, 2GB or 4GB)	6GB LPDDR4x	2GB DDR on board (option: 4GB)	8GB LPDDR5 6400MT/s on board (optional: 4GB/16GB)	3GB LPDDR4 on board (option: 4GB)
Flash Memory	16GB eMMC on board	128GB eMMC on board	16GB eMMC on board (up to 32GB)	16GB eMMC on board (up to 256GB)	16GB eMMC (up to 64GB)
Video Codec	Up to 1080p decode, AVC/H.264, HEVC/H.265 up to 1080p encode, AVC/H.264, HEVC/H.265	4K@30FPS for H.264/H.265 4K@60FPS for H.264/H.265/ VP9	4K30 8-bit H.264/HEVC/VP8/ VP9	Decoder: H.265, H.264, 4Kp30 Encoder: H.265, H.264, 4Kp30	N/A
Graphics	Open VG 1.1, Open GL ES 3.1, Vulkan, Open CL 1.2 FP	N/A	Adreno 612; 845 MHz, 3D graphics accelerator with 64-bit addressing	Arm Mali-G310 V2 GPU 3D GPU OpenGL® ES 3.2 Vulkan® 1.3 OpenCL 3.0	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
LAN	2x RJ45 GbE	N/A	1x RJ45 GbE	1x 10 GbE Ethernet 2x 10/100/1000 Mbps Ethernet	2x RJ45 GbE
Audio	2x SAI	N/A	1x I²S	2x I²S	2x I²S
SATA	N/A	N/A	N/A	N/A	N/A
I²C	4x I²C	N/A	4x I²C	4x I²C	4x I²C
I/O	1x MIPI-DSI 4-lane 2x MIPI-CSI 4 lanes 1x CSPI 1x QSPI 4x UART 1x PCI-E Gen3	1x PCI-E Gen3 2-lane 2x SoundWire 1x SDC for SD card 3x DMIC Interfaces GPIOs QUPs (UART/I2C/SPI)	1x MIPI CSI 2 lane 1x MIPI CSI 2 or 4 lane 1x UART 2x SPI 12x GPIO 3x USB 2.0 (Type-A) 1x USB 3.0 (gen-1 with OTG support)	1x 4-lane MIPI-DSI supporting 4kp30 or 3840 x 1440p60 (BOM Optional) 1x 8-lane or 2x 4-lane LVDS up to 1080p or 1920x1200 or 2x 720P 1x HDMI interface up to 4kp30 or 3840 x 1440p60 1x USB 3.0 Type-C with PHY 1x USB 2.0 with PHY 1x MIPI CSI-2 2-Lane (BOM Optional) 1x MIPI CSI-2 4-Lane 2x 4-wire UART and 2x 2-wire UART 1x SPI interface 1x XSPI interface 14x GPIO 1x Green LED for power on/off 2x CAN FD	2x MIPI CSI 4 lane+2 lane 1x MIPI-DSI 4-lane 2x USB 3.0 2x SPI 4x UART 2x CAN bus 12x GPIO 1x PCI-E
SDIO	2x High-speed SDIO	N/A	N/A	1x 4-bit High-speed SDIO	1x High-speed SDIO
Watchdog Timer	256 levels	256 levels	256 levels	1~6553s, power on/off 4s	256 levels
Dimensions	36 mm x 49 mm (1.4" x 1.9")	36 mm x 49 mm (1.4" x 1.9")	82mm x 50mm (3.2" x 2")	82mm x 50mm (3.2" x 2")	82mm x 50mm (3.2" x 2")
Power Connector	N/A	N/A	N/A	N/A	N/A
Operating Temperature	-40°C~+85°C (-40°F ~ 185°F)	-25°C ~ +75°C (-13°F ~ 75°F)	-30°C ~ +80°C (-22°F ~ 176°F)	0°C ~ +60°C(32°F ~ 140°F) (Consumer grade, no heat-sink required) -40°C ~ +85°C (-40°F ~ 185°F) (Industrial grade, with heat-sink)	-40°C ~ +85°C
Supported OS	Yocto 4.0 Android 13	LA 3.0 LU 1.0 WP 1.0	Linux open embedded Other OS (by request)	Yocto 5.0 Android 14 Other OS (by request)	Yocto 2.5 Android 11 Other OS(by request)
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Comparison Table

SMARC Module				
Model	**RM-N8MP**	**RM-N8M**	**RM-N8MMI**	**RM-F6 series**
Form Factor	SMARC™ 2.1	SMARC™ 2.0	SMARC™ 2.0	SMARC™ 1.0
Processor	NXP Cortex-A53 i.MX 8M Plus processor	NXP Cortex-A53 and Cortex-M4 i.MX 8M Quad processor	NXP Cortex-A53 and Cortex-M4 i.MX 8M Mini Quad processor	NXP Cortex-A9 i.MX 6 Solo/Dual processor
System Memory	3GB LPDDR4 on board (option: 4GB)	3GB LPDDR4 on board	2GB LPDDR4 on board	512KB/1GB DDR3 on board
Flash Memory	16GB eMMC (up to 64GB)	16GB eMMC on board	8GB eMMC on board	4GB eMMC on board
Video Codec	1080p/60fps video decode, AVC/H.264, HEVC/H.265, VP8, VP9 1080p/60fps video encode, AVC/H.264, HEVC/H.265	4Kp60 HEVC/H.265 4Kp60 VP9 decoder 4Kp30 AVC/H.264 decoder 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder TrustZone support	1080p60 VP9 1080p60 HEVC/H.265 Decoder 1080p60 AVC/H.264 Baseline, Main, High decoder 1080p60 VP8 1080p60 AVC/H.264 Encoder 1080p60 VP8 TrustZone support	i.MX53 + VP6 / WebM VP8, H.264 MVC 1080p30 + D1 (Solo) 1080p60or30 + D1 Dual 1080p decode (Dual) 1080p30 H.264BP Dual 720p encode
Graphics	OpenGL Es 1.1, 2.0, 3.0, 3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1	GC7000Lite OpenGL ES 1.1, 2.0, 3.0, 3.1 Open CL 1.2 Vulkan	GCNanoUltra Vivante GC320	Vivante GC880, OpenGL ES 2.0 (Solo) Vivante GC320 (Solo) Vivante GC2000, OpenGL, GL ES 2.0 & Halti, CL EP (Dual) Vivante GC355, OpenVG 1.1 (Dual)
LAN	2x RJ45 GbE	1x RJ45 GbE	1x RJ45 GbE	1x RJ45 GbE
Audio	2x I²S	2x I²S, 1x SPDIF	2x I²S, 1x SPDIF	1x I²S, 1x SPDIF
SATA	N/A	N/A	N/A	1x SATA2.0 (Dual)
I²C	4x I²C	4x I²C	4x I²C	4x I²C (Solo) 3x I²C (Dual)
I/O	2x MIPI CSI 4 lane+2 lane 1x MIPI-DSI 4-lane 2x USB 3.0 2x SPI 4x UART 2x CAN FD 12x GPIO 1x PCI-E	1x MIPI-DSI 4-lane 1x HDMI2.0a 2x MIPI-CSI2 4-lane 2x SPI/eSPI 4x UART 2x USB 3.0 2x PCI-E (x1) Gen1 1x GbE 12x GPIO	1x MIPI-DSI 4-lane 1x MIPI-CSI2 4-lane 2x SPI/eSPI 4x UART 2x USB2.0 2x PCI-E (x1) Gen1 12x GPIO	2x USB 1x USB OTG 4x UART 1x HDMI 1x 18/24bit LVDS/TTL 2x CAN 2x SPI 1x MIPI-CSI 12x GPIO 1x PCI-E (x1)
SDIO	1x High-speed SDIO	2x MMC/ SDIO interface	2x MMC/ SDIO interface	3x MMC/ SDIO interface
Watchdog Timer	256 levels	256 levels	256 levels	256 levels
Dimensions	82mm x 50mm (3.2" x 2")	82mm x 50mm (3.2" x 2")	82mm x 50mm (3.2" x 2")	82mm x 50mm (3.2" x 2")
Power Connector	N/A	N/A	N/A	N/A
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)	-25°C ~ +85°C (-13°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)
Supported OS	Yocto 4.0 Android 11 Other OS(by request)	Yocto 2.5 Android 9 Other OS (by request)	Yocto 2.5 Android 9 Other OS (by request)	Ubuntu Android 4.3
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Comparison Table

Carrier Board				
RP-107	**RP-106**	**RP-105**	**RP-103-SMC**	**RP-102-SMC**
RM-QCS6490-S (SOM)	NVIDIA Jetson NX/Nano Modules	SMARC™ 2.1	SMARC™ 2.1	SMARC™ 1.0
Qualcomm® QCS6490	NVIDIA Jetson NX/Nano Modules	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	2x RJ45 GbE	1x RJ45 GbE	2x RJ45 GbE	1x RJ45 GbE
N/A	N/A	1x I2S	Built-in audio	Built-in audio
N/A	N/A	N/A	2x SATA3	1x SATA2
N/A	N/A	1x I²C	1x I²C	2x I²C
1x DC-in jack (+12V) 1x UART 2x USB Type-A port, only as host 1x Micro USB port 1x USB Type-C port 1x HDMI 2.0 1x SD card slot 1x 6-pin switch 1x Force USB boot button 1x Volume up button 1x Volume down button 1x Power on button 5x MIPI Camera interface 3x RGB LED from PMIC 1x Low-speed connector 1x DIP switches	1x HDMI 1x UART 2x USB 2.0 host 1x USB 2.0 OTG (Type-C) 2x USB 3.0 1x CAN Bus 4x DI + 4x DO 1x Audio Line-in 1x Mic-out 2x Summit connector 1x M.2 B-Key (3042) 1x M.2 B-Key (3052) 1x M.2 E-Key (2230) 1x M.2 M-Key (2280) 1x Power button 1x Recovery button 1x Reset button 2x Nano SIM Slot	3x USB 2.0 host 1x USB 3.0 host (with USB 2.0/3.0 OTG support) 1x HDMI 1x COM (RS232/422/485) 1x SD slot 1x MIPI display power (3.3V) 1x MIPI-DSI 2x MIPI-CSI2 6x GPIOs (3.3 V) 2x RS232 (RX/TX / pin eader) 1x M.2 E-Key (2230) (USB 2.0 interface only) 1x Speaker R and L 1x RTC battery 1x TTL (3.3V reserved for debug)	4x USB 3.0 1x OTG Micro USB 2.0 2x HDMI Tx 1x HDMI Rx 1x COM (RS232/422/485 by switch) 1x 12V fan header 4x CAN bus 2.0b 3x 18/24-bit Dual-channel LVDS 2x MIPI-CSI2 2x MIPI-DSI 1x 12 GPIOs 2x RS232 (RX/TX only) 1x I2S 2x SPI 1x QSPI 1x Full-size Mini PCI-E 1x SIM socket 1x M.2 E-Key (2230) 2x UART 1x 4-Wire UART	4x USB2 1x OTG USB 1x COM (RS232/422/485 by switch) 2x RS232 1x HDMI 1x 8/24bit LVDS/TTL 2x CAN 1x SPI 1x MIPI-CSI 8x GPIO
N/A	N/A	N/A	1x SD slot	1x Micro SD slot
N/A	N/A	N/A	N/A	N/A
150mm x 180mm (5.9" x 7")	190mm x 170mm (7.48" x 6.7")	170mm x 170mm (6.7" x 6.7")	170mm x 170mm (6.7" x 6.7")	170mm x 170mm (6.7" x 6.7")
+9V~+36V DC-in	+9V~+36V DC-in	12V~24V DC-in	19V~24V DC-in jack and internal header	19V DC-in jack
-40°C ~ +70°C (-40°F ~ 158°F)	-20°C ~ +70°C (-4°F ~ 185°F)	-30°C ~ +85°C (-22°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)
N/A	Ubuntu 22.04	N/A	N/A	N/A
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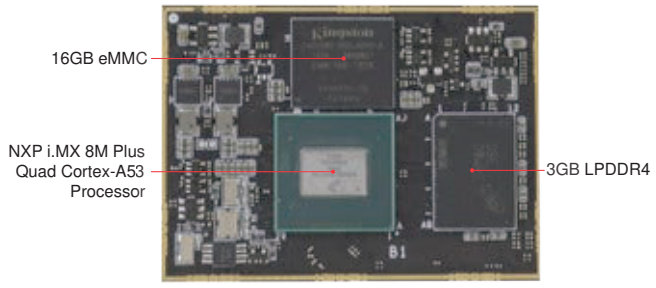
RM-H8MP-S

SOM Module

Wide-Temperature SOM Module
with NXP Arm® i.MX 8M Plus Quad Cortex™-A53 1.6 GHz Processor



Features

- NXP Cortex™-A53, i.MX 8M Plus Quad 1.6 GHz processor
- 3GB LPDDR4, 16GB eMMC
- Video decode/encode, up to 1080p/60fps.
- Extensive peripheral I/O support
- Low power design, no heatsink required
- Wide-range operating temperature (-40°C~85°C)

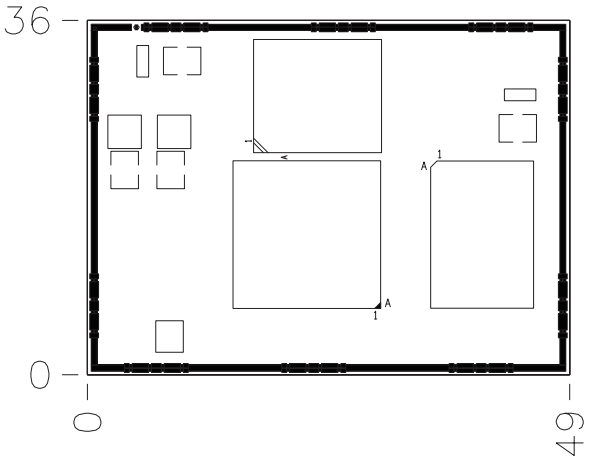
Specifications

Form Factor	SOM Module (System-on-Module)
Processor	NXP i.MX8M Plus Quad Cortex-A53 processor
System Memory	3GB LPDDR4 on board (option: 1GB, 2GB or 4GB)
Flash Memory	16GB eMMC on board (up to 64GB)
Display	HDMI 2.0 1x dual-channel LVDS 1x MIPI-DSI 4-lane
Video Codec	Up to 1080p decode, AVC/H.264, HEVC/H.265 Up to 1080p encode, AVC/H.264, HEVC/H.265
Graphics	Open VG 1.1, Open GL ES 3.1, Vulkan, Open CL 1.2 FP
Audio Interface	2x SAI
LAN	2x GbE GMAC
USB	2x USB 3.0
Image Capture Interface	2x MIPI-CSI (4 lanes)
Serial Interface	4x UART, 1x CSPI, 1x QSPI Interface
Media Interface	2x High-speed SDIO
PCI-E	1x PCI-E (Gen3)
SATA	N/A
GPIO	Up to 46 GPIO
I²C	4x I²C
Others	N/A
CAN Bus	2x CAN FD
Dimensions	36mm x 49mm (1.4" x 1.9")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-40°C~+85°C (-40°F ~ 185°F)
OS Support	Yocto 3.0 (sumo, kernel 5.4.70) Android 11
Certification	CE/ FCC Class-A

Ordering Information

RM-H8MP-S	RISC System on Module, 3GB LPDDR4, 16GB eMMC

Dimensions



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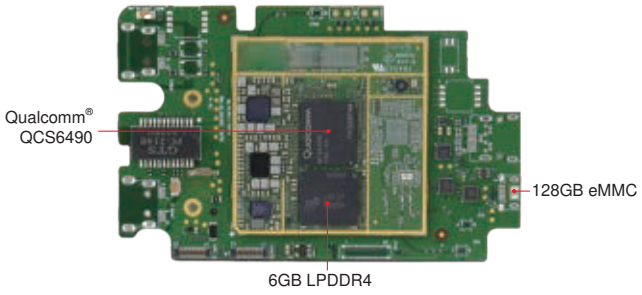
RM-QCS6490-S

SOM Module

Wide-Temperature SOM Module
with Qualcomm QCS6490 Processor



Features

- SOM (System on Module) is integrated with Qualcomm® QCS6490 SoC
- Video: 4K@60FPS video decoding; 4K@30FPS video encoding
- AI Performance: 12.5 TOPS
- Peripheral Interfaces, including GPIO, UART, I²C, I³C, SPI, DSI, USB 3.1 (with RP-107 carrier board)
- Long-term availability with Qualcomm solution
- Wide-range operating temperature (-25°C~75°C)

Specifications

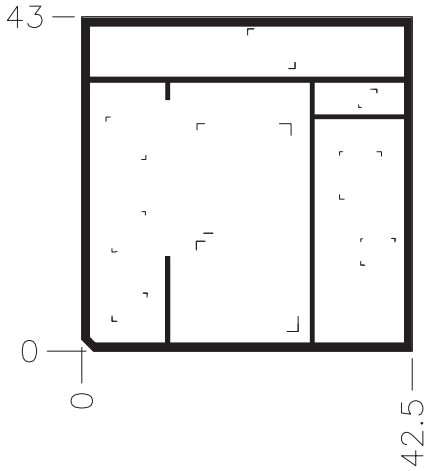
Form Factor	SOM Module (System-on-Module)
Processor	Qualcomm® QCS6490 Qualcomm® Kryo™ CPU 670 Qualcomm® Adreno™ GPU 642L, Adreno 633 VPU, Adreno DPU 1075 Qualcomm® Compute Hexagon™ DSP with dual HVX, Hexagon Co-processor (Hexagon CP) 2.0 and Hexagon Tensor Accelerator Qualcomm® Spectra™ 570L image processing
System Memory	6GB
Flash Memory	128GB
Display	1x MIPI-DSI 4-lane
Video Codec	4K@30FPS for H.264/H.265 4K@60FPS for H.264/H.265/VP9
Graphics	N/A
Audio Interface	N/A
LAN	N/A
USB	N/A
Image Capture Interface	N/A
Serial Interface	N/A
Media Interface	N/A
PCI-E	N/A
SATA	N/A
GPIO	N/A
I²C	N/A
Others	Camera Interfaces: 2x 4-lane MIPI CSI D-PHY (2x of them are compatible with 3-trio MIPI-CSI C-PHY for cameras up to 48M) Voltage: 3.4V~4.5V, Typ. 3.8V Form Factor: LGA
CAN Bus	N/A
Dimensions	36mm x 49mm (1.4" x 1.9")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-25°C ~ +75°C (-13°F ~ 75°F)

OS Support	Android 12/13, Ubuntu
Certification	CE/ FCC Class-A

Ordering Information

RM-QCS6490-S	Industrial-grade SOM (System-on-Module), Qualcomm® QCS6490, 6GB LPDDR4, 128GB eMMC

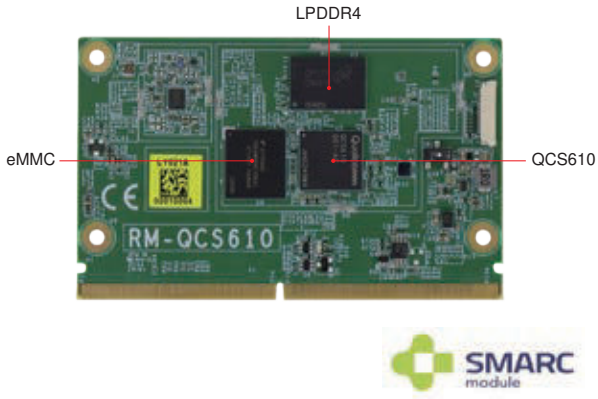
Dimensions



RM-QCS610

SMARC 2.1 CPU Module

Wide-Temperature SMARC™ 2.1 Module
with Qualcomm QCS610 Processor



Features

- Qualcomm QCS610 SoC
- Up to 4GB LPDDR4, 32GB eMMC
- Qualcomm Adreno 612 GPU 3D graphics accelerator with 64-bit addressing 845 MHz
- 4K video capture and playback at 30fps
- 3.15 TOPS @Caffe
- Validated with Linux open Embedded
- Long-term availability with Qualcomm solution
- Compliant with SMARC™ 2.1
- Carrier board for RM-QCS610 SMARC™ 2.1 CPU module
- Supports 12V~24V DC-in jack, reset, power, LID button, RTC battery
- Supports Gigabit LAN, audio, USB OTG, HDMI, COM (RS232/422/485)
- With Micro SD socket, mPCI-E with USB on board
- Supports TTL, HDMI, MIPI-DSI Display, MIPI-CSI camera
- Wide-range operating temperature (-30°C~85°C)

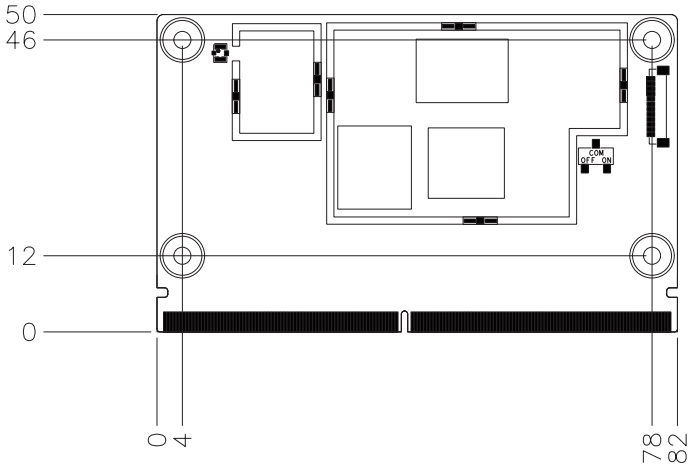
Specifications

Form Factor	SMARC™ 2.1
Processor	QCS610 Kryo Gold: Dual high-performance cores 2.2 GHz Kryo Silver: Hexa low-power cores 1.8 GHz
System Memory	On board - 4GB LPDDR4/ 32GB eMMC
Flash Memory	32GB eMMC
Display	1x HDMI TX (Up to 1920 x 1080 at 60 Hz) 1x MIPI DSI TX (Up to 1920 x 1200 at 60 Hz) Controlled by SW1 switch
Video Codec	4K30 8-bit H.264/HEVC/VP8/VP9 Multi-format codec up to 4K30 video encode Multi-stream codec (4K30) (HEVC) + 720p30 (YUV) + 480p30 (VA-YUV) Dual 14-bit image signal processing (ISP) + Lite ISP: 24 MP (2x IFE + 1x IFE Lite, 16 + 16 + 2 MP), 4K30, MCTF, SHDR, C-PHY, DPHY 4K30 8-bit H.264/HEVC/VP8
Graphics	Adreno 612; 845 MHz, 3D graphics accelerator with 64-bit addressing
Audio Interface	1x I²S
LAN	1x GbE LAN
USB	3x USB 2.0 (Type-A) 1x USB3.0 (Micro-B, With OTG Support)
Image Capture Interface	1x MIPI CSI 2Lane (Up to 1920 x 1080 at 30 FPS) 1x MIPI CSI 4Lane (Up to 4208 x 3120 at 30 FPS)
Serial Interface	1x UART 2Wire, 2x UART 4Wire, 2x SPI
Media Interface	N/A
PCI-E	N/A
SATA	N/A
GPIO	12x GPIO
I²C	4x I²C
Others	RTC
CAN Bus	N/A
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-30°C ~ +80°C (-22°F ~ 176°F)
OS Support	Linux open embedded / Other OS (by request)
Certification	CE/ FCC Class-A

Ordering Information

RM-QCS610L	Industrial grade SMARC™2.1 CPU module, Qualcomm QCS610 SoC, 4GB LPDDR4, 32GB eMMC
HSRMQCS610-B	Heat sink for IBASE RM-QCS610 series module

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RM-N95

SMARC 2.1.1 CPU Module

Wide-Temperature SMARC™ 2.1.1 Module with
Six Cortex-A55/Cortex-M33/Cortex-M7 processors

Features

- 6x Cortex-A55 / 1x Cortex-M33 / 1x Cortex-M7 processors
- 8GB LPDDR5 6400MT/s on board (option: 4GB or 16GB)
- 16GB eMMC on board (upgradeable to 256GB)
- NPU with 2.0 TOPS performance
- MIPI-DSI / LVDS / HDMI
- 10 GbE Ethernet support
- Validated on Yocto 5.0 / Android 14
- Wide-range operating temperature (-40°C~85°C)

Specifications

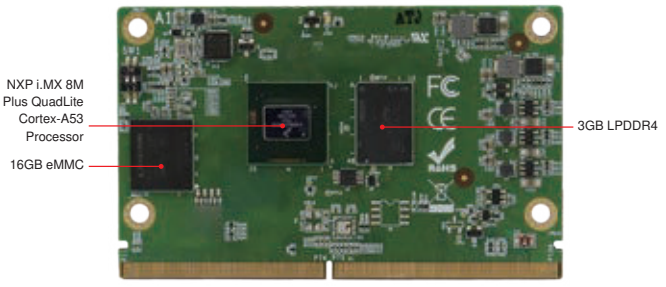
Form Factor	SMARC™ 2.1.1
Processor	NXP i.MX95 with Six Cortex-A55 cores (up to 2.0GHz)
System Memory	8GB LPDDR5 6400MT/s on board (option: 4GB/16GB)
Flash Memory	16GB eMMC NAND Flash for O.S. (upgradable up to 256GB) and 8 Kbit EEPROM for board information
Display	1x 4-lane MIPI-DSI (4kp30 or 3840 x 1440p60, BOM selectable) 1x 8-lane or 2x 4-lane LVDS (up to 1080p or 1920 x 1200 or dual 720P) 1x HDMI interface (up to 4kp30 or 3840 x 1440p60)
Video Codec	Decoder: H.265, H.264, 4Kp30 Encoder: H.265, H.264, 4Kp30
Graphics	Arm Mali-G310 V2 GPU 3D GPU OpenGL® ES 3.2 Vulkan® 1.3 OpenCL 3.0
Audio Interface	2x I2S
LAN	1x 10 GbE Ethernet 2x 10/100/1000 Mbps Ethernet
USB	1x USB 3.0 Type-C with PHY 1x USB 2.0 with PHY
Image Capture Interface	1x MIPI CSI-2 2-Lane (BOM selectable) 1x MIPI CSI-2 4-Lane
Serial Interface	2x 4-wire UART and 2x 2-wire UART 1x SPI interface 1x XSPI interface
Media Interface	1x 4-bit high-speed SDIO
PCI-E	2x PCI-E 3.0 x1 lanes
SATA	N/A
GPIO	14x GPIO
I²C	4x I²C
Others	Watchdog timer: 1~6553s Power on/off 4s 1x Green LED for power status
CAN Bus	2x CAN FD

Dimensions	8-layer PCB 82mm x 50mm (3.23" x 1.97") Max component height: - Top side: 3.0mm - Bottom side: 1.3mm PCB Thickness: 1.2mm Golden Finger: 45° chamfer (0.18mm)
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	Operating: 0°C to +60°C (Consumer grade, no heat-sink required) -40°C to +85°C (Industrial grade, with heat-sink) Storage: -40°C to 85°C(-40°F~185°F)
OS Support	Yocto 5.0, Android 14, other OS (by request)
Certification	CE/ FCC Class-B

RM-N8MPL

SMARC 2.1 CPU Module

Wide-Temperature SMARC 2.1 Module
with NXP ARM® i.MX 8M Plus QuadLite Cortex-A53 Processor



Features

- NXP ARM® i.MX 8M Plus QuadLite Cortex-A53 Processor
- 3GB LPDDR4, 16GB eMMC on board
- Extensive peripheral I/O support
- Validated with Yocto 4.0 (sumo, kernel 5.4.70) / Android 11
- Long-term availability with NXP solution
- Compliant with SMARC™ 2.1
- Wide-range operating temperature (-40°C~85°C)

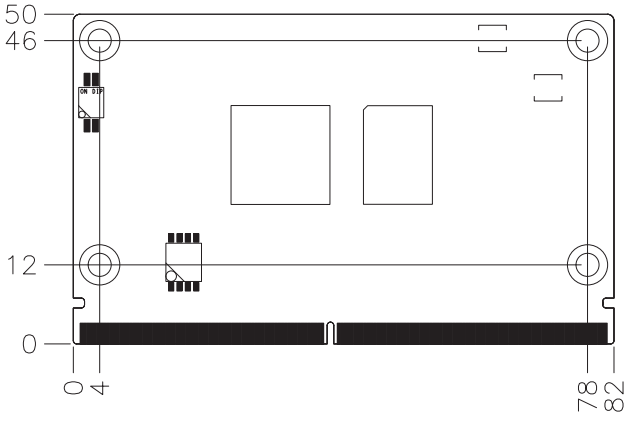
Specifications

Form Factor	SMARC 2.1
Processor	NXP i.MX 8M Plus QuadLite Cortex-A53 Processor
System Memory	3GB LPDDR4 on board (option: 2GB/4GB)
Flash Memory	16GB eMMC on board (up to 128GB)
Display	1x HDMI 2.0a Tx
Video Codec	N/A
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
Audio Interface	2x I²S
LAN	GbE with YT8531H LAN PHY on board
USB	2x USB 3.0 with OTG interface
Image Capture Interface	2x MIPI-CSI2 4-lane + 2-lane
Serial Interface	4x UART, 2x SPI
Media Interface	3x High-speed SDIO
PCI-E	1x PCI-E interface
SATA	N/A
GPIO	12x GPIO
I²C	4x I²C
Others	N/A
CAN Bus	2x CAN FD
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-40°C~+85°C (-40°F ~ 185°F)
OS Support	Yocto 4.0 (sumo, kernel 5.4.70) / Android 11 Other OS (by request)
Certification	CE/ FCC Class A

Ordering Information

RM-N8MPL	NXP i.MX8M Plus QuadLite Cortex-A53 1.8GHz processor, 3GB LPDDR4, 16GB eMMC
HSRMN8MMI-B	Heat sink

Dimensions

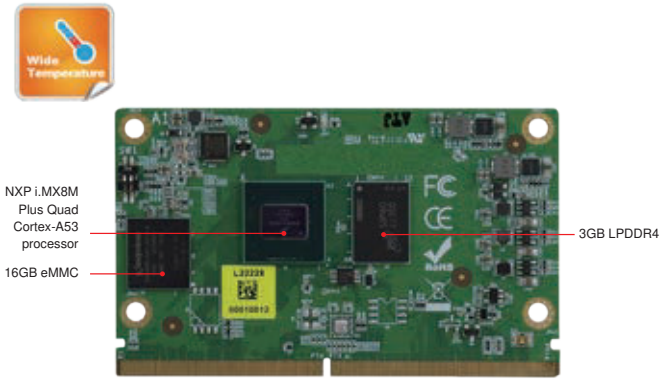


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RM-N8MP

SMARC 2.1 CPU Module

Wide-Temperature SMARC™ 2.1 Module
with NXP ARM® i.MX 8M Plus Quad Cortex-A53 Processor



Features

- NXP i.MX8M Plus Quad Cortex-A53 processor
- 3GB LPDDR4, 16GB eMMC on board
- Extensive peripheral I/O support
- Validated with Yocto 4.0 (sumo, kernel 5.4.70) / Android 11
- Long-term availability with NXP solution
- Compliant with SMARC™ 2.1
- Wide-range operating temperature (-40°C~85°C)

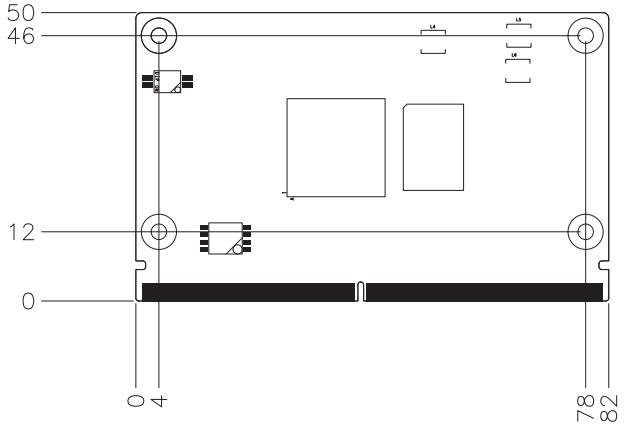
Specifications

Form Factor	SMARC™ 2.1
Processor	NXP i.MX8M Plus Quad Cortex-A53 processor
System Memory	3GB LPDDR4 on board (option: 2GB/4GB)
Flash Memory	16GB eMMC on board (up to 64GB)
Display	1x HDMI 2.0a Tx
Video Codec	1080p/60fps video decode, AVC/H.264, HEVC/H.265, VP8, VP9 1080p/60fps video encode, AVC/H.264, HEVC/H.265
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
Audio Interface	2x I²S
LAN	GbE with YT8531H LAN PHY on board
USB	2x USB 3.0 with OTG interface
Image Capture Interface	2x MIPI-CSI2 4-lane + 2-lane
Serial Interface	4x UART, 2x SPI
Media Interface	3x High-speed SDIO
PCI-E	1x PCI-E interface
SATA	N/A
GPIO	12x GPIO
I²C	4x I²C
Others	N/A
CAN Bus	2x CAN FD
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-40°C~+85°C (-40°F ~ 185°F)
OS Support	Yocto 4.0 (sumo, kernel 5.4.70) / Android 11 Other OS (by request)
Certification	CE/ FCC Class A

Ordering Information

RM-N8MP	NXP i.MX8M Plus Quad Cortex-A53 1.8GHz processor, 3GB LPDDR4, 16GB eMMC
F8Sxx-HSK	Heat sink

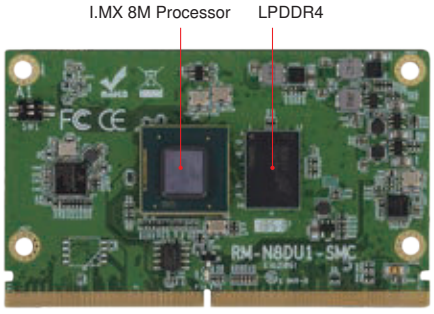
Dimensions



RM-N8M Series

SMARC 2.0 CPU Module

Wide-Temperature SMARC™ 2.0 Module with NXP ARM® Quad Cortex-A53/Cortex-M4 i.MX 8M Processor



Features

- NXP Cortex™-A53/Cortex™-M4, i.MX 8M Quad processor
- 3GB LPDDR4, 16GB eMMC on board
- Extensive peripheral I/O support
- Validated with Yocto 2.5 and Android 9
- Long-term availability with NXP solution
- Compliant with SMARC™ 2.0

Specifications

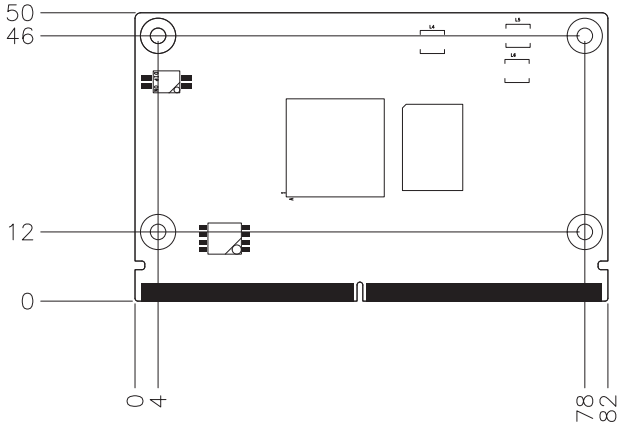
Form Factor	SMARC™ 2.0
Processor	NXP i.MX 8M Quad Cortex™-A53/ Cortex™-M4 processor
System Memory	3GB LPDDR4 on board
Flash Memory	16GB eMMC on board
Display	1x HDMI2.0a
Video Codec	4Kp60 HEVC/H.265 4Kp60 VP9 decoder 4Kp30 AVC/H.264 decoder 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder TrustZone support
Graphics	• GC7000Lite • OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan
Audio Interface	2x I²S, 1x SPDIF
LAN	1x GbE LAN
USB	2x USB 3.0/USB 2.0 with OTG interface
Image Capture Interface	2x MIPI-CSI2 4-lane each
Serial Interface	4x UART, 2x SPI/eSPI
Media Interface	2x High-speed MMC/SDIO (MMC 8-bit, SDIO 4-bit)
PCI-E	2x PCI-E (x1) Gen2
SATA	N/A
GPIO	12x GPIO
I²C	4x I²C
Others	Wireless WCN3980 (option)
CAN Bus	N/A
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-25°C ~ +80°C (-13°F ~ 185°F)

OS Support	Yocto 2.5 Android 9 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

RM-N8M-Q316I	NXP Cortex™-A53/Cortex™-M4, i.MX 8M Quad 1.3GHz processor , 3GB LPDDR4, 16GB TLC eMMC

Dimensions

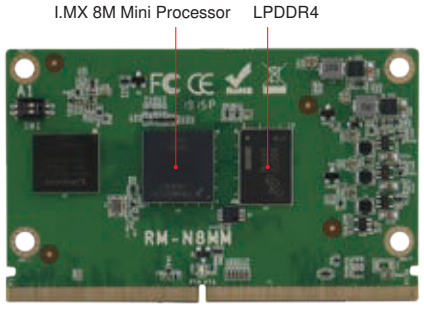


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RM-N8MMI Series

SMARC 2.0 CPU Module

Wide-Temperature SMARC™ 2.0 Module with NXP ARM® Quad Cortex-A53/Cortex-M4 i.MX 8M Mini Processor



Features

- NXP Cortex™-A53/ Cortex™-M4, i.MX 8M Mini Quad processor
- 2GB LPDDR4, 8GB eMMC on board
- Wide-range operating temperature (-40°C to 85°C)
- Extensive peripheral I/O support
- Validated with Yocto 2.5 and Android 9.0
- Long-term availability with NXP solution
- Compliant with SMARC™ 2.0
- Wide-range operating temperature (-40°C~85°C)

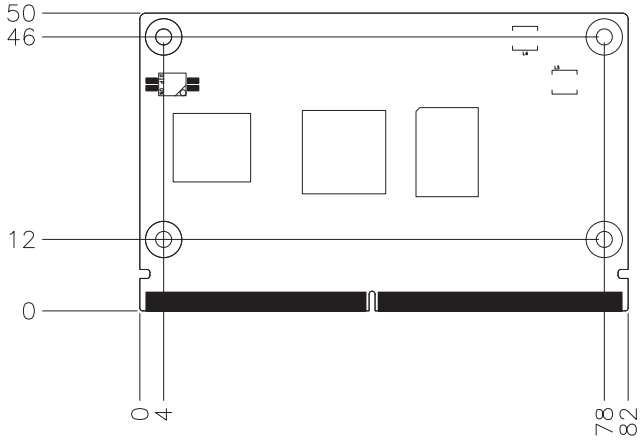
Specifications

Form Factor	SMARC™ 2.0
Processor	NXP i.MX 8M Mini Quad Cortex™-A53 and Cortex™-M4 processor
System Memory	2GB LPDDR4 on board
Flash Memory	8GB eMMC on board
Display	1x MIPI-DSI 4-lane up to 1920 x 1080 at 60Hz
Video Codec	• 1080p60 VP9 • 1080p60 HEVC/H.265 decoder • 1080p60 AVC/H.264 Baseline, Main, High decoder • 1080p60 VP8 • 1080p60 AVC/H.264 encoder • 1080p60 VP8 • TrustZone support
Graphics	• GCNanoUltra • Vivante GC320
Audio Interface	2x I²S, 1x SPDIF
LAN	1x GbE LAN
USB	2x USB 2.0 with OTG interface
Image Capture Interface	1x MIPI-CSI2 4-lane
Serial Interface	4x UART, 2x SPI Interface
Media Interface	2x High-speed MMC/SDIO (MMC 8-bit, SDIO 4-bit)
PCI-E	1x PCI-E (x1) Gen2
SATA	N/A
GPIO	12x GPIO
I²C	4x I²C
Others	Wireless WCN3980 (option)
CAN Bus	N/A
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
OS Support	Yocto 2.5 Android 9 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

RM-N8MMI-Q208I	Industrial Grade SMARC™ 2.0, Cortex™-A53 i.MX 8M Mini Quad 1.6GHz processor, 2GB LPDDR4, 8GB eMMC

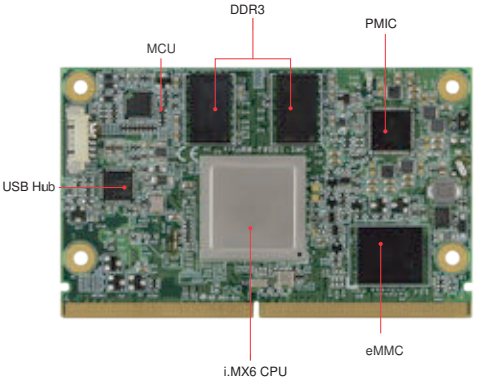
Dimensions



RM-F6 series

SMARC 1.0 CPU Module

Wide-Temperature SMARC™ 1.0 Module
with NXP ARM® Cortex-A9 i.MX 6Dual/6Solo Processor



Features

- i.MX automotive-grade 6Dual/6Solo core processor
- 1080p hardware encode/decode
- OpenGL ES 2.0 and OpenVG 1.1 hardware accelerators
- 1GB DDR3, 4GB eMMC on board
- Supports 10/100/1000 Mbit Ethernet
- Supports 24-bit parallel LCD, LVDS & HDMI
- Supports Linux 3.0, Android 4.3
- Wide-range operating temperature (-40°C~85°C)

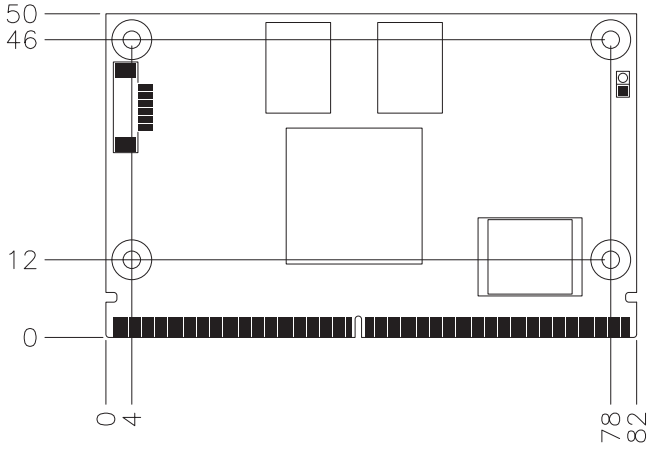
Specifications

Form Factor	SMARC™ 1.0
CPU	NXP i.MX 6Dual/6Solo Cortex™-A9 processor with 512KB L2 cache
System Memory	I-grade 1GB DDR3 on board
Display	Supports 18/24-bit parallel LCD & LVDS Interface (up to1366 x 768) Supports HDMI interface (1920 x 1080)
Video Codec	Multi-format HD1080 video Decode and Encode
Audio Interface	I²S, SPDIF
LAN	1x GbE LAN
USB	2x USB 2.0 port & 1x USB OTG Interface
Image Capture Interface	CSI Interface for MIPI camera
Serial Interface	4x UART, 1x SPI Interface
Media Interface	2x High-speed MMC/SDIO (MMC 8-bit, SDIO 4-bit)
PCI-E	1x PCI-E interface
SATA	1x SATA 2.0 (Dual only)
GPIO	12x GPIO
I²C	3x I²C *(4x I²C in F6SO1)
Others	Wireless WCN3980 (option)
CAN Bus	2x CAN 2.0B
Dimensions	82mm x 50mm (3.2" x 2")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3Hz to 500Hz, 15 mins
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
OS Support	Ubuntu Linux 11.10 Android 4.3
Certification	CE/ FCC Class A

Ordering Information

RM-F6DU1-SMC	SMARC™ 1.0 Module with NXP i.MX 6Dual 800MHz processor, 1GB DDR3, 4GB eMMC, -40°C~85°C operating temperature
RM-F6SO1-SMC	SMARC™ 1.0 Module with NXP i.MX6 Solo 800MHz processor, 1GB DDR3, 4GB eMMC, -40°C~85°C operating temperature
F6DU1-HSD	Heat spreader for F6DU1
F6SO1-HSD	Heat spreader for F6SO1

Dimensions

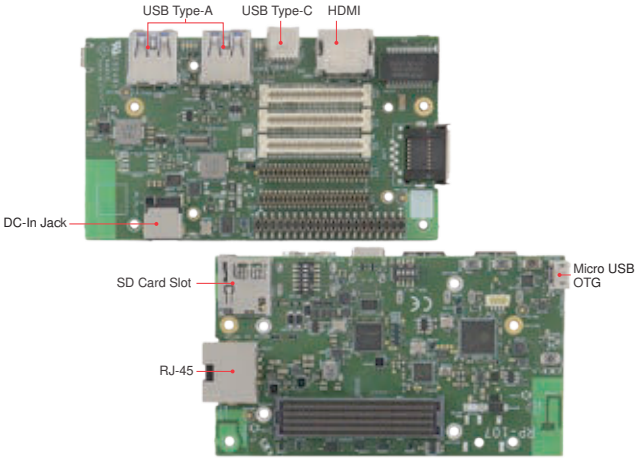


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RP-107

Carrier Board

Carrier Board for RM-QCS6490-S SOM Module



Features

- 1x UART debug port, UART to USB
- 2x USB Type-A port, only as host
- 1x Micro USB port, sharing DP/ DM with USB Type-C connector, adb / download / host / device
- 1x USB Type-C port, adb / download / host / device
- 1x HDMI 2.0
- 1x RJ-45
- 1x DC-in jack (+12V)

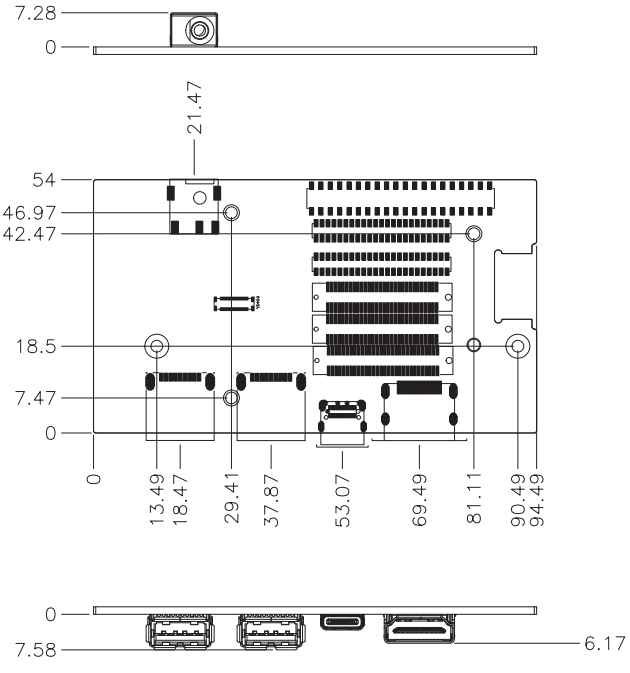
Specifications

Form Factor	Carrier Board for RM-QCS6490-S (SOM)
Edge I/O	1x RJ-45 2x USB 3.0 Type-A port, only as host 1x DC-in jack (+12V) 1x UART debug port, UART to USB 1x USB Type-A port, only as host 1x Micro USB port, sharing DP/DM with USB Type-C connector, adb/download/host/device 1x USB Type-C port, adb/download/host/device 1x HDMI 2.0
Internal I/O	1x SD card slot 1x MIPI Camera interface 3x RGB LED from PMIC with independent brightness control 1x Low-speed connector to low-speed expansion board
Jumpers, Switch & Buttons	1x DIP switches for board function control (including display, camera, USB) 1x 6-pin switch 1x Force USB boot button 1x Volume up button 1x Volume down button 1x Power on button
Power Input	+12V DC-in
Dimensions	90mm x 50mm
Environment	Humidity: 0% to 90% RH at 60° C (non-condensing)
Operating Temperature	-40°C ~ +70°C (-40°F ~ 158°F)
OS Support	N/A
Certification	CE/FCC Class-B

Ordering Information

RP-107	Carrier Board for RM-QCS6490-S Module, +12V DC-in jack

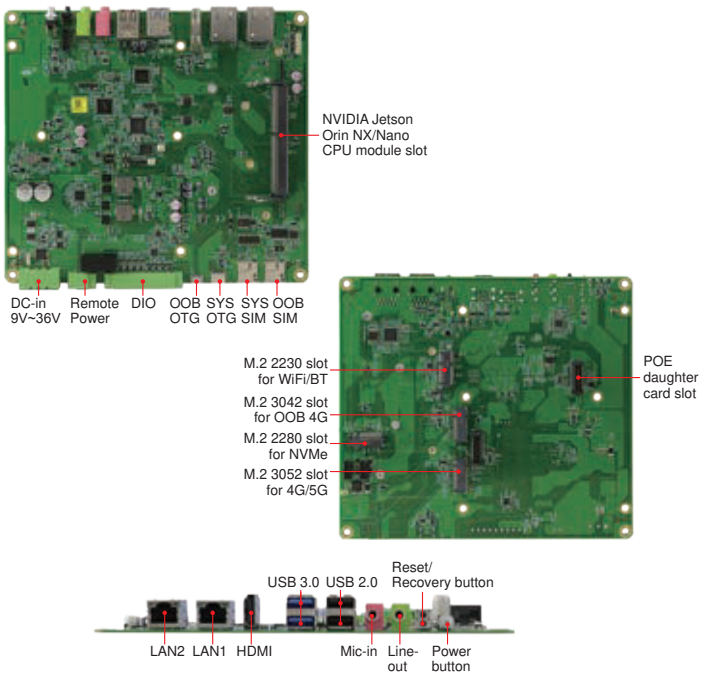
Dimensions



RP-106

Carrier Board

Carrier Board for NVIDIA® Jetson NX/Nano Modules



Features

- 1x DDR4 SODIMM with 260-pin connector for NVIDIA Jetson Orin NX/ Nano Module
- Supports HDMI, Gigabit LAN, audio, USB OTG, USB, COM (RS232/422/485)
- Supports OOB function via I210 LAN port (option)
- Supports +19V~+36V DC-in, reset, power, Recovery & RTC function
- 1x M.2 B-Key 3042 for OOB 4G function
- 1x M.2 B-Key 3052 for 4G/5G connectivity
- 1x M.2 E-Key 2230 for WiFi module
- 1x M.2 M-Key 2280 for NVMe
- 1x Summit connector for IDA-8104

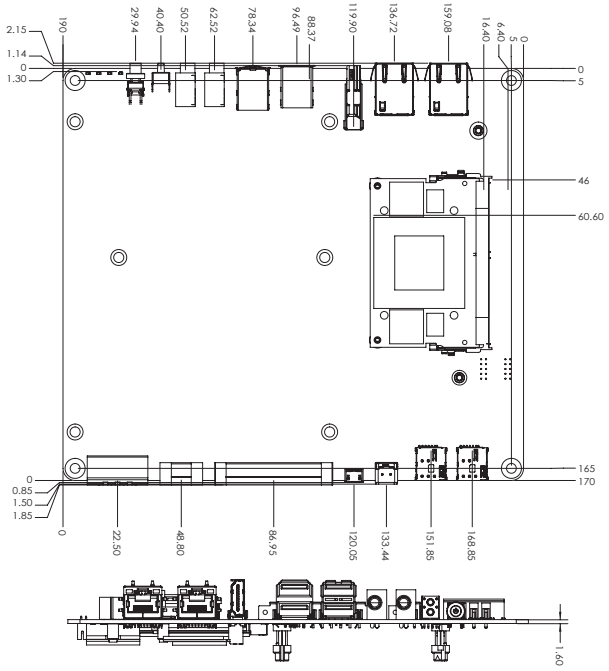
Specifications

Form Factor	Carrier Board for NVIDIA Jetson NX/Nano Modules
Edge I/O	1x DC-in Connector (+9V~+36V) 1x HDMI 2.1 1x Audio Line-in/1x Mic-out 1x UART 2x USB 2.0 host 1x USB 2.0 OTG (Type C) 2x USB 3.2 1x CAN Bus 4x DI + 4x DO 1x RJ45 GbE LAN for OOB function 1x RJ45 GbE LAN 4x LED
Internal I/O	1x Summit connector for PoE card 1x M.2 B-Key 3042 for OOB 4G function 1x M.2 B-Key 3052 for 4G/5G connectivity 1x M.2 E-Key 2230 for WiFi module 1x M.2 M-Key 2280 for NVMe 1x RTC battery
Jumpers, Switch & Buttons	1x Power button 1x Recovery button 1x Reset button
Power Input	+9V~36V DC-in
Dimensions	190mm x 170mm (7.4" x 6.7")
Environment	Humidity: 0% to 90% RH at 60° C (non-condensing)
Operating Temperature	-20°C ~ +70°C (-40°F ~ 158°F)
OS Support	Ubuntu 22.04
Certification	CE/FCC Class-B

Ordering Information

RP-106	Carrier Board for NVIDIA Jetson NX 16GB or Nano 4GB Modules, +9V~+36V DC-in jack

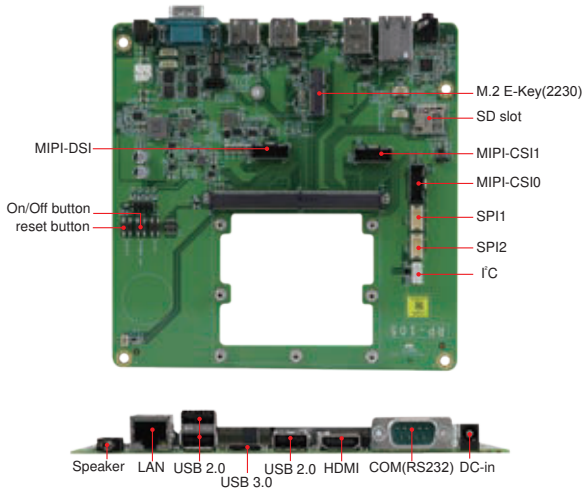
Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RP-105

Carrier Board
Carrier Board for SMARC™ 2.1 CPU Module



Features

- Carrier Board for RM-QCS610 SMARC™ 2.1 CPU Module
- Supports 12V~24V DC-in jack, reset, power, LID button, RTC battery
- Supports Gigabit LAN, audio, USB OTG, HDMI, COM (RS232/422/485)
- With Micro SD socket, Mini PCI-E with USB on board
- Supports TTL, HDMI, MIPI-DSI, MIPI-CSI camera

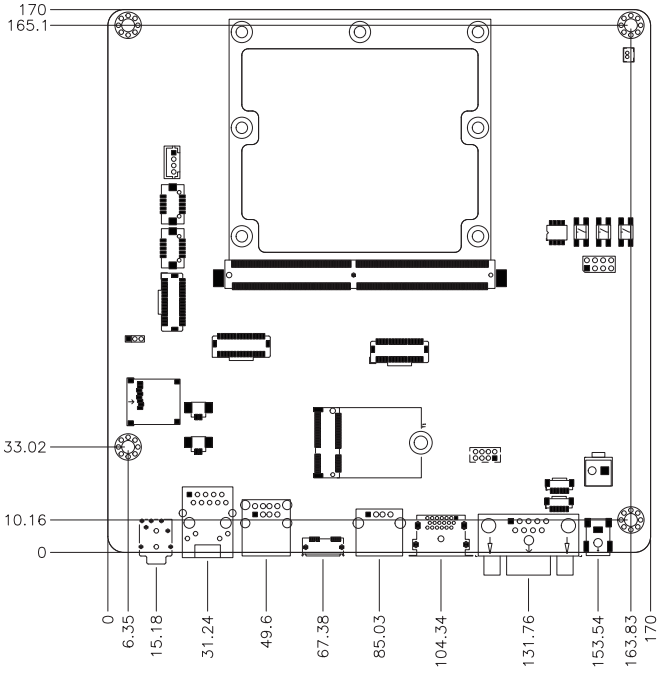
Specifications

Form Factor	Carrier Board Compliant with SMARC™ 2.1
Edge I/O	1x DC-in jack (12V~24V) 1x RJ45 GbE LAN 1x Headphone & Mic 3x USB 2.0 host 1x USB 3.0 host (with USB 2.0/3.0 OTG support) 1x HDMI 1x COM (RS232/422/485) 1x SD slot
Internal I/O	2x CAN bus 2.0B 1x MIPI display power (3.3V) 1x MIPI-DSI 2x MIPI-CSI2 6x GPIOs (3.3 V) 2x RS232 (RX/TX / pin header) 1x I²C 1x I²S 1x M.2 E-Key (2230) (USB 2.0 interface only) 1x Speaker R and L 1x RTC battery 1x TTL (3.3V reserved for debug)
Jumpers, Switch & Buttons	1x Boot select switch (Refer to Qualcomm CRB) 1x Power button 1x Reset button 1x LID button
Power Input	12V~24V DC-in
Dimensions	170mm x 170mm (6.7" x 6.7")
Environment	Humidity: 0% to 90% RH at 60° C (non-condensing)
Operating Temperature	-30°C ~ +85°C (-22°F ~ 185°F)
OS Support	Based on the CPU module
Certification	CE/FCC Class A

Ordering Information

RP-105	Carrier Board for SMARC™2.1 modules,12V~24V DC-in, Mini-ITX, Mini PCI-E with USB, Gigabit LAN, USB OTG, HDMI, CSI MIPI bus, 6x GPIO, 2x RS232, 1x RS232/422/485, VDDIO=3.3V

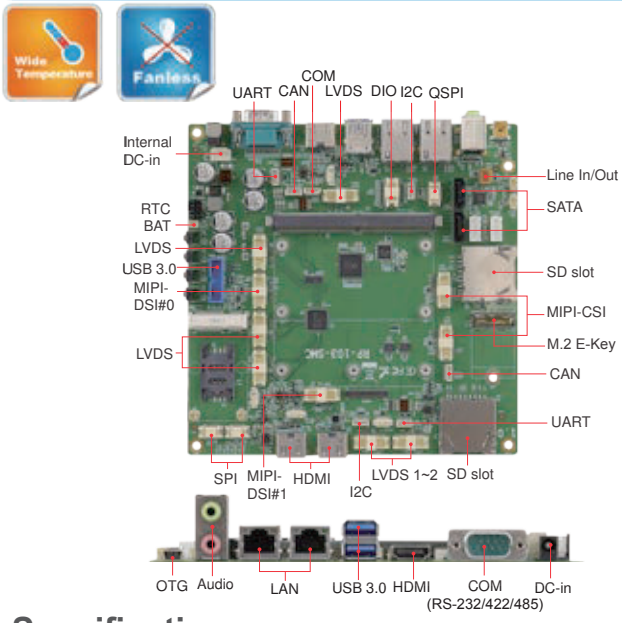
Dimensions



RP-103-SMC

Carrier Board

Carrier Board for SMARC™ 2.1 CPU Module



Features

- Carrier Board for RM-N8M Plus and RM-N8M and RM-N8MMI series SMARC™ 2.1 CPU Module
- Extensive peripheral I/O support
- Complete system available for evaluation
- Wide-range operating temperature (-40°C~85°C)

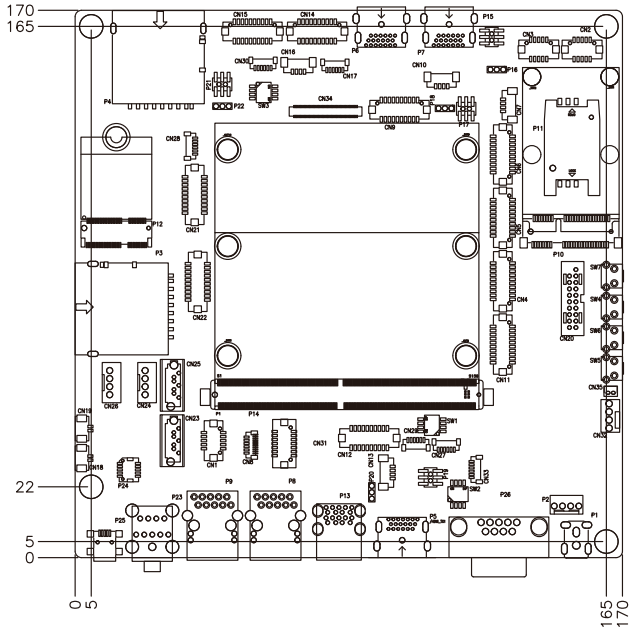
Specifications

Form Factor	Carrier Board Compliant with SMARC™ 2.1
Edge I/O	1x 19V~24V DC-in jack 2x RJ45 Gigabit LAN (one for RM-N8 only) 2x USB 3.0 1x OTG Micro USB 2.0 2x HDMI TX (one for RM-N8 only) 1x HDMI RX (for RM-N8 only) 1x Headphone & Mic 1x COM (RS232/422/485 by switch) 2x SD slot (one for RM-N8 only)
Internal I/O	1x 19V~24V DC-in header 1x 12V Fan header 4x CAN bus 2.0b (three for RM-N8 only) 3x 18/24-bit Dual-channel LVDS (two for RM-N8 only) 4x LCD backlight 2x MIPI-CSI2 (one for RM-N8/RM-N8M only) 2x MIPI-DSI (one for RM-N8 only) 2x USB 3.0 12x GPIOs 2x RS232 (RX/TX only) 2x I2C 2x SATA III and power (one for RM-N8 only) 1x I^2S 1x QSPI 1x Full-size Mini PCI-E 1x SIM socket 1x M.2 E-Key (2230) 1x Speaker out (R/L) 1x RTC battery 1x 4-wire UART
Jumpers, Switches & Buttons	1x Boot select switch 1x I/O and display select switch 1x Power button 1x Reset button 1x LID button 1x Sleep button 4x Backlight power (3V3/5V/12V) jumper 3x LCD power 3V3/5V jumper
Power Input	19V~24V DC-in jack and internal header
Dimensions	170mm x 170mm (6.7" x 6.7")
Environment	Humidity: 0 % to 90 % RH at 60° C (non-condensing) Shock: Non-Operating: 1G, 15 mins (x-, y-, z-axis) Vibration: Non-operating: 3 Hz to 500 Hz, 15 mins
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
OS Support	Depends on CPU Module
Certification	CE/FCC Class-B

Ordering Information

RP-103-SMC	Carrier Board for SMARC™ 2.1 Modules, 19V~24V DC-in jack, 1x RJ45 LAN, 1x OTG Micro USB2.0, 1x Headphone & Mic, 1x 12V Fan header, 1x CAN bus 2.0b, 1x Full-size mini PCI-E, 1x LCD backlight, 4x USB 3.0, 12x GPIOs, 2x RS232 (RX/TX only), 1x I^2C, 1x I^2S(Audio), 1x SIM socket, 1x M.2 E-Key (2230),1x Speaker out (R/L),1x RTC battery, 18/24-bit Dual-Channel LVDS, 1x HDMI 2.0 1x COM (RS232/422/485) or 4-Wire UART, 1x QSPI,1x MIPI-CSI, 1x MIPI-DSI, 1x SATA III and power

Dimensions

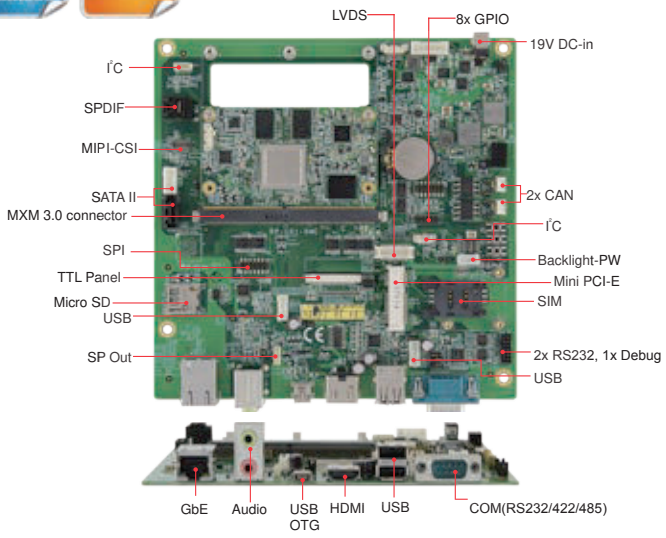


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

RP-102-SMC

Carrier Board

Carrier Board for SMARC™ 1.0 CPU Module



Features

- For SMARC™ 1.0 CPU Modules
- Supports 19V DC-in, reset, power, RTC function
- Supports Gigabit LAN, audio, USB OTG, HDMI, COM (RS232/422/485)
- With Micro SD socket, Mini PCI-E with USB, SIM socket on board
- Supports 2x isolated CAN transceiver, TTL, LVDS, HDMI, MIPI-CSI camera
- Wide-range operating temperature (-40°C~85°C)

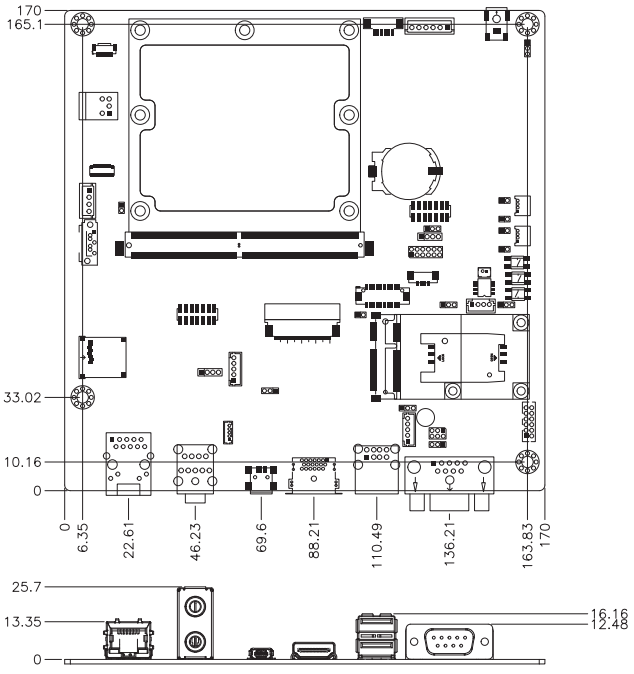
Specifications

Form Factor	SMARC™ 1.0 Carrier Board
Edge I/O	1x DC-in jack 1x RJ45 GbE LAN 1x Microphone + Headphone 2x USB 2.0 host 1x USB OTG 1x HDMI 1x COM (RS232/422/485)
Internal I/O	2x CAN bus 2.0B 1x 18/24-bit single CH LVDS 1x 18/24-bit TTL box header 1x LCD DDC (I²C) 1x LCD backlight connector 1x CSI-MIPI 2x USB 2.0 host 8x GPIO pin header 2x RS232 box header 1x SIM socket 1x SPDIF 1x Speaker box header 1x Micro-SD socket 2x I²C 1x SATA II 1x Full-size Mini PCI-E with USB interface
Jumpers, Switch & Buttons	1x Boot media select switch (SD/eMMC) 1x Reset button 1x Power button 1x GPI button 1x RS232/422/485 (by jumper selection) 1x Backlight power jumper
Power Input	19V DC-in
Dimensions	170mm x 170mm (6.7" x 6.7")
Environment	Humidity: 0% to 90% RH at 60° C (non-condensing) Vibration: Non-operating, 3Hz to 500Hz, 15mins
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
OS Support	Based on the CPU module
Certification	CE/FCC Class A

Ordering Information

RP-102-SMC	Carrier Board for SMARC™ 1.0 Modules,19V DC-in, Mini-ITX, 2x CAN, Mini PCI-E with USB, Resistive touch header (4-wire), 2x USB header,1x I²C header, 18/24-bit LVDS,TTL connector, Line in/ Line out, EEROM, CSI MIPI bus, 8x GPIO, 2x RS232,1x RS232/422/485, VDDIO=3.3V

Dimensions



Comparison Table

Model	IBR-SMB	IBR500	IBR300	IBR215
Form Factor	65mm x 45mm SBC	3.5-inch SBC	2.5-inch SBC	2.5-inch SBC
Processor	NXP Cortex®-A53, i.MX 8M Plus Lite Quad processor	MediaTek Genio 700 2x A78 2.2GHz L2 256KB 6x A55 2.0GHz L2 128KB, shared 2MB L3 cache	NXP i.MX 93 Cortex-A55 Dual processor, 1.7GHz	NXP Cortex®-A53, i.MX 8M Plus Quad processor
System Memory	1GB DDR4 on board	LPDDR4 4000MT/s on-board 8GB	2GB LPDDR4 on board	3GB LPDDR4 on board (option: 2/4/8GB)
Flash Memory	4GB eMMC on board	128GB eMMC 5.1 Flash for O.S.	32GB eMMC on board (up to 256GB)	16GB eMMC on board (up to 256GB)
Video Codec	N/A	Decode: 4K75fps, AV1. VP9, H.265, H.264 Encode: 4K30fps, H.265, H.264	N/A	1080p60, H.265, H.264, VP9, VP8 decoder 1080p60, H.265, H.264 encode
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1	ARM Mali-G57 MC3, OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1	Pixel processing pipeline (PXP) engine to support 2D image processing	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
LAN	1x RJ45 GbE	1x RJ45 GbE	2x RJ45 GbE LAN	2x RJ45 GbE
Audio	N/A	1x line-out	Internal header (1x line-in, 1x line-out)	Internal header (1x line-in, 1x line-out)
SATA	N/A	N/A	N/A	N/A
I²C	1x I²C	1x I²C	1x I2C	2x I²C, 1x I²C (expansion pitch 2x20 headers)
I/O	1x 2-ch LVDS 8-Lane WTB connector 1x microUSB1 power supply only (no data) 1x microUSB2 OTG for 2D Barcode Reader / USB Interface 1x microUSB3 OTG, for debug or image download for USB WiFi Dongle 2x 10pin 2.0mm pitch pin header. -include 1x I2C, 2x UART, 1x SPI, 1x PWM 1x MicroSD card for memory extension 2x LEDs	1x COM port 1x LAN port 2x HDMI 1x USB 1x USB OTG 1x DC-in Jack 1x Line-out 6-pin header 1x Factory Reset button 1x On/Off button 6x GPIO in 2x pin header 2x LEDS 2x Antenna holes 1x Debug port	2x USB2.0 (Type-A) 1x Reset button 1x 12V~24V DC-in lock jack 2x USB 2.0 (2x5-pin wafer connector) 1x Audio Line-in and Line-out 3x COM port (1 for RS232/422/485, 2 for debug port) 1x 4-wire UART or 2-wire UART + I2C 1x Audio Line-in and Line-out (6-pin header) 1x RTC battery pin header 1x DC power (4-pin header) 1x Pin DIP switch 2x Green LED for power on/off	4x GPIO 1x DC power (4-pin header) 3x IO expansion 2mm pitch 2x20 headers with following features (Contact us for design reference): 1x USB 2.0 1x PCM 2x UART(Rx, Tx) 1x UART (Tx, Rx, CTS, RTS) 2x USB 3.0 1x 2ch LVDS with backlight control 2x PWM 3x GPIO 1x Cap touch IF 2x MIPI-CSI for cameras 2x CAN-FD
SDIO	N/A	1x M.2 E-Key (2230) w/ SDIO, UART	1x M.2 E-Key (2230) for WiFi/BT Module 1x Micro SD slot	1x SDIO(expansion 2mm pitch 2x20 headers) 1x M.2 B-Key(3052) with SIM socket (for 5G module)
Watchdog Timer	256 levels	256 levels	256 levels	256 levels
Dimensions	65mm x 45mm	147mm x 102mm	100mm x 72mm	105mm x 72mm (4.13 x 2.83")
Power Connector	5V DC input through microUSB1.	12V DC in lock jack	12V DC in lock jack	12V~24V DC-in jack
Operating Temperature	Design target: Consumer grade: 0~50°C (design target) Future option: Industrial grade: -40°C ~ 75°C (head sink required)	-10°C ~ +50°C (-14°F ~ 122°F)	-40°C ~ +85°C (-40°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)
Supported OS	Yocto 3.0 Linux V5.4.x Other OS (by request)	Yocto 5.15 Android 13	Yocto 4.0	Yocto 5.0 Android 11 Other OS (by request)
Page No.	P. 26	P. 27	P. 28	P. 30-31

Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Comparison Table

Model	IBR215L	IBR210	IBR117	IBR115
Form Factor	2.5-inch SBC	3.5-inch SBC	3.5-inch SBC	2.5-inch SBC
Processor	NXP Cortex®-A53, i.MX 8M Plus Lite Quad processor	NXP Cortex®-A53 and Cortex-M4 i.MX 8M Quad processor	NXP Cortex-A9 i.MX 6Dual processor	NXP Cortex-A9 i.MX 6Dual-Lite processor
System Memory	3GB LPDDR4 on board (option: 2/4/8GB)	3GB LPDDR4 on board	1GB DDR3 on board	1GB DDR3 on board
Flash Memory	16GB eMMC on board (up to 256GB)	16GB eMMC on board	4GB eMMC on board	4GB eMMC on board
Video Codec	N/A	4Kp60 HEVC/H.265 4Kp60 VP9 decoder 4Kp30 AVC/H.264 decoder 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder TrustZone support	1080p60or30 + D1 Dual 1080p decode 1080p30 H.264BP Dual 720p encode	i.MX53 + VP6 / WebM VP8, H.264 MVC 1080p30 + D1 1080p30 H.264BP Dual 720p encode
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1	GC7000Lite OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan	Vivante GC2000, OpenGL, GL ES 2.0 & Halti, CL EP Vivante GC355, OpenVG 1.1	Vivante GC880, OpenGL ES 2.0 Vivante GC320
LAN	2x RJ45 GbE	1x RJ45 GbE	1x RJ45 GbE	1x RJ45 GbE
Audio	Internal header (1x line-in, 1x line-out)	Internal header (1x line-in, 1x line-out)	Internal header (1x line-in, 1x line-out)	Internal header (1x line-in, 1x line-out)
SATA	N/A	N/A	1x SATA2.0	N/A
I²C	2x I²C, 1x I²C (expansion pitch 2x20 headers)	1x I²C	1x I²C	1x I²C
I/O	4x GPIO 1x DC power (4-pin header) 3x IO expansion 2mm pitch 2x20 headers with following features (Contact us for design reference): 1x USB 2.0 1x PCM 2x UART(Rx, Tx) 1x UART (Tx, Rx, CTS, RTS) 2x USB 3.0 1x 2ch LVDS with backlight control 2x PWM 3x GPIO 1x Cap touch IF 2x MIPI-CSI for cameras 2x CAN-FD	2x USB 3.0 (Type-A) 1x USB OTG (mini-USB Type-B) 1x HDMI 2.0a 1x RS232/422/485 1x On/Off button 2x 2-wire UART 2x USB 3.0 Internal header 3x green LEDs (for Power On/Off wireless status and programmable) 8x GPIO 2x MIPI-CSI 1x MIPI-DSI	2x USB 2.0 (Type-A) 1x USB OTG (mini-USB Type-B) 1x HDMI 1x RS232/422/485 1x Reset button 1x Dual-channel LVDS (FHD) 2x 2-wire UART 2x USB 2.0 Internal header 3x green LEDs (for Power On/Off wireless status and Programmable) 2x CAN Bus2.0B (w/ isolation) pin headers 8x GPIO	1x USB 2.0 (Type-A) 1x USB OTG (mini-USB Type-B) 1x HDMI 1x RS232/422/485 1x Reset button 1x single channel LVDS (1377x768) 2x 2-wire UART 2x USB 2.0 Internal header 8x GPIO 2x green LEDs (for Power On/Off and wireless status)
SDIO	1x M.2 B-Key(3052) with SIM socket (for 5G module) 1x SDIO(expansion 2mm pitch 2x20 headers)	1x M.2 E-Key (2230) w/ USB, SDIO, UART, PCI-E 1x Mini PCI-E w/ SIM socket 1x SD socket	1x M.2 E-Key (2230) w/ USB, SDIO, UART, PCI-E 1x Mini PCI-E (USB only) w/ SIM socket 1x SD socket	1x M.2 E-Key (2230) w/ PCI-E, USB, SDIO, UART 1x Micro SD socket
Watchdog Timer	256 levels	256 levels	256 levels	256 levels
Dimensions	105mm x 72mm (4.13" x 2.83")	147mm x 102mm (5.8" x 4")	147mm x 102mm (5.8" x 4")	100mm x 72mm (3.94" x 2.83")
Power Connector	12V~24V DC-in jack	12~24V DC-in jack	12V DC-in jack	12V DC-in jack
Operating Temperature	With heat sink or through housing design: -40°C~85°C(-40°F ~185°F) Without heatsink:-40°C~65°C (-40°F ~149°F)	-20°C ~ +85°C (-4°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)	-40°C ~ +85°C (-40°F ~ 185°F)
Supported OS	Yocto 5.0 Android 11 Other OS (by request)	Yocto 2.5 Android 9 Other OS (by request)	Yocto 2.1 Android 6.0.1	Yocto 2.1 Yocto 2.5 Android 6.0.1
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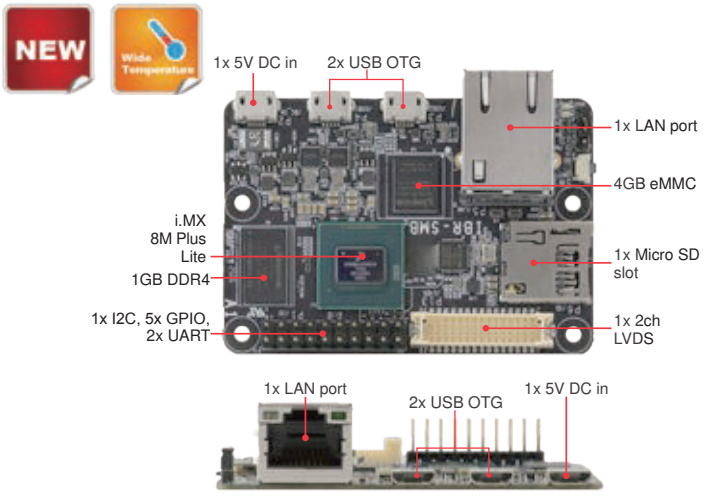
Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

IBR-SMB

Ultra-Compact Single Board Computer

NXP ARM® Cortex-A53 i.MX8M Plus Lite Processor



Features

- 1GB DDR4, 4GB eMMC
- 1x RJ45, 1x MicroSD, 2x USB OTG
- 2-ch LVDS 8-lane WTB connector
- 5V DC input
- Ruggedized and fanless design
- PCB dimensions: 65mm x 45mm
- Wide-range operating temperature from -40°C to 75°C

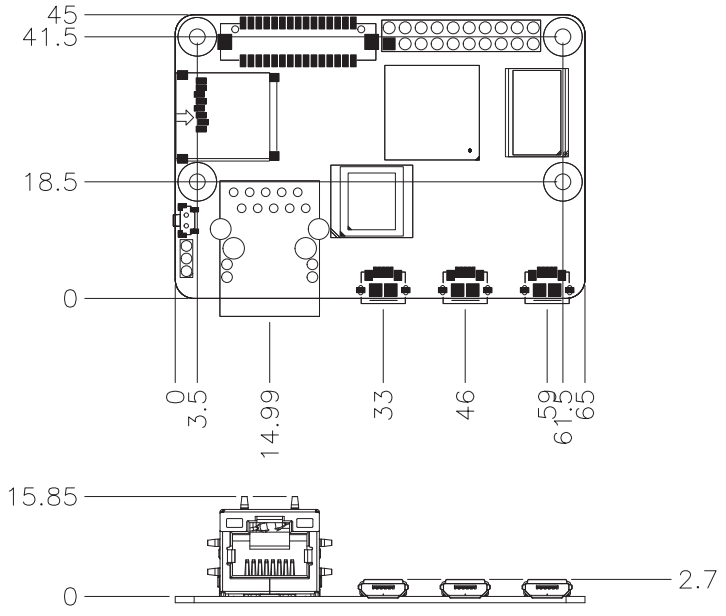
Specifications

Form Factor	SBC
Processor	NXP Cortex®-A53 i.MX8M Plus Lite processor
System Memory	1GB DDR4 on board (option: 2GB)
Flash Memory	4GB eMMC on board (up to 256GB)
Display	2-ch LVDS 8-lane WTB connector
Video Codec	N/A
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
Edge I/O	1x 2-ch LVDS 8-Lane WTB connector 1x microUSB1 power supply only (no data) 1x microUSB2 OTG For 2D Barcode Reader / USB Interface 1x microUSB3 OTG, for debug or image download For USB WIFI Dongle
Internal I/O	2x 10pin 2.0mm pitch pin header -include 1x I2C, 2x UART, 1x SPI, 1x PWM 1x MicroSD card for memory extension 2x LEDs
Expansion IO	N/A
Watchdog	256 levels, 0~128 seconds
Dimensions	65mm x 45mm
Power Input	5V DC input through microUSB1
Operating Temperature	Design target: Consumer grade: 0~50°C (design target) Future option: Industrial grade: -40°C ~ 75°C (head sink required)
Relative Humidity	0 % to 90 % RH at 60°C (non-condensing)
OS Support	Yocto 3.0 Linux V5.4.x Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

IBR-SMB V-A1	NXP Cortex®-A53 i.MX8M Plus Lite processor, 1GB LPDDR4, 4GB eMMC, 2-ch LVDS 8-lane WTB connector, 1x microUSB power supply only (5V DC input), 2x microUSB2 OTG, 1x 10/100/1000MHz LAN port, 2x LEDs, 2x 10pin 2.0mm pitch pin header

Dimensions

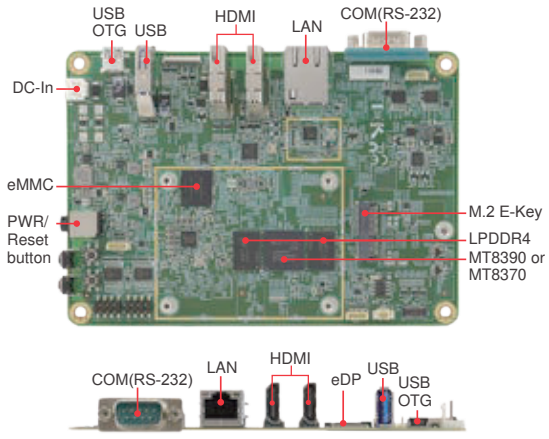


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

IBR500

Single Board Computer

Low-Power 3.5" SBC with MediaTek Genio 700/MT8390 or MediaTek Genio 510/MT8370 Processor



Features

- MediaTek Genio 700 /MT8390 2.2GHz or MediaTek Genio 510 / MT8370 2.0GHz processor
- On board LPDDR4 4000MT/s on-board 4GB or 8GB
- 64GB or 128GB eMMC 5.1 Flash for O.S.
- HDMI 4K60, HDMI 4K30
- Embedded I/O for COM, GPIO, USB, Ethernet
- Supports M.2 E-Key (2230) for WiFi6 2T2R + BT 5.2 connectivity
- Ruggedized and fanless design

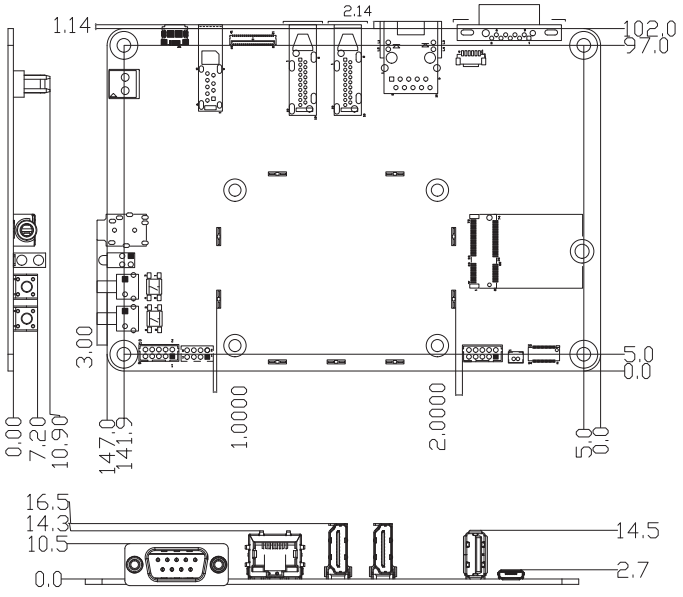
Specifications

Form Factor	3.5-inch SBC
Processor	MediaTek Genio 700 2x A78 2.2GHz L2 256KB, 6x A55 2.0GHz L2 128KB, shared 2MB L3 cache
System Memory	LPDDR4 4000MT/s on-board 4GB~8GB 4ch 16-bits LPDDR4X@3733MHz, up to 8GB, 29.8GB/s DRAM BW
Flash Memory	64GB or 128GB eMMC 5.1 Flash for O.S.
Display	1x HDMI (4K60) + 1x HDMI (4K30)
Video Codec	Decode: 4K75fps, AV1. VP9, H.265, H.264 Encode: 4K30fps, H.265, H.264
Graphics	ARM Mali-G57 MC3, OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1
Edge I/O	1x COM port 1x LAN port 2x HDMI 2x On/Off button 1x USB 3.0 1x micro USB OTG 1x Reset button 1x Audio Line-Out 2x LEDS
Internal I/O	1x SPI in 2x 2 pin header Home & Power key in 2x2 Header 1x RS232(Debug) 1x 12V DC in connector
Expansion IO	1x M.2 E-Key (2230) w/ SDIO, UART (for Wireless) 6x GPIO in 2x pin header 1x I^2C in 2x 2-pin header
Watchdog	256 Levels, 0~128 Secs
Dimensions	147mm x 102mm (5.78" x 4")
Power Input	12V DC-in by DC-Connector
Operating Temperature	With heat sink or through housing design: -10°C~+50°C (14°F ~122°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 5.15, Android 14, Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

IBR500	MediaTek Genio 700 Cortex A78 & A55, 8GB LPDDR4, 64~128GB eMMC 5.1

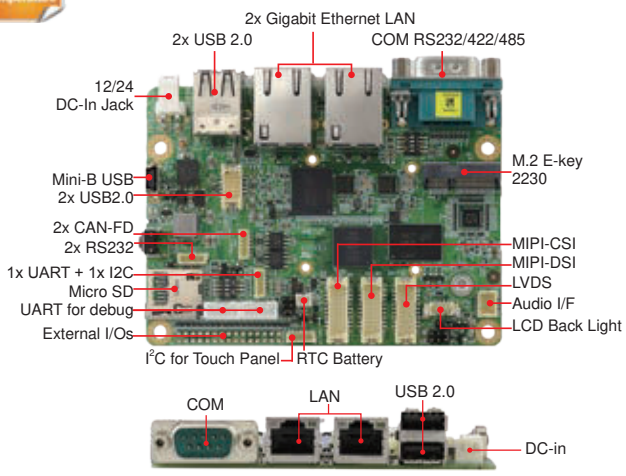
Dimensions



IBR300

Single Board Computer

Low-Power 2.5" SBC
with NXP i.MX93 - ARM Cortex-A55 Dual Core Processor



Features

- NXP Arm Cortex® -A55 Dual Core cluster and Arm Cortex® -M33 processor
- 2GB LPDDR4, 32GB eMMC & SD socket for expansion
- Embedded I/O for COM, USB, HDMI, Ethernet
- Supports M.2 E-Key (2230) for WiFi/BT module
- Ruggedized and fanless design
- Wide-range operating temperature (-40°C~85°C)

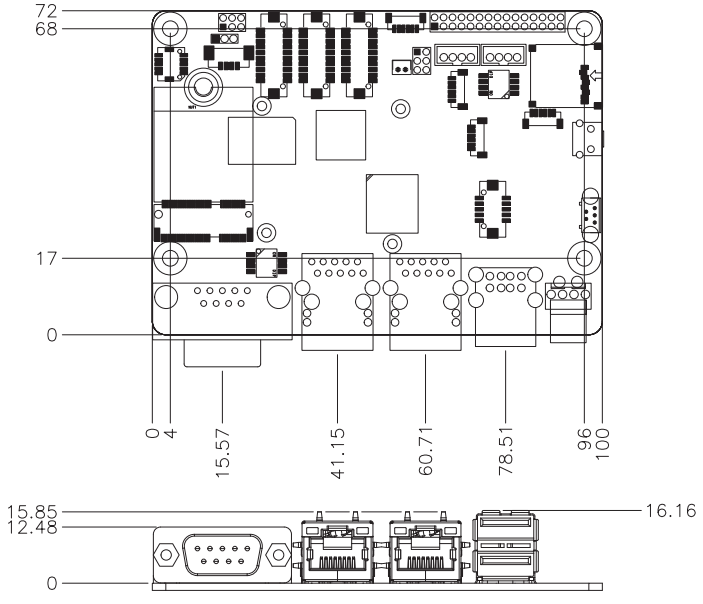
Specifications

Form Factor	2.5-inch SBC
Processor	NXP Cortex®-A55 i.MX93 Dual Core industrial-Grade SoC operating up to 1.7 GHz MCU: Cortex®-M33 CPU operating up to 250 MHz NPU: ARM Ethos®-U65 microNPU (256 MACs operating up to 1.0 GHz and 2 OPS/MAC)
System Memory	2GB LPDDR4 on board (option: 4GB)
Flash Memory	32GB eMMC on board (up to 256GB)
Display	1x LVDS 1x MIPI-DSI
Video Codec	N/A
Graphics	Pixel processing pipeline (PXP) engine to support 2D image processing
Edge I/O	2x USB2.0 (Type-A) 1x Reset button 1x 12V~24V DC-in lock jack 2x Gigabit LAN port 1x COM port for RS232/422/485
Internal I/O	2x USB 2.0 (2x5-pin wafer connector) 3x COM port (1x debug, 2xRS232,3-pin header) 2x CAN FD pin header 1x I2C / 1x UART pin header 1x Audio Line-in and Line-out (6-pin header) 1x RTC battery pin header 1x DC power (4-pin header) 1x Pin DIP Switch 2x Green LED for power on/off 1x M.2 E-Key (2230) for WiFi/BT module 1x Micro SD slot 1x I²C 1x UART
Expansion IO	N/A
Watchdog	256 Levels, 0~128 Secs
Dimensions	100mm x 72mm (3.9" x 2.8")
Power Input	12/24VDC-In Jack and Internal header
Operating Temperature	-40°C~+85°C (-40°F ~185°F)
Relative Humidity	0%~90% (non-condensing)
OS Support	Yocto 4.2 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

IBR300-Q232I	ARM-based IOT Gateway, NXP i.MX 93 Cortex-A55, 1.7GHz, 2GB LPDDR4, 32GB eMMC

Dimensions

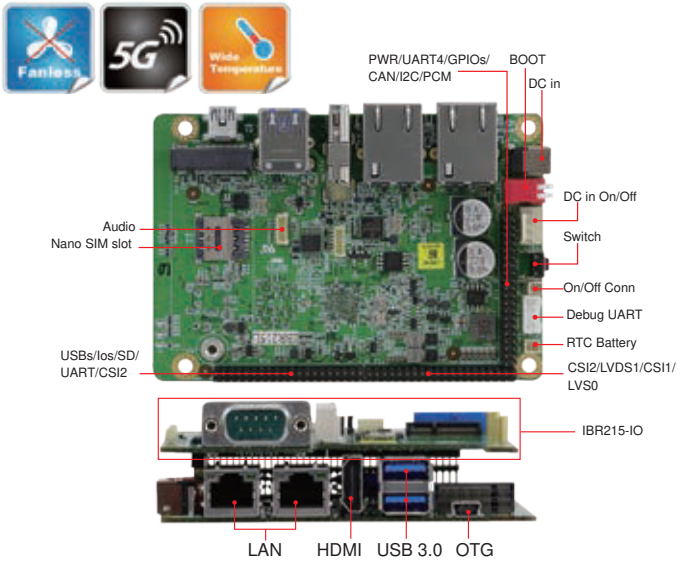


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

IBR215L

Single Board Computer

Low-Power 2.5" SBC
with NXP i.MX 8M Plus QuadLite - ARM Cortex-A53 Processor



Features

- NXP i.MX 8M Plus QuadLite - ARM Cortex-A53 Processor
- 3GB LPDDR4, 16GB eMMC & SD socket
- External connectivity for USB, HDMI & Ethernet
- Supports M.2 B-Key (3052) for 5G module, NFC functions
- IBR215-IO: Expansion board for WiFi/BT, 4G/LTE, LCD, camera functions
- Ruggedized and fanless design
- Wide-range operating temperature (-40°C~85°C)

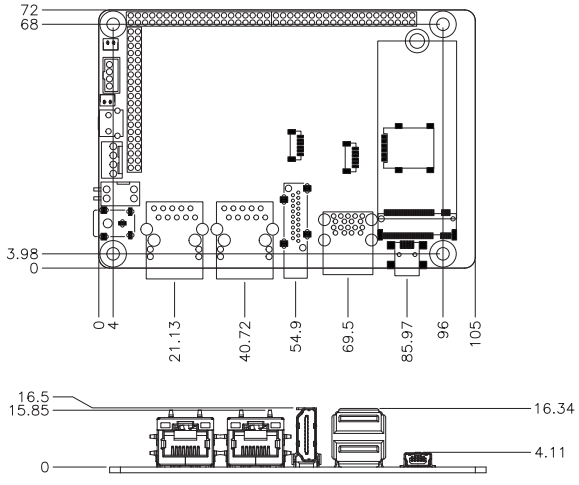
Specifications

Form Factor	2.5-inch SBC
Processor	NXP Cortex®-A53 i.MX8M Plus QuadLite processor
System Memory	3GB DDR4 on board (option: 2/4/8GB)
Flash Memory	16GB eMMC on board (up to 256GB)
Display	HDMI 2.0a Tx
Video Codec	N/A
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
Edge I/O	1x On/Off button 1x 12V~24V DC-in jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switch (boot from eMMC or SD) 1x HDMI 1.4a 2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG
Internal I/O	1x M.2 B-Key(3052) with SIM socket (for 5G module) 2x I2C / 4x GPIO 1x Audio Line-in and Line-out 1x12V~24V DC-in jack 1x DC power (4-pin header) 3x IO expansion 2mm pitch 2x20 headers with following features (Contact us for design reference): • 1x USB 2.0 • 1x PCM • 2x UART(Rx, Tx) • 1x SDIO • 1x UART (Tx, Rx, CTS, RTS) • 2x USB 3.0 • 1x 2ch LVDS with backlight control • 1x I2C • 2x PWM • 3x GPIO • 1x Cap touch IF • 2x MIPI-CSI for cameras • 2x CAN-FD
Expansion IO	1x M.2 E-Key(2230)w/ SDIO, UART for wireless 1x Mini PCI-E w/ USB 2.0, SIM, PCM for 4G/LTE 1x DB-9 RS232/422/485 port 2x USB 3.0 in 1x19-pin headers 1x 2ch LVDS with backlight control 1x Cap touch IF 2x MIPI-CSI 2x CAN-FD
Watchdog	256 levels, 0~128 seconds
Dimensions	IBR215L: 105mm(W) x 72mm(D) 4.13"(W) x 2.83"(D) IBR215-IO: 100mm(W) x 72mm 3.94"(W) x 2.83"(D) IBR215L+IBR215-IO: 105mm(W) x 72mm(D) x 35mm(H) 4.13"(W) x 2.83"(D) x 1.37"(H)
Power Input	12V~24V DC-in jack
Operating Temperature	With heat sink or through housing design: -40°C~85°C (-40°F ~185°F) Without heatsink:-40°C~65°C (-40°F ~149°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 5.0 Android 11 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

IBR215L-Q316I	ARM-based IoT Gateway, NXP Cortex®-A53, i.MX 8M Plus QuadLite 1.6GHz processor, 3GB LPDDR4, 16GB eMMC
IBR215-IO	Expansion Board for IBR215L

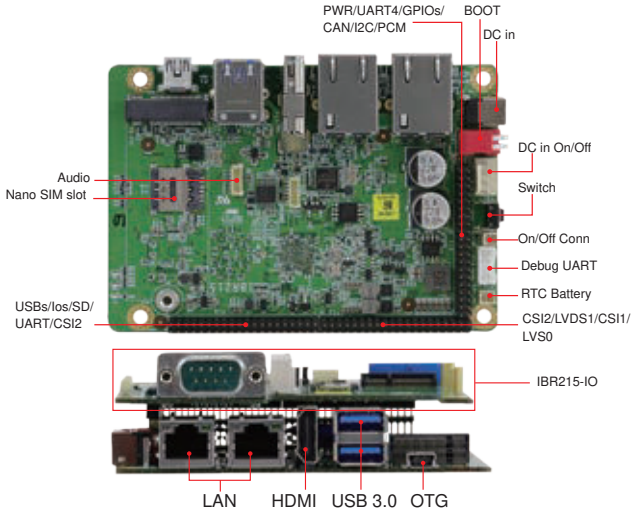
Dimensions



IBR215

Single Board Computer

Low-Power 2.5" SBC
with NXP i.MX 8M Plus - ARM Cortex-A53 Quad Processor



Features

- NXP i.MX 8M Plus - ARM Cortex-A53 Quad Processor
- 3GB LPDDR4, 16GB eMMC & SD socket
- External connectivity for USB, HDMI & Ethernet
- Supports M.2 B-Key (3052) for 5G module, NFC functions
- IBR215-IO: Expansion board for WiFi/BT, 4G/LTE, LCD, camera functions
- Ruggedized and fanless design
- Wide-range operating temperature (-40°C~85°C)

Specifications

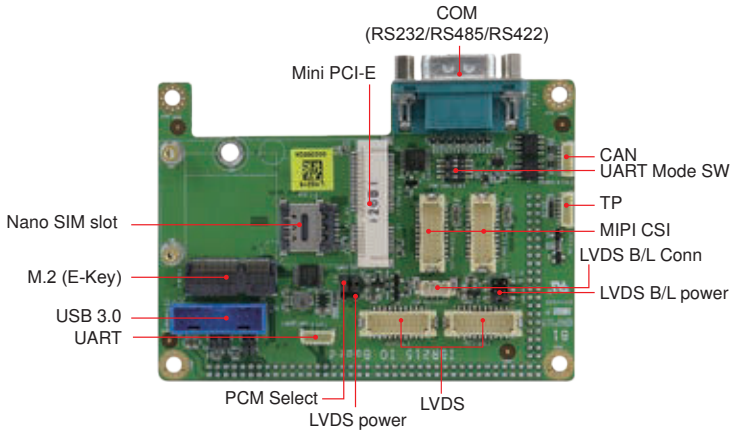
Form Factor	2.5-inch SBC
Processor	NXP Cortex®-A53 i.MX8M Plus processor
System Memory	3GB DDR4 on board (option: 2/4/8GB)
Flash Memory	16GB eMMC on board (up to 256GB)
Display	HDMI 2.0a Tx
Video Codec	Decode: 1080p60, H.265, H.264, VP9, VP8 Encode: 1080p60, H.265, H.264
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
Edge I/O	1x On/Off button 1x 12V~24V DC-in jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switch (boot from eMMC or SD) 1x HDMI 1.4a 2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG
Internal I/O	1x M.2 B-Key(3052) with SIM socket (for 5G module) 2x I2C / 4x GPIO 1x Audio Line-in and Line-out 1x12V~24V DC-in jack 1x DC power (4-pin header) 3x IO expansion 2mm pitch 2x20 headers with following features (Contact us for design reference): • 1x USB 2.0 • 1x PCM • 2x UART(Rx, Tx) • 1x SDIO • 1x UART (Tx, Rx, CTS, RTS) • 2x USB 3.0 • 1x 2ch LVDS with backlight control • 1x I2C • 2x PWM • 3x GPIO • 1x Cap touch IF • 2x MIPI-CSI for cameras • 2x CAN-FD
Expansion IO	1x M.2 E-Key(2230)w/ SDIO, UART for wireless 1x Mini PCI-E w/ USB 2.0, SIM, PCM for 4G/LTE 1x DB-9 RS232/422/485 port 2x USB 3.0 in 1x19-pin headers 1x 2ch LVDS with backlight control 1x Cap touch IF 2x MIPI-CSI 2x CAN-FD
Watchdog	256 levels, 0~128 seconds
Dimensions	IBR215: 105mm(W) x 72mm(D) 4.13"(W) x 2.83"(D) IBR215-IO: 100mm(W) x 72mm 3.94"(W) x 2.83"(D) IBR215+IBR215-IO: 105mm(W) x 72mm(D) x 35mm(H) 4.13"(W) x 2.83"(D) x 1.37"(H)
Power Input	12V~24V DC-in jack
Operating Temperature	With heat sink or through housing design: -40°C~85°C (-40°F ~185°F) Without heatsink:-40°C~65°C (-40°F ~149°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 5.0 Android 11 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

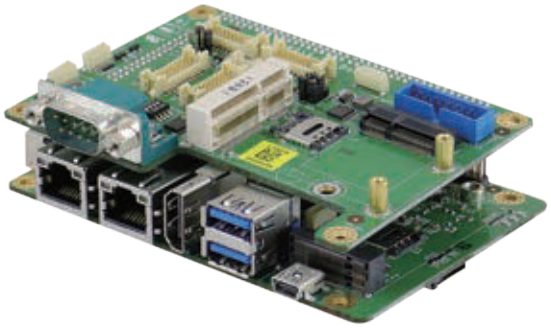
IBR215-Q316I	ARM-based IoT Gateway, NXP Cortex®-A53, i.MX 8M Plus Quad 1.6GHz processor, 3GB LPDDR4, 16GB eMMC
IBR215-IO	Expansion Board for IBR215

Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Compatible I/O Expansion Board



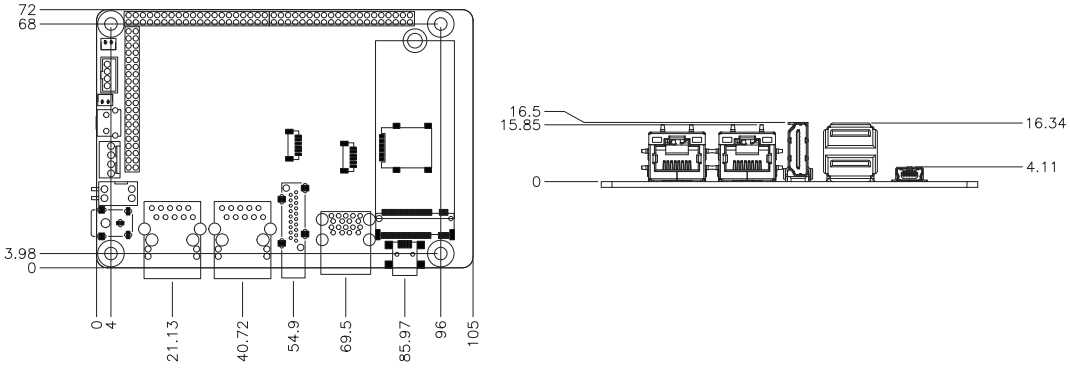
IBR215-IO



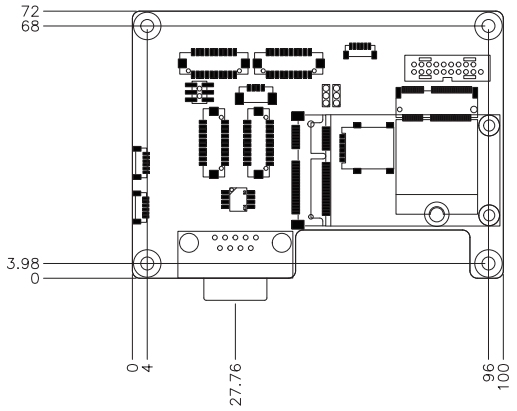
IBR215 with IBR215-IO module

Dimensions and Drawing

IBR215



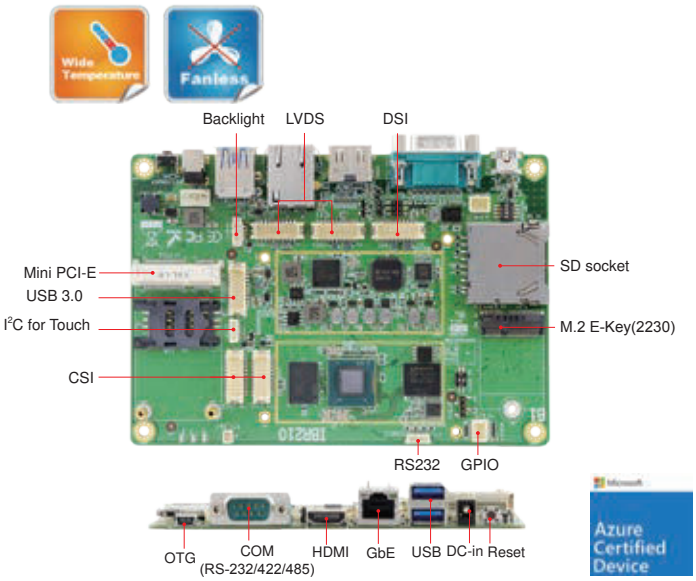
IBR215-IO



IBR210

Single Board Computer

Low-Power 3.5" SBC
with NXP ARM® Quad Cortex-A53/Cortex-M4 i.MX 8M Processor



Features

- NXP Cortex™-A53/-M4, i.MX 8M Quad processor
- 4K HDMI, Dual-channel FHD LVDS
- 3GB LPDDR4, 16GB eMMC and SD socket
- Embedded I/O for COM, GPIO, USB 3.0, USB-OTG, Audio and Ethernet
- M.2 E-Key (2230) and mini-PCI-E with SIM socket for wireless/4G/LTE connectivity
- Wide-range operating temperature (-20°C~80°C)

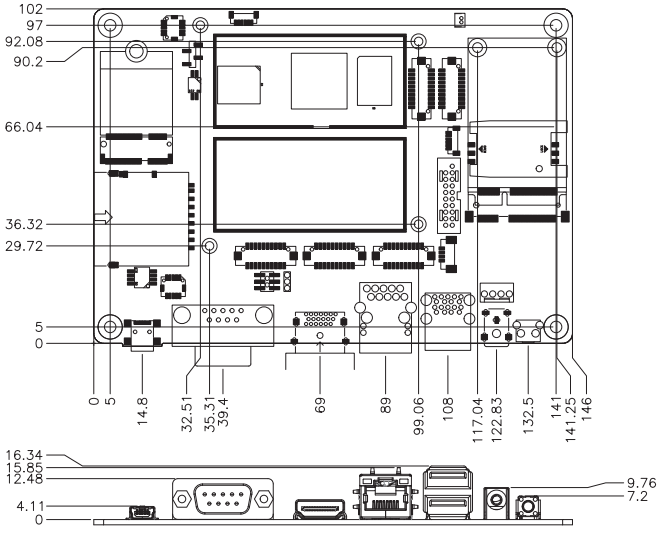
Specifications

Form Factor	3.5-inch SBC
Processor	NXP i.MX 8M Quad Cortex™-A53 and Cortex™-M4 processor
System Memory	3GB LPDDR4 on board
Flash Memory	16GB eMMC on board
Display	1x Dual-channel LVDS (FHD) 1x HDMI 2.0a
Video Codec	• 4Kp60 HEVC/H.265 main, and main 10 decoder • 4Kp60 VP9 decoder • 4Kp30 AVC/H.264 decoder • 1080p60 MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 decoder
Graphics	• GC7000Lite • OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan
Edge I/O	1x RJ45 GbE LAN 2x USB 3.0 Type-A 1x USB OTG (mini-USB Type-B) 1x HDMI 2.0a 1x RS232/422/485 (D-SUB 9 male connector) 1x SD socket (UHS-I SDR-104, max. 104MB/s) 1x On/Off button
Internal I/O	1x Dual-channel LVDS 1x Backlight, 3.3V/1A, 5V/1A, 12V/1A (jumper selection) 1x MIPI-DSI (2*10-pin header) 2x MIPI-CSI (2*10-pin header) 2x USB 3.0 header 1x M.2 E-Key (2230) w/ USB, SDIO, UART, PCI-E 1x Mini PCI-E w/ SIM socket 1x I²C header 1x 2-wire RS232 header (for debug console port) 2x 2-wire RS232 header 1x Audio header (Line-in and Line-out) 8x GPIO (2*5 pin header 1.0mm) 3x Green LEDs (for power On/Off, wireless status, and programmable)
Expansion IO	N/A
Watchdog	256 Levels, 0~128 secs
Dimensions	147mm x 102mm (5.8" x 4")
Power Input	12V~24V DC-in jack and Internal Header
Operating Temperature	-20°C ~ +80°C (-4°F ~ 176°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 2.5 Android 9 Ubuntu 18.04 evaluation Other OS (by request)
Certification	CE/FCC Class-B

Ordering Information

IBR210-Q316I	Industrial Grade3.5" SBC, i.MX 8M Quad 1.3GHz processor, 3GB LPDDR4, 16GB eMMC

Dimensions

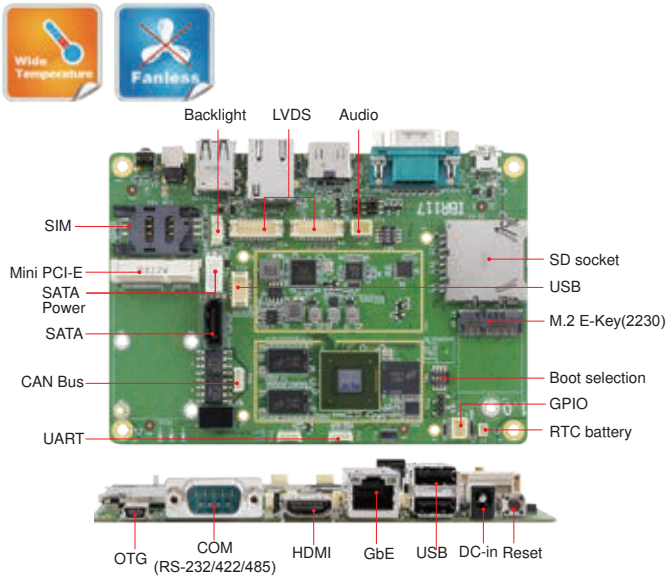


Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

IBR117

Single Board Computer

Low-Power 3.5" SBC with
NXP ARM® Cortex-A9 i.MX 6Dual Processor



Features

- NXP Cortex™-A9, i.MX 6Dual processor
- Supports HDMI and dual LVDS
- 1GB DDR3, 4GB eMMC and SD socket
- Embedded I/O, COM, GPIO, USB, USB-OTG, audio and Ethernet
- M.2 E-Key (2230) and Mini PCI-E with SIM socket for wireless/4G/LTE connectivity
- Wide-range operating temperature (-40°C~85°C)

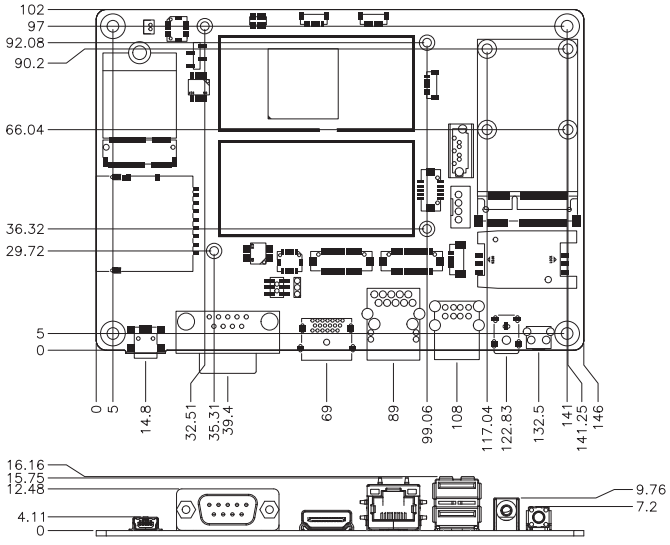
Specifications

Form Factor	3.5-inch SBC
Processor	NXP Cortex™-A9 i.MX 6Dual processor
System Memory	1GB DDR3 on board
Flash Memory	4GB eMMC on board (option: 8/16/32/64 GB)
Display	2x 18/24-bit single LVDS /1x Dual LVDS, up to 1366 x 768 for 2ch, 1920 x 1080 for 1ch 1x HDMI V1.4, up to 1080P at 60Hz
Video Codec	• 1080p60or30 + D1 Dual 1080p decode • 1080p30 H.264BP • Dual 720p encode
Graphics	• Vivante GC2000, OpenGL, GL ES 2.0 & Halti, CL EP • Vivante GC355, OpenVG 1.1
Edge I/O	1x RJ45 GbE LAN 2x USB Type-A 1x USB OTG (mini-USB Type-B) 1x HDMI 1x RS232/422/485 (D-SUB 9 male connector) 1x SD socket (UHS-I SDR-104, max.104MB/s) 1x Reset button
Internal I/O	1x Dual-channel LVDS (FHD) 1x Backlight, 3.3V/1A, 5V/1A, 12V/1A (jumper selection) 2x USB 2.0 header 1x M.2 E-Key (2230) w/ USB, SDIO, UART, PCI-E 1x Mini PCI-E (USB only) w/ SIM socket 1x SATA & 4-pin header for the power, 5V/12V 2x CAN Bus 2.0B (2*3 pin header) 1x I²C header 1x 2-wire UART header (for Debug Console Port) 2x 2-wire UART (6-pin header, 1.0mm) 1x Audio header (Line-in and Line-out) 8x GPIO (2*5 pin header 1.0mm) 3x Green LEDs (for Power On/Off, wireless status, and Programmable)
Expansion IO	N/A
Watchdog	256 Levels, 0~128 secs
Dimensions	147mm x 102mm (5.8" x 4")
Power Input	12V DC-in jack
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 2.1 Android 6.0.1
Certification	CE/ FCC Class-B

Ordering Information

IBR117	3.5" ARM-based SBC, NXP Cortex™-A9, i.MX 6Dual 1GHz processor, 1GB DDR, 4GB eMMC, Dual LVDS, HDMI, RS-232/422/485, USB, M.2 E-Key (2230) and Mini PCI-E w/ SIM socket

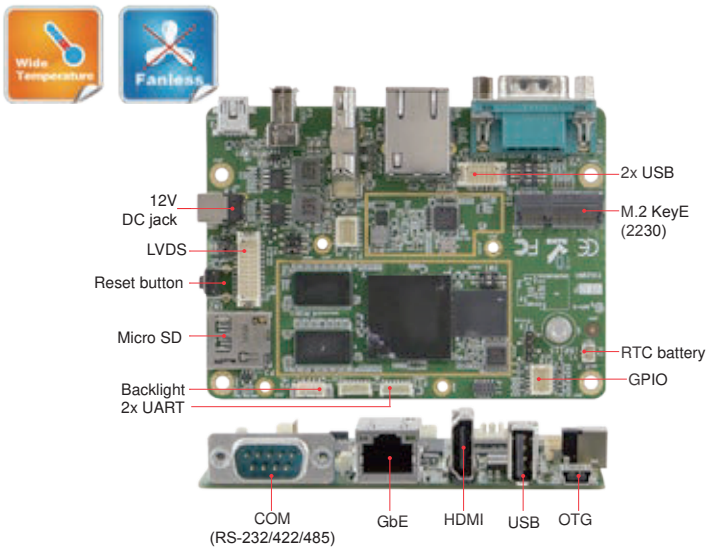
Dimensions



IBR115

Single Board Computer

Low-Power 2.5" SBC with
NXP ARM® Cortex-A9 i.MX 6Dual-Lite Processor



Features

- NXP Cortex™-A9, i.MX 6Dual-Lite processor
- Supports HDMI and Single LVDS (1366x768)
- Supports 1GB DDR3, 4GB eMMC and Micro SD socket
- Embedded I/O as COM, GPIO, USB, USB-OTG, Audio and Ethernet
- M.2 E-Key (2230) for wireless connectivity
- Wide-range operating temperature (-40°C~85°C)

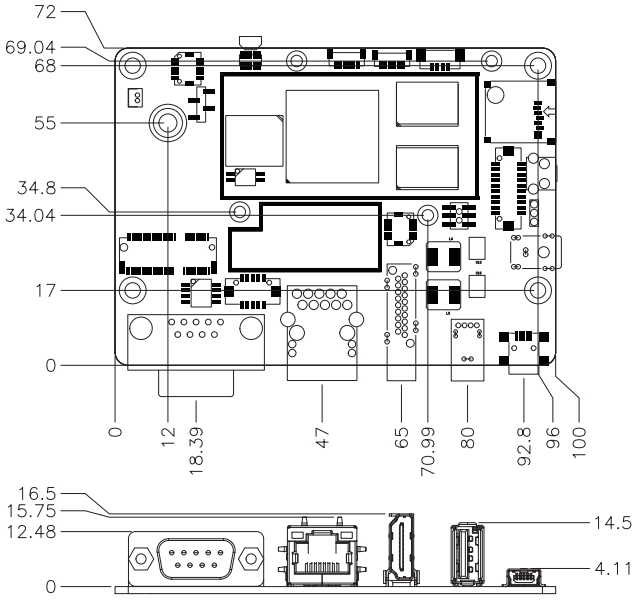
Specifications

Form Factor	2.5-inch SBC
Processor	NXP Cortex™-A9 i.MX 6Dual-Lite processor
System Memory	1GB DDR3 on board
Flash Memory	4GB eMMC on board (option: 8/16/32/64 GB)
Display	1x 18/24-bit single LVDS, up to 1366 x 768 1x HDMI V1.4, up to 1080P at 60Hz
Video Codec	• i.MX53 + VP6 / WebM VP8, H.264 MVC • 1080p30 + D1 • 1080p30 H.264BP • Dual 720p encode
Graphics	• Vivante GC880, OpenGL ES 2.0 • Vivante GC320
Edge I/O	1x RJ45 GbE LAN 1x USB (Type-A) 1x USB OTG (mini-USB Type-B) 1x HDMI 1x RS232/422/485 (D-sub 9 male connector) 1x Micro SD socket (UHS-I SDR-104, max.104MB/s) 1x Reset button
Internal I/O	1x single-channel LVDS (1366x768) 1x Backlight, 3.3V/1A, 5V/1A, 12V/1A (jumper selection) 2x USB 2.0 header 1x M.2 E-Key (2230) w/ PCI-E, USB, SDIO, UART 1x I²C header 1x 2-wire UART header (for debug console port) 2x 2-wire UART (1x6 pin header,1.0mm) 1x Audio pin header (Line-in and Line-out 8x GPIO (2*5 pin header 1.0mm) 2x Green LEDs (for power On/Off, and wireless status)
Expansion IO	N/A
Watchdog	256 levels, 0~128 secs
Dimensions	100mm x 72mm (3.94" x 2.83")
Power Input	12V DC-in jack
Operating Temperature	-40°C ~ +85°C (-40°F ~ 185°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 2.1 Yocto 2.5 Android 6.0.1
Certification	CE/ FCC Class-B

Ordering Information

IBR115	2.5" ARM-based SBC, NXP Cortex™-A9, i.MX 6Dual-Lite 1GHz processor, 1GB DDR, 4GB eMMC, Single LVDS, HDMI, RS-234/422/485, USB, M.2 E-Key (2230)

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Edge Computer

IBASE edge computer solutions fully support ARM NXP I.MX, serving as a platform to collect and communicate field data to remote cloud devices. Designed as compact IoT Edge Computers for different environments to fit into constrained-spaces, they also have VESA/DIN rail mounting kit options.

The rugged edge computer perform reliably even in harsh conditions, supporting a wide-range operating temperature, anti-vibration, M.2 / PCI-E expansion modules and a rich set of versatile I/O interface.

They enable users to seamless interconnect devices and secure the flow of data for various applications. They come with a starter kit (BSP) required for industrial applications to simplify integration, accelerate time-to-market and minimize development cost.

Rugged

Wide Temperature
Anti-Vibration, Fanless

Expandable

M.2 & Mini-PCIE for Wireless Connectivity
SD Socket for Storage

Compact

Slim Size , Ultra Low Power
Rich I/O, Versatile Mounting

Efficient

Customized BSP Package , Modularized SW
Complete Programming Guide

Comparison Table

Model	EC3500	EC3100	EC3000
Processor	NVIDIA® Jetson AGX Orin 32GB/64GB SOM + Carrier Board	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3/6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3
Graphics	1792-core NVIDIA Ampere GPU with 56 Tensor Cores / 2048-core NVIDIA Ampere GPU with 64 Tensor Cores	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores / 512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores / 512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores
System Memory	32/64 GB 256-bit LPDDR5 204.8 GB/s	16GB/8GB 128-bit LPDDR5 102.4 GB/s and 8GB/4GB B 128-bit LPDDR5 68 GB/s	8GB 128-bit LPDDR5 102.4 GB/s and 8GB 128-bit LPDDR5 102 GB/s and 4GB 64-bit LPDDR5 51 GB/s
Storage	64GB eMMC 5.1	128GB NVMe	128GB NVMe
Construction	SGCC	SGCC	SGCC
Display	1x HDMI 2.1 connector	NX: HDMI 2.1 Nano: HDMI 1.4	NX: HDMI 2.1 Nano: HDMI 1.4
Network	1x RJ-45 GbE port 1x RJ-45 10GbE port	2x RJ-45 GbE port	1x RJ-45 GbE port
Standard I/O	1x HDMI 2.1 connector 1x RJ-45 GbE port 1x RJ-45 10GbE port 2x USB 3.2 Gen1 Type-A 1x USB 2.0 Type-C (OTG only) 1x USB 3.2 Type-C Gen 2 1x DC-in 9V~36V DC / 4-pin DC Jack Power Connector 1x Power button 1x MicroSD slot 1x Micro SIM holder 1x Recovery button 1x Reset button 2x Antenna holes	2x USB 3.2 Type-A Gen2 2x USB 2.0 Type-A 1x USB 2.0 Type-C (OTG only) 1x Audio Line-In connector 1x Mic connector 1x Power button 2x Edge insert SIM socket 1x Recovery button 1x Reset button 2x Antenna holes 1x COM port 2x Summit connector 4x DI + 4x DO	1x Gigabit Ethernet (10/100/1000) RJ45 with LED 1x HDMI Type-A 2x USB 3.2 Gen2 Type-A 2x USB 2.0 Type-A 1x Micro USB connector supports Recovery Mode and OTG 1x Power LED 1x Recovery button 1x 12-24V DC input with 2-pins terminal block 2x Antenna 1x DB9 connector for RS-232/485 and CanBus 1x DB15 connector for RS-232/422/485 and DIO x8
Watchdog	256 levels, 0~128 seconds	256 levels, 0~128 seconds	256 levels, 0~128 seconds
Expansion slots	1x M.2 B-Key (3042/3052) for LTE/5G with Micro Sim Holder: cellular function 1x M.2 E-Key (2230) for WiFi/BT/GPS function 1x M.2 M-Key (2280) NVMe 1x MicroSD Slot	1x M.2 B-Key (3042/3052) for LTE/5G with Nano SIM holder: cellular function 1x M.2 B-Key (3042) for OOB 4G function with USB2.0 1x M.2 E-Key (2230) for WiFi/BT/GPS function 1x M.2 M-Key (2280) for NVMe 1x Nano SIM slot	1x M.2 B-key (3042/3052) for 4G/5G/M.2 2242 B+M Key NVMe 1x M.2 E-Key (2230) for WiFi/BT/NVMe
Fanless	Yes	Yes	Yes
Certification	CE, FCC & LVD	CE/FCC Class-B	CE/FCC Class-B
Dimensions	150mm x 125mm x 70mm	220mm x 174mm x 80mm	130mm x 102mm x 47.5mm
Weight	1.5 KG	3Kg	0.8kg
Operating Temperature	-0 ~ +50 °C (32°F ~ 122°F)	-20 ~ +70 °C (-4°F ~ 158°F)	-15°C~55°C (-5°F~131°F)
OS Support	Ubuntu 20.04, Other OS (by request)	Ubuntu 22.04, Other OS (by request)	Ubuntu 22.04, Other OS (by request)
Power Input	9V~36V DC-in jack	9V~36V DC-in jack	12 to +24V DC-in jack
Page No.	P. 39	P. 40	P. 41

Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Comparison Table

Model	ISR500	ISR215	ISR215F
Processor	MediaTek Genio 700 /MT8390 : 2x A78 2.2GHz L2 256KB, 6x A55 2.0GHz L2 128KB, shared 2MB L3 cache MediaTek Genio 510 / MT8370 : 2x A78 2.0GHz L2 256KB, 4x A55 2.0GHz L2 128KB, shared 2MB L3 cache	NXP i.MX 8M Plus - ARM Cortex-A53 Quad processor	NXP i.MX 8M Plus - ARM Cortex-A53 Quad processor
Graphics	ARM Mali-G57 MC3, OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1
System Memory	LPDDR4 4000MT/s on-board 8GB	3GB LPDDR4 on board (option: 2/4/8GB)	3GB LPDDR4 on board (option: 2/4/8GB)
Storage	128GB eMMC 5.1 Flash for O.S.	16GB eMMC (up to 256GB)	16GB eMMC (up to 256GB)
Construction	SGCC	SGCC	SGCC
Display	1x HDMI (4K60) 1x HDMI (4K30)	1x HDMI	1x HDMI
Network	1x RJ-45 GbE port	2x RJ45 GbE LAN	2x RJ45 GbE LAN
Standard I/O	1x COM port 1x LAN port 2x HDMI 1x On/Off button 1x USB 1x USB OTG 1x Audio Line-out 2x Antenna holes 1x Factory reset button	2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG 1x On/Off button 1x 12V~24V DC-in jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switches 4x Antenna holes (reserved)	2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG 1x on/off button 1x 12V~24V DC-in jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switches 1x UART(RS432/422/485) 4x Antenna holes (reserved)
Watchdog	256 levels, 0~128 seconds	256 levels, 0~128 seconds	256 levels, 0~128 seconds
Expansion slots	1x M.2 E-Key (2230) for Wireless w/ SDIO, UART	1x M.2 B-Key (3052) for 5G (Internal) 1x SD card slot	1x M.2 3052 Key-B with SIM socket (for 5G module) 2x I2C / 4x GPIO 6-pin header 1x Audio Line-in and Line-out 6-pin header 1x DC power in 4-pin header 1x mPCI-E (IO board, for 4G/LTE USB module) 1x M.2 2232 E-key (IO board, UART and SDIO for WiFi/BT modules) The features below are on IO board but not externally: 2x USB 3.0 in 2x 10-pin header 1x LVDS 2ch with Backlight control 1x Cap touch IF 2x MIPI-CSI for cameras 2x CAN-FD
Fanless	Yes		Yes
Certification	CE/FCC Class-B	CE/FCC Class-B	CE/FCC Class-B
Dimensions	155mm x 100mm x 36mm	119mm x 82mm x 36 mm	119mm x 92mm x 46mm
Weight	1.5Kg	0.5KG	0.7KG
Operating Temperature	-10°C~ +50°C (14°F ~ 122°F)	-40°C~ +70°C (-40°F ~ 158°F)	-40 ~ +70 °C (-40 ~ 158 °F)
OS Support	Yocto 5.15 Android 14	Yocto 5.0, Android 11, Other OS (by request)	Yocto 5.0, Android 11, Other OS (by request)
Power Input	12V~24V DC-in lock jack	12V~24V DC-in jack	12V~24V DC-in jack
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Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

Comparison Table

Model	ISR215L	ISR301
Processor	NXP Cortex®-A53, i.MX 8M Plus Lite Quad processor	NXP i.MX 8M - ARM Cortex-A53 Quad processor
Graphics	OpenGL Es 1.1, 2.0, 3.0,3.1 OpenCL 3.0 OpenVG 1.1 OpenGL 4.0 EGL 1.5 Vulkan 1.1	GC7000Lite OpenGL ES 1.1, 2.0, 3.0,3.1 Open CL 1.2,and Vulkan
System Memory	3GB LPDDR4 on board (option: 2/4/8GB)	3GB LPDDR4 on board
Storage	16GB eMMC (up to 256GB)	16G eMMC on board
Construction	SGCC	SGCC
Display	1x HDMI	1x HDMI
Network	2x RJ45 GbE LAN	1x RJ45 GbE LAN
Standard I/O	2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG 1x On/Off button 1x 12V~24V DC-in jack 1x SD socket (UHS-I SDR-104, 104MB/s max.) 1x Boot select switches 4x Antenna holes (reserved)	2x USB 3.0 Type-A 1x RJ45 GbE LAN 1x RS232 /422/485 (DB9) 1x Mini-USB OTG 1x 12V~24V DC-in jack 1x On/Off button 2x RS232 (DB9) 8x GPIO (DB9) 2x Antenna hole (reserved) 3x LED indicators 1x SD socket (UHS-I SDR-104, 104MB/s max.)
Watchdog	256 levels, 0~128 seconds	256 levels, 0~128 seconds
Expansion slots	1x M.2 B-Key (3052) for 5G (Internal) 1x SD card slot	1x M.2 E-Key (2230) w/ USB, SDIO,UART, PCI-E 1x Mini PCI-E (PCI-E and USB) w/ SIM socket 1x SD card slot
Fanless	Yes	Yes
Certification	CE/FCC Class-B	CE/FCC Class-B
Dimensions	119mm x 82mm x 36 mm	172mm x 162mm x 36 mm
Weight	0.5KG	0.8KG
Operating Temperature	-40°C~ +70°C (-40°F ~ 158°F)	-10°C ~ +60°C (14°F ~ 140°F)
OS Support	Yocto 5.0, Android 11, Other OS (by request)	Yocto 2.5, Android 9 Other OS (by request)
Power Input	12V~24V DC-in jack	12V-24V DC-in jack
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Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

EC3500

Edge AI Computer

Rugged Edge Computer
with NVIDIA® Jetson AGX Orin series

Features

- NVIDIA® Jetson AGX Orin™ series module
- 64GB eMMC, 1x MicroSD slot
- 2x LAN, 10G and 1G
- 2x USB 3.2 Gen1 Type-A, 1x USB 3.2 Gen2 Type-C
- 1x USB 2.0 Type-C (OTG)
- 1x HDMI
- 1x M.2 B-Key 3042/3052 for 4G/5G
- 1x M.2 E-Key 2230 for WiFi/BT/GPS
- 1x M.2 M-Key 2280 for NVMe SSD
- Wide-power input range +9V to +36VDC
- Supports Ubuntu 20.04 OS

Specifications

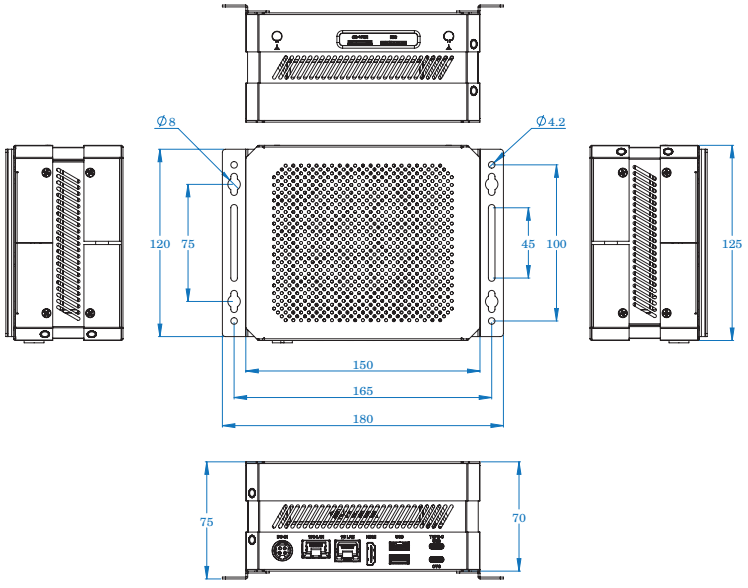
System Board	NVIDIA® Jetson AGX Orin 32GB/64GB SOM + Carrier Board
Processor	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3 / 12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
System Memory	32/64 GB 256-bit LPDDR5 204.8 GB/s
Storage	64GB eMMC 5.1
Construction	SGCC
Color	Black
Display	HDMI 2.1 Type A
Network	1x RJ-45 GbE port 1x RJ-45 10GbE port
Watchdog	256 levels, 0~128 seconds
Front I/O	1x HDMI 2.1 2x USB 3.2 Gen1 Type-A 1x USB 2.0 Type-C (OTG only) 1x USB 3.2 Type-C Gen 2 1x DC-in 9V~36V DC / 4-pin DC jack power 1x RJ45 GbE for 1G 1x RJ45 GbE for 10G
Rear I/O	1x Power button 1x MicroSD slot 1x Micro SIM holder 1x Recovery button 1x Reset button 2x Antenna holes
Side I/O	N/A
Expansion slots	1x M.2 B-Key 3042/3052 (LTE/5G - USB3) w/ Micro SIM holder: cellular function 1x M.2 E-Key 2230 (PCI-E/USB2): WiFi/BT/GPS function 1x M.2 M-Key (NVMe) 2280: 1x MicroSD slot
Fanless	No
Dimensions (WxDxH)	150mm (W) x 125mm (D) x 70mm (H)
Mounting	DIN rail, wall mount

Operating Temperature	-0 ~ +50 °C (32°F ~ 122°F)
Relative Humidity	0%~ 90% (non-condensing)
OS Support	Ubuntu 20.04
Certification	CE, FCC & LVD

Ordering Information

EC3500-64	NVIDIA Jetson AGX Orin series ,64 GB 256-bit LPDDR5 204.8 GB/s, 64GB eMMC 5.1, HDMI 2.1, 1G LAN 10GbE LAN, USB2.0/3.0,SIM/MicroSD, DC 9V~36V, WiFi/BT/GPS/4G/5G(option)
EC3500-32	NVIDIA Jetson AGX Orin series ,32 GB 256-bit LPDDR5 204.8 GB/s, 64GB eMMC 5.1 HDMI 2.1, 1G LAN 10GbE LAN, USB2.0/3.0,SIM/ MicroSD, DC 9V~36V,WiFi/BT/GPS/4G/5G(option)

Dimensions



EC3100

Edge AI Computer

Rugged Edge Computer
with NVIDIA® Jetson Orin NX/Nano series

Features

- NVIDIA® Jetson Orin NX and Nano series module
- 2x GbE LAN (1 for OOB)
- 1 x USB Type-C supports Recovery Mode and OTG
- 2 x USB 3.2 Type-A, 2 x USB 2.0 Type-A
- 1 x DB9 for RS232 COM port, 1 x DB9 for CANBus
- 1x HDMI
- 1x M.2 3052 B-Key for 4G/5G
- 1x M.2 3042 B-Key for OOB 4G
- 1x M.2 2230 E-Key for WiFi/BT/GPS
- 1x M.2 2280 M-Key for NVMe SSD
- 1x Summit connector for PoE Board
- Wide-power input range +9V to +36VDC
- Supports Ubuntu 22.04 OS

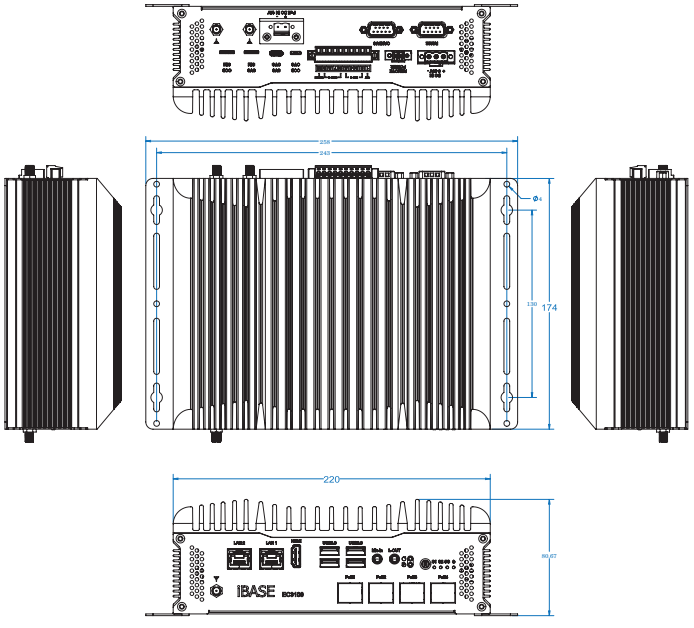
Specifications

System Board	NVIDIA® Jetson Orin NX 16GB or 8GB/Orin Nano 8GB or 4GB SOM + Carrier Board
Processor	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3/6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3
System Memory	NVIDIA® Jetson Orin NX: 16GB 256-bit LPDDR5 102.4 GB/s NVIDIA® Jetson Orin Nano: 4GB 256-bit LPDDR5 34 GB/s
Storage	128GB NVMe
Construction	SGCC
Color	Black & Red
Display	Orin NX: HDMI 2.1 Type A Orin Nano: HDMI 1.4 Type A
Network	2x RJ-45 GbE port (10/100/1000)
Watchdog	256 levels, 0~128 seconds
Front I/O	1x RJ45 GbE for OOB 1x RJ45 GbE for system 1x HDMI 2.1 Type-A 2x USB 3.2 Type-A Gen2, 2x USB 2.0 Type-A 1x Line-out jack 1x Mic-in jack 1x Power button 1x Recovery button 1x Reset button 4x RJ45 GbE support PoE (optional) 1x Antenna holes
Rear I/O	1x DC-in 9V~36V lockable power jack 1x Remote power connector 4x DI + 4 x DO (pin1 with isolation output 5V @ 0.5A) 2x Edge insert nano SIM socket 1x USB 2.0 Type-C (OTG) 1x USB 2.0 Micro-USB (OOB OTG) 1x RS232 COM port DB9 connector 1x CANBus DB9 connector 2x Antenna holes
Side I/O	N/A
Expansion slots	1x M.2 3052 B-Key 4G/5G 1x M.2 3042 B-Key OOB 4G 1x M.2 2230 E-Key WiFi/BT/GPS 1x M.2 2280 M-Key NVMe
Fanless	Yes
Dimensions (WxDxH)	220mm (W) x 174mm (D) x 80mm (H)
Mounting	wall mount
Operating Temperature	-20 ~ +70 °C (-40°F ~ 158°F)
Relative Humidity	10%~ 90% (non-condensing)
OS Support	Ubuntu 22.04
Certification	CE, FCC Class B & LVD

Ordering Information

EC3100-NX-16	NVIDIA® Jetson Orin NX 16GB, 1x HDMI, 2x GbE, 5x USB, 2x M.2 B-key, 1x M.2 E-key, 1x M.2 M-Key, with power adaptor, with RTC battery
EC3100-NX-8	NVIDIA® Jetson Orin NX 8GB, 1x HDMI, 2x GbE, 5x USB, 2x M.2 B-key, 1x M.2 E-key, 1x M.2 M-Key, with power adaptor, with RTC battery
EC3100-NANO-8	NVIDIA® Jetson Orin Nano 8GB, 1x HDMI, 2x GbE, 5x USB, 2x M.2 B-key, 1x M.2 E-key, 1x M.2 M-Key, with power adaptor, with RTC battery
EC3100-NANO-4	NVIDIA® Jetson Orin Nano 4GB, 1x HDMI, 2x GbE, 5x USB, 2x M.2 B-key, 1x M.2 E-key, 1x M.2 M-Key, with power adaptor, with RTC battery

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

EC3000

Edge AI Computer

Rugged Edge Computer
with NVIDIA® Jetson Orin NX/Nano series

Features

- NVIDIA® Jetson Orin NX and Nano series module
- 1x GbE LAN
- 1x Micro USB supports OS flash
- 2x USB 3.2 Gen2 Type-A
- 2x USB 2.0 Type-A
- 2x COM/DIO/CANBus, 1x HDMI
- 1x M.2 3042/3052 B-key for 4G/5G/M.2 2242 B+M-key NVMe SSD
- 1x M.2 2230 E-key WiFi/BT/NVMe SSD
- Wide power input range +12V to +24V DC
- Supports Ubuntu 22.04 OS

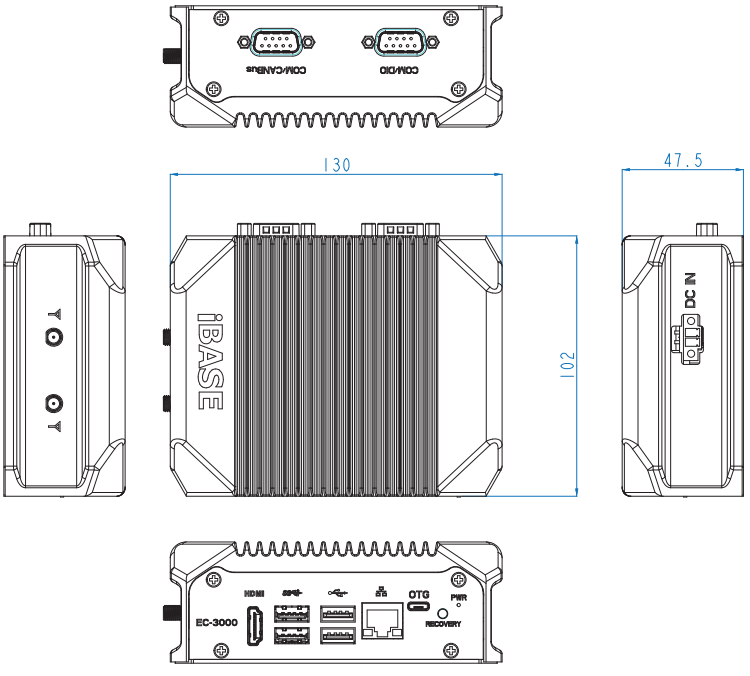
Specifications

System Board	NVIDIA® Jetson Orin NX 8GB/Orin Nano 4GB SOM + carrier board
Processor	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3
System Memory	NVIDIA® Jetson Orin NX: 8GB 128-bit LPDDR5 102.4 GB/s NVIDIA® Jetson Orin Nano: 8GB 128-bit LPDDR5 102 GB/s NVIDIA® Jetson Orin Nano: 4GB 64-bit LPDDR5 51 GB/s
Storage	1x M.2 2242 B+M Key NVMe or M.2 2230 E-Key NVMe
Construction	Aluminum & steel
Color	Black & Red
Display	Orin NX: HDMI 2.1 Type A Orin Nano: HDMI 1.4 Type A
Network	1x RJ-45 GbE port (10/100/1000)
Watchdog	N/A
Front I/O	1x Gigabit Ethernet (10/100/1000), RJ45 with LED 1x HDMI Type-A 2x USB 3.2 Gen2 Type-A 2x USB 2.0 Type-A 1x Micro USB connector supports Recovery Mode and OTG 1x Power LED 1x Recovery button
Rear I/O	1x DB9 connector for RS-232/485 and CanBus 1x DB15 connector for RS-232/422/485 and DIO x8
Side I/O	2x Antenna 1x 12-24V DC input with 2 pins terminal block
Expansion slots	1x M.2 3042/3052 B-key (4G/5G/M.2 2242 B+M Key storage) 1x M.2 E-Key (2230) (WiFi/BT/Storage)
Fanless	Yes
Dimensions (WxDxH)	130mm x 102mm x 47.5mm
Mounting	wall mount
Operating Temperature	-15°C~55°C (-5°F~131°F)
Relative Humidity	5%~95% (non-condensing)
OS Support	Ubuntu 22.04
Certification	CE, FCC Class B

Ordering Information

EC3000-NX-8	NVIDIA® Jetson Orin NX 8GB, 1x HDMI, 1x GbE, 5x USB, M.2 B+M/E Key, 12V to 24V DC input, -15°C ~+55°C operating temperature, with power adapter, with RTC battery
EC3000-NANO-8	NVIDIA® Jetson Orin Nano 8GB, 1x HDMI, 1x GbE, 5x USB, M.2 B+M/E Key, 12V to 24V DC input, -15°C ~ + 55°C operating temperature, with power adapter, with RTC battery
EC3000-NANO-4	NVIDIA® Jetson Orin Nano 4GB, 1x HDMI, 1x GbE, 5x USB, M.2 B+M/E Key, 12V to 24V DC input, -15°C~+55°C operating temperature, with power adapter, with RTC battery

Dimensions



ISR500

Edge Computer

Rugged Edge Computer
with MediaTek Genio 700 (MT8390) or MediaTek Genio 510 (MT8370) Processor

Features

- MediaTek Genio 700 (MT8390) 2.2GHz or MediaTek Genio 510 (MT8370) 2.0GHz processor
- Onboard 4GB LPDDR4 with 4000MT/s
- Embedded I/O for COM, USB, HDMI, Ethernet
- Supports M.2 E-Key (2230) for WiFi6 2T2R + BT 5.2
- Ruggedized and fanless design

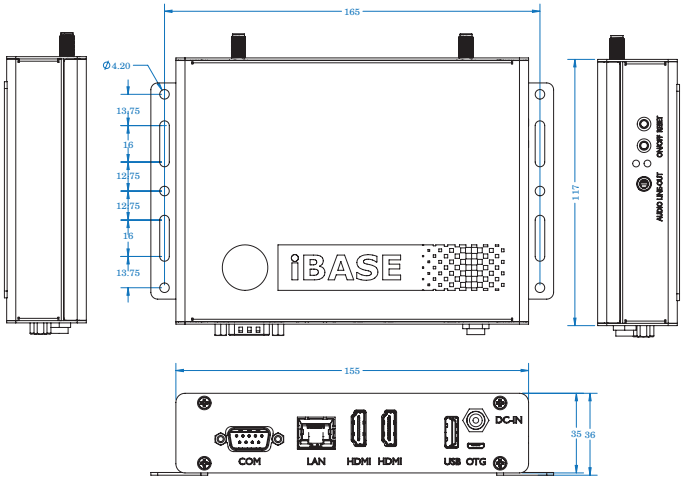
Specifications

System Board	IBR500 3.5-inch SBC
Processor	MediaTek Genio 700 (MT8390) : 2x A78 2.2GHz L2 256KB, 6x A55 2.0GHz L2 128KB, shared 2MB L3 cache MediaTek Genio 510 (MT8370) : 2x A78 2.0GHz L2 256KB, 4x A55 2.0GHz L2 128KB, shared 2MB L3 cache
System Memory	Onboard 4GB LPDDR4 with 4000MT/s (default)
Storage	64GB~128GB eMMC 5.1 Flash for O.S. and 8MB SPI NOR Flash for board information
Construction	SGCC
Color	Black & Silver
Display	1x HDMI (4K60) + 1x HDMI (4K30)
Network	1x RJ45 GbE LAN
Watchdog	256 Levels, 0~128 secs
Front I/O	1x COM port 1x LAN port 2x HDMI 1x USB Type A 1x USB OTG (Micro USB) 1x DC in power jack
Rear I/O	2x Antenna holes
Side I/O	1x Factory reset button 1x Audio Line-Out 1x PWR On/Off button
Expansion slots	1x M.2 E-Key (2230) w/ SDIO, UART (for Wireless)
Fanless	Yes
Dimensions (WxDxH)	155mm (W) x 110mm (D) x 35mm (H)
Mounting	Desktop or wall mounting (wall mount kit included)
Operating Temperature	-10°C ~ 50°C (14°F~122°F)
Relative Humidity	5~90% @ 45°C, (non-condensing)
OS Support	Yocto 5.15 Android 13
Certification	CE / LVD / FCC Class-B (TBD)

Ordering Information

ISR500-1	MediaTek Genio 700 / MT8390: 2x A78 2.2GHz L2 256KB, 6x A55 2.0GHz L2 128KB, shared 2MB L3 cache, 8GB LPDDR4, 64~128GB eMMC
ISR500-2	MediaTek Genio 510 / MT8370: 2x A78 2.2GHz L2 256KB, 4x A55 2.0GHz L2 128KB, shared 2MB L3 cache, 4GB LPDDR4, 64GB eMMC
50W power adaptor	50W (12V @5.0A) power adaptor, bare wire type Compatible with IEC62368-1/EN62368-1
Option Accessories	WiFi / Bluetooth module & antenna kit M.2 Wifi/BT module: A024MDWiFi0045000P or A024MDWiFi0046000P Antenna kit: A055RFAS67H600000P+A055BTC0000010000P

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

ISR215

Edge Computer

Rugged Edge Computer
with NXP i.MX 8M Plus - ARM Cortex-A53 Quad Processor

Features

- NXP i.MX 8M Plus - ARM Cortex-A53 Quad processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- Embedded I/O, USB, HDMI, Ethernet
- Supports M.2 B-Key(3052) for 5G connectivity
- Ruggedized and fanless design
- Wide-range operating temperature (-40°C~70°C)

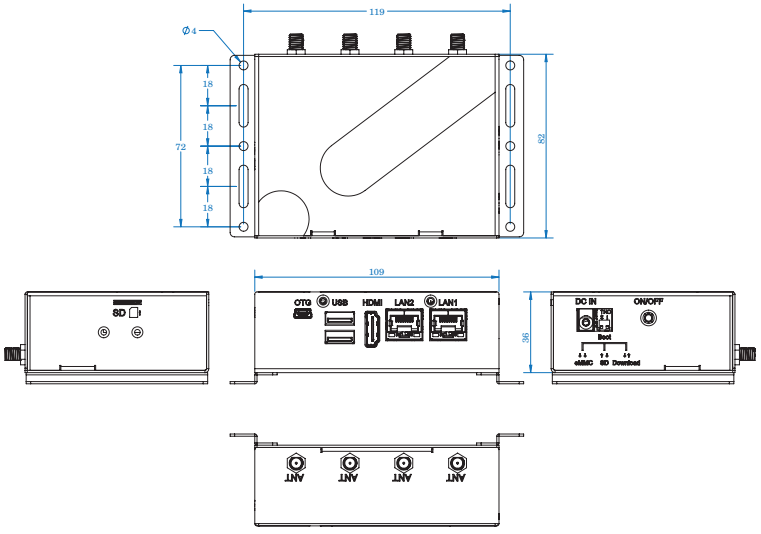
Specifications

System Board	IBR215-Q316I 2.5-inch SBC
Processor	NXP i.MX 8M Plus - ARM Cortex-A53 Quad processor
System Memory	3GB LPDDR4 on board (option: 2/4/8GB)
Storage	16GB eMMC on board (up to 256GB)
Construction	SGCC
Color	Black
Display	HDMI 2.0a Edge connector
Network	2x RJ45 GbE LAN
Watchdog	256 levels, 0~128 seconds
Front I/O	1x HDMI 2.0a 2x USB 3.0 (Type-A) 2x RJ45 GbE 1x Mini-USB OTG
Rear I/O	4x Antenna hole (reserved)
Side I/O	1x On/Off button 1x 12V~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 B-Key(3052) with SIM socket (for 5G module)
Fanless	Yes
Dimensions (WxDxH)	119mm (W) x 82mm (D) x 36mm (H)
Mounting	DIN rail, wall mount
Operating Temperature	-40°C~ +70°C (-40°F ~ 158°F)
Relative Humidity	0%~ 90% (non-condensing)
OS Support	Yocto 5.0 Android 11 Debian Support for other OS available upon request
Certification	CE/ FCC Class B/ LVD

Ordering Information

ISR215-Q316I	ARM-based IOT Gateway, NXP i.MX 8M Plus - ARM Cortex-A53 Quad 1.6GHz processor, 3GB LPDDR4, 16GB eMMC, 60W Power Adapter

Dimensions



ISR215F

Edge Computer

Rugged Edge Computer
with NXP i.MX 8M Plus - ARM Cortex-A53 Quad Processor

Features

- NXP Cortex™-A53, i.MX 8M Plus Quad 1.6GHz processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- Embedded I/O for COM, USB, HDMI, Ethernet
- Supports M.2 B-Key (3052) for 5G module and NFC functions
- Supports M.2 E-Key (2230) for WiFi/BT, 4G/LTE, LCD and camera functions
- Ruggedized and fanless design

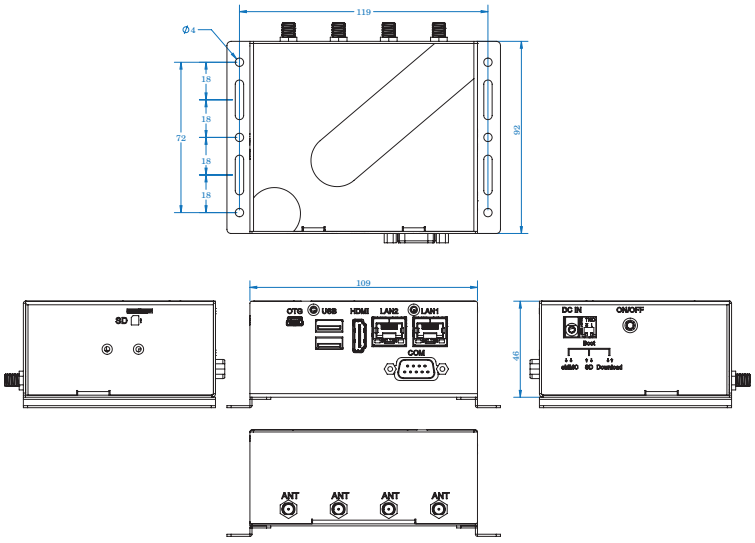
Specifications

System Board	IBR215-Q316I 2.5-inch SBC
Processor	NXP Cortex™-A53, i.MX 8M Plus Quad 1.6GHz, NPU up to 2.3 TOPS
System Memory	3GB LPDDR4 on board (option: 2/4/8GB)
Storage	16GB eMMC on board (option: up to 256GB)
Construction	SGCC
Color	Black
Display	HDMI 2.0a Edge connector LVDS 2ch heater expansion (IO board)
Network	2x RJ45 GbE LAN
Watchdog	256 levels, 0~128 seconds
Front I/O	1x HDMI 2.0a 2x USB 3.0 Type-A 2x RJ45 GbE LAN 1x Mini-USB OTG 1x RS232/422/485 (IO board)
Rear I/O	4x Antenna hole (reserved)
Side I/O	1x On/Off button 1x 12V~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 B-Key with SIM socket (for 5G module) 2x I2C / 4x GPIO 6-pin header 1x Audio Line-in and Line-out 6-pin header 1x DC power in 4-pin header 1x mPCI-E (IO board, for 4G/LTE USB interface module) 1x M.2 E-key (IO board, UART and SDIO for WiFi/BT modules) The following features are also available on IO board but not externally 2x USB 3.0 in 2x 10-pin header 1x LVDS 2ch with Backlight control 1x Cap touch IF 2x MIPI-CSI for cameras 2x CAN-FD 1x 5V DC
Fanless	Yes
Dimensions (WxDxH)	119mm (W) x 92mm (D) x 46mm (H)
Mounting	DIN rail, wall mount
Operating Temperature	-40 ~ +70 °C (-40 ~ 158 °F)
Relative Humidity	0%~ 90% (non-condensing)
OS Support	Yocto 5.0 Android 11 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

ISR215-Q316I	ARM-based IOT Gateway, NXP i.MX 8M Plus - ARM Cortex-A53 Quad 1.6GHz processor, 3GB LPDDR4, 16GB eMMC
ISR215F-Q316I	ARM-based IOT Gateway, NXP i.MX 8M Plus - ARM Cortex-A53 Quad 1.6GHz processor, 3GB LPDDR4, 16GB eMMC and Expansion IO board

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

ISR215L

Edge Computer

Rugged Edge Computer
with NXP i.MX 8M Plus Lite - ARM Cortex-A53 Quad Processor

Features

- NXP i.MX 8M Plus Lite - ARM Cortex-A53 Quad processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- Embedded I/O, USB, HDMI, Ethernet
- Supports M.2 B-Key(3052) for 5G connectivity
- Ruggedized and fanless design
- Wide-range operating temperature (-40°C~70°C)

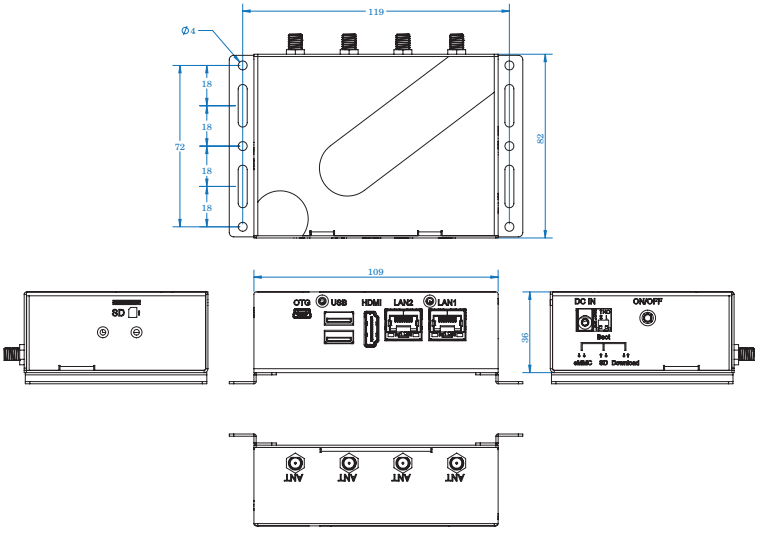
Specifications

System Board	IBR215L-Q316I 2.5 inch SBC
Processor	NXP i.MX 8M Plus Lite QuadLite processor
System Memory	3GB LPDDR4 on board (option: 2/4/8GB)
Storage	16GB eMMC on board (up to 256GB)
Construction	SGCC
Color	Black
Display	HDMI 2.0a Edge connector
Network	2x RJ45 GbE LAN
Watchdog	256 levels, 0~128 seconds
Front I/O	1x HDMI 2.0a 2x USB 3.0 (Type-A) 2x RJ45 GbE 1x Mini-USB OTG
Rear I/O	4x Antenna hole (reserved)
Side I/O	1x On/Off button 1x 12V~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 B-Key(3052) with SIM socket (for 5G module)
Fanless	Yes
Dimensions (WxDxH)	119mm (W) x 82mm (D) x 36mm (H)
Mounting	DIN rail, wall mount
Operating Temperature	-40°C~ +70°C (-40°F ~ 158°F)
Relative Humidity	0%~ 90% (non-condensing)
OS Support	Yocto 5.0 Android 13 Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

ISR215L-Q316I	ARM-based IOT Gateway, NXP i.MX 8M Plus Lite - ARM Cortex-A53 QuadLite 1.6GHz processor, 3GB LPDDR4, 16GB eMMC, 60W Power Adapter

Dimensions



ISR301

Edge Computer

Rugged Edge Computer
with NXP i.MX 8M - ARM Cortex-A53 Quad Processor

Features

- NXP i.MX 8M - ARM Cortex-A53 Quad processor
- 3GB LPDDR4, 16GB eMMC & SD socket for expansion
- Embedded I/O for COM, GPIO, USB, HDMI, Ethernet
- Supports M.2 E-Key (2230) and Mini PCI-E with SIM socket for wireless/4G/LTE connectivity
- Ruggedized and fanless design

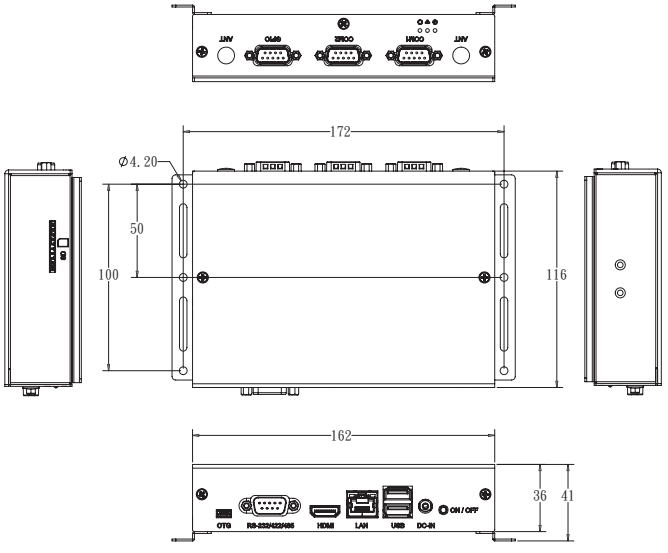
Specifications

System Board	IBR210-Q316I 3.5-inch SBC
Processor	NXP i.MX 8M - ARM Cortex-A53 Quad processor
System Memory	3GB LPDDR4 on board
Storage	16GB eMMC on board (default)
Construction	SGCC
Color	Black
Display	1x HDMI 2.0a, up to 4K resolution
Network	1x RJ45 GbE LAN
Watchdog	256 levels, 0~128 seconds
Front I/O	1x HDMI Type-A, up to 4K 2x USB 3.0 Type-A 1x RJ45 GbE LAN 1x RS232 /422/485 (DB9) 1x Mini-USB OTG 1x 12V~24V DC-in jack 1x On/Off button
Rear I/O	2x RS232 (DB9) 8x GPIO 2x Antenna hole (reserved) 3x LED indicators
Side I/O	1x SD socket (UHS-I SDR-104, 104MB/s max.)
Expansion slots	1x M.2 E-Key (2230) w/ USB, SDIO, UART, PCI-E 1x Mini PCI-E (PCI-E and USB) w/ SIM socket
Fanless	Yes
Dimensions (WxDxH)	172mm (W) x 162mm (D) x 36mm (H)
Mounting	VESA 75 / 100, DIN rail, wall mount
Operating Temperature	-10°C~ +60°C (14°F ~ 140°F)
Relative Humidity	10%~90% (non-condensing)
OS Support	Yocto 2.5 Android 9 Ubuntu 18.04 evaluation Other OS (by request)
Certification	CE/ FCC Class-B

Ordering Information

ISR301-Q316I	ARM-based IOT Gateway, NXP i.MX 8M - ARM Cortex-A53 Quad 1.3GHz processor, 3GB LPDDR4, 16GB eMMC, HDMI, RS-234/422/285, USB 3.0, M.2 E-Key (2230) & Mini PCI-E w/ SIM socket

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.