AXIOMTEK

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Design-in Service

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Design-in Service

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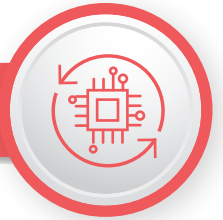


- Embedded Software Services

Modular Hardware **Design**

Axiomtek's strong embedded design capability allows it to offer a full range of embedded board solutions available in different form factors. From industrial motherboards to SoMs (System on Modules) and SBCs (single-board computers), all board platforms come with a highly expandable design that can be customized to include high-performance CPUs for enhanced computing power or to support specific features such as wireless communication or multiple displays.

Schematic Modular

- Design quality consistency
- Save development time
- Speed up evaluations

Component Management

- Redundancy design
- Longevity support
- Cost effectiveness

Domain Design Capability

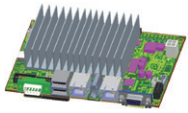
- Industrial isolation design
- CPU/MCU/EC integration
- EMI/ESD protection 8K/15KV

Mechanical & ID Design

Axiomtek has a long history of providing solutions tailored to clients' unique needs or operations. After taking the ideas from customers about how they want their device to look and operate, including thermal solution, dimensions, physical appearance, preferable colors, and user interfacing, Axiomtek's design team will create a solution to pull all these elements together nicely to meet their expectations.

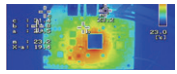
Thermal Solution

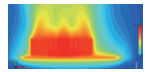
Customers can count on Axiomtek's thermal solution service to ensure that their embedded boards or systems, despite producing excessive heat from running heavy workloads, are well protected by their excellent dissipation design to be able to cool down quickly and deliver reliable, failure-preventing performance. Our thermal design services include proven thermal modules, enclosures, and customizable thermal solution support, which guarantees Axiomtek's products are robust enough to operate under extreme temperatures.



Proven Thermal Module

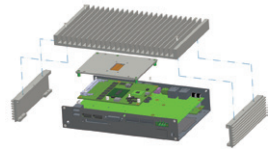
Proven heat sink/cooler or system thermal solution which has been qualified in different temperature conditions.





Thermal Simulation Services

Using the FloTHERM thermal simulation to evaluate the thermal performance which can predict airflow and heat transfer



Customized Thermal Solution

Customized heat sink or cooler based on the modularized thermal solution concept

BIOS & Firmware **Customization**

Axiomtek's customized BIOS and firmware services can implement many specific features for specific vertical market demands and help customers to differentiate their embedded products and applications.

BIOS Service

- Intel/AMD platform
- UEFI architecture
- Customized BIOS default setting
- Secure password
- LVDS panel resolution support
- I/O resource allocate
- Custom logo

Firmware Service

Embedded Controller

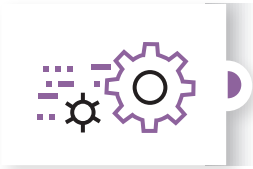
- Watchdog timer
- Hardware monitoring
- Power sequencing
- Smart battery

Micro Control Unit

- Firmware update
- Interrupt support
- Sensor monitoring
- Remote device management

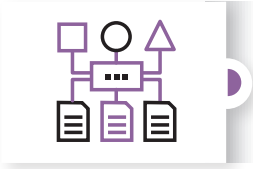
Embedded
Software Services

To optimize system resource demand, reduce total cost of ownership, improve system reliability and system design time to market, Axiomtek provides embedded software services including embedded OS service development, software API utility and driver supporting service. Axiomtek is committed to helping customers from the very beginning planning stages to successfully complete system delivery. Axiomtek's Embedded OS services for easy access and control for all platform device functions and the ability to develop a user-friendly interface. Its software API utility and driver services provide system environment protection, increased system reliability and enables remote management control.



Embedded OS Services

Windows® 11 IoT
Windows® 10 IoT
Linux/Ubuntu/Yocto
Android



API Utility and Driver Services

Hardware monitoring, DIO, Watchdog
Remote management software
Specific utilities and drivers:
CANbus, CANopen, EtherCAT, EMGD driver

Design-in Service **Process**

Consisting of highly skilled engineers and product managers with professional expertise in the fields of mechanical engineering, electrical engineering, and industrial design, Axiomtek's design service team can participate in every stage of a development project – from concept incubation, product design, functionality testing and debugging all the way down to the production line, shipping, deployment and post-manufacturing services. We integrate your ideas, specifications and selection of components into our solutions to deliver the performance exactly as you expected, at the same time taking every critical factor into consideration, whether it be processing speed, storage capacity, noise reduction, ventilation, data acceleration, or peripheral arrangement. All aspects will be meticulously thought out, tested, and executed to assure our customers of top quality and maximum performance. With strong design capabilities, our engineers will help you accomplish each critical development milestone with the least effort while minimizing design uncertainty and risk to speed up product to market.

01

Initial Planning

- Product selection
- Domain knowledge sharing
- Comprehensive document support

02

Design

- Schematic review
- Layout review
- Thermal design
- BIOS, EOS customization

03

Debug

- Power on/off test
- Phenomenon duplication
- Analysis & verification
- Solutions & suggestions

04

Validation

- Functionality
- Reliability/safety
- Thermal profile tests
- Electrostatic signal compatibility
- Certification tests

05

Ready to Ship

- Production test
- Material maintenance
- Schedule control
- Warranty support

Our Value-Added **Services**

Server System Integration

Variant applications
Customized ID design
Customized thermal simulation
Noiseless server system

Chassis / Peripherals

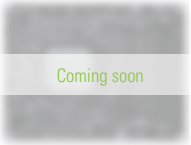
Add-on value service
Fan and fanless sesign
EMI/ESD validation
Peripherals integration

Single Board Computers

Entry level to high performance
All kinds of form factors
IoT/AI/5G solutions

COM Express Modules

CEM710 NEW



COM Express Type 7

- Intel® Xeon® D-1700 processor (Ice Lake-D LCC)
- 4 DDR4-2666 SO-DIMM, up to 128 GB (optional)
- 1 PCIe x16 Gen4, 1 PCIe x8 Gen3, 8 PCIe x1 Gen3
- 2 SATA Gen3
- 4 USB 3.2 and 4 USB 2.0
- Two 10GBase-KR
- Supports TPM 2.0

CEM561 NEW

COM Express Type 6 Compact

- 12th gen Intel® Core™ i7/i5/i3 or Celeron® processor (Alder Lake U)
- Dual channel DDR4-3200 SO-DIMM, up to 64GB
- Up to 8 lanes of PCI Express
- 2 SATA Gen3
- 4 USB 3.2 and 8 USB 2.0
- Supports NVMe for up to 512GB (by request)
- Supports TPM 2.0
- Enabler Middleware (eAPI) intelligent remote management software

CEM530

COM Express Type 6 Basic

- Intel® Xeon® or 9th/8th gen Intel® Core™ processor
- Intel® CM246/QM370 chipset
- Dual channel DDR4-2666 SO-DIMM, up to 64GB
- 1 PCIe x16 and 8 PCIe x1 Gen3
- 4 SATA Gen3 with RAID 0/1/5/10
- 4 USB 3.2 and 8 USB 2.0
- Supports TPM 2.0

CEM320 NEW

COM Express Type 10 Mini Module

- Intel Atom® x6000E series or Intel® Celeron® N/J processor (Elkhart Lake)
- 8GB/16GB LPDDR4 memory onboard
- Up to 4 lanes of PCI Express
- 2 SATA 3.0
- 2 USB 3.2 and 8 USB 2.0
- eMMC and TPM2.0 onboard

1.8" Embedded Board

Dimensions: 85 × 56 mm

KIWI310

- Intel® Celeron® processor N3350 onboard
- On-board LPDDR4 for up to 4GB of memory
- One GbE LAN and one M.2 Key E
- On-board eMMC for up to 64GB
- 40-pin GPIO
- Supports operating system: Linux, Android, Windows

Pico-ITX SBCs

Dimensions: 100 x 72mm

PICO52R

- 8th gen Intel® Core™ i7/i5/i3 and Celeron® processor
- 1 DDR4 SO-DIMM for, up to 32GB
- 2 USB 2.0 and 2 USB 3.2
- 2 GbE LAN
- M.2 Key E
- Intel® AMT 11 supported

PICO319

- Intel® Atom® x5-E3940 processor
- 1 DDR3L SO-DIMM, up to 8GB
- 1 PCI Express Mini Card slot with mSATA supported
- 2 GbE LAN
- M.2 Key B

PICO318

- Intel® Pentium® processor N4200
  or Intel® Celeron® processor N3350/J3455
- 1 DDR3L SO-DIMM, up to 8GB
- 1 PCI Express Mini Card slot with mSATA supported
- 2 GbE LAN
- M.2 Key B

PICO316

- Intel® Pentium® processor N4200
  or Intel® Celeron® processor N3350/J3455
- 1 DDR3L SO-DIMM, up to 8GB
- 2 USB 2.0 and 3 USB 3.2
- 1 PCI Express Mini Card slot with mSATA supported

3.5” Embedded Boards

Dimensions: 146 x 104mm

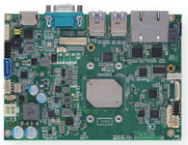
CAPA55R

- 11th gen Intel® Core™ i7/i5/i3 or Celeron® processor
- 2 DDR4 SO-DIMM, up to 64GB
- 1 GbE LAN and 1 2.5 GbE LAN ports
- 3 M.2 expansion slots

CAPA322 NEW

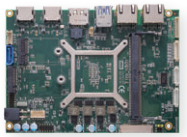
- Intel® Celeron® processor N6210/J6412 or Intel Atom® x6413E processor
- 1 DDR4 SO-DIMM, up to 32GB
- 4 USB 2.0 and 2 USB 3.2
- 1 PCI Express Mini Card slot with mSATA supported
- 1 M.2 Key E and 1 M.2 Key B

CAPA310



- Intel Atom® x5-E3940 processor
- 1 DDR3L SO-DIMM, up to 8GB
- 2 USB 2.0 and 4 USB 3.2
- 1 mSATA
- 1 PCI Express Mini Card slot
- ZIO connector

CAPA13S



- AMD Ryzen™ Embedded V1807B and V1605B APU
- 1 DDR4 SO-DIMM, up to 16GB
- Supports quad-view 4K/2K display
- 3 GbE LAN
- M.2 Key E
- M.2 Key B

Industrial Chassis for 3.5” Embedded SBC

APC200

- **Industrial Chassis for CAPA13R**
  197.4 x 139.6 x 49.6 mm
  -10°C to +50°C
  Supports wall mount

APC202

- **Industrial Chassis for CAPA312**
  207.5 x 140 x 35 mm
  -10°C to +50°C
  Supports wall mount

APC205

- **Industrial Chassis for CAPA520**
  197.4 x 139.6 x 43 mm
  -10°C to +50°C
  Supports wall mount

APC206

- **Industrial Chassis for CAPA55R**
  197.4 x 139.8 x 49.6 mm
  -10°C to +50°C
  Supports wall mount

APC207

- **Industrial Chassis for CAPA322**
  197.4 x 139.8 x 43 mm
  -10°C to +50°C
  Supports wall mount

Industrial Chassis for PICO-ITX SBCs

APC201

- **Industrial Chassis for PICO52R**
  152.5 x 107.5 x 50 mm
  -10°C to +50°C
  Supports wall mount

APC203

- **Industrial Chassis for PICO318**
  152.4 x 107.3 x 37.5 mm
  -10°C to +50°C
  Supports wall mount

APC204

- **Industrial Chassis for PICO316**
  152.4 x 107.3 x 38.3 mm
  -10°C to +50°C
  Supports wall mount

Industrial Chassis for 1.8" Embedded Board

APC208

- **Fanless Chassis for KIWI310**
  60 x 96 x 37 mm
  0°C to +40°C
  Supports wall mount

KIWI board

Add-on-Cards & Peripherals

Mini Cards

AX92920

- **M.2 Key E Module for 16-bit DIO**

  Form factor: M.2 Key E

  Controller: Intel® i211-AT

  Specification: 16-bit programable DIO

  Dimension: 22 x 30 mm

AX92917

- **M.2 Key E Module for 16-bit DIO**

  Form factor: M.2 Key E

  Controller: Intel® i211-AT

  Specification: 1 Gigabit Ethernet

  Dimension: 22 x 30 mm

AX92906

- **Full-Size PCI Express Mini Module with COM**

  Form factor: Full-size PCI Express Mini Card

  Specification: 2 COM ports (2 x RS-232) and half-size PCI Express Mini Card slot (PCIe only)

  Dimension: 51 x 30 mm

AX92905

- **Full-Size PCI Express Mini Module with Audio**

  Form factor: Full-size PCI Express Mini Card

  Specification: Audio (Mic-In/Line-In/Line-Out) and half-size PCI Express Mini Card slot (PCIe only)

  Dimension: 51 x 30 mm

AX92902

- **Full-Size PCI Express Mini Module with Gigabit LAN**

  Form factor: Full-size PCI Express Mini Card

  Controller: Intel® i210IT

  Specification: 1 Gigabit Ethernet

  Dimension: 51 x 30 mm

Mini-ITX Motherboards

Dimensions: 170 x 170 mm

MANO566 NEW

- LGA1700 12th gen Intel® Core™ i9/i7/i5/i3 processor
- Intel® Q670E chipset
- 2 DDR4 SO-DIMM, up to 64GB
- 4 USB 3.2, 4 USB 2.0, and 4 COM ports
- 2 SATA-600
- 1 M.2 Key M 2280 supports NVMe
- 1 PCIe x16, 1 M.2 Key E 2230, and 1 M.2 Key B 3052/3042 with SIM Card slot
- Supports RAID 0/1

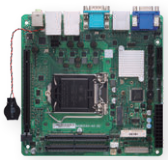
MANO561 NEW

- LGA1700 12th gen Intel® Core™ i9/i7/i5/i3 processor
- Intel® H610 chipset
- 2 DDR4 SO-DIMM, up to 64GB
- 2 USB 3.2 Gen1 and 5 USB 2.0
- 2.5GbE LAN and 4 COM ports
- 1 PCIe x16, 1 M.2 Key E, and 1 M.2 Key B
- 1 Full-size mini-PCIe slot and 1 SATA-600
- 12 to 24 VDC power in

MANO560 NEW

- LGA1700 12th gen Intel® Core™ i9/i7/i5/i3 processor
- Intel® H610 chipset
- 2 DDR4 SO-DIMM, up to 64GB
- 2 USB 3.2 Gen1, 5 USB 2.0, and 4 COM ports
- 1 PCIe x16 and 1 M.2 Key E slot
- 1 Full-size mini-PCIe slot and 1 SATA-600
- 1 M.2 Key B for USB 3.2 interface 5G module

MANO540 NEW



- FCLGA1200 10th gen Intel® Core™ i9/i7/i5/i3 processor
- Intel® H410 chipset
- 2 DDR4 SO-DIMM, up to 64GB
- 2 USB 3.2 Gen1, 5 USB 2.0, and 6 COM ports
- 1 PCIe x16 and 1 M.2 Key E slot
- 1 Full-size mini-PCIe slot and 2 SATA-600
- 1 M.2 Key B for USB 3.2 interface 5G module

MANO522

- LGA1151 9th/8th gen Intel® Core™ i7/i5/i3 processor
- Intel® H310 chipset
- 2 DDR4 SO-DIMM, up to 64GB
- 4 USB 3.2 Gen 1, 2 USB 2.0, and 6 COM ports
- 2 SATA-600 and 1 mSATA
- PCIe x16 and M.2 Key E

MANO520

- 9th/8th gen Intel® Core™ i7/i5/i3 processor
- Intel® H310 chipset
- 2 DDR4 SO-DIMM, up to 32GB
- 4 USB 3.0, 4 USB 2.0, and 4 COM ports
- 3 SATA-600 and 1 mSATA
- PCIe x16 and M.2 Key E

MANO321

NEW

- Intel® Celeron® processor J6412
- 2 DDR4 SO-DIMM, up to 32GB
- 1 PCIe x2 for PCIe x4 expansion slot
- 1 PCIe Mini Card slot and PCIe x1
- 4 USB 3.1, 4 USB 2.0, and 6 COM supported
- 1 SATA-600 and 1 M.2 Key B
- 9 to 20 VDC power in
- HDMI/VGA/LVDS with triple view supported

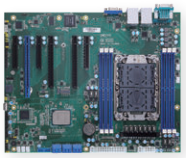
MANO311

- Intel® Celeron® processor N3350
- 1 DDR3L SO-DIMM, up to 8GB
- 4GB DDR3L onboard memory (optional)
- 1 PCI Express Mini Card slot and PCIe x1
- 4 USB 3.0, 2 USB 2.0, and 6 COM supported
- 1 SATA-600, 1 mSATA, and 1 SDXC

ATX Motherboards

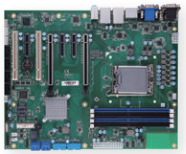
Dimensions: 305 x 244 mm

IMB700 NEW



- 3rd gen Intel® Xeon® scalable processors (Ice Lake-SP)
- Six 288-pin DDR4-3200 RDIMM for up to 384GB of memory
- 3 PCIe x16 and 3 PCIe x8
- Supports M.2 Key M
- TPM 2.0 supported (optional)
- Supports multiple graphic cards
- Supports internal USB dongle

IMB540 NEW



- LGA1700 socket 12th gen Intel® Core™ i9/i7/i5/i3, Pentium® or Celeron® processor (Alder Lake-S)
- Four 288-pin DDR4-3200 ECC/non-ECC un-buffered Long-DIMM, up to 128GB
- DisplayPort++, VGA, DVI-D, and HDMI with quad view supported
- Supports M.2 Key M 2280
- 4 USB 3.2 Gen 2x1 and 2 Dual USB 3.2 Gen 1x1
- TPM 2.0 supported (optional)

IMB530

- LGA1200 socket 11th/10th gen Intel® Core™ i9/i7/i5/i3, Xeon® W, Pentium® or Celeron® processor (Comet Lake and Rocket Lake)
- Four 288-pin DDR4-2933 (CML)/3200 (RKL) ECC/non-ECC un-buffered Long-DIMM, up to 128GB
- DisplayPort++, VGA, DVI-D and HDMI with triple-view supported
- Supports M.2 Key M 2280
- 2 USB 3.2 Gen2 and 4 USB 3.2 Gen1
- TPM 2.0 supported (optional)

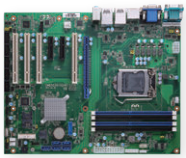
IMB525R

- LGA1151 socket 9th/8th gen Intel® Core™ i7/i5/i3, Xeon® E, Pentium® or Celeron® processor (Coffee Lake Refresh)
- Four 288-pin DDR4-2666/2400 ECC DIMM, up to 128GB
- DisplayPort++, VGA, DVI-D, and HDMI, and VGA with triple-view supported
- 5 SATA-600 with RAID 0/1/5/10
- 1 PCI Express Mini Card slot
- 2 USB 3.2 Gen 2x1 and 4 USB 3.2 Gen 1x1
- TPM 2.0 supported (optional)

IMB524R

- LGA1151 socket 9th/8th gen Intel® Core™ i7/i5/i3, Pentium® & Celeron® processor (Coffee Lake Refresh)
- Two 288-pin DDR4-2666/2400 DIMM, up to 64GB
- DisplayPort++, DVI-D, HDMI, and VGA with dual-view supported
- 4 SATA-600
- 1 PCI Express Mini Card slot
- 4 USB 3.2 Gen 1x1 and 5 USB 2.0
- TPM 2.0 supported (optional)

IMB523R



- LGA1151 socket 9th/8th gen Intel® Core™ i7/i5/i3, Pentium® & Celeron® processor (Coffee Lake Refresh)
- Four 288-pin DDR4-2666/2400 DIMM, up to 128GB
- DisplayPort++, DVI-D, HDMI, and VGA with triple-view supported
- 5 SATA-600 with RAID 0/1/5/10
- 1 PCI Express Mini Card slot
- 2 USB 3.2 Gen 2x1 and 4 USB 3.2 Gen 1x1
- TPM 2.0 supported (optional)

ATX Motherboards

Dimensions: 305 x 244 mm

IMB521R

- LGA1151 socket 9th/8th gen Intel® Core™ i7/i5/i3, Xeon® E, Pentium® or Celeron® processor (Coffee Lake Refresh)
- Four 288-pin DDR4-2666/2400 ECC DIMM, up to 128GB
- DisplayPort++, VGA, DVI-D, and HDMI with triple-view supported
- 4 SATA-600 with RAID 0/1/5/10
- 2 USB 3.2 Gen 2x1 and 4 USB 3.2 Gen 1x1
- TPM 2.0 supported (optional)

IMB520R

- LGA1151 socket 9th/8th gen Intel® Core™ i7/i5/i3, Pentium® & Celeron® processor (Coffee Lake Refresh)
- Four 288-pin DDR4-2666/2400 DIMM, up to 128GB
- VGA, DisplayPort++, DVI-D and HDMI with triple-view supported
- 4 SATA-600 with RAID 0/1/5/10
- 2 USB 3.1 Gen2 and 4 USB 3.1 Gen1
- TPM 2.0 supported (optional)

EATX Motherboard

Dimensions: 305 x 330 mm

IMB760 NEW

- Dual 3rd gen Intel® Xeon® scalable processors (Ice Lake-SP)
- Sixteen 288-pin DDR4-3200 RDIMM for up to 1TB of memory
- 4 PCIe x16 and 2 PCIe x8
- Supports 2 M.2 Key M for NVMe with RAID 0 & 1
- Supports TPM 2.0 module (optional)
- Two 10GbE ports
- IPMI (optional)

RISC SoM

Q7M120

- Freescale i.MX6 Qseven SoM
- Qseven v2.0 (70 x 70 mm)
- Ultra-low power consumption Cortex™-A9
- 2 CAN
- 24-bit TTL signal
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Linux 3.0.35/Android 4.3
- Audio

SCM120

- Freescale i.MX6 SMARC SoM
- SMARC 1.0 (82 x 50 mm)
- Ultra-low power consumption Cortex™-A9
- 2 CAN 2.0B
- 24-bit TTL signal
- LVDS/HDMI 1080P
- 10/100/1000 Mbps Ethernet
- Linux 3.0.35/Android 4.3
- Audio

SCM186 NEW

- RISC Embedded SMARC v2.0 SoM with i.MX8M Plus Quad 1.8GHz SoC
- SMARC 2.0 (82 x 50 mm)
- Ultra-low power consumption Cortex-M7
- 2 CANBus 2.0B
- NXP i.MX 8M Plus Quad A53 Core processor
- AI acclerator, up to 2.3 TOPS
- LPDDR4 4GB
- 8GB eMMC
- HDMI up to 4K resolution
- Dual-channel 24-bit LVDS
- 10/100/1000 Mbps Ethernet
- USB 3.2 Gen1
- MIPI-CSI
- Yocto 3.3, Linux Kernel 5.10.35
- Audio

AXIOMTEK

ASIA

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