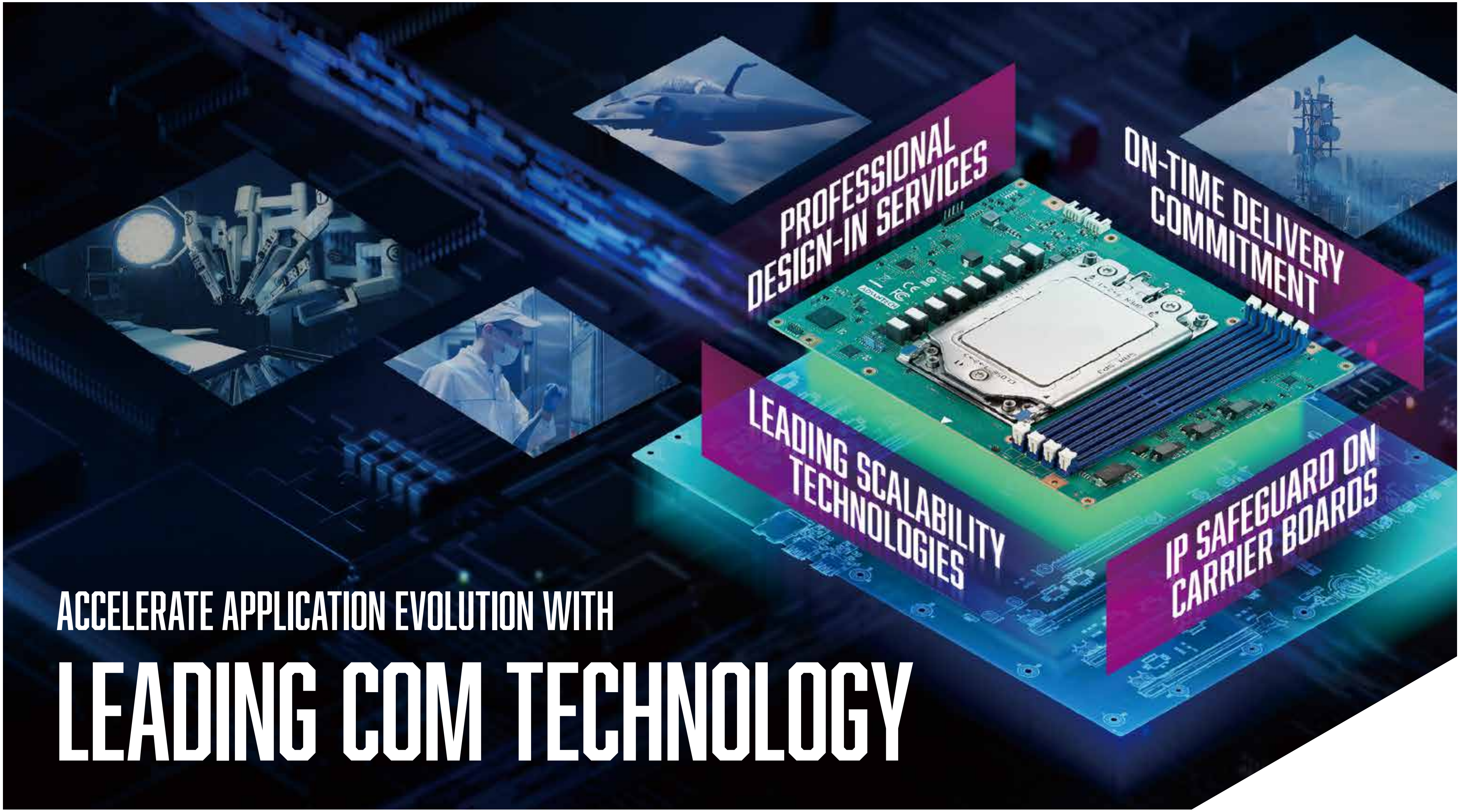


ACCELERATE APPLICATION EVOLUTION WITH

LEADING COM TECHNOLOGY

COMPUTER ON MODULE

ADVANTECH
Enabling an Intelligent Planet

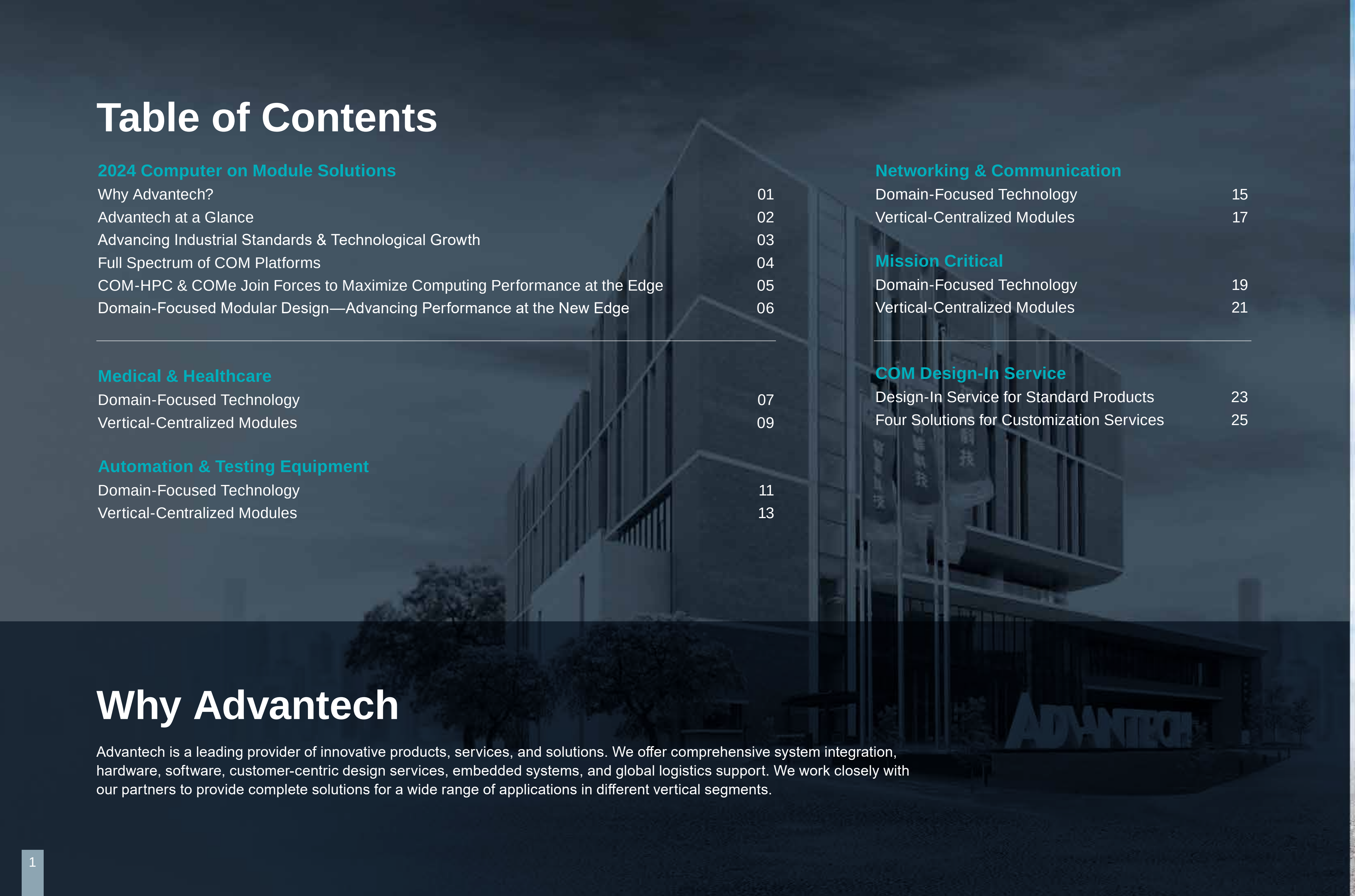


Table of Contents

2024 Computer on Module Solutions

Medical & Healthcare

Automation & Testing Equipment

Networking & Communication

Mission Critical

COM Design-In Service

Why Advantech

Advantech is a leading provider of innovative products, services, and solutions. We offer comprehensive system integration, hardware, software, customer-centric design services, embedded systems, and global logistics support. We work closely with our partners to provide complete solutions for a wide range of applications in different vertical segments.

ADVANTECH
Enabling an Intelligent Planet

Est. **1983**

Headquarters: **Taipei, Taiwan**

INDUSTRIES SERVED

Industry 4.0, Industrial IoT, Embedded Computing, Medical, Retail, Logistics

$11B MARKET CAP
(July 2023)

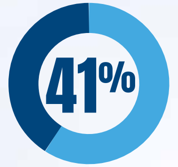
HONORS & AWARDS

- No.5 in Best Taiwanese Global Brands
- No.17 in Top 50 Global Automation Vendors
- No.9 in Top 100 Industrial IoT Companies
- Red Dot Product Design Award
- iF Product Design Award

Interbrand
CONTROL
IoT ONE
reddot design award
iF

WORLD'S LARGEST IPC COMPANY

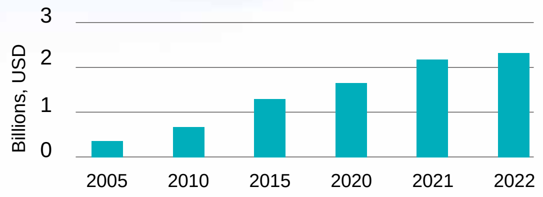
Advantech IPC WW Market Share



● Advantech ● Other IPC Companies

Source: OMDIA – Market Share Estimates for Industrial PCs: World, 2022 Edition

$2.31B 2022 REVENUE



KEY ECOSYSTEM PARTNERS

arm
intel partner Titanium
Microsoft
Micron
NVIDIA ELITE PARTNER
AMD EMBEDDED SOLUTIONS Partner Program ELITE
NXP GOLD PARTNER
Canonical Ubuntu

& more...

QUALITY SYSTEMS IN PLACE

- ISO9001
- ISO14001
- ISO13485
- ISO17025
- ISO27001
- ISO45001
- TL9000
- RoHS
- WEEE
- SONY GP
- REACH

1.8 MILLION+ sq. ft.

MANUFACTURING PLANTS

Linkou, Taiwan

- 9 SMT lines
- Engineering sample services
- Complex product lines
- Flexible & quick production

Kunshan, China

- 12 SMT lines
- Chassis design & production
- Mature product lines
- Cost-effective production

Nogata, Japan

- 4 SMT lines
- Japan design center, CTOS service, logistics center, repair center

WORLDWIDE OFFICES

Manufacturing	03
On-site service	04
Design centers	11
CTOS centers	16
Repair centers	17
Logistics centers	20

More than 90 offices globally!

8900+ EMPLOYEES

Advancing Industrial Standards & Technological Growth

Mastering hardware design for error-free development

PICMG®

COM Express

Since 2005 R1.0 R2.1 R3.0 R3.1

COM-HPC®

Since 2021 R1.0 R1.2

2005 2010 2015 2020 2025

SGeT

SMARC

Since 2011 R1.0 R2.1.1

OPEN STANDARD MODULE™

Since 2020 R1.0 R1.1

Learn More

Full Spectrum of COM Platforms

Ensure seamless upgrades & swift time-to-results

COM-HPC®

For high-performance systems with enhanced bandwidth and accelerated data transfer

E 200X160

C 160X120

D 160X160

A 120X95

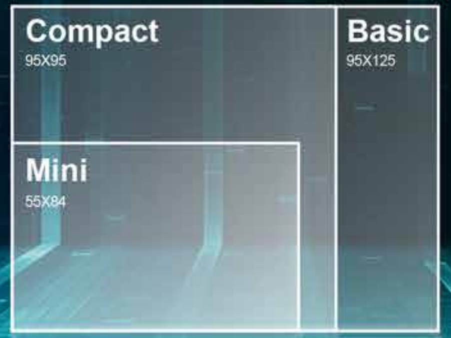
B 120X120

Mini 95X70

Unit: mm

COM Express

COM-Express enables full-range performance across diverse applications



Compact 95X95

Basic 95X125

Mini 55X84

SMARC

Small, power efficient, supports ARM & x86 platforms

Large 80X82

Small 50X82

OPEN STANDARD MODULE™

Future-proof, versatile standards for ultra-small, low power

Size M 30X45

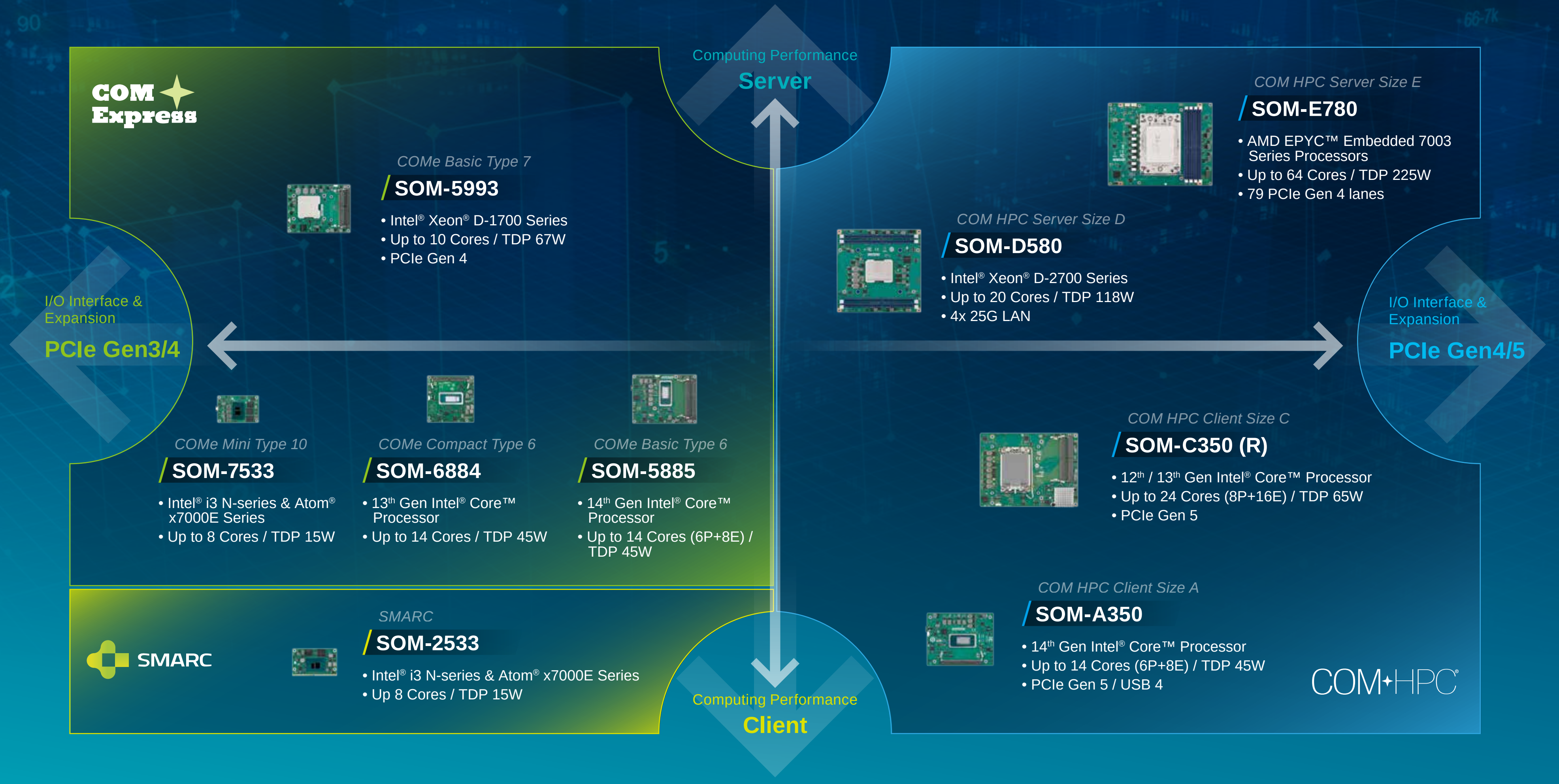
Size L 45X45

Size S 30X30

Size 0 30X15

Learn More

COM HPC & COMe Join Forces to Maximize Computing Performance at the Edge



COMe Basic Type 7

SOM-5993

- Intel® Xeon® D-1700 Series
- Up to 10 Cores / TDP 67W
- PCIe Gen 4

COMe Mini Type 10

SOM-7533

- Intel® i3 N-series & Atom® x7000E Series
- Up to 8 Cores / TDP 15W

COMe Compact Type 6

SOM-6884

- 13th Gen Intel® Core™ Processor
- Up to 14 Cores / TDP 45W

COMe Basic Type 6

SOM-5885

- 14th Gen Intel® Core™ Processor
- Up to 14 Cores (6P+8E) / TDP 45W

SMARC

SOM-2533

- Intel® i3 N-series & Atom® x7000E Series
- Up 8 Cores / TDP 15W

COM HPC Server Size E

SOM-E780

- AMD EPYC™ Embedded 7003 Series Processors
- Up to 64 Cores / TDP 225W
- 79 PCIe Gen 4 lanes

COM HPC Server Size D

SOM-D580

- Intel® Xeon® D-2700 Series
- Up to 20 Cores / TDP 118W
- 4x 25G LAN

COM HPC Client Size C

SOM-C350 (R)

- 12th / 13th Gen Intel® Core™ Processor
- Up to 24 Cores (8P+16E) / TDP 65W
- PCIe Gen 5

COM HPC Client Size A

SOM-A350

- 14th Gen Intel® Core™ Processor
- Up to 14 Cores (6P+8E) / TDP 45W
- PCIe Gen 5 / USB 4

Domain-Focused Modular Design—Advancing Performance at the New Edge

Advanced Thermal Technology

Quadro Flow Cooling System (QFCS)/ EMI Optimization

Software Integration Service

DeviceOn / 1sec Slim Boot

High-Performance Computing

Max. 64 CPU Cores / Server-Grade Thermal Management

Robust Hardware Design

Anti-Vibration RAM / IPC-A-610G Class 3

MEDICAL & HEALTH CARE

Experience precise diagnostics & surgical excellence with premium signal & thermal solutions.

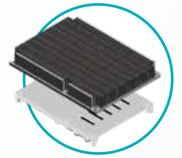
High Computing Performance for Real-time Applications

- Up to 24 cores for extreme computing power
- Enables 128 EUs (execution units) for excellent graphics & AI performance
- DDR5, PCIe Gen5, USB4 Compatibility

Embedded BIOS

Boot Guard, BIOS Guard, Secure Boot

Advanced Thermal Solution



Standard

- COM module come with a default heat spreader.
- Optional semi-heatsink or cooler is available for clients. (This information is detailed in the datasheet.)

Customization

- Thermal simulations based on customers' system design
- Propose & offer customized/optimal thermal solutions

Quadro Flow Cooling System (QFCS)

- **Silent:** 45 dB at 4300 rpm (Full Run). *the standard cooler >50dB
- **Slim & lightweight:** 45% thinner & 38% lighter *compared to a standard cooler
- **Efficient:** Unleash 100% CPU performance with no throttling at 60°C
- No board-bending & easy assembly (no need for assembly fixtures)

Quality & Reliability Design-In Service

- Professional signal integrity measurement service.
- EMI & ESD engineering for noise optimization.
- Edge AI SDK to accelerate AI software development at the Edge.

Edge AI SDK

Learn More

Medical-Grade Quality & Longevity

- Product Longevity: 10 to 15 Years
- Fixed BOM (Bill of Materials) Control Service
- Registered with the U.S. Food & Drug Administration (FDA)

COMe Compact Type 6 13th Gen Intel® Core™ Processors

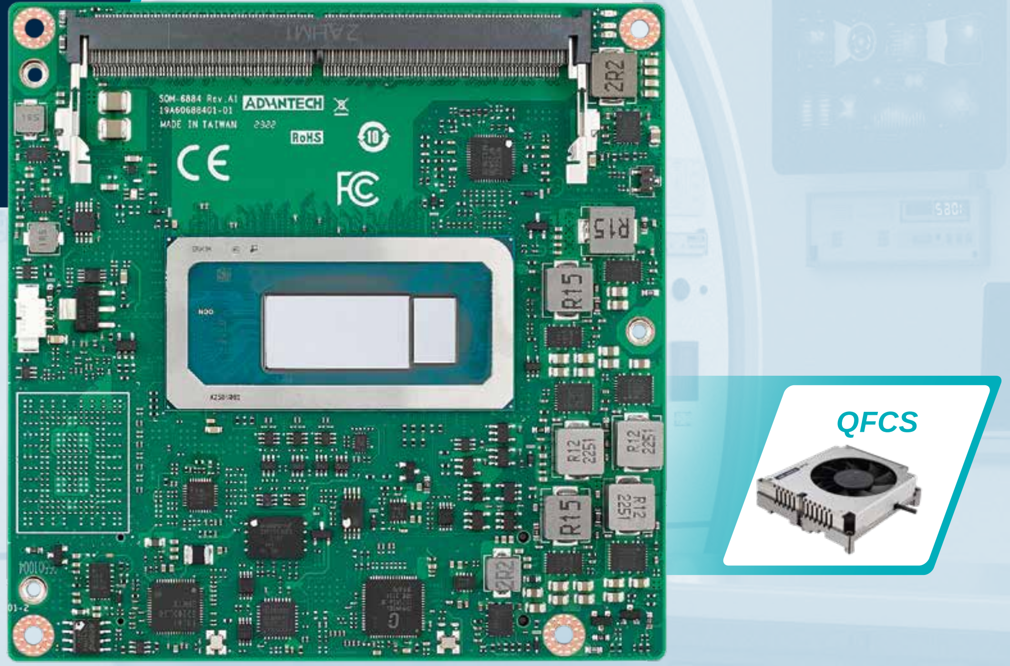
SOM-6884

Learn More

Flexible Native AI Solution at the Edge

Phase In — Sep 2023 Longevity — Q1 of 2033

Elevating Visual Brilliance & Operational Efficiency



Optimized Performance & Efficiency

- Up to 14 cores, 20 threads, 96 EU, +6-9% operating, +1.5x AI performance
- Different TDP SKU: 15W, 28W & 45W & 4 independent displays up to 8K resolution

Advanced Low-Profile Thermal Solution, QFCS

- Thin, light & silent thermal solution with throttling-free performance @60°C
- 29.2mm QFCS for 45W TDP SKU; 19mm QFCS for 28W & 15W TDP SKU

Fast & Secure Boot Solution

- Slim bootloader / boot guard / secure boot
- 1 sec. fast boot for BIOS booting

COMe Basic Type 6 14th Gen Intel® Core™ Processors.

SOM-5885

Learn More

1st COMe Basic with Integrated NPU

(AI accelerator)

Phase In — June 2024 Longevity — Q1 of 2034

Accelerate Graphics & AI Computing Performance

Powerful Computing & Advanced Cooling

- Up to 14C/20T CPU, +24% CPU performance & 96GB DDR5 5600MT/s SODIMM
- QFCS cooler with radiation optimized

Excellent Xe LPG Graphics Performance

- 1.9X Gfx growth, with integrated NPU, up to 32 TOPS (14th Gen.)
- 128EU, 4 * 8K DD

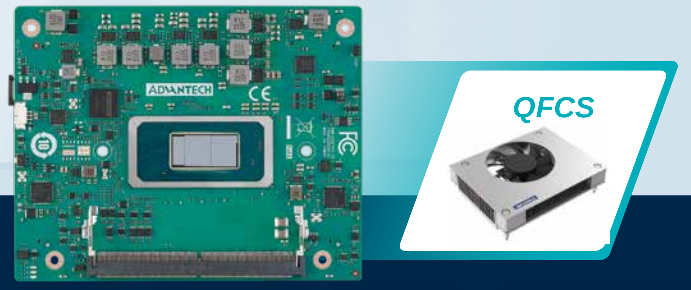
COM-HPC Client Size A 14th Gen Intel® Core™ Processors.

SOM-A350

Learn More

COM-HPC with Integrated NPU & PCIe Gen5

Phase In — July 2024 Longevity — Q1 of 2034



Enable Real-Time Transmission & Advanced AI Performance

Next Gen. I/O Technology

- 1 x PCIe x8 Gen5 + 2 x PCIe x4 Gen4
- 2 x 2.5G LAN
- USB4 reference design

Safe & Reliable

- Guiding Post for easier & safer assembly to prevent board damage
- Dual BIOS failsafe

AUTOMATION & TESTING EQUIPMENT

Maximize Production Efficiency Through the Toolkit & Interface

Efficient Development with Firmware Support

Easy-to-Use Utilities

- **ASED (Advantech Stream Editor):** Ensuring self-encryption & active HDD S.M.A.R.T. prediction
- **Configuration Tools:** Customize BIOS settings without firmware rebuilding, saving time & cost
- **Firmware Update:** Update firmware across various OS
- **DMI Editor:** Read DMI (Desktop Management Interface) & set Type 1~3 (Info for the system, baseboard, & chassis)

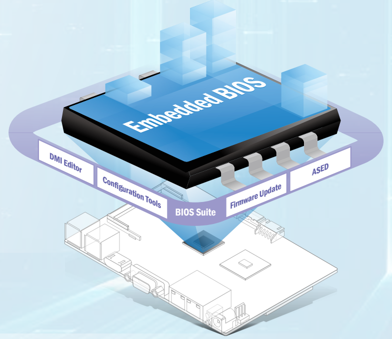
Multi-Layer Trust Solution

- Layer 3 : Secure boot ensures signed software & devices are loaded.
- Layer 2 : Secure storage - compliant with TCH-OPAL 2.0.
- Layer 1 : Boot Guard, BIOS Guard, protection from uncertified firmware

Customization Services

- Modularized designs & customizable mechanisms
- Domain-focused design & customizable utilities
- Open source firmware support

* 50+ engineers with deep industrial BIOS experience & 20+ years of BIOS development experience (source code control via SVN)



Speedy Data Transmission

- PCIe x16 Gen 5
- USB4 / Thunderbolt™ 4
- DDR5 Supported

Flexible & Scalable Operating System Package

Canonical Ubuntu

Learn More

The best out-of-box Linux desktop OS

- **Easy to use:** A flexible, user-friendly interface for customizable Edge applications
- **Secure:** Tri-weekly security updates, critical, embargo & regular CVEs

Why Ubuntu from Advantech?

- 500+ qualification tests to ensure hardware functionality in Ubuntu
- Technical support (Advantech x Canonical)
- Legal shipment & professional open source consulting services

yocto PROJECT
VxWorks

Yocto/VxWorks supported: Ready to use & validated by Advantech

Learn More

50%
Operating Cost Savings

DeviceOn

Off-the-Shelf Edge Orchestration Software

Remote management of over 10,000 AIoT devices

*Across x86/RISC, Windows/Linux/Android, in private or public clouds

Over-the-Air Updates

Container Management

Diagnostics & Alerts

SMARC Intel® Core™ i3-N305, N-Series & Atom® x7000E Series Processors

SOM-2533

The 1st High-Performance SMARC with Core™ i3 CPU

Learn More

Phase In — Feb 2024 Longevity — Q1 of 2033

Bringing a New Level of Computing Power to Entry Applications

Up to 8-Core CPU with 15W TDP, GFX & Memory Upgrade

- 1.4x CPU, 3.5x AI & Gen12 LP GFX → 2x Gfx (performance over the previous generation)
- LPDDR5 4800MT/s up to 16GB & PCIe Gen3 x4, USB 3.2 Gen2, SATA 3.2

Ethernet up to 2 x 2.5Gb with TSN

- Enhance factory operation accuracy & efficiency
- Up to 2.5G data bandwidth for a huge dataspHere

On-Board Components Designed for Harsh Environments

- Solder-down LPDDR5 & on-board eMMC
- DeviceOn for remote management & OTA SW updates

COMe Compact Type 6 Intel® i3 N-Series & Atom® x7000E Series

SOM-6833

High-Speed COMe for Smart Automation

Learn More

Phase In — Aug 2024 Longevity — Q1 of 2033

Enhance Flexible Configuration & Ease of Deployment

Applicable to Diverse Industrial Bus & Sensor Interfaces

- Up to 2.5G LAN data bandwidth for a huge dataspHere
- PCIe Gen3, USB 3.2 Gen2, CAN-FD supported

Easy Deployment & Rugged Design

- Compact with on-board eMMC, wide power input & extended operating temp
- DeviceOn for remote management & OTA(Over-The-Air) SW updates

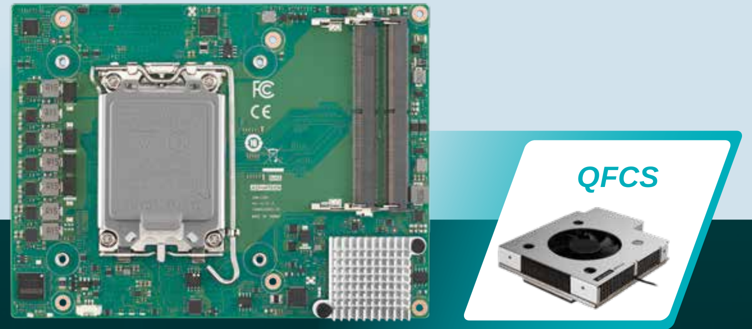
COM-HPC Client Size C 12th/13th Gen Intel® Core™ Processors

SOM-C350R

The COM with Intel® Core™ i9 & PCIe Gen5

Learn More

Phase In — Oct 2023 Longevity — Q1 of 2033



Enable Accurate Operation & Save Manufacturing Cost

Powerful Computing & Speedy Data Transmission

- 12th & 13th Gen Intel® Core™ i Processors, up to 24 Cores & TDP 65W
- 16 x PCIe Gen5, 16 x PCIe Gen4 & 10 x PCIe Gen3 lanes for great bandwidth

AI & Scalability & Professional Design-In Service

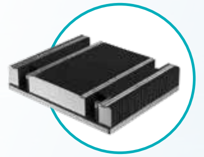
- Edge AI SDK, For Faster AI Implementation
- QFCS cooler to unleash the best computing performance

NETWORKING & COMMUNICATION

Effective massive data processing & availability with server-grade computing & comprehensive security

Fast & Reliable Transmission

- Up to 4 x 25GBASE-KR via copper/fiber-optic media (reference design available)
- -40~85°C native wide operating temp. range
- Rugged RAM for anti-vibration (fixed by on-board posts)
- Supports CPU TDP up to 200W for high-speed transmission with heat & signal stability



Heat Pipe

SOM-D580

Vapor Chamber

SOM-E780

Leading Security Technology

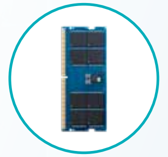
Device Protection

- Boot Guard & BIOS Guard & secure boot qualified device
- TPM 2.0 on-board IC active storage encryption
- ECC memory detection & memory error correction

Storage Security

- **Application Level:** data theft prevention
- **Platform Level:** authentication
- **Platform Level:** local & remote monitor & mgmt.
- **Device Level:** self-encrypted drive

Learn More



SPD Write Protection

Lifetime Warranty

Prevents the modification or alteration of data stored in DRAM

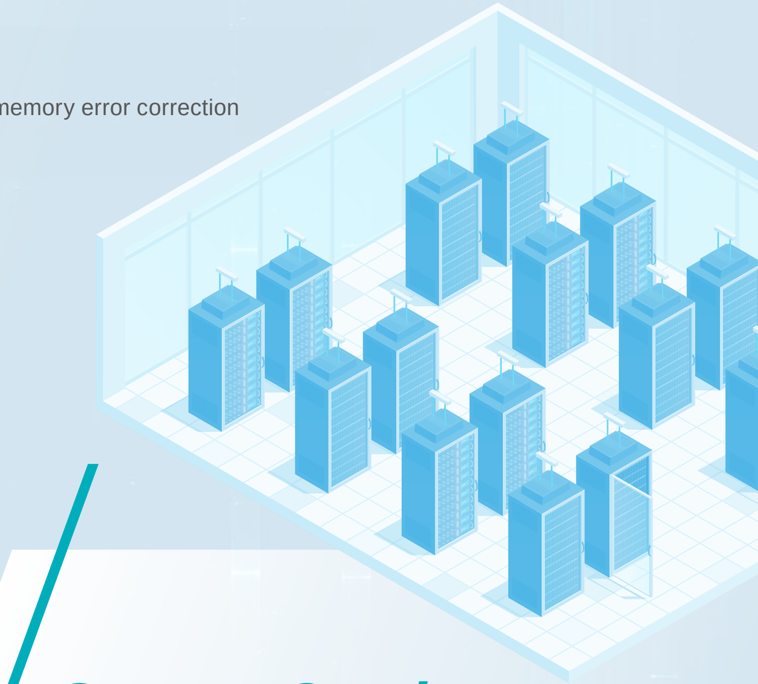
Application Add-Ons

Windows Server IoT

- 10 years of long-term support
- Windows WAC-based toolkit to accelerate remote control efficiency:
  - Multi-BMC management
  - Lockdown: for security configuration
  - Hardware information readiness

Windows IoT

- 10 years of long-term support
- Cost effective: CPU based on different license level costs
- Bitlocker: data protection by disk encryption



Server-Grade Computing Performance

- Server-grade, up to 64 cores
- 79 x PCIe Gen4 for various add-on cards, supporting NIC, GPU, FPGA
- Ultra-thin thermal solution for 60°C Ta (ambient temperature)
- Reference BMC circuit & firmware to enable the IPMB feature
- Supports up to 512GB memory

COM-HPC Server Size E AMD EPYC™ Embedded 7003 Series Processors

SOM-E780

Ultra-Powerful COM-HPC

Learn More

Phase In — Jan 2023 Longevity — Q1 of 2028

Enabling Server-Grade Multitasking Performance at the Edge

Server-Grade CPU (64Cores/128Threads/TDP 225W)

- Parallelized cores ideal for NFV & SDN
- High performance-per-watt to reduce energy & operation cost

High Expandability & Throughput

- Up to 512GB large memory size with 4 x DDR4 long DIMM
- 79 x PCIe Gen4 lanes for various add-on cards — NIC, GPU, FPGA, AI cards

Optimized Thermal Solutions

- Server-grade thermal solution for TDP up to 225W
- Vapor chamber available for industrial applications

COMe Basic Type 7 Intel® Atom™ C3000 Processors

SOM-5962

Scalable Networking-Focused Solution

Learn More

Phase In — Apr 2020 Longevity — Q3 of 2031

Delivering Robust High-Speed Transmission

Faster Data Transmission Capability

- 2-16 Cores enable scaling one design across multiple use cases
- Max. 31W TDP one chip, suitable for high density micro-servers

Rugged DDR4 SODIMM Design

- Optional DDR4 rugged SODIMM x 2 for harsh environments
- Anti-vibration & MIL-STD-810G compliance

COM-HPC Server Size D Intel® Xeon® D-2700 Processors

SOM-D580

Extended Temp Server Module, 100G LAN

Learn More

Phase In — Dec 2023 Longevity — Q1 of 2032

Accelerate Edge Server Evolution & Time-to-Market

High-Bandwidth Ethernet Connectivity

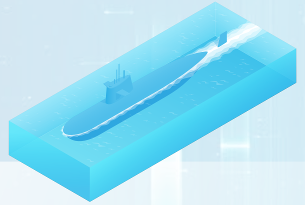
- 4 x 10GbE or 4 x 25GbE BASE-KR support
- 32 x PCIe Gen4 & 18 x PCIe Gen3 for flexible expansion

Rugged Outdoor Application Usage

- Native wide temperature range support (-40 ~ 85°C)
- QFCS 2.0, advanced thermal solution: slim, lightweight & efficient

MISSION CRITICAL

Achieve unwavering Edge computing with top-quality design and advanced manufacturing capability



Verified High Quality

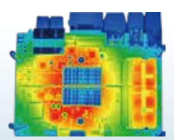
- **Anti-shock/anti-vibration compliant design, with corner bonding available upon request**
  IEC 60068-2-64 / MIL-STD-810G
- **Robust module layout design with premium verification support**
  IPC-4101 / IPC-A-610G Class 2 & Class 3

Seamless wide-temperature alignment in component management, validation, and manufacturing.

Certified Parts & Suppliers

- Global power brands selected for dependable wide-temperature performance
- Centralized component management center (CMC) to enhance productivity

Performance Assurance



Ensure stability using the FloTHERM simulation tool and innovative thermal solutions such as QFCS

Extensive Temperature Resistance

Industrial Standards
- IEC60068-2-1
- IEC60068-2-2
- IEC60068-2-78
- IEC60068-2-14
- MIL-STD-810G

100% Burn-In Testing

Advantech's facility conducts thorough extended-temperature burn-in tests for top-quality assurance

Pioneering Manufacturing Expertise

Among the select few companies in the world to offer IPC Class 3 manufacturing expertise.

ISO-9001 & ISO-14001/ IPC-A-610G Class 2&3

IPC

IPC J-STD-001/IPC-A-610 Qualified Manufacturers Listing

for

Advantech Co., Ltd. (Linko Board Factory)

Taoyuan City, Taiwan

IPC®

Qualified Coating Material: CONAP®CE-1171
- Hydrolytic stability & flexibility: MIL-I-46058C
- Thermal shock (-65~125°C): MIL-STD-810G
- Flame resistance, self-extinguishing: FED-STD-406
- Fungus resistance, rating 0: MIL-STD-810G

Tailored Services
- Coating material
- Coating for specific parts
- Coating thickness
- Functional check

24/7 Rugged & Reliable

- On-board RAM, IBECC, eMMC, or SSD
- On-board TCG standard TPM 2.0 protection
- Boot Guard, BIOS Guard, and secure boot qualified devices

Rugged RAM for anti-vibration (fixed by on-board posts)

2 x 32GB rugged RAM

COMe Basic Type 7 Intel® Xeon® D-1700 Processors

SOM-5993

Rugged Server-Grade COM with Super-Speed I/O

Learn More

Phase In — Aug 2022 Longevity — Q1 of 2032

Ensure Worry-Free 24/7 Operation at the Edge

Powerful, Rapid, and Ruggedized Solution

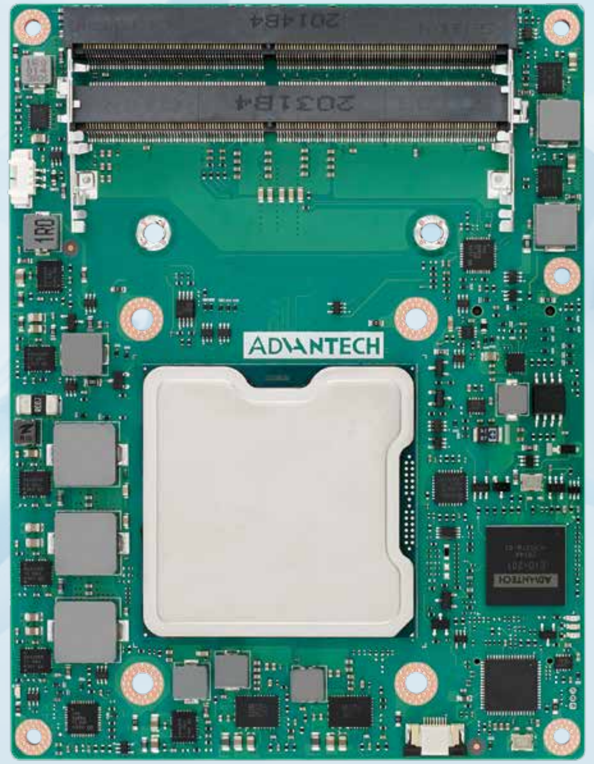
- Intel® Xeon® D-1700 Processors, up to 10 Cores & TDP 67W
- Up to 4pcs of rugged SODIMM, ECC memory support, & on-board TPM 2.0

Super-Speed Low Consumption Solution

- 4 x 10GBASE-KR, PCIe x16 Gen4, & memory up to 128GB DDR4 2933MT/s RAM
- Low power computing at the network edge

Thermal Technology: Quadro Flow Cooling System (QFCS)

- 100% CPU power without throttling
- Silent, thin, low profile for implementation in space-limited systems



COMe Mini Type 10 Intel® i3 N-Series & Atom® x7000E Series

SOM-7533

Efficient Power for Portability and Ruggedness

Learn More

Phase In — Jan 2024 Longevity — Q1 of 2033

Boost Performance & Power Savings with High Mobility

Tiny & Powerful with 8-Core CPU

- 1.4x CPU, 3.5x AI performance, Gen 12 LP GFX → 2 x Gfx (performance over the previous generation)
- PCIe Gen3 x4, 2.5G LAN with TSN, USB 3.2 Gen2, SATA 3.2

Rugged & Reliable

- On-board LPDDR5 RAM up to 16GB 4800MT/s IBECC, on-board eMMC
- TPM 2.0, wide-range voltage support, follows IPC-A-610G standards

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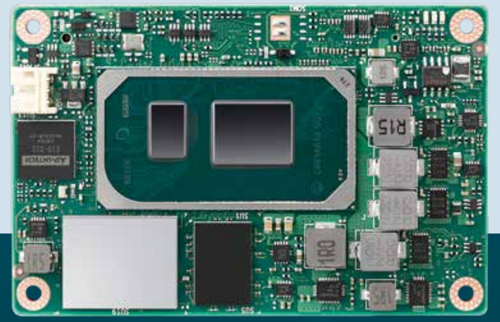
COMe Mini Type 10 11th Gen Intel® Core™ Processors.

SOM-7583

Powerful, Fanless Core i7 in a Mini Form Factor

Learn More

Phase In — Mar 2021 Longevity — Q4 of 2030



Optimize Performance in Tight Spaces Under Harsh Conditions

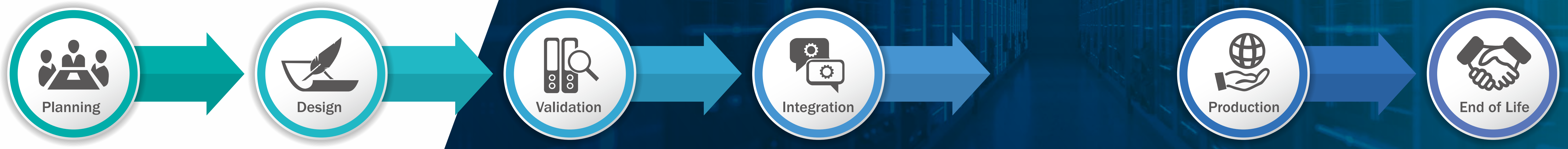
Rugged & Reliable

- On-board RAM, IBECC, NVMe x4 SSD & native wide temp. range, CPU & parts
- SSD failure prediction; 2sec quick erase to protect data

Fanless with Expert Service Available

- 27mm fanless heatsink for 15W full run at 60°C
- Edge AI SDK, Linux BSP service

COMPREHENSIVE DESIGN-IN Service


Planning
Design
Validation
Integration
Production
End of Life

Deliver project proposal

- Technical feasibility study
- Fast/early sample for customer's investigation
- Off-the-shelf or customized product selection
- Hardware & software proposal
- Performance & power consumption comparison
- Product selection guide
- Evaluation board

Schematic review & design document

- Schematic & layout checklist
- User manual
- Application note
- 2D/3D mechanical model
- IP library
- Placement & layout check

Troubleshooting & risk management

- Verification & feasibility testing
- Phenomenon duplication
- Analysis & suggestions
- Sequential debugging SOP
- Local FAE for on-site debug support
- BIOS & EC customization service

Custom software & thermal solution

- Wide temperature design for extreme environments (-40°C to 85°C)
- Advanced thermal solution (DHCS) for high TDP products
- Customized thermal solution
- Selected software services
- Embedded peripheral integration

Assured product quality & delivery

- Design quality assurance
- Product mass production
- Localized production & support
- Customer quality control after delivery

EOL & migration

- Product change notice
- Last-time buy & last shipment
- Product migration proposal

Design-In Service for Standard Products

COM Design-In Services offer proactive services with pre-validated technology to ensure project success. There are 6 phases of the design-in process from planning, design, validation, software and hardware integration, production, and longevity support. It shortens the complex procedure of developing applications which helps customers focus on their core business. With COM Design-In Service for standard products, customers can save time, cost and resources, and reduce development risks.

Full Customization Services

In some cases, customers may find they have difficulties in carrier board design and semi-system integration. Or they may simply want a customized COM module for their specific applications. Advantech clearly understands the needs and expectations of our customers. With COM customization services, customers can save their development schedule time, production cost, and work hours, all of which ensure that customers meet time-to-market expectations.

COM customization services provide flexible integration including COM module customization, carrier board design and production, semi-system integration services, and manufacturing services. The four key solutions benefit our customers with faster time-to-market.

Without wasting time on collecting resources and stock management, customers can focus on their own products and businesses.

Four Solutions for Customization Services

COM Module Customization Service

As an industry leader, Advantech has provided a wide range of COM modules and design-In services to customers for years. To service more vertically-focused markets and respond to various requirements, we also provide customized COM services for our customers to develop multiple applications easily.

Services include

- Advantech proven design IP
- Design & project management
- Prototype validation
- Strict revision controls

Semi-System Integration Service

Most customers face the problem of LCD, storage device, and Wi-Fi module integration. We provide component integration services including resource matching and integration testing that can help customers adapt and certify devices with longevity support.

Services include

- Validating LCD and storage with longevity support
- Certifying Wi-Fi, 3G, & Bluetooth modules
- Assembling devices on carrier boards & performance testing

Carrier Board Design & Production Services

COM customized service provides customers with comprehensive carrier board solutions, either designing a customized carrier board (ODM) based on the customer's needs, or providing a cost-effective carrier board (OEM) production service. With our help designing and producing carrier boards, customers can focus on developing their core businesses.

Services include

- Longevity component support
- SI, PWR, QE+QA testing of modules + carrier boards
- Accessory integration & assembly
- Module + carrier board functionality testing

Manufacturing Service

Advantech has great production capacity and is able to leverage resource deployment as well as maintenance. With our advantages and experience in manufacturing, we deliver cost-effective manufacturing services on time and within budget.

Services include

- Highly effective production system
- Advanced testing & inspection shop floor control system
- Certified quality assurance systems
- Flexible, high temperature, burn-in testing service

Product Selection Guide

COM HPC





Model Name	SOM-A350	SOM-C350	SOM-C350R	SOM-D580	SOM-E780
Form Factor/ Pinout	COM-HPC Client Size A	COM-HPC Client Size C	COM-HPC Client Size C	COM-HPC Server Size D	COM-HPC Server Size E
CPU	14th Gen Intel® Core™ processors Up to 14 Cores (6P+8E) / TDP 45W	12th Gen Intel® Core™ processors Up to 16 Cores (8P+8E) / TDP 65W	13th Gen Intel® Core™ processors Up to 24 Cores (8P+16E) / TDP 65W	Intel® Xeon® D-2700 Processor Up to 20 Cores / TDP 118W	AMD EPYC™ 7003 Series Processors Up to 64 Cores / TDP 225W
Memory	DDR5 5600MT/s, Max. 96GB, 2 x 260P SODIMM	DDR5 4800MT/s, Max 128GB, 4 x 262P SODIMM	DDR5 5600MT/s, Max. 128GB, 4 x 262P SODIMM	DDR4 3200MT/s, Max 512GB, 4 x 288P LRDIMM	DDR4 3200MT/s, Max. 512GB, 4 x 288P LRDIMM
Graphics	Intel® Xe® LPG Graphics, 128 EUs	Intel® Xe® LP Graphics, 96 EUs	Intel® Xe® LP Graphics, 96 EUs	-	-
Display	DDI, eDP	DDI, eDP	DDI, eDP	-	-
Ethernet	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	1 x 2.5GbE, 4 x 25GbE or 4 x 10GbE	1 x 2.5GbE
PCIe (Lanes)	8 x PCIe 5.0, 20 x PCIe 4.0 (Lanes)	16 x PCIe 5.0, 16 x PCIe 4.0, 10 x PCIe 3.0 (Lanes)	16 x PCIe 5.0, 16 x PCIe 4.0, 10 x PCIe 3.0 (Lanes)	32 x PCIe 4.0, 17 x PCIe 3.0 (Lanes)	79 x PCIe 4.0 (Lanes)
I/O Ports	SATA 3.0, USB4, USB 3.2, USB 2.0, MIPI-CSI, SPI Bus, GPIO, eSPI	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, eSPI	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, eSPI	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, eSPI	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC
Supply Voltage	Vin: 8V-20V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V
Operating Temp. Range	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C
Dimensions	120 x 95 mm	160 x 120 mm	160 x 120 mm	160 x 160 mm	200 x 160 mm

Product Selection Guide

COMe & SMARC



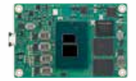


Model Name	SOM-5993	SOM-5962	SOM-5885	SOM-5883	SOM-5899
Form Factor	COMe Basic Type 7 R3.0	COMe Basic Type 7 R3.0	COMe Basic Type 6 R3.1	COMe Basic Type 6 R3.0	COMe Basic Type 6 R3.0
CPU	Intel® Xeon® D-1700 Processors Up to 10 Cores / TDP 67W	Intel® Atom™ C3000 Processors Up to 16 Cores / TDP 31W	14th Gen Intel® Core™ processors Up to 14 Cores (6P+8E) / TDP 45W	11th Gen Intel® Core™ processors Up to 8 Cores / TDP 45W	9th/8th Gen Intel® Xeon®/Core™ Processors Up 12 Cores / TDP 45W
Memory	DDR4 2933MT/s, Max. 128GB, 4 x 260P SODIMM	DDR4 2400/2133/1866MT/s, Max. 128GB, 4 x 260P SODIMM	DDR5 5600MT/s, Max. 96GB, 2 x 260P SODIMM	DDR4 3200MT/s, Max. 128GB, 4 x 260P SODIMM	DDR4 2666/2400/2133MT/s, Max. 96GB, 3 x 260P SODIMM
Graphics	-	-	Intel® Xe® LPG Graphics, 128 EUs	Intel® Iris® Xe (Gen 12) Graphics	Intel® UHD Graphics 610/630/P630
Display	-	-	LVDS, DDI, eDP	VGA, LVDS, DDI, eDP	VGA, LVDS, DDI, eDP
Ethernet	1 x 2.5GbE, 4 x 10GbE	4 x 10GbE	1 x 2.5GbE	1 x 2.5GbE	1 x 1GbE
Expansion	16 x PCIe 4.0, 16 x PCIe 3.0 (Lanes)	16 x PCIe 3.0 (Lanes)	24 x PCIe 4.0 (Lanes)	16 x PCIe 4.0, 8 x PCIe 3.0 (Lanes)	24 x PCIe 3.0 (Lanes)
I/O Ports	SATA 3.0, USB 3.0, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0,USB 3.0, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB4, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC
Supply Voltage	Vin: 8.55-12.6V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V
Operating Temp. Range	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C / -40 ~ 85°C
Dimensions	125 x 95 mm	125 x 95 mm	125 x 95 mm	125 x 95 mm	125 x 95 mm





Model Name	SOM-6884 A1	SOM-6883	SOM-6872 A2	SOM-6833	SOM-6832
Form Factor/ Pinout	COMe Compact Type 6 R3.1	COMe Compact Type 6 R3.0	COMe Compact Type 6 R3.0	COMe Compact Type 6 R3.1	COMe Compact Type 6 R3.0
CPU	13th Gen Intel® Core™ Processors Up 14 Cores / TDP 45W	11th Gen Intel® Core™ Processors Up 4 Cores / TDP 28W	AMD Ryzen™ V2000 Processors Up to 8 Cores / TDP 54W	Intel® Core™ i3-N305, N-series, & Atom® x7000E Series Processor Up to 8 Cores / TDP 15W	Intel® Pentium®/Celeron® & Atom® x6000 Series Processors Up to 4 Cores / TDP 12W
Memory	DDR5 4800MT/s, Max. 64GB, 2x 262P SODIMM	DDR4 3200MT/s (1CH on board), Max. 48GB, 1x 260P SODIMM	DDR4 3200MT/s, Max. 64GB, 2x 260P SODIMM	LPDDR5 4800MT/s, Max. 16GB, 1x 260P SODIMM	DDR4 3200MT/s, Max. 16GB, 2x 260P SODIMM
Graphics	Intel® Iris® Xe Graphics/UHD Graphics Architecture	Intel® Iris® Xe Graphics/UHD Graphics Architecture	AMD Radeon Graphics Vega GPU	Intel® Gen12 LP Graphics	Intel® UHD Graphics
Display	LVDS, DDI, eDP	VGA, LVDS, DDI, eDP	VGA, LVDS, DDI, eDP	LVDS, DDI, eDP	LVDS, DDI, eDP
Ethernet	1 x 2.5GbE	1 x 2.5GbE	1 x 1GbE	1 x 2.5GbE	1 x 2.5GbE
PCIe (Lanes)	12 x PCIe 4.0, 8 x PCIe 3.0 (Lanes)	6 x PCIe 3.0 (Lanes)	16 x PCIe 3.0 (Lanes)	7 x PCIe 3.0 (Lanes)	6 x PCIe 3.0 (Lanes)
I/O Ports	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, COM Port, LPC
Supply Voltage	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V
Operating Temp. Range	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C / -40 ~ 85°C
Dimensions	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm


Model Name	SOM-7583	SOM-7533	SOM-7532	SOM-2533	SOM-2532
Form Factor	COMe Mini Type 10 R3.0	COMe Mini Type 10 R3.1	COM Express Mini Type 10 R3.0	SMARC 2.1.1	SMARC 2.1.1
CPU	11th Gen Intel® Core™ Processors Up 4 Cores / TDP 28W	Intel® Core™ i3-N305, N-Series, & Atom® x7000E Series Processor Up to 8 Cores / TDP 15W	Intel® Pentium®/Celeron® & Atom® x6000 Series Processors Up to 4 Cores / TDP 12W	Intel® Core™ i3-N305, N-Series, & Atom® x7000E Series Processor Up to 8 Cores / TDP 15W	Intel® Pentium®/Celeron® & Atom® x6000 Series Processors Up to 4 Cores / TDP 12W
Memory	LPDDR4X 4267MT/s, Max. 16GB	LPDDR5 4800MT/s, Max. 16GB	LPDDR4 3200MT/s, Max. 16GB	LPDDR5 4800MT/s, Max. 16GB	LPDDR4 3200MT/s, Max. 16GB
Graphic	Intel® Iris® Xe Graphics/UHD Graphics Architecture	Intel® UHD Graphics	Intel® UHD Graphics	Intel® UHD Graphics	Intel® UHD Graphics
Display	DDI, eDP	LVDS, DDI, eDP	LVDS, DDI, eDP	LVDS, DDI, eDP	LVDS, DDI, eDP
Ethernet	1 x 2.5GbE	1 x 2.5GbE	1 x 2.5GbE	2 x 2.5GbE	2 x 1GbE
Expansion	4 x PCIe 3.0 (Lanes)	4 x PCIe 3.0 (Lanes)	4 x PCIe 3.0 (Lanes)	4 x PCIe 3.0 (Lanes)	4 x PCIe 3.0 (Lanes)
I/O Ports	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, COM Port, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO,COM Port, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO,COM Port, LPC	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, CAN Bus, eSPI	SATA 3.0, USB 3.2, USB 2.0, SPI Bus, GPIO, CAN-FD, eSPI
Supply Voltage	Vin: 4.75-20V VSB: 4.75-5.25V	Vin: 4.75-20V VSB: 4.75-5.25V	Vin: 4.75-20V VSB: 4.75-5.25V	Vin: 4.75-5.25V	Vin: 4.75-5.25V
Operating Temp. Range	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C	0 ~ 60°C / -40 ~ 85°C	0 ~ 60°C	0 ~ 60°C / -40 ~ 85°C
Dimensions	84 x 55 mm	84 x 55 mm	84 x 55 mm	82 x 50 mm	82 x 50 mm

Regional Service and Customization Centers

China	Kunshan	86-512-5777-5666
Taiwan	Taipei	886-2-2792-7818
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Sweden

Stockholm	46-0-864-60-500

Poland

Warsaw	48-22-31-51-100

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