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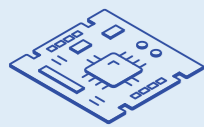
2024 PRODUCT GUIDE

Your Best Channel Partner to Provide One-Stop-Shop Solutions

ECS, headquartered in Taiwan, is a trailblazing technology service provider, committed to a transformative journey into becoming a comprehensive solution partner for its clients. Since its inception in 1987, ECS has evolved from being a prominent motherboard manufacturer to a multifaceted entity, offering a diverse array of ICT products and service solutions to partners globally.



Business Outlook & Next



Motherboard

- With Intel® Core™ processors
- 2.5 GbE, Ethernet
- Flagship-class audio
- PCIe 5.0 GPU and M.2 support
- Enhanced security and reliability
- Excellent gaming performance



Mini PC

- Offers high throughput, low power, and fast response
- Ultra-small-form-factor (uSFF) design
- Dongle-free Bluetooth® experiences
- Tall and slim form factor



Laptop

- Personal AI PC
- Supports latest NPU technology
- Copilot AI assistant in Windows 11
- Lightest laptops under 2.2 pounds / 1 kg

Competitive Advantage in Manufacturing

- Cost/Process Optimization
- Supply Chain Management
- Component/Product Traceability
- Logistics Management
- Computer Motherboard/ System Product Manufacturing
- Finished Product/System Product Assembly
- System Integration
- Product Testing/Validation



Desktop /Workstation

- CPU and memory overlocking capability
- Optimized memory trace layout
- Advanced power stage design
- Server-grade IPMI remote management
- High-speed data transfer



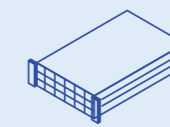
Cloud

- Telematics
- Charging Service
- IoT Device Twins
- Insight Dashboard(BI)
- Fleet MGMT



B5G

- LEO - CubeSat
- User Terminal
- CPE/FWA
- Array Antenna



Server

- Rack
- MEC
- Road-Side



EV Charger

- Mercury Series AC EV Charger
- Venus Series AC EV Charger

Product Portfolio

Black Series



Motherboard — ECS Black Series is making a comeback !

The backbone of your system, our motherboards deliver reliability, performance, and compatibility for your computing needs

- Z790 Gaming Series
- B760 Black Series
- H610 Value Series

Mini PC — Size Meets Performance

Pack powerful competence into a compact form factor, ideal for space-constrained environments without compromising on functionality.

- Q Series: Pocket-sized Design
- Z Series: Silent and Reliable, Fanless
- One Series: Powerful Computing Performance
- P Series: Performance AI PC
- X Series: Arm-based Processor
- M Series: Fanless Design, Wide Range DC-in

LIVA



Notebook — Your Personal AI

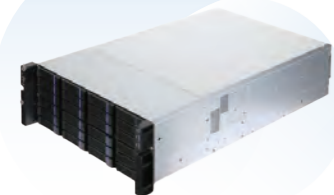
Offer PC solutions for education, commercial, and high-end needs, prioritizing durability, proficiency, security, and accessibility features.

- Lightest laptops under 2.2 pounds / 1 kg
- AI PC
- Commercial Laptop
- Chromebook

Desktop / Workstation — Transforming Workspaces, Transcending Expectations

Provide robust computing power for everyday tasks and multimedia needs, offering capability at an affordable price point.

- B760 Desktop PC for Small Business
- W790 Mainstream Workstation



Network — Lighting the Path to Next-Gen Networking

Create scalable and efficient solutions for data storage, processing, and networking, ensuring steadiness and performance for business-critical operations.

- Gateway
- Smart NIC card
- Switch
- Server
- LEO

AI First Mate: Streamlining Workflow on ECS Notebooks



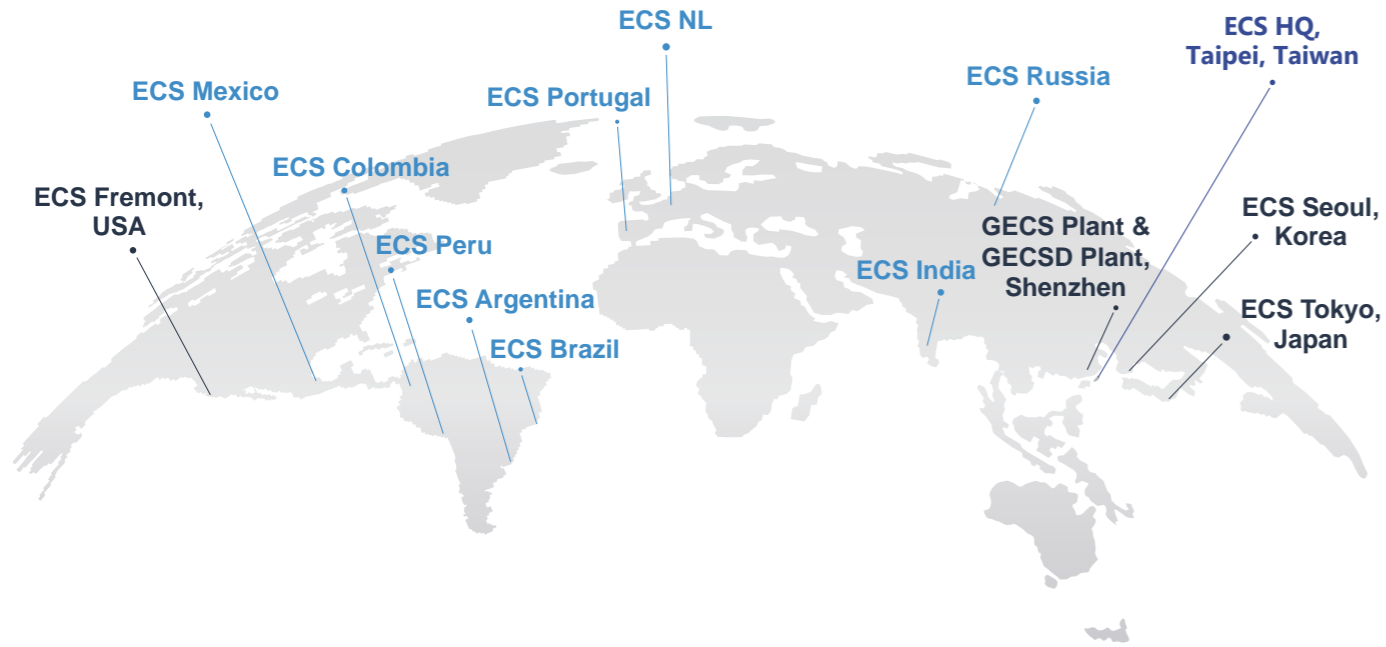
Vision Mate AI-based photo editor on ECS AI PC

Powerful, next generation AI-based photo editor on ECS high-end PC, CR60RL5. With Vision Mate, you can generate text-to-image or image-to-image with AI, turning your photo style on different filters, easily removing the background, and enhancing your photo resolution.

Learning Mate Personal AI chatbot on ECS AI PC

To create your learning assistant, upload relevant context and documents to build your knowledge base on ECS AI series business laptop, UP40ML. Learning Mate will answer the question based on the knowledge base and help you get started easily and interactively.

Global Service Network and Sales Channel



Global Alliance
40+ Partners

Global Network
10+ Countries

Operational Site

- Taipei, Taiwan (Headquarter)
- Fremont, California, U.S.A.
- Tokyo, Japan
- Seoul, Korea

Manufacturing Production Base

- Xingying Digital Technology (Shenzhen) Co., Ltd.
- Elitegroup Technology (Thailand) Co., Ltd.

Value Statement

Innovation

Creative thinking and competitiveness improve to build solutions as our value.

Trustworthy

We are the value provider of service-oriented for our partnership and customer engagement.

Sustainability

Together, we dedicate the development to embrace the smart and bright life.



Our Services

01

OEM / ODM / JDM

02

Integration of Hardware & Software

03

Mass Production

04

Quality Management

05

Logistics & Warehousing

06

After Service & Customer Relationship



MODEL NAME	Campbeltown 7L	LEET Z790H7-A	Speyside 34L
CPU	Intel® 14th Gen Processors for LGA 1700 socket	Intel® 12th & 13th Gen Processors for LGA 1700 socket	Intel® Xeon® W-2500 / W-2400 Series Processor(Sapphire Rapids-64L)
MEMORY	2 x DIMMs, DDR5 4800MHz Up to 64GB	4 x DIMMs, Dual Channel DDR5 6200+(OC)/5600MHz Up to 128GB	8 x R-DIMMs, DDR5 4800MHz. Up to 512GB/2TB(3DS)
STORAGE	1 x 3.5" SATA 6Gb/s HDD/ SSD 1 x M.2 2280 PCIe x4 Gen 3 SSD 1 x Slim optical drive	4 x SATA 6Gb/s support SATA RAID 0,1,5,10 and extra 2 x SATA 6Gb/s 4 x M.2 support PCIE RAID 0,1,5 : 1 x M.2 supports 2242/2260/2280 PCIe Gen4 x4 NVME SSD 2 x M.2 supports 2242/2280 PCIe Gen4 x4 SSD 1 x M.2 supports 2242/2260/2280 PCIe Gen4 x4 & SATA SSD	1 x M.2 key M 2260/2280 1 x M.2 key M 2280/22110 2 x 3.5"HDD (8 x SATA Ports MAX)
EXPANSION SLOTS	NA	1 x PCIe x16 Gen 5.0 slot 1 x PCIe x16 Gen 4.0 slot 1 x PCIe x1 Gen 3.0 slot	NA
WIRELESS	1 x M.2 2230 WLAN 802.11ac/ 802.11ax	1 x M.2 supports 2230 WLAN/ BT ,CNVi expansion	1 x M.2 key M 2230
VIDEO OUTPUT	1 x HDMI 1 x DisplayPort 1 x VGA	1 x HDMI 1 x DisplayPort	NVIDIA Graphic Card (DP/ Mini DP) (5 x Slots MAX)
AUDIO	Front I/O: 1 x Combo jack Rear I/O: 3 x Audio Jacks	8-Channel(7.1) HD Audio subsystem by Realtek ALC1220	Realtek ALC1220 Audio CO-DEC. (up to 7.1 channel)
I/O	Front I/O: 1 x USB 3.2 Gen 1x1 Type C 3 x USB 3.2 Gen 1x1 1 x Combo Jack Rear I/O: 1 x HDMI 1 x DisplayPort 1 x VGA 4 x USB 2.0 1 x Gigabit LAN 3 x Audio Jacks	1 x USB 3.2 Gen 2x2 4 x USB 3.2 Gen 2x1 4 x USB 3.2 Gen 1x1 8 x USB 2.0 1 x 2.5 Gigabit LAN	Front I/O: 2 x USB 3.2 Gen1x1 2 x USB 2.0 1 x Headphone 1 x Mic-in Rear I/O: 2 x USB 3.2 Gen1 2 x USB 3.2 Gen2x1 1 x USB 3.2 Gen2x2 Type-C 2 x USB 2.0 1 x Audio Jack (6 in 1) 1 x 2.5 Gigabit LAN 1 x 5 Gigabit LAN
DIMENSION	290 x 93 x 280 mm	34L	34L
OS SUPPORT	Windows 11	Windows 11 for workstation/ Linux	Windows 11 for workstation/ Linux
POWER SUPPLY	180 W Power Supply Unit (PSU), 80 PLUS Bronze 300 W Power Supply Unit (PSU), 80 PLUS Bronze	Base on different configuration	Base on different configuration
MB SIZE	NA	305 x 244mm	304.8mm x 266.7mm x 1.97mm (CEB)
REMARK	NA	MCU controll multi RGB headers Easy Buttons to use BIOS update w/o CPU & DRAM VR Loading LED	5 x SYS FAN (MAX) 2 x CPU FAN (MAX) Intel VROC (Option)

ONE Series

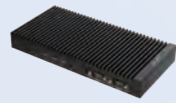


MODEL NAME	LIVA One H610	LIVA One A300	SF110 B660
CPU	Intel® 12th & 13th & 14th Gen Processors with LGA1700 Socket (TDP 35W/ 65W Max.)	AMD® Ryzen™ 3/ 5/ 7 & Athlon™ Processors with AM4 Socket (TDP 35W/ 65W Max.)	Intel® 12th & 13th & 14th Gen Processors with LGA1700 Socket (TDP 35W/ 65W Max.)
Memory	2 x SO-DIMMs, DDR5 4800/5600 MT/s Up to 64GB	2 x SO-DIMMs, DDR4 3200MHz Up to 64GB	2 x SO-DIMMs, DDR4 3200MHz Up to 64GB
Storage	1 x 2.5" SATA 6Gb/s HDD/ SSD 1 x M.2 2280 PCIe NVME x4 Gen4 SSD	1 x 2.5" SATA 6Gb/s HDD/ SSD 1 x M.2 2280 SATA/ PCIe x4 Gen 3 SSD	1 x 2.5" SATA 6Gb/s HDD/ SSD 1 x M.2 2280 SATA/ PCIe NVME x4 Gen4 SSD
Wireless	1 x M.2 2230 WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ac/ 802.11ax	1 x M.2 2230 WLAN 802.11ax
Video Output	1 x HDMI 2 x DisplayPort 1 x VGA / RS232 (optional) (3 Video Outputs Max.)	SKU 1: 1 x HDMI 1 x DisplayPort 1 x VGA SKU 2: 1 x HDMI 2 x DisplayPort	1 x HDMI 2 x DisplayPort 1 x VGA / RS232 (optional) (4 Video Outputs Max.)
Audio	1 x Combo Jack	2 x Audio Jacks	1 x Combo Jack
I/O	1 x MIC-in Front I/O: 2 x USB 3.2 Gen 2x1 Type-C 2 x USB 3.2 Gen 1x1 1 x Combo Jack 1 x Mic-in Rear I/O: 2 x USB 3.2 Gen 1x1 2 x USB 2.0 1 x 2.5 GbE LAN 1 x DC-in 1 x Kensington Lock	2 x USB 3.2 Gen 2x1 Type C 2 x USB 3.2 Gen 1x1 1 x Combo Jack 1 x Mic-In Rear I/O: 2 x USB 3.2 Gen 1x1 2 x USB 2.0 1 x 2.5 Gigabit LAN 1 x COM (RS-232, Optional) 1 x DC-in 1 x Kensington Lock	1 x MIC-in Front I/O: 2 x USB 3.2 Gen 2x1 Type-C 2 x USB 3.2 Gen 2x1 1 x Combo Jack 1 x Mic-in Rear I/O: 2 x USB 3.2 Gen 1x1 2 x USB 2.0 1 x 1.0 GbE LAN 1 x DC-in 1 x Kensington Lock
Dimension	205 x 176 x 33 mm	205 x 176 x 33 mm	205 x 176 x 33 mm
OS Support	Windows 11 / Linux	Windows 11/ Linux	Windows 11 / Linux
Power Supply	TDP 35W & 65W: 19V/ 120W	TDP 35W: 19V/ 90W TDP 65W: 19V/ 120W	TDP 35W & 65W: 19V/ 120W
Operation Temp	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
Others	Support TPM Onboard (Optional) Support Internal Speaker (Optional)	N/A	Support DASH Function Support TPM Onboard Support Internal Speaker

Z Series



MODEL NAME	LIVA Z7 PLUS	LIVA Z5 PLUS	LIVA Z5E PLUS
CPU	Intel® 14th Gen Meteor Lake-H Processors TDP 28W(U7/U5), 45W(U9)	Intel® 13th & 14th Gen Core™ Processors (TDP 15W)	Intel® 13th & 14th Gen Core™ Processors (TDP 15W)
Memory	2 x SO-DIMMs, DDR5 5600MHz Up to 96GB	2 x SO-DIMMs, DDR4 3200MHz Up to 64GB	2 x SO-DIMMs, DDR4 3200MHz Up to 64GB
Storage	1 x M.2 2280 Key M NVMe SSD 1 x M.2 2242 Key M NVMe SSD	1 x M.2 2280 PCIe/ NVMe Gen 4x4 SSD	1 x M.2 2280 PCIe/ NVMe Gen 4x4 SSD 1 x 2.5" SATA 6Gb/s HDD/ SSD (Optional)
Wireless	1 x Intel WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ax
Video Output	2 x HDMI (1 x HDMI port w/ CEC function)	2 x HDMI (1 x HDMI port w/ CEC function) 1 x DisplayPort up to 8K@60Hz 1 x Type C Alt. DP up to 8K@60Hz	2 x HDMI (1 x HDMI port w/ CEC function) 1 x DisplayPort up to 8K@60Hz 1 x Type C Alt. DP up to 8K@60Hz
Audio	N/A	1 x Combo Jack	1 x Combo Jack
I/O	Front I/O: 3 x USB 3.2 Gen 2x1 1 x USB 3.2 Gen 2x2 Type-C 1 x USB 2.0 Rear I/O: 2 x USB 4 Gen 2x2 Type-C (to DP) 2 x USB2.0 2 x HDMI 1 x 2.5 GbE + 1x 1.0 GbE LAN 1 x DC-in Side I/O: 1 x Kensington Lock	1 x USB 4 Gen 2x2 Type-C (Alt. DP) 3 x USB 3.2 Gen 2x1 2 x 2.5 Gbps LAN (LAN 2: vPRO Optional) 1 x DC-In 1 x Kensington Lock	1 x USB 4 Gen 2x2 Type-C (Alt.DP) 3 x USB 3.2 Gen 2x1 2 x 2.5 Gbps LAN (LAN 2: vPRO Optional) 2 x COM (RS-232, RS422, RS485) SKU1: 2 x COM (RS-232) SKU2: 1 x HDMI-in (for capture card) 1 x DC-In 1 x Kensington Lock
Dimension	117 x 117 x 50.4 mm	148 x 120 x 38.35 mm	148 x 120 x 53.9 mm
OS Support	Windows 11 / Linux	Windows 11 / Linux	Windows 11 / Linux
Power Supply	19V/ 120W for U5/ U7 19V/ 150W for U9	19V/ 90W	19V/ 90W
Operation Temp	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
Others	Support HDMI CEC	Support vPRO (Optional)	Support vPRO (Optional) Support Capture card (Optional)



MODEL NAME	LIVA Z5F PLUS	LIVA Z3E	LIVA Z3
CPU	Intel® 13th & 14th Gen Core™ Processors (TDP 15W)	Intel® Pentium® Silver N6000 Processor Intel® Celeron® N5100/ N4500 Processors	Intel® Pentium® Silver N6000 Processor Intel® Celeron® N5100/ N4500 Processors
Memory	2 x SO-DIMMs, DDR4 3200MHz Up to 64GB	2 x SO-DIMMs, DDR4 2933MHz Up to 16GB	2 x SO-DIMMs, DDR4 2933MHz Up to 16GB
Storage	1 x M.2 2280 PCIe/ NVMe Gen 4x4 SSD 1 x 2.5" SATA 6Gb/s HDD/ SSD (Optional)	eMMC 5.1, Up to 128GB 1 x M.2 2280 PCIe x2 Gen 3 SSD 1 x 2.5" SATA 6Gb/s HDD/ SSD (Optional)	eMMC 5.1, Up to 128GB 1 x M.2 2280 PCIe x2 Gen 3 SSD
Wireless	1 x M.2 2230 WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ax
Video Output	2 x HDMI (1 x HDMI port w/ CEC function) 1 x DisplayPort up to 8K@60Hz 1 x Type C Alt. DP up to 8K@60Hz	1 x HDMI 1 x mini DisplayPort	1 x HDMI 1 x mini DisplayPort
Audio	1 x Combo Jack	1 x Combo Jack	1 x Combo Jack
I/O	1 x USB 4 Gen 2x2 Type-C (Alt. DP) 3 x USB 3.2 Gen 2x1 2 x 2.5 Gbps LAN (LAN 2: vPRO Optional) 2 x COM (RS-232, RS422, RS485) 2 x COM (RS-232) 1 x DC-In	1 x USB 3.2 Gen 2x1 Type-C 3 x USB 3.2 Gen 1x1 2 x USB 2.0 1 x Gigabit LAN 2 x COM (RS-232) 1 x DC-In 1 x Kensington Lock	1 x USB 3.2 Gen 2x1 Type-C 3 x USB 3.2 Gen 1x1 2 x USB 2.0 1 x Gigabit LAN 1 x DC-In 1 x Kensington Lock
Dimension	242 x 120 x 30 mm	117 x 128 X 52.9 mm	117 x 128 x 35 mm
OS Support	Windows 11 / Linux	Windows 11 / Linux	Windows 11 / Linux
Power Supply	19V/ 90W	19V/ 65W	19V/ 65W
Operation Temp	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
Others	Support vPRO (Optional) Wall Mount, Din Rail support	1 x M.2 2280 for SSD (Key M) 1 x M.2 2230 for Wireless (Key E)	1 x M.2 2280 for SSD (Key M) 1 x M.2 2230 for Wireless (Key E)



MODEL NAME	LIVA Z	LIVA ZE
CPU	Intel® Pentium® N4200 Processor Intel® Celeron® N3350/ N3450 Processors	Intel® Pentium® N4200 Processor Intel® Celeron® N3350/ N3450 Processors
Memory	2 x SO-DIMMs, DDR3L 1866MHz Up to 8GB	2 x SO-DIMMs, DDR3L 1866MHz Up to 8GB
Storage	eMMC 32GB/ 64GB 1 x M.2 2242 SATA SSD	eMMC 32GB/ 64GB 1 x M.2 2242 SATA SSD 1 x 2.5" SATA 6Gb/s HDD/ SSD (Optional)
Wireless	1 x M.2 2230 WLAN 802.11ax	1 x M.2 2230 WLAN 802.11ax
Video Output	1 x HDMI 1 x mini DisplayPort	1 x HDMI 1 x mini DisplayPort
Audio	1 x Combo Jack/ 1 x Digital Mic	1 x Combo Jack/ 1 x Digital Mic
I/O	1 x USB 3.2 Gen 1x1 Type-C 3 x USB 3.2 Gen 1x1 2 x Gigabit LAN 1 x DC-In	1 x USB 3.2 Gen 1x1 Type-C 3 x USB 3.2 Gen 1x1 2 x Gigabit LAN 4 x COM (RS-232) 1 x DC-In
Dimension	117 x 128 x 32 mm	117 x 128 x 51 mm
OS Support	Windows 10 / Linux	Windows 10 / Linux
Power Supply	19V/ 65W	19V/ 65W
Operation Temp	0°C ~ 40°C	0°C ~ 40°C
Others	N/A	N/A

M Series



MODEL NAME	M600	M520W
CPU	Intel® Core™ i3-N305 Processor 6M Cache, up to 3.80 GHz Intel® Processor N200 6M Cache, up to 3.70 GHz Intel Atom® x7211E 6M Cache, up to 3.20 GHz Intel Atom® x7425E 6M Cache, up to 3.40 GHz	Intel Elkhart Lake X6413E SoC
Memory	1 x SO-DIMM, DDR5 4800MHz Up to 16GB	2 x SO-DIMM DDR4 3200MHz Up to 32 GB
Storage	1 x M.2 2280 SATA/ PCIe NVMe x 1 Gen3 SSD	1 x SATAIII 1 x M.2 key-M type 2242/2260/2280 w/ PCIe x2
Wireless	1 x M.2 2230 WLAN 802.11ax	1 x Mini PCIe for WLAN card
Video Output	2 x HDMI	1 x HDMI 2.0 1 x VGA
Audio	HDMI Audio	HDMI Audio
I/O	Front I/O: 4 x COM (3 x RS232, 1 x RS232/422/485) 2 x USB 2.0 Rear I/O: 2 x 2.5 GbE LAN 4 x USB 3.2 2 x HDMI 1 x 9~36V DC-IN	Front I/O: 4 x COM (2 x RS232 RI/5V/12V, 2 x RS232/422/485 RI/5V/12V) 1 x 9~24V DC-IN Rear I/O: 2 x 2.5 GbE LAN 2 x USB 3.2 Gen.1 4 x USB 2.0 1 x HDMI 2.0 1 x VGA
Dimension	200 x 125 x 39.5mm	160 x 130 x 50mm
OS Support	Windows 11 / Linux	Windows 11 64bit / Windows 10 IOT Enterprise 2021 or above / Linux Ubuntu 20.04
Power Supply	19V/ 90W	AC Adapter 60W (12V/ 5A)
Operation Temp	0°C ~ 50°C	-20°C ~ 60°C
Others	Support 5G / 4G LTE Module (M.2 3042/3052)	Support 5G / 4G LTE Module (M.2 3042/ 3052)

Q Series



MODEL NAME	LIVA Q3 Plus	LIVA Q3D	LIVA Q3H
CPU	AMD Ryzen™ Embedded V1605B/ R1505G/ R2314 Processors	Intel® Pentium® Silver N6000 Processor Intel® Celeron® N5100/ N4500 Processors	Intel® Pentium® Silver N6000 Processor Intel® Celeron® N5100/ N4500 Processors
Memory	DDR4 on Board 2400MHz 4GB/ 8GB	LPDDR4 onboard 2400MHz 4GB/ 8GB	LPDDR4 onboard 2400MHz 4GB/ 8GB
Storage	eMMC 64GB/ 128GB	eMMC 64GB/ 128GB	eMMC 64GB/ 128GB
Wireless	1 x M.2 2230 WLAN 802.11ac	1 x M.2 2230 WLAN 802.11ac	1 x M.2 2230 WLAN 802.11ac
Video Output	1 x HDMI 1 x mini DisplayPort	1 x HDMI 1 x DisplayPort	1 x HDMI 1 x HDMI IN
Audio	HDMI Audio	HDMI Audio	HDMI Audio
I/O	2 x USB 3.2 Gen 2 1 x USB 2.0 1 x Gigabit LAN 1 x Micro SD Card Slot 1 x DC-In 1 x Kensington Lock	2 x USB 3.2 Gen 1x1 1 x USB 2.0 1 x Gigabit LAN 1 x Micro SD Card Slot 1 x DC-In 1 x Kensington Lock	2 x USB 3.2 Gen 1x1 1 x USB 2.0 1 x Gigabit LAN 1 x Micro SD Card Slot 1 x DC-In 1 x Kensington Lock
Dimension	74 x 74 x 52.1 mm	74 x 74 x 34.6 mm	74 x 74 x 34.6 mm
OS Support	Windows 11 / Windows 10 / Linux	Windows 11 / Linux	Windows 11 / Linux
Power Supply	12V/ 36W	12V/ 36W	12V/ 36W
Operation Temp	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
Others	Support HDMI CEC	Support HDMI CEC	Support HDMI CEC

P Series



MODEL NAME	LIVA P500 H610	MODEL NAME	LIVA P200
Processor	Intel® 12th & 13th & 14th Gen Processors for LGA 1700 socket (TDP 65W)	CPU	Intel® Core™ i3-N305 Processor (TDP 15W) Intel® Core™ i3-N300 Processor (TDP 7W) Intel® Processor N200 / N100 (TDP 7W)
Chipset	Intel® H610 Chipset	Memory	1 X SO-DIMM DDR4 3200MHz Up to 16 GB
Memory	2 x DDR5 SODIMM slots 64GB per DIMM (Max 128GB) DDR5 5600 MT/s for i9/i7 DDR5 4800 MT/s for i5/i3	Storage	1 x M.2 2280 PCIe Gen3x1 SSD
Video Output	1 x HDMI 2.0b / 1 x DP 1.4a / 1 x VGA	Wireless	1 x M.2 2230 WLAN 802.11ax
Storage Interface	1 x M.2 2280 PCIe(NVME) Gen4x4 / SATA3.0 SSD 1 x SATA 2.5" inch HDD	Video Output	1 x DisplayPort up to 4K@60Hz 1 x HDMI up to 4K@60Hz 1 x VGA
Audio	CODEC ALC 256 + Amplifier (2 watts) 2CH MIC-IN / LINE-OUT	Audio	2 x Audio Jacks
Ethernet	1 x 2.5 GbE (Intel i226-V) 1 x 1.0 GbE (Intel i219V)	I/O	Front I/O: 1 x Power Button with LED 4 x COM (RS232) 2 x USB2.0 Rear I/O: 1 x w/screw DC IN Jack 1 x Combo Jack 2 x COM (RS232/RS422/RS485) 2 x Audio Jacks 2 x Gigabit LAN 1 x HDMI 2.0 1 x DisplayPort 1 x VGA 4 x USB 3.2 Gen 2x1 Type A ports 2 x USB 2.0 2 x Antenna hole
Expansion Slot	1 x PCIe16 Gen5 slot 1 x M.2 2280 Key M (PCIe Gen3 x4 / SATA3.0 for SSD) 1 x M.2 2230 Key E (PCIe/BT & CNVI) for WLAN 802.11ax/BT 1 x M.2 3052 Key B (USB) for LTE/5G module 1 x Socket nano Sim support LTE/5G	Dimension	200 x 200 x 52.7mm
Onboard Connctors	3 x 4pin Smart Fan (1 for CPU , 2 for SYS, Fan carve support) 1 x SATA3 connector (FPC ZIF Bottom 12P 2R SMD) 2 x COM 2*5pin (1 for RS232+1 for RS232/422/485) 1 x COM_SEL 2*3pin (RI/5V/12V) 1 x Battery (2*1pin) 1 x Internal Speake r(2*1pin)	OS Support	Windows 11 / Linux
Front Panel	1 x USB 2.0 x1 Type A 2 x USB 3.2 Gen 1x1 Type A 1 x USB 3.2 Gen 2x1 Type C 2 x Audio port (MIC-IN / LINE-OUT) 1 x Power Button 1 x Power LED 1 x HDD LED	Power Supply	12V / 60W
Back Panel	2 x RJ45 ports / 1 x HDMI / 1 x DP / 1 x VGA / 2 x Dual USB 2.0 Type A 2 x COM: COM1 support RS232 COM2 support RS232/422/485 by BIOS select 1 x Kensington Lock 2 x Antenna Hole 1 x DC-in for MB 1 x DC-in for external Graphic card (option) 1 x External power button	Operation Temp	0°C ~ 40°C
Drive Bays	2.5" HDD		
Riser Card	1 x PCIe x16 / 1 x PCIe x1 / 1 x 12V power input Note: 1. Graphic Card size < L225.5 x M123.2 x H40.1mm 2. If Graphic Card power consumption is over 75W, then plug in external power input.		
Dimensions	250Lx200Wx95H mm (w/o stand rubber) 250Lx200Wx98.8H mm (w stand rubber)		
OS Support	windows 11 / win10 IOT / Linux		
Power Supply	Adapter 180W, 19V / 9.47A or 12V / 15A Adapter 240W, 12V/20A for External Graphic Card (option)		
Others	1 x TPM2.0 IC (BOM Option)		

X Series



MODEL NAME	LIVA X3A	LIVA X5A
CPU	Rockchip RK3588	NVIDIA JETSON AGX ORIN 32GB SOM
Memory	LPDDR5 onboard 8GB	LPDDR5 32GB
Storage	eMMC 64GB	1 x 64GB eMMC 5.1 1 x M.2 2280 SSD, PCIe Gen4x4, 256GB 1 x M.2 2230 WLAN 802.11ax
Wireless	WLAN 802.11ax	1 x HDMI 1.4 port
Video Output	4 x HDMI port (4K*3+1080P)	N/A
Audio	1 x Combo Jack	1 x USB 3.2 Gen2 port
I/O	4 x USB3.2 Gen 1 2 x LAN port 1 x Audio Combo Jack 1 x DC-In w/lock 1 x Micro SD 1 x 10pin Phoenix connector for RS232/422/485, Recovery, Reset, Power 2 x SMA port for WLAN dipole antennas 1 x Kensington Lock 1 x Screw hole for Grounding	3 x USB 3.2 Gen1 port 4 x USB 2.0 6 x SMA port for Dipole Antennas (WLAN*2 + 5G*4) 1 x Nano SIM card tray for 5G 1 x DC-in jack w/Lock, range: 9V~48V 4 x RJ45 Ethernet, LED, Isolated 2 x RS485/RS232/CAN bus 250Kbps (RJ45 conn.) 1 x power key+Reset+Recovery (RJ45 conn.)
Dimension	109 x 68 x 50mm	189 x 155 x 69mm
OS Support	Android 12	Ubuntu 20.04
Power Supply	19V/ 45W	AC Adapter 120W/19V 3pin (AC 110V ~ 240V 50/60Hz)
Operation Temp	0°C ~ 40°C	Fanless: 0°C ~ 40°C Fan: 0°C ~ 55°C (Storage Temperature : -30°C ~ 70°C)
Others	Support HDMI CEC PoE box support (optional) LTE box support (optional)	Support 5G M.2 Module FCC/UL, CE/CB, BSMI

All-in-One PC



MODEL NAME	LIVA AiO G24-MH610
Screen Size	23.8"
CPU	Supports Intel® 12/13/14th Gen Core™ Processors
Motherboard	H610H7-TI5
Display	Full HD with LED-backlight LCD Support 10-point Multi-touch (Optional) 178° Wide-viewing Angle Aspect Ratio 16:9
Graphics	Integrated Intel® UHD Graphics
Memory	2 x SO-DIMMs, DDR4 3200MHz
Storage	Supports 1 x 2.5" SATA HDD/ SSD Supports 1 x M.2 2280 Slot for SATA/ PCIe Gen 3 SSD
Camera	2MP Webcam w/DMIC
ODD	Supports 1 x Slim Optical DVD-RW or 1 x 2.5" SATA HDD/SSD (Optional)
Audio	2 x 3W Speakers
I/O	Side: 2 x USB 3.2 Gen 1x1 2 x Audio Jacks 1 x Card Reader 1 x COM port Rear: 2 x USB 3.2 Gen 2x1 2 x USB 2.0 1 x HDMI 2.0 Out 1 x VGA 1 x Gigabit LAN 2 x Audio Jacks 1 x 19V DC-In
Wireless	1 x M.2 2230 WLAN 802.11ax
OS Support	Windows 11
Power Supply	120W
Operation Temp	0°C ~ 40°C



MODEL NAME	B760H7-M8	B660H7-M22	B660H7-M8
Form Factor	Micro-ATX	Micro-ATX	Micro-ATX
Chipset	Intel® B760 Chipset	Intel® B660 Chipset	Intel® B660 Chipset
CPU	Intel® 12th & 13th Gen Processors for LGA 1700 Socket (TDP 125W Max.)	Intel® 12th Gen Processors for LGA 1700 Socket (TDP 65W Max.) (Alder Lake-S)	Intel® 12th Gen Processors for LGA 1700 Socket (TDP 65W Max.) (Alder Lake-S)
Memory	2 x DIMMs, Dual Channel DDR5 5600MHz, Up to 64GB	2 x DIMMs, DDR4 3200*MHz, Up to 64GB	2 x DIMMs, DDR5 4800*MHz, Up to 64GB
Storage	4 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports * M.2 SATA and SATA_3 port share	4 x SATA 6Gb/s Ports
Expansion Slots	1 x PCIe x16 Gen 5 Slot 1 x PCIe x1 Gen3 Slots 1 x PCI Slot 2 x M.2 supports 2260/2280 Slot for SATA/ PCIe x4 Gen4 SSD	1 x PCIe x16 Gen 4 Slot 1 x PCIe x1 Gen 3 Slot 1 x M.2 2242/2260/2280 Slot for SATA/ PCIe x4 Gen 3 SSD (By PCH) 1 x M.2 2242/2260/2280 Slot for PCIe x4 Gen 4 SSD (By CPU)	1 x PCIe x16 Gen 5 Slot 1 x PCIe x1 Gen 3 Slots 1 x PCI Slot 1 x M.2 2260/2280 Slot for SATA/ PCIe x4 Gen 4 SSD 1 x M.2 2260/2280 Slot for SATA/ PCIe x4 Gen 3 SSD
Video Output	1 x HDMI Port 1 x DP Port 1 x D-Sub Port 1 x DVI Port	1 x HDMI Port 1 x DVI Port 1 x VGA (3 Video Outputs Max.)	1 x HDMI 1 x DisplayPort 1 x DVI 1 x VGA (3 Video Outputs Max.)
Audio	Realtek ALC897 HD Audio CODEC	6-Channel (5.1) HD Audio	6-Channel (5.1) HD Audio
Ethernet	1 x Intel i219V Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN
USB	6 x USB 2.0 ports 2 x USB 3.2 Gen2x1 ports 2 x USB 3.2 Gen1x1 ports	6 x USB 3.2 Gen 1x1 5 x USB 2.0	4 x USB 3.2 Gen 1x1 6 x USB 2.0
Dimension	244 x 210 mm	244 x 211 mm	244 x 210 mm
OS Support	Windows 11 / Linux	Supports Windows 11	Supports Windows 11
Operation Temp	0°C ~ 40°C	0° C ~ 50° C	0° C ~ 50° C
Others	2 x USB 3.2 Gen2x1 (TYPE A+C) 10Gbps ports 2 x USB 3.2 Gen1x1 Ports 1 x COM port 1 x LPT Header 1 x TPM Header 1 x COM Port 8-pin CPU Power Connector	1 x COM header 5 LED Lights 8pin CPU Power Connector	1 x COM/ 1 x LPT/ 1 x TPM Header 1 x COM Port 8-pin CPU Power Connector



MODEL NAME	B660H7-M20	B660H7-M14	H610H7-M2
Form Factor	Micro-ATX	Micro-ATX	Micro-ATX
Chipset	Intel® B660 Chipset	Intel® B660 Chipset	Intel® H610 Chipset
CPU	Intel® 12th Gen Processors for LGA 1700 Socket (TDP 65W Max.) (Alder Lake-S)	Intel® 12th Gen Processors for LGA 1700 Socket (TDP 65W Max.) (Alder Lake-S)	Intel® 12th & 13th & 14th Gen Processors for LGA 1700 socket
Memory	2 x DIMMs, DDR4 3200*MHz, Up to 64GB	2 x DIMMs, DDR4 3200*MHz, Up to 64GB	2 x DIMMs, Dual Channel DDR4 3200MHz, Up to 64GB
Storage	3 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports
Expansion Slots	1 x PCIe x16 Gen 5 Slot 1 x PCIe x1 Gen 3 Slots 1 x M.2 2280 Slot for PCIe x4 Gen 4 SSD 1 x M.2 2280 Slot for SATA SSD 1 x M.2 2230 Slot for WIFI/BT	1 x PCIe x16 Gen 5 Slot 2 x PCIe x1 Gen 4 Slots 1 x M.2 2280 Slot for PCIe x4 Gen 4 SSD 1 x M.2 2230 Slot for WIFI/BT	1 x PCI Express x16 Gen4 Slot 1 x PCI Express x1 Gen3 Slot 1 x M.2 supports 2260/2280 Slot for SATA/ PCIe x4 Gen3 SSD 1 x M.2 supports 2230 KEY E CNVi & WLAN
Video Output	1 x HDMI 1 x DisplayPort	1 x HDMI 1 x VGA	1 x HDMI Port 1 x DP Port 1 x D-Sub Port
Audio	6-Channel (5.1) HD Audio	6-Channel (5.1) HD Audio	Realtek ALC897 HD Audio CODEC
Ethernet	1 x Gigabit LAN	1 x Gigabit LAN	1 x Realtek RTL8111H Gigabit LAN
USB	4 x USB 3.2 Gen 1x1 6 x USB 2.0 1 x USB 3.2 Gen 2x1 (TYPE-C)	4 x USB 3.2 Gen 1x1 6 x USB 2.0	2 x USB 3.2 Gen2x1 Ports 2 x USB 3.2 Gen1x1 Ports 4 x USB 2.0 Ports
Dimension	244x230 mm	244 x 210 mm	229 x 213mm
OS Support	Supports Windows 11	Supports Windows 11	Windows 11 / Linux
Operation Temp	0° C ~ 50° C	0° C ~ 50° C	0° C ~ 40° C
Others	3 x RGB header 3 x ARGB header 8-pin CPU Power Connector	1 X COM Port 1 X COM header 1 x LPT header 1 x TPM IC 1 X Speaker header 8-pin CPU Power Connector	



MODEL NAME	H610H7-M7 V7.0A
Form Factor	Micro-ATX
Chipset	Intel® H610 Chipset
CPU	Intel® 12th & 13th & 14th Gen Processors for LGA 1700 socket
Memory	2 x DIMMs, Dual Channel DDR5 5600MHz, Up to 64GB
Storage	4 x SATA 6Gb/s Ports
Expansion Slots	1 x PCI Express x16 Gen5 Slot 2 x PCI Express x1 Gen3 Slot 1 x M.2 supports 2280 PCIe x4 Gen3 SSD 1 x M.2 supports 2230 KEY E CNVi & WLAN
Video Output	1 x HDMI Port 1 x DP Port 1 x D-Sub Port
Audio	Realtek ALC897 HD Audio CODEC
Ethernet	1 x Intel i219V Gigabit LAN
USB	2 x USB 3.2 Gen2x1 Ports 2 x USB 3.2 Gen1x1 Ports 5 x USB 2.0 Ports
Dimension	244 x 210mm
OS Support	Windows 11 / Linux
Operation Temp	0° C ~ 40° C
Others	1 x COM Header (w/varistor) Onboard TPM IC 2.0



MODEL NAME	H610H7-TI5
Form Factor	Mini-ITX
Chipset	Intel® H610 Chipset
CPU	Intel® 12th & 13th & 14th Gen Processors for LGA 1700 Socket (TDP 65W Max.)
Memory	2 x SO-DIMMs, DDR5 5600MHz, Up to 64GB
Storage	2 x SATA 6Gb/s Ports
Expansion Slots	1 x M.2 2280 Slot for SATA/ PCIe x4 Gen 3 SSD 1 x M.2 2230 Slot for WLAN card
Video Output	1 x HDMI 2.0 1 x VGA 1 x LVDS
Audio	2-Channel HD Audio
Ethernet	1 x Gigabit LAN
USB	2 x USB 3.2 Gen2x1 Ports 2 x USB 3.2 Gen1x1 Ports 5 x USB 2.0 Ports
Dimension	170 x 170mm
OS Support	Supports Windows 11
Operation Temp	0° C ~ 50° C
Others	1 x COM header 1 x DMIC & speaker header 1 x BLKT_PWR jumper (19V/12V) 1 x LCD_PWR jumper (5V/12V) 1 x TPM IC (Optional)



MODEL NAME	H610H7-IM1
Form Factor	Micro-ATX
Chipset	Intel® H610 Chipset
CPU	Intel® 12th & 13th & 14th Gen Processors for LGA 1700 socket
Memory	2 x DIMMs, Dual Channel DDR4 3200MHz, Up to 64GB
Storage	4 x SATA 6Gb/s Ports
Expansion Slots	1 x PCI Express x16 Gen4 Slot 1 x PCI Express x16 Gen3 Slot (x4 signal) 1 x PCI Express x1 Gen3 Slot 1 x PCI Slot 1 x M.2 supports 2280 PCIe x4 Gen3 SSD
Video Output	1 x HDMI Port 1 x DP Port 1 x D-Sub Port
Audio	Realtek ALC897 HD Audio CODEC
Ethernet	1 x Intel i219V Gigabit LAN 1 x Intel i226V 2.5 Gbps LAN
USB	2 x USB 3.2 Gen2x1 Ports 4 x USB 3.2 Gen1x1 Ports 6 x USB 2.0 Ports
Dimension	244 x 244mm
OS Support	Windows 11 / Linux
Operation Temp	0° C ~ 50° C
Others	10 x COM ports Dual LAN TPM AMP for speaker



MODEL NAME	A520AM4-M3
Form Factor	Micro-ATX
Chipset	AMD A520
CPU	AMD Ryzen™ 5000 Series/ 4000 G-Series/ 3000 Series Desktop Processors for Socket AM4 (TDP 65W Max.)
Memory	2 x DIMMs, DDR4 3200MHz, Up to 64GB
Storage	4 x SATA 6Gb/s Ports (Supports RAID 0, 1, 10)
Expansion Slots	1 x M.2 2242/2260/2280 Slot for SATA PCIe x4 Gen 3 SSD 1 x PCIe x16 Gen 3 Slot 1 x PCIe x1 Gen 2 Slot
Video Output	1 x HDMI Port 1 x DisplayPort 1 x VGA Port
Audio	6-Channel (5.1) HD Audio
Ethernet	1 x Gigabit LAN
USB	4 x USB 3.2 Gen 1x1 6 x USB 2.0
Dimension	220 x 205 mm
OS Support	Supports Windows 11
Operation Temp	0° C ~ 50° C
Others	1 x COM Header



MODEL NAME	A520AM4-M9
Form Factor	Micro-ATX
Chipset	AMD A520
CPU	AMD Ryzen™ 5000 Series/ 4000 G-Series/ 3000 Series Desktop Processors for Socket AM4 (TDP 95W Max.)
Memory	2 x DIMMs, DDR4 3200MHz, Up to 64GB
Storage	4 x SATA 6Gb/s Ports (Supports RAID 0, 1, 10)
Expansion Slots	1 x M.2 2280 Slot for SATA/ PCIe x4 Gen 3 SSD 1 x PCIe x16 Gen 3 Slot 1 x PCIe x1 Gen 2 Slot 1 x M.2 2230 Slot for WLAN/ Bluetooth
Video Output	1 x HDMI Port 1 x DisplayPort 1 x VGA Port
Audio	6-Channel (5.1) HD Audio
Ethernet	1 x Gigabit LAN (Supports DASH)
USB	1 x USB 3.2 Gen 1x1 Type C 3 x USB 3.2 Gen 1x1 6 x USB 2.0
Dimension	244 x 205 mm
OS Support	Supports Windows 11
Operation Temp	0° C ~ 50° C
Others	2 x COM/ 1 x LPT/ 1 x Speaker Headers TPM IC Onboard 8-pin CPU Power Connector



MODEL NAME	A300AM4-TI5
Form Factor	Thin Mini-ITX
Chipset	AMD A300 Knoll
CPU	AMD Ryzen™ 5000 Series/ 4000 G-Series/ 3000 Series Desktop Processors for Socket AM4 (TDP 65W Max.)
Memory	2 x SO-DIMMs, DDR4 3200MHz max. Up to 64GB
Storage	2 x SATA 6Gb/s Ports
Expansion Slots	1 x M.2 2242/2280 for SATA/ PCIe x4 Gen 3 SSD 1 x M.2 2230 Slot for WLAN/ Bluetooth
Video Output	1 x HDMI 1 x VGA 1 x Internal HDMI (Optional) 1 x COM (Optional)
Audio	6-Channel (5.1) HD Audio
Ethernet	1 x Gigabit LAN
USB	4 x USB 3.2 Gen 1x1 5 x USB 2.0
Dimension	170 x 170mm
OS Support	Supports Windows 11
Operation Temp	0° C ~ 50° C
Others	30-pin LVDS Connector 4-pin Power Connector 3 x USB 2.0 Headers for Card Reader/ Camera/ Touch Panel COM Port (Optional)



MODEL NAME	ADLN-I3
Form Factor	Mini-ITX
Chipset	N/A
CPU	Intel® Alder Lake-N SoC
Memory	1 x SO-DIMM, DDR4 3200MHz, Up to 16GB
Storage	1 x SATA 6Gb/s Port
Expansion Slots	1 x PCIe x1 Slot 1 x M.2 supports 2280 Slot for SATA/ PCIe SSD 1 x M.2 supports 2230 KEY E CNVi & WLAN
Video Output	1 x HDMI Port 1 x DisplayPort 1 x VGA Port 1 x LVDS Port
Audio	Realtek ALC897 HD Audio CODEC
Ethernet	2 x Realtek RTL8111H Gigabit LAN
USB	4 x USB 3.2 Gen2x1 Ports 4 x USB 2.0 Ports
Dimension	170 x 170mm
OS Support	Windows 11 / Linux
Operation Temp	0° C ~ 40° C
Others	1 x LPT, Case Open, Front Panel, Front Audio, TPM header 2 x COM Headers (RS-232, 8 Ports Internal) 1 x COM1: RS232 support 5/12V / RI (default) Jumper select (real I/O) RS232/422/485, BIOS selectable 1 x COM2: RS232/422/485, BIOS selectable (real I/O)



MODEL NAME	ADLN-I
Form Factor	Mini-ITX
Chipset	N/A
CPU	Intel® Alder Lake-N SoC
Memory	1 x SO-DIMM, DDR4 3200MHz, Up to 16GB
Storage	2 x SATA 6Gb/s Ports
Expansion Slots	*SATA PORT 2 share with M.2 1 x M.2 supports 2280 Slot for SATA/ PCIe SSD 1 x M.2 supports 2230 KEY E CNVi & WLAN
Video Output	1 x HDMI Port 1 x DisplayPort 1 x VGA Port
Audio	Realtek ALC897 HD Audio CODEC
Ethernet	1 x Realtek RTL8111H Gigabit LAN
USB	2 x USB 3.2 Gen2x1 Ports 2 x USB 3.2 Gen1x1 Ports 6 x USB 2.0 Ports
Dimension	170 x 170mm
OS Support	Windows 11 / Linux
Operation Temp	0° C ~ 40° C
Others	1 x COM Port



MODEL NAME	BAT-I2
Form Factor	Mini-ITX
Chipset	N/A
CPU	Intel® Celeron® Processor J1800 Intel® Celeron® Processor J1900
Memory	1 x SO-DIMM, DDR3 1333MHz, Up to 8GB
Storage	2 x SATA 3Gb/s Ports
Expansion Slots	1 x mini PCIe Slot for WLAN/ Bluetooth
Video Output	1 x HDMI 1 x VGA
Audio	6-Channel (5.1) HD Audio
USB	1 x USB 3.2 Gen 1x1 6 x USB2.0
Dimension	170 x 170mm
OS Support	Supports Windows 10
Operation Temp	0° C ~ 50° C
Others	2 x COM/ 1 x LPT Header (Optional) LVDS or eDP (Optional)



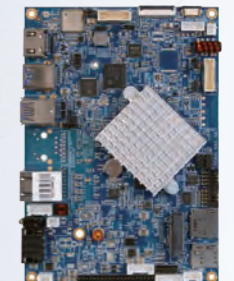
MODEL NAME	Z790H7-AQF GAMING	W790E1-CE	Z790H7-ABK Lite GAMING
CPU	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® Sapphire Rapids-64L Processors for LGA4677 Socket(TDP up to 250W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)
CHIPSET	Intel Z790	Intel® W790 Chipset	Intel Z790
MEMORY	4 DIMMs/2 Channels DDR5 6400+MHz(OC) Max up to: 192GB	8 x R-DIMMs, DDR5 Max up to: 512GB	4 DIMMs/2 Channels DDR5 7200+MHz(OC) Max up to: 192GB
GRAPHICS	1 x HDMI + 1 x DP	NA	1 x HDMI + 1 x DP
LAN	Intel I226-V 10/100/1000/2.5G	Intel I226-LM 2.5G LAN Controller Realtek 8126 5G LAN Controller	Realtek 8125B 10/100/1000/2.5G
DIMENSION	ATX, 305mm x 244mm	CEB, 304.8mm x 266.7mm	ATX, 305mm x 244mm



MODEL NAME	B650A5-CM	A620A5-MEP	B760H7-MX2
CPU	AMD® AM5 Ryzen 7000/8000 Series for LGA1718 Socket(TDP up to 170W)	AMD® AM5 Ryzen 7000/8000 Series (TDP up to 170W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)
CHIPSET	AMD® B650 Chipset	AMD A620	Intel B760
MEMORY	4 x DIMMs, DDR5 6000+MHz Max up to: 128GB	4 DIMMs/2 Channels DDR5 6000+MHz(OC) Max up to: 192GB	4 DIMMs/2 Channels DDR5 6000+MHz(OC) Max up to: 192GB
GRAPHICS	1 x VGA + 1 x DP + 1 x HDMI	1 x HDMI + 1 x DP	1 x HDMI + 1 x DVI
LAN	Realtek 8125BG 2.5G LAN Controller	Realtek 8125BG 10/100/1000/2.5G	Realtek 8125B 10/100/1000/2.5G
DIMENSION	Micro-ATX, 244mm x 244mm	mATX, 244mm x 244mm	mATX, 244mm x 244mm



MODEL NAME	B760H7-MBK Lite GAMING	B760H7-TBK Lite GAMING	B760H7-CM
CPU	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® 13~14 Gen Core™ Processors for LGA1700 Socket(TDP up to 65W)
CHIPSET	Intel B760	Intel B760	Intel® B760 Chipset
MEMORY	4 DIMMs/2 Channels DDR5 6000+MHz(OC) Max up to: 192GB	2 DIMMs/2 Channels DDR5 6400+MHz(OC) Max up to: 96GB	4 x DIMMs, DDR5 5200 MHz Max up to: 128GB
GRAPHICS	1 x HDMI + 1 x DP	1 x HDMI + 1 x DP	1 x DP + 1 x HDMI
LAN	Realtek 8125B 10/100/1000/2.5G	Realtek 8125B 10/100/1000/2.5G	Realtek 8125BG 2.5G LAN Controller
DIMENSION	mATX, 244mm x 244mm	Mini ITX, 170mm x 170mm	Micro-ATX, 244mm x 244mm



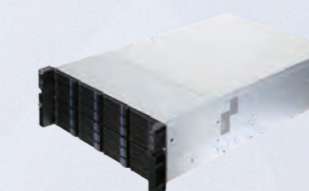
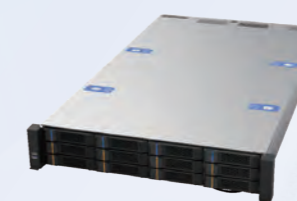
MODEL NAME	B760H7-MEZ	B760H7-TEP	RK3568-IS1
CPU	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Quad-core Cortex-A55 up to 2.0GHz
CHIPSET	Intel B760	Intel B760	RK3568 Quad Cortex-A55@2Ghz
MEMORY	4 DIMMs/2 Channels DDR5 6000+MHz(OC) Max up to: 192GB	2 DIMMs/2 Channels DDR5 6400+MHz(OC) Max up to: 96GB	2GB/4GB/8GB DDR3 LPDDR4X
GRAPHICS	1 x HDMI + 1 x DP	1 x HDMI + 1 x DP	1 x HDMI Port 1 x eDP Port 1 x LVDS Port
LAN	Realtek 8125B 10/100/1000/2.5G	Realtek 8125B 10/100/1000/2.5G	2 x LAN Interfaces (LAN2 optional)
DIMENSION	mATX, 244mm x 244mm	Mini ITX, 170mm x 170mm	3.5-inch SBC, 146mm x 101mm



MODEL NAME	H610H6-MD	H610H6-MEP	H610H6-MS
CPU	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)
CHIPSET	Intel H610	Intel H610	Intel H610
MEMORY	2 DIMMs/2 Channels DDR5 5600+MHz(OC) Max up to: 96GB	2 DIMMs/2 Channels DDR4 3200 MHz Max up to: 64GB	2 DIMMs/2 Channels DDR4 3200 MHz Max up to: 64GB
GRAPHICS	1 x HDMI	1 x HDMI	1 x HDMI + 1 x DP
LAN	Intel I219V 10/100/1000	Intel I219V 10/100/1000	Realtek 8111H 10/100/1000
DIMENSION	mATX, 236mm x 208mm	mATX, 236mm x 208mm	mATX, 216mm x 228mm



MODEL NAME	H610H6-MP3	B650A5-MS
CPU	Intel® 12~14 Gen Core™ Processors (TDP up to 125W)	AMD® AM5 Ryzen 7000/8000 Series (TDP up to 170W)
CHIPSET	Intel H610	AMD B650
MEMORY	2 DIMMs/2 Channels DDR4 3200 MHz Max up to: 64GB	2 DIMMs/2 Channels DDR5 6000+MHz(OC) Max up to: 96GB
GRAPHICS	1 x HDMI	1 x HDMI + 1 x DP
LAN	Realtek 8111H 10/100/1000	Realtek 8125BG 10/100/1000/2.5G
DIMENSION	mATX, 198mm x 228mm	mATX, 235mm x 221mm



MODEL NAME	C55CAL	F56CAL
CPU	x86 platform dual port 32 cores processor TDP up to 290W	x86 platform dual port 32 cores processor TDP up to 290W
MEMORY	DDR4 speed up to 3200MHz System RDIMM 16G/32G/64G*16 channel (Max:2048G)	DDR4 speed up to 3200MHz RDIMM 16GB/32GB/64GB*16 channel (Max:1024G) 1DIMM per channel
NIC	25G dual port 100G four port Support OCP 3.0 form factor	On board 1G Optional NIC card by PCIe slot
OS DISK	M.2 2280 SATA on board*2 Support up to 1T	M.2 2280 Key M Type SSD (PCI-E(NVME support)) on board*1
HDD	Max support 3.5" SATA/SAS SATA3 6Gb/ s7200 or up to 12000 RPM x12	3.5" SATA/SAS SATA3 6Gb/s7200, Max 36bays, front 24/rear 12
SSD	Max support U.2 * 24SFF Bays	2.5" HDD can be locked up on the 3.5" HDD tray 2x Rear SATA HDD ports via SATA cable from minisas ports(Option)
PSU	1600W/2000W based on the system simulation. Support redundant 1+1	1600W above PSU base on the system simulation. Support redundant 1+1
REAR I/O PORTS	3x USB3.0 1x VGA 1x Serial port (RJ45) 1x Management port (RJ45)	D-SUB with RS232 comport LAN port *1(BMC) USB 3.0*2 Dual 1G port Power button
FRONT I/O	1 x USB2.0 [Upper] + 1 x USB3.0 [Lower] 1 x VGA Port 1x Power Switch 1x ID Switch 1 x Reset Switch	Power Button with LED Reset Button UID button with LED HDD Status LED System Alarm LED LAN1 Activity LED LAN2 Activity LED USB 3.0
RAID	SAS x16 Ports, RAID 0/1/10/5, Broad- com 9560 or HBA 9500(option)	NA
OS	Customized Kernel	Customized Kernel
BMC	AST 2500	AST 2500
DIMENSION	438mmX770mmX87mm (WxLxH)	699mmX432mmX176mm (WxLxH)



MODEL NAME	TM10AN	EH20QT	SH20JL1
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	Intel N100 / Quad Core / 3.40 GHz	SC 7180 (QSIP 7180)	Intel® Celeron® Processor N4500 (4M Cache, up to 2.80 GHz) Intel® Celeron® Processor N5100 (4M Cache, up to 2.80 GHz) Intel® Pentium® Silver N6000 Processor (4M Cache, up to 3.30 GHz)
GRAPHIC CARD	Intel® UHD Graphics@750 MHz	Adreno GPU 618	Intel® UHD Graphics, Frequency up to 750/800 MHz Intel® UHD Graphics, Frequency up to 850 MHz
MEMORY	DDR4 SDRAM, Detachable Max up to: 4GB	LPDDR4X, speed up to 2133 MHz Max up to: 4GB	DDR4 SO-DIMM, speed up to 2993 MT/s RAM socket*1 Max up to: 16GB
STORAGE	Up to 256GB SSD	Up to 64GB eMMC 5.1	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD
DIMENSIONS	264.9(W) x 169.5(D) x 12.6(H) mm	305.8(W) x 225.0(D) x 22.8(H) mm	287(W) x 199(D) x 19.9(H) mm
WEIGHT	650g	1.44kg	1.07kg
SCREEN	10.95" WUXGA (2000*1200), IPS, Touch screen	11.6" HD (1366 x 768), TN, Touch screen	11.6" HD (1366 x 768), IPS, Non-Touch screen 11.6" HD (1366 x 768), TN, Non-Touch screen
BATTERY	48W/7.6V/6300mAh	Li-Polymer Battery, 2 cells, 2S1P/7.6V/4000mAh/30.4Wh Li-Polymer Battery, 2 cells, 2S1P/7.4V/5000mAh/37Wh	Li-Polymer Battery, 2 cells, 2S1P/7.6V/4000mAh/30.4Wh Li-Polymer Battery, 2 cells, 2S1P/7.6V/5530mAh/42Wh
CAMERA	Front Camera 2.0MP Rear Camera 5.0MP AF	2.0M rotatable camera integrated microphone arrays	2.0M camera integrated microphone arrays
CONNECTIVITY	802.11 a/b/g/n/ac, ax is optional 4G LTE connectivity (Optional)	802.11ac 2x2 MIMO (QSIP 7180) 4G LTE connectivity	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 802.11ax 2x2 Combo RTL8822CE (Optional) 802.11ax 2x2 Combo RTL8852BE (Optional) WWAN/5G(Optional)
I/O PORT	1 x USB 3.0 Type-A 1 x USB 3.1 Type-C 1 x HDMI 1.4 1 x DC IN (12V/2A) / Type-C USB Port (15V/2A) 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x Docking 1 x Nano SIM card reader (Optional)	1 x USB 3.2 Gen 1 Type-C with full function 1 x USB 2.0 Type-A 1 x Micro SD card reader 1 x RJ45 Gigabit Ethernet 1 x HDMI 1.4 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x Nano SIM card reader	1 x DC-in port 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C (data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x Nano SIM card reader (Optional)
RUGGEDNESS	Compliant MIL-STD 810H standard (76cm Drop Height) IP54	Compliant MIL-STD 810H standard (100cm Drop Height) IP52	Compliant MIL-STD 810H standard (122cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP5X
STYLUS	Active Stylus	Active stylus	NA

MODEL NAME	SH20JL2	HG20JL	SG20AN1
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	Intel® Celeron® Processor N4500 (4M Cache, up to 2.80 GHz) Intel® Celeron® Processor N5100 (4M Cache, up to 2.80 GHz) Intel® Pentium® Silver N6000 Processor (4M Cache, up to 3.30 GHz)	Intel® Jasper Lake N5100/N6000/N4500	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N300 Processor (6M Cache, up to 3.80 GHz)
GRAPHIC CARD	Intel® UHD Graphics, Frequency up to 750/800 MHz Intel® UHD Graphics, Frequency up to 850 MHz	Intel® UHD Graphics	Intel® UHD Graphics, Frequency up to 750 MHz Intel® UHD Graphics, Frequency up to 1.25 GHz
MEMORY	DDR4 SO-DIMM, speed up to 2933 MT/s RAM socket*1 Max up to: 16GB	4GB/8GB/16GB	DDR4 SO-DIMM, speed up to 3200 MT/s RAM socket*1 Max up to: 16GB
STORAGE	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD	Up to 64GB/128GB EMMC Up to 128GB/256GB SSD	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD
DIMENSIONS	287(W) x 199(D) x 20.9(H) mm	293.3(W) x 210.9(D) x 22.7(H) mm	287(W) x 199(D) x 18.5(H) mm
WEIGHT	1.17kg	1.2kg	1.3kg
SCREEN	11.6" HD (1366 x 768), IPS, Touch screen 11.6" HD (1366 x 768), TN, Touch screen	11.6" HD (1366 x 768), TN, Non-Touch screen	11.6" HD (1366 x 768), IPS, Non-Touch screen 11.6" HD (1366 x 768), TN, Non-Touch screen
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.6V/4000mAh/30.4Wh Li-Polymer Battery, 2 cells, 2S1P/7.6V/5530mAh/42Wh	Lithium-ion polymer, 7.6V 5000mAh	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5400mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	F2.0MP Reversible	2.0M camera integrated microphone arrays
CONNECTIVITY	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 802.11ax 2x2 Combo RTL8822CE (Optional) 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Optional)	802.11 a/b/g/n/ac 2.4G+5G , ax is optional 4G LTE connectivity	802.11ax 2x2 Combo AX201 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Optional)
I/O PORT	1 x DC-in port 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C (data only); USB Type-C with full function (Optional) 1 x HDMI1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x Nano SIM card reader (Optional)	1 x DC-in port 3 x USB 3.0 Type-A 1 x Type-C with full function 1 x HDMI1.4 1 x Micro SD card reader 1 x Nano SIM card reader 1 x Kensington Lock 1 x Ethernet port 1 x 3.5mm Combo Audio Jack	1 x DC-in port 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C (data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x Nano SIM card reader (Optional)
RUGGEDNESS	Compliant MIL-STD 810H standard (76cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP5X	Compliant MIL-STD 810H standard (75cm Drop Height)	Compliant MIL-STD 810H standard (122cm Drop Height) IP5X
STYLUS	NA	Active Stylus	NA



MODEL NAME	SG20AN2	EP20AN2
OPERATING SYSTEM	Windows 11	Windows 11
PROCESSOR	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N300 Processor (6M Cache, up to 3.80 GHz)	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N300 Processor (6M Cache, up to 3.80 GHz)
GRAPHIC CARD	Intel® UHD Graphics, Frequency up to 750 MHz Intel® UHD Graphics, Frequency up to 1.25 GHz	Intel® UHD Graphics, Frequency up to 750MHz Intel® UHD Graphics, Frequency up to 1.25GHz
MEMORY	DDR4 SO-DIMM, speed up to 3200 MT/s RAM socket*1 Max up to: 16GB	DDR4 SO-DIMM, speed up to 3200 MT/s RAM socket*1 Max up to: 16GB
STORAGE	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD
DIMENSIONS	287(W) x 199(D) x 19.5(H) mm	287(W) x 199(D) x 19.9(H) mm
WEIGHT	1.3kg	1.3kg
SCREEN	11.6" HD (1366 x 768), IPS, Touch screen 11.6" HD (1366 x 768), TN, Touch screen	11.6" HD (1366 x 768), TN, Touch screen 11.6" HD (1366 x 768), IPS, Touch screen
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh
CAMERA	2.0M camera integrated microphone arrays	2.0M rotatable camera integrated microphone arrays
CONNECTIVITY	802.11ax 2x2 Combo AX201 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Optional)	802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Optional)
I/O PORT	1 x DC-in port 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C (data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional)	1 x DC-in port 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C (data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional)
RUGGEDNESS	Compliant MIL-STD 810H standard (76.2cm Drop Height) IP5X	Compliant MIL-STD 810H standard (76.2cm Drop Height) IP5X
STYLUS	NA	Active stylus



MODEL NAME	SG20QT1C	SG20QT2C	SG20JL1C
OPERATING SYSTEM	Chrome OS	Chrome OS	Chrome OS
PROCESSOR	Qualcomm SC7180	Qualcomm SC7180	Intel® Celeron® Processor N4500 (4M Cache, up to 2.80 GHz) Intel® Celeron® Processor N5100 (4M Cache, up to 2.80 GHz) Intel® Pentium® Silver N6000 Processor (4M Cache, up to 3.30 GHz)
GRAPHIC CARD	Adreno GPU 618	Adreno GPU 618	Intel® UHD Graphics, Frequency up to 750/800 MHz Intel® UHD Graphics, Frequency up to 850 MHz
MEMORY	LPDDR4X, speed up to 2133 MHz Max up to: 4GB	LPDDR4X, speed up to 2133 MHz Max up to: 4GB	LPDDR4X, speed up to 2133 MHz Max up to: 4GB
STORAGE	Up to 64GB eMMC 5.1	Up to 64GB eMMC 5.1	Up to 64GB eMMC 5.1
DIMENSIONS	287(W) x 199(D) x 18.5(H) mm	287(W) x 199(D) x 19.5(H) mm	287(W) x 199(D) x 18.5(H) mm
WEIGHT	1.3kg	1.3kg	1.17kg
SCREEN	11.6" HD (1366 x 768), IPS, Non-Touch screen 11.6" HD (1366 x 768), TN, Non-Touch screen	11.6" HD (1366 x 768), TN, Touch screen 11.6" HD (1366 x 768), IPS, Touch screen	11.6" HD (1366 x 768), IPS, Non-Touch screen 11.6" HD (1366 x 768), TN, Non-Touch screen
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.6V/5530mAh/42Wh Li-Polymer Battery, 2 cells, 2S1P/7.6V/4000mAh/30Wh	Li-Polymer Battery, 2 cells, 2S1P/7.6V/5530mAh/42Wh Li-Polymer Battery, 2 cells, 2S1P/7.6V/4000mAh/30Wh	Li-Polymer Battery, 2 cells, 2S1P/7.6V/5530mAh/42Wh
CAMERA	1.0M camera integrated microphone arrays	1.0M camera integrated microphone arrays	1.0M camera integrated microphone arrays
CONNECTIVITY	802.11ac 2x2 MIMO	802.11ac 2x2 MIMO	802.11ax 2x2 Combo AX201 802.11ac 2x2 Combo RTL8822CE
I/O PORT	2 x USB 3.2 Gen 1 Type-C with full function 1 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional)	2 x USB 3.2 Gen 1 Type-C with full function 1 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional)	2 x USB 3.2 Gen 1 Type-C with full function 1 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional)
RUGGEDNESS	Compliant MIL-STD 810H standard (122cm Drop Height) IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X	Compliant MIL-STD 810H standard (122cm Drop Height) IP5X
STYLUS	NA	NA	NA



MODEL NAME	EP20AN1C	EP20AN2C	SE40MD1C
OPERATING SYSTEM	Chrome OS	Chrome OS	Chrome OS
PROCESSOR	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz)	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz)	AMD Ryzen™ and Athlon™ 7020 C Series Processors, 6W AMD Ryzen™ and Athlon™ 7020 C Series Processors, 15W
GRAPHIC CARD	Intel® UHD Graphics, Frequency up to 750/800 MHz	Intel® UHD Graphics, Frequency up to 750/800 MHz	AMD NAVI2 integrated GPU
MEMORY	LPDDR5, speed up to 4800 MT/s Max up to: 8GB	LPDDR5, speed up to 4800 MT/s Max up to: 8GB	LPDDR5, speed up to 6400 MHz Max up to: 16GB
STORAGE	Up to 64GB eMMC 5.1	Up to 64GB eMMC 5.1	Up to 256GB PCIe® NVMe™ SSD
DIMENSIONS	287(W) x 199(D) x 19(H) mm	287(W) x 199(D) x 19.9(H) mm	329.2(W) x 219.25(D) x 18.8(H)mm
WEIGHT	1.3kg	1.3kg	1.52kg
SCREEN	11.6" HD (1366 x 768), IPS, Non-Touch screen 11.6" HD (1366 x 768), TN, Non-Touch screen	11.6" HD (1366 x 768), TN, Touch screen 11.6" HD (1366 x 768), IPS, Touch screen	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh	Li-Polymer Battery, 3 cells, 3S1P/11.55V/4656mAh/55Wh
CAMERA	2.0M rotatable camera integrated microphone arrays	2.0M rotatable camera integrated microphone arrays	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)
CONNECTIVITY	802.11ax 2x2 Combo MT7921	802.11ax 2x2 Combo MT7921	802.11ax 2x2 Combo MT7921
I/O PORT	1 x USB 3.2 Gen 1 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x Nano SIM card reader (Optional) 1 x Kensington Lock	2 x USB 3.2 Gen 1 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x Nano SIM card reader (Optional) 1 x Kensington Lock	2 x USB 3.2 Gen 1 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock
RUGGEDNESS	Compliant MIL-STD 810H standard (122cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP52	Compliant MIL-STD 810H standard (76cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP52	Compliant MIL-STD 810H standard (76cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP5X
STYLUS	NA	Active Stylus (Optional)	NA

MODEL NAME	SE40AN1C
OPERATING SYSTEM	Chrome OS
PROCESSOR	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N305 Processor (6M Cache, up to 3.80 GHz)
GRAPHIC CARD	Intel® UHD Graphics, Frequency up to 750 MHz Intel® UHD Graphics, Frequency up to 1.25 GHz
MEMORY	LPDDR5, speed up to 4800 MT/S Max up to: 8GB
STORAGE	Up to 128GB eMMC 5.1
DIMENSIONS	(6w) 329.2(W) x 219.25(D) x 18(H)mm (15w) 329.2(W) x 219.25(D) x 18.8(H)mm
WEIGHT	(6w) 1.4kg (15w) 1.5kg
SCREEN	14" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh Li-Polymer Battery, 3 cells, 3S1P/11.55V/4656mAh/55Wh
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)
CONNECTIVITY	802.11ax 2x2 Combo MT7921
I/O PORT	(6w SKU) 2 x USB 3.2 Gen 1 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x Kensington Lock (15w SKU) 2 x USB 3.2 Gen 1 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x Kensington Lock
RUGGEDNESS	Compliant MIL-STD 810H standard (76cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad)
STYLUS	NA



MODEL NAME	SP41MD	SP40LC	SP40BL
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	AMD Ryzen™ and Athlon™ 7020 Series Processors, 6W AMD Ryzen™ and Athlon™ 7020 Series Processors, 15W	AMD Ryzen™ 5000 series (Lucienne Zen 2) AMD Ryzen™ 7, 5700U, 4.3/1.8GHz, 8C/16T AMD Ryzen™ 5, 5500U, 4/2.1GHz, 6C/12T AMD Ryzen™ 3, 5300U, 3.85/2.6GHz, 4C/8T AMD Ryzen™ 5000 series (Cezanne Zen 3) AMD Ryzen™ 7, 5800U, 4.4/1.9GHz, 8C/16T AMD Ryzen™ 5, 5600U, 4.2/2.3GHz, 6C/12T AMD Ryzen™ 3, 5400U, 4/2.6GHz, 4C/8T	AMD Ryzen™ 5000 U-Series Processors (Barcelo, Zen3) AMD Ryzen™ 7030 U-Series Processors (Barcelo-R, Zen3)
GRAPHIC CARD	AMD NAVI2 integrated GPU	AMD Radeon Vega 7	AMD Radeon Vega 7
MEMORY	LPDDR5, speed up to 6400MHz RAM socket*1 Support up to 16GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 32GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 32GB
STORAGE	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD
DIMENSIONS	331.5(W) x 228.9(D) x 19.9(H) mm	331.5(W) x 228.9(D) x 19.9(H) mm	331.5(W) x 228.9(D) x 19.9(H) mm
WEIGHT	1.55kg	1.55kg	1.55kg
SCREEN	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)
CONNECTIVITY	802.11ax 2x2 Combo MT7921K (Optional) 802.11ax 2x2 Combo AX200 (Optional) 802.11ax 2x2 Combo RTL8822CE (Optional) 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Quectel EM05-G (Cat 4)) (Optional)	802.11ax 2x2 Combo AX200 (Optional) 802.11ax 2x2 Combo RTL8822CE (Optional) 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Quectel EM05-G (Cat 4))(Optional)	802.11ac 2x2 Combo RTL8822CE 802.11ac 1x1 Combo RTL8821CE 802.11ax 2x2 Combo AX200 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)
I/O PORT	2 x USB 3.2 Gen 1 Type-A 1 x DC-in port 1 x USB 3.2 Gen 1 Type-C (Data Only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock
RUGGEDNESS	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X



MODEL NAME	SP41HP	SE40AN	SR40AL
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	AMD Ryzen™ 8040 Series Processors, 15W-30W	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N305 Processor (6M Cache, up to 3.80 GHz)	12th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support
GRAPHIC CARD	AMD RDNA 3	Intel® UHD Graphics, frequency up to 750 MHz Intel® UHD Graphics, Frequency up to 1.25 GHz	Intel® UHD Graphics for 12th Gen Intel® Processors
MEMORY	DDR5, speed up to 5600MT/s RAM Socket*2 Support up to 64GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*1 Support up to 16GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB
STORAGE	Up to 1TB PCIe® NVMe™ SSD	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD
DIMENSIONS	331.5(W) x 228.9(D) x 19.9(H) mm	329.2(W) x 219.25(D) x 18.8(H) mm	331.5(W) x 228.9(D) x 19.9(H) mm
WEIGHT	1.55kg	1.5kg	1.55 kg
SCREEN	14" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 3 cells, 3S1P/11.55V/4656mAh/55Wh	Li-Polymer Battery, 2 cells, 2S1P/7.7V/5350mAh/41Wh Li-Polymer Battery, 2 cells, 2S1P/7.7V/5900mAh/45Wh Li-Polymer Battery, 3 cells, 3S1P /11.55V/4656mAh/55Wh	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W
CAMERA	2.0M camera integrated microphone arrays	2.0M camera integrated microphone arrays	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)
CONNECTIVITY	802.11ax 2x2 Combo RTL8852BE 802.11ax 2x2 Combo RTL8852CE (Optional)	802.11ax 2x2 Combo AX201 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(optional)	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)
I/O PORT	1 x USB3.2 Gen 2 Type-C with full function 2 x USB 3.2 Gen 1 Type-A 1 x HDMI 2.0 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x RJ45 Gigabit Ethernet 1 x DC-in port 1 x Kensington Lock	(6w SKU) 1 x DC-in port 1 x USB3.2 Gen 1 Type-C (Data Only); USB Type-C with full function (Optional) 2 x USB 3.2 Gen 1 Type-A 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x Nano SIM card reader (Optional) (15w SKU) 1 x USB 3.2 Gen 1 Type-C with full function 1 x USB3.2 Gen 1 Type-C (Data Only)(Optional) 2 x USB 3.2 Gen 1 Type-A 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock
RUGGEDNESS	IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) Spill-resistant keyboard and Touchpad (up to 300cc on keyboard / 200cc on touchpad) IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X



MODEL NAME	SR41AL	SR41RL	UP40ML
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	12th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support	13th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support	Intel® Core™ Ultra Processors with Intel vPro® Essentials support
GRAPHIC CARD	Intel® UHD Graphics for 12th Gen Intel® Processors	Intel® UHD Graphics for 13th Gen Intel® Processors	Intel® Arc™ graphics
MEMORY	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB	DDR5, speed up to 5600MT/s RAM socket*2 Support up to 64GB
STORAGE	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD
DIMENSIONS	331.5(W) x 228.9(D) x 19.9(H) mm	331.5(W) x 228.9(D) x 19.9(H) mm	313.6(W) x 224.8(D) x 16.3(H) mm
WEIGHT	1.55kg	1.55kg	1.4kg
SCREEN	14.1" (1366 x 768), TN, Non-Touch screen (Anti-Glare) 14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14.1" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	14" (1920 x 1200), IPS, Non-Touch screen (Anti-Glare) 14" (2560 x 1600), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W	Li-Polymer Battery, 3 cells, 3S1P/11.55V/4656mAh/55Wh Li-Polymer Battery, 3 cells, 3S1P/11.61V/6000mAh/70Wh
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	2.0M camera integrated microphone arrays
CONNECTIVITY	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)	802.11ax, 2x2 Combo RTL8852BE	802.11ax, 2x2 Combo RTL8852BE 802.11ax, 2x2 Combo AX211
I/O PORT	2 x USB 3.2 Gen 1 Type-A 1 x DC-in port 1 x USB 3.2 Gen 1 Type-C (Data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock	2 x USB 3.2 Gen 1 Type-A 1 x DC-in port 1 x USB 3.2 Gen 1 Type-C (Data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Micro SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet (Optional) 1 x Kensington Lock	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C with full function 1 x HDMI 2.0 1 x Thunderbolt 4 1 x 3.5mm Combo Audio Jack 1 x Micro SD card reader 1 x RJ45 Gigabit Ethernet
RUGGEDNESS	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X	Compliant MIL-STD 810H standard (76cm Drop Height) IP5X	Compliant MIL-STD 810H standard



MODEL NAME	MF50AN	MF50AL	MF51AL
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	Intel® Processor N100 (6M Cache, up to 3.40 GHz) Intel® Processor N200 (6M Cache, up to 3.70 GHz) Intel® Core™ i3-N300 Processor (6M Cache, up to 3.80 GHz) Intel® Core™ i3-N305 Processor (6M Cache, up to 3.80 GHz)	12th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support	12th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support
GRAPHIC CARD	Intel® UHD Graphics, Frequency up to 750 MHz Intel® UHD Graphics, Frequency up to 1.25 GHz	Intel® UHD Graphics for 12th Gen Intel® Processors	Intel® UHD Graphics for 12th Gen Intel® Processors
MEMORY	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*1 Support up to 16GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB
STORAGE	Up to 128GB eMMC 5.1 Up to 256GB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD
DIMENSIONS	368(W) x 244(D) x 21.6(H) mm	368(W) x 244(D) x 21.6(H) mm	368(W) x 244(D) x 21.6(H) mm
WEIGHT	1.8kg	1.8kg	1.8kg
SCREEN	15.6" (1920 x 1080), IPS, Non-Touch screen	15.6" (1920 x 1080), IPS, Non-Touch screen	15.6" (1920 x 1080), IPS, Non-Touch screen
BATTERY	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W Li-Polymer Battery, 3 cells, 3S1p/11.4V/5000mAh/57W	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W Li-Polymer Battery, 3 cells, 3S1p/11.4V/5000mAh/57W	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W Li-Polymer Battery, 3 cells, 3S1p/11.4V/5000mAh/57W
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)
CONNECTIVITY	802.11ax 2x2 Combo AX201 802.11ax 2x2 Combo RTL8852BE (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)	802.11ac 1x1 Combo AC9461 802.11ac 2x2 Combo AC9560 (Optional) 802.11ax 2x2 Combo AX201 (Optional) 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)
I/O PORT	3 x USB 3.2 Gen 1 Type-A 1 x USB3.2 Gen 1 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet 1 x Kensington Lock	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet 1 x Smart Card reader (Optional) 1 x Kensington Lock	2 x USB 3.2 Gen 1 Type-A 1 x DC-in port 1 x USB 3.2 Gen 1 Type-C (Data only); USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet 1 x Smart Card reader (Optional) 1 x Kensington Lock
RUGGEDNESS	IP5X	IP5X	IP5X



MODEL NAME	MF50RL	MF51RL	NF50
OPERATING SYSTEM	Windows 11	Windows 11	Windows 11
PROCESSOR	13th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support	13th Gen Intel® Core™ U-series processors with Intel vPro® Essentials support	AMD Ryzen Lucienne 5000 series AMD Ryzen Barcelo 5000 series(Zen3) AMD Ryzen Barcelo-R 7030 series(Zen3) 12th Gen Intel® Core™ Processor,15W 13th Gen Intel® Core™ Processor.15W
GRAPHIC CARD	Intel® UHD Graphics for 13th Gen Intel® Processors	Intel® UHD Graphics for 13th Gen Intel® Processors	TBD
MEMORY	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB	DDR4 SO-DIMM, speed up to 3200MT/s RAM socket*2 Support up to 64GB	2*SODIMM DDR4 3200MT/s Max up to : 64GB
STORAGE	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD	Up to 1TB PCIe® NVMe™ SSD
DIMENSIONS	368(W) x 244(D) x 21.6(H) mm	368(W) x 244(D) x 21.6(H) mm	360.3(W) x 250.5(D) x 19.9(H)mm
WEIGHT	1.8kg	1.8kg	1.77kg
SCREEN	15.6" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	15.6" (1920 x 1080), IPS, Non-Touch screen (Anti-Glare)	15.6" (1920*1080) ,IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 3 cells, 3S1P/11.55V/4656mAh/55Wh	Li-Polymer Battery, 3 cells, 3S1p/11.4V/3950mAh/45W Li-Polymer Battery, 3 cells, 3S1p/11.4V/5000mAh/57W	Lithium-ion polymer battery 11.4V 4000mah 45Wh/11.4V 4825mah 55Wh
CAMERA	2.0M camera integrated microphone arrays	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	1MP/2MP,2*DMIC
CONNECTIVITY	802.11ax, 2x2 Combo RTL8852BE 4G LTE connectivity (Quectel EM05-E (Cat 4))(Optional)	802.11ax, 2x2 Combo RTL8852BE 802.11ax 2x2 Combo AX211 (Optional) 4G LTE connectivity(Quectel EM05-E (Cat 4))(Optional)	802.11ac/802.11ax (Optional) 4G LTE connectivity (Optional) 10/100/1000Mbps Gigabit Ethernet
I/O PORT	3 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 1 Type-C with full function 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet 1 x Smart Card reader (Optional) 1 x Kensington Lock	2 x USB 3.2 Gen 1 Type-A 1 x DC-in port 1 x USB 3.2 Gen 1 Type-C (Data only) ; USB Type-C with full function (Optional) 1 x HDMI 1.4 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Nano SIM card reader (Optional) 1 x RJ45 Gigabit Ethernet 1 x Kensington Lock	1 x USB 3.2 Gen 1 Type-A 2 x USB 3.2 Gen 1 Type-A 1 x USB 3.2 Gen 2 Type-C port with full function 1 x Micro SD Card Reader 1 x Micro SIM slot (Optional) 1 x 3.5mm Combo Audio Jack 1 x HDMI 1.4 1 x Kensington Lock
RUGGEDNESS	IP5X	IP5X	NA

MODEL NAME	CR60RL5	DP60
OPERATING SYSTEM	Windows 11	Windows 11
PROCESSOR	13th Gen Intel® Core™ H-series processors with Intel vPro® Essentials support	Intel® ML-U Series 15W Intel® ML-H Series 28W-45W (by request) CPU supports V-pro and non-V-pro (AVL)
GRAPHIC CARD	Intel® Arc™ A350M Graphics Intel® Arc™ A370M Graphics	TBD
MEMORY	DDR5 SO-DIMM, speed up to 4800 MT/s RAM socket * 2 Support up to 64GB	DDR5 speed up to 5600MT/s RAM Socket * 2 Standard System DRAM Module 8GB/16GB supported System DDR5 up to 64GB
STORAGE	Up to 1TB PCIe® NVMe™ SSD	M.2 2280 Key M Type SSD Support PCIe Gen4 NVME Support 256GB/512GB/1TB Socket * 2
DIMENSIONS	357(W) x 238.6(D) x 19.9(H) mm	356.8(W) x 244.55(D) x 17.95(H) mm
WEIGHT	15.6" Weight: 1.92kg 16" Weight: 1.95kg	TBD
SCREEN	15.6" (1920 x 1080) (Anti-Glare) 45% NTSC 15.6" (1920 x 1080) (Anti-Glare) 72% NTSC 15.6" (3840 x 2160) UHD 4K 16" (1920 x 1200) 60Hz sRGB 100% 16" (1920 x 1200) 165Hz NTSC 45% 16" (2560 x 1600) QHD 165Hz sRGB 100%	16" FHD (1920 x 1200), IPS, Non-Touch screen (Anti-Glare)
BATTERY	Li-Polymer Battery, 3 cells, 3S1p/11.55V/4656mAh/55Wh	Li-Polymer Smart-Battery 3S1P /11.55V/4656mAh/ 55Wh or3S1P /11.61V/6000mAh/ 70Wh
CAMERA	1.0M camera integrated microphone arrays 2.0M camera integrated microphone arrays (Optional)	Front 1080p(standard)+ Front 720p Infrared (IR) (Optional) Camera+Mic physical power on/off switch Camera shutter
CONNECTIVITY	802.11ac 2x2 Combo AX201 802.11ax 2x2 Combo RTL8852BE (Optional) 802.11ax 2x2 Combo AX211 (Optional)	2x2 Combo RTL8852BE/2x2 Combo AX211 (w/ vPRO) (optional)
I/O PORT	1 x DC-in port 1 x Thunderbolt™ 4 1 x USB 3.2 Gen 2 Type-C with full function (Optional) 2 x USB 3.2 Gen 2 Type-A 1 x HDMI 2.0 1 x Micro SD card reader 1 x 3.5mm Combo Audio Jack 1 x Kensington Lock 1 x RJ45 Gigabit Ethernet	3 x USB3.2 Gen 1 Type-A 1 x Type-C (USB3.2 Gen 2 + PD3.0 + DP1.2 with Alt mode support) 1 x HDMI 2.0 1 x Thunderbolt 4 1 x 3.5mm Combo Audio Jack 1 x Micro SD Card Reader 1 x LAN
RUGGEDNESS	NA	NA

Venus Series



EU 32A AC EV Charger



Socket /
Socket with Shutter

- 332A Single Phase / Three Phase for European Type
- OCPP 1.6J / OCPP2.0.1 (Upgradable) / ISO15118 (Upgradable)
- 5" IPS Display
- RFID for Membership
- Payment Terminal for Credit Card
- RCD - Type A + DC 6mA Built-in
- Hardware Daisy Chain for Sharing Internet
- Operation Temperature -35 to +55
- Safety Compliance (OCP / OVP / UVP / PEN Fault / Surge Protection)
- Multi Connectivity - Ethernet RJ45 / WiFi / LTE
- MID Meter
- IP55 / IK10 Enclosure
- Certification IEC61851 / EN17186 / EN303645 / RCM / UKCA / UK EV Regulation / PTB
- Designed components with -40 to +85 condition
- Customization Available

EU 32A AC EV Charger



- 332A Single Phase / Three Phase for European Type
- OCPP 1.6J / OCPP2.0.1 (Upgradable) / ISO15118 (Upgradable)
- 5" IPS Display
- RFID for Membership
- Payment Terminal for Credit Card
- RCD - Type A + DC 6mA Built-in
- Hardware Daisy Chain for Sharing Internet
- Operation Temperature -35 to +55
- Safety Compliance (OCP / OVP / UVP / PEN Fault / Surge Protection)
- Multi Connectivity - Ethernet RJ45 / WiFi / LTE
- MID Meter
- IP55 / IK10 Enclosure
- Certification IEC61851 / EN17186 / EN303645 / RCM / UKCA / UK EV Regulation / PTB
- Designed components with -40 to +85 condition
- Customization Available

UL 50A AC EV Charger



- 50A Single Phase
- OCPP 1.6J / OCPP2.0.1 (Upgradable) / ISO15118 (Upgradable)
- 5" IPS Display
- RFID for Membership
- Payment Terminal for Credit Card
- Operation Temperature -35 to +55
- Safety Compliance (OCP / OVP / UVP / Surge Protection)
- Multi Connectivity - Ethernet RJ45 / Wi-Fi / LTE
- NEMA4 / IK10 Enclosure
- SAEJ1772/NACS Charging Plug Available
- NACS to SAEJ1772 Adaptor
- Certification UL2231-1 / UL2231-2 / UL991 / UL1998/UL2594/Energy Star/CTEP
- Designed components with -40 to +85 condition
- Customization Available

Mercury Series

EU 32A AC EV Charger



Socket /
Socket with Shutter

- 32A Single Phase / Three Phase for European
- OCPP 1.6J
- Safety Compliance Built-in (OCP / OVP / UVP / Surge Protection)
- Multi Connectivity – Ethernet RJ45 / WiFi / LTE (Optional)
- RFID Personal Identification
- Build-in Digital Meter
- IP55 / IK10 Enclosure
- Certification (IEC 61851)
- Customization Available

EU 32A AC EV Charger



- 32A Single Phase / Three Phase for European
- OCPP 1.6J
- Safety Compliance Built-in (OCP / OVP / UVP / Surge Protection)
- Multi Connectivity – Ethernet RJ45 / WiFi / LTE (Optional)
- RFID Personal Identification
- Build-in Digital Meter
- IP55 / IK10 Enclosure
- Certification (IEC 61851 / IEC 62196)
- Customization Available

CNS 32A AC EV Charger



- 32A Single Phase for CNS
- OCPP 1.6J
- Safety Compliance Built-in (OCP / OVP / UVP)
- Multi Connectivity – Ethernet RJ45 / WiFi / LTE (Optional)
- RFID Personal Identification
- Build-in Digital Meter
- IP55 / IK10 Enclosure
- Certification (CNS 15511 / CNS 14165 / CNS 15700)
- SAE J1772 Charging Cable
- Customization Available

EV Charger Software Solution



Scalability

Scaled up or down to meet the needs of any business.



User Friendly

Align with service providers dedicated to bringing user-friendly solutions.



Interoperability

With strong interoperability, device connection can be easily completed.

Solution: Cloud to Cloud



EVSE
OCPP standard EV Charger



ECSIPC EVSE Management System (CSMS)

REST API



Operation System (Cloud)

System Integrator engagement for Cloud REST API requirement

- ECSIPC management platform provides REST API for the cloud to cloud applications.
- Easy to add EV Charger functions to your cloud software applications.

The information may be subject to change without prior notice.

Charging Station Management System (CSMS)



Mobile APP



Friendly Charging Station Management

The administrator can remote access and manage charging stations via ECSIPC CSMS.

Smart Charging / Load Balance

The system can not only keep all chargers balanced charging in one area, but also process optimized charging schedule based on off-peak electricity price.

Customized REST API Service

CSMS provides REST API for cloud to cloud applications and it enables the operators, such as shopping mall, hotel, restaurant, parking lot owners, offering the hustle-free EV charging service.

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