ASUS®

No.1 in Quality and Services

-The Wall Street Journal Asia

2018 Business Guide

Motherboard, Mini PC, Business Router, Single Board Computer & LCD Monitor

ASUS®
IN SEARCH OF INCREDIBLE

ASUS is one of Fortune magazine's World's Most Admired Companies, and is dedicated to creating products for today and tomorrow's smart life. Our comprehensive portfolio includes Zenbo, ZenFone, ZenBook and a range of IT devices and components, along with AR, VR and IoT. ASUS employs more than 16,000 people worldwide and over 5,000 world-class R&D talents. Driven by innovation and committed to quality, the company won 4,511 awards and earned approximately US$13 billion of revenue in 2017.

2018 THOMSON REUTERS TOP100 GLOBAL TECH LEADER

Thomson Reuters selected ASUS as a 2018 Top 100 Global Technology Leader which identifies the tech industry's most operationally sound and financially successful organizations.

Interbrand has honored ASUS as Taiwan's most valuable brand for five consecutive years (since 2013).

Forbes 2017 GLOBAL TOP REGARDED COMPANIES 2000

Forbes ranked ASUS #26 in the Top Regarded Companies list from their 2017 Global 2000 rankings.

Fortune has praised ASUS as one of the World's Most Admired Companies in the tech industry.

EXCLUSIVE FOR BUSINESSES

24/7 Reliability Test

Optimized for 24/7 operations, each motherboard is tested under temperatures of up to 45°C and humidity levels of up to 80% to ensure it can handle a wide range of conditions in different locations.

EOL Notice and ECN Control

ASUS issues an Engineering Change Notice (ECN) before product revisions, an end-of-life (EOL) notice six months before a product's EOL, and a Last Buy Order (LBO) notice three months prior to EOL - allowing lead time for your organization to prepare for product transition.

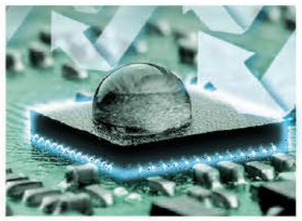
*ECN control for mini PCs is available on request.

Customized BIOS

Customization allows for more efficient IT systems and lower costs of software management. Customized BIOS settings can be applied to your PCs during manufacturing, according to your network and security needs. In addition, ASUS Control Center, a centralized IT-management suite, lets you customize each BIOS setting: change the boot order of devices, set administrative passwords, and enable/disable output interfaces like USB ports, for example.

Anti-sulfur Resistors

Considering the long-term reliability required by commercial products, ASUS business motherboards are equipped with anti-sulfur resistors. With a high-quality ceramic body, the resistors provide excellent protection against sulfuration, ensuring ASUS business motherboards can withstand even the harshest environments.



Protective Coating

With an innovative moisture-resistant coating, the motherboard is protected against the high levels of humidity that usually build up in densely-populated environments, such as factories, libraries, data centers and internet cafes. The coating also minimizes internal corrosion by preventing the accumulation and migration of moisture — prolonging the life of your motherboard.

QUALITY THAT EXCEEDS INDUSTRY STANDARDS

Extensive testing for extreme reliability, compatibility and safety.

We are the world's biggest motherboard brand, renowned for our design thinking that revolves around users – just like you. Our engineers employ exacting standards to guarantee quality throughout the product's life, choosing the finest components for real-world protection. Our motherboards are proven to be compatible with more than 1,000 components and devices, and undergo a minimum of 7,000 hours of strict validation. That gives you the peace of mind of knowing that ASUS motherboards are fit for all environments and applications. To build your PC with the best foundations, build it with an ASUS motherboard.

Thermal Measurement
High temperatures increase the risk of failure, so every ASUS motherboard is subjected to extensive heat tests to build a thermal profile. This gives you a clear performance picture for a wide variety of situations, allowing you to plan your cooling requirements!

Temperature/Humidity Test
The combined effects of temperature and humidity are vital factors for calculating real-world reliability, so every ASUS motherboard undergoes repeated heat-humidity endurance cycles - so you know they're ready for any situation!

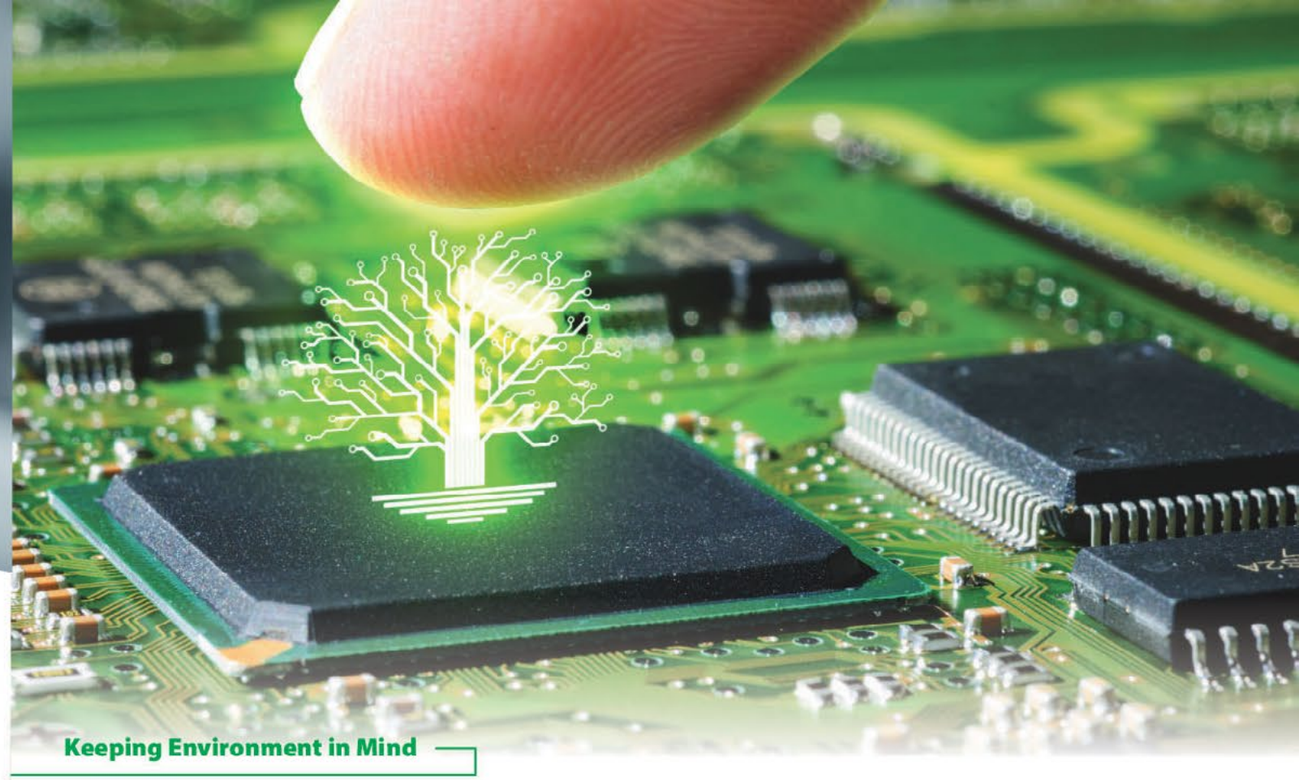
Thermal Shock Test
We put our motherboards through thermal-shock tests to prove their ability to cope with rapid temperature shifts, so they're ready to perform in extreme environments.

Acoustic Test
When you need to know about noise levels, ASUS motherboards are the way forward. We measure acoustic performance to keep noise emissions to a minimum - and that means quieter, more comfortable working environments.

Drop Test
It's a fact of life that equipment is sometimes dropped during transit, and that's why we test both our motherboards and packaging are able to withstand the occasional rigors of transportation.

Non-Operation Vibration Test
Transport vibrations literally shake up equipment, so we test ASUS motherboards for this precisely factor. Rough or smooth, ASUS motherboards are ready for every journey!

Non-Operation Shock Test
Physical handling is unavoidable, so it's good to know that ASUS motherboards are designed to cope with the real world - from the occasional knocks and bumps to everyday vibrations!



Keeping Environment in Mind

We at ASUS are fully committed to creating a sustainable future. We believe in adopting an eco-friendly approach towards every aspect of our business, and in being an active participant in environmental assessment programs for a greener tomorrow. This is where the GreenASUS philosophy comes in — from our internal practices to our production processes — we remain focused on safeguarding our planet.

Internationally Certified

Enterprise-proven and with leading quality that exceeds industry standards, ASUS is certified by multiple international safety and environmental organizations, including UL and Blue Angel. ASUS provides safe, secure and sustainable solutions, and is the

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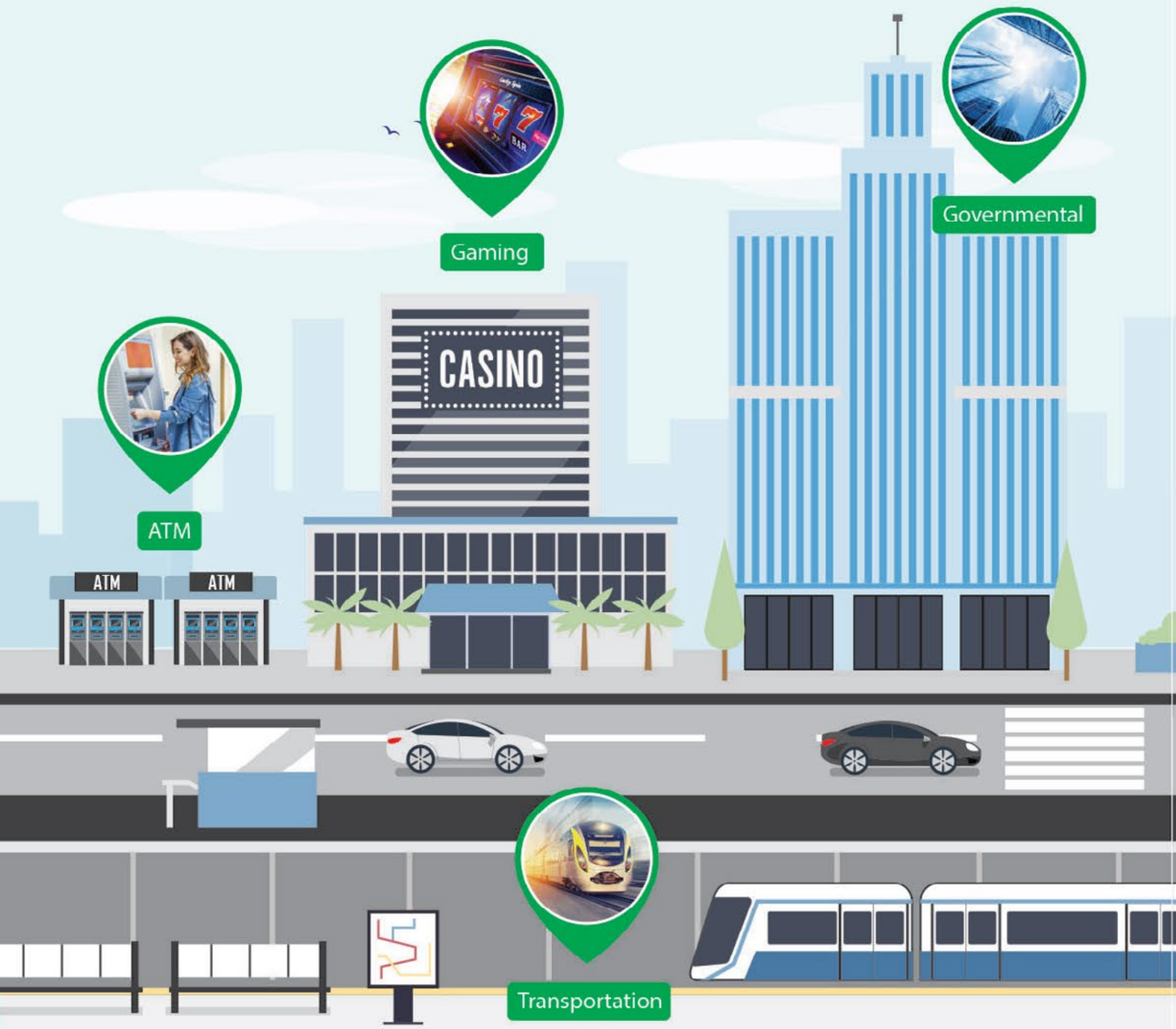
THE GLOBAL LEADER IN BUSINESS SOLUTIONS



ASUS values its relationship with businesses, no matter their size. Micro-businesses with limited IT budgets, large enterprises that require simplified remote management, sales operations that require rapid mobility and security, and designers and engineers seeking high-performance computing — all of these customers can rely on ASUS to provide complete solutions tailored to their unique technology requirements.

ASUS Business Series Motherboard, Mini PC, Industrial PC and Single Board Computer all features comprehensive system protection, 24/7 stability, and an easily customizable, improved management suite to give business customers safe, reliable and simplified IT operations.

CSM Project

CORPORATE STABLE MODEL

About this program

The ASUS Corporate Stable Model (CSM) program is designed to provide stable motherboards and mini PCs to businesses everywhere. In the 16 years that the motherboard CSM program has been operating in the United States and Canada, thousands of customers and solution providers have become part of the ASUS CSM partner network — making it the most established commercial-motherboard program currently available, with CSM boards deployed across many vertical markets. Now, we're building on that success and offering the CSM program to businesses around the world!

Each purchase of a Corporate Stable Model product includes the ASUS Control Center IT-management software suite (CSM Edition, a $60 value)*

*Program offerings may vary by region. Please consult your local sales representative for more information.
*Check the CSM model list with local sales contact.

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*ECN control for mini PCs are available on request.

Stable Supply

Supply Flexibility

As the world's No. 1 motherboard brand, ASUS has great material-supply flexibility, and is able to respond rapidly to forecast changes. Working with ASUS removes the worry about material-supply gaps.

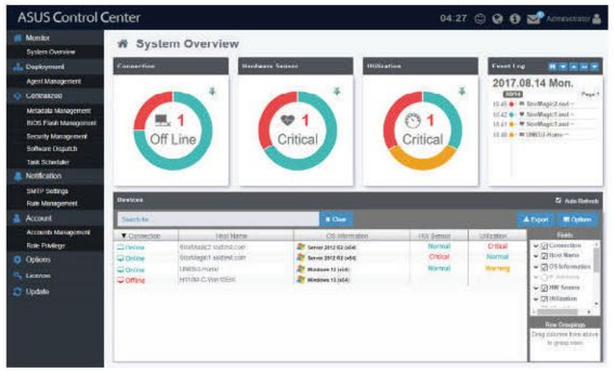
Extended Supply

Please contact your ASUS representative for information about projects requiring a supply guarantee of up to 36 months. A supply guarantee may be available with a confirmed purchase order (PO) and minimum order quantity (MOQ).

ASUS Control Center

ASUS Control Center is a centralized IT-management suite that enhances enterprise productivity with comprehensive control through a very friendly user interface. ASUS Control Center provides high visibility and the best IT-management experiences across ASUS enterprise and commercial products. Each purchase of a Corporate Stable Model entitles the customer to a copy of the ASUS Control Center IT-management software suite (CSM Edition, a $60 value).

*Enterprise edition of the ASUS Control Center is also available to customers wishing to upgrade.



For more ACC software information, please scan the below QR codes.

ACC Installation tutorial Video

ACC Features table

ASUS Control Center Video

- Hardware & Software Monitoring
- Remote Management
- Asset Management
- Mobile Control
- Security

SERVER SOLUTIONS

High Performance Computing (HPC)

High-performance computing is divided into two categories - symmetric multi-processing (SMP) and high-performance cluster (HPC). The symmetric multiprocessor architecture of symmetric multi-processing offers the installation of multiple CPUs on a single server — such as the RS720Q-E9 series 2U server with 4 nodes and shares memory and all I/O resources between the CPUs.

The cluster architecture of high-performance cluster computing consists of many servers with multiple CPUs and GPUs installed — such as the ESC8000 and ESC4000 series with support for 8 or 4 GPU.

The environments of these two architectures are very different. In SMP architectures, the CPU and memory allocation is handled by the operating system, so there is less human interface. In HPC architectures, the CPU and memory allocation is handled by the user with the operating system only responsible for the operations to return results.

ESC8000 G4

Eight GPU flexibility under a single root PCI-E topology in parallel or series

ESC8000 G4 supports up to eight double-deck GPU cards in a 4U chassis and flexible SKU transformed with PCI-E lanes topology across PLX PCI-E switch can be configured via software. Dual embedded Omni-Path 100Gbps Fabric enables high speed data transmission.

4U	2	24
Form Factor	CPU Number	Memory Number

RS700-E9

Maximize cabinet density, maximize power efficiency

RS720Q-E9 features optimized efficiency and airflow compared to previous generations. With the latest CPU technology for maximum processing performance and a modular design for ease of installation and maintenance, RS720Q-E9 is ideal for enterprise, high-performance computing (HPC) , datacenters and cloud-computing environments.

2U4N	2	12
Form Factor	CPU Number	Memory Number

WORKSTATION SOLUTIONS

Workstation Solutions

With NVIDIA® Quadro and multi graphic cards, ASUS workstations can be used in content creation and media streaming. As close partnership with NVIDIA®, ASUS workstation continues to test and verify various new graphic cards to satisfy customers' requests in systems.

Independent software vendor (ISV) software is becoming an important factor to users in variety of industries. ASUS is working in close partnership with ISV vendors, including Adobe and Autodesk, to test and verify compatibility, making sure ASUS workstations are reliable, and highly effective for users in different fields.

Virtual reality (VR) is bringing more convenient, cost effective, and time-saving way for professionals across different industries. In architecture, mechanical or interior designing, users can use VR to experience a 360-degree view of their designs, giving engineers and designers a complete understanding of their products before production.

ESC700 G3

Streamline Airflow Design with Supreme Power Solution

ESC700 G3 delivers superior flexibility and performance with Intel® 2011-v3 socket, eight DDR4 DIMM slots, and five PCI-E 3.0 x16 slots. Furthermore, ESC700 G3's layout is designed for optimal airflow, with the processor and memory slots placed in a parallel arrangement, providing optimized cooling for increased efficiency.

5U	2	8
Form Factor	CPU Number	Memory Number

TS700-E8-RS8 V2

Built with Super Speed, Ready for Hyper Scale

TS700-E8-RS8 V2 is designed for dual use server and workstation supporting extreme graphics power, optimized audio performance, BIOS flashback and Q-code logger, an easy-maintenance button. It features the latest Intel® Xeon® processor E5-2600 v3 product families, 16 DIMMs, six expansion slots, three 5.25" media bays and 1+1 Redundant 800W 80PLUS Gold Power Supply. TS700-E8-RS8 V2 is perfect for growing business applications and individual workstation users.

1	4
CPU Number	Memory Number

SERVER BOARD

Versatile server boards with standard form factor

ASUS provides versatile server boards with standard form factors, such as EEB, ATX, micro ATX, Mini ITX and follows standard mounting hole locations. Users can choose a rack or tower server chassis that can be fitted in cabinets for enterprise usage, or even a PC ATX chassis which is a cost-effective and readily available form factor. These server boards allow users to build a competitive server with a wide variety of configuration choices.

Comprehensive server management

The ASMB Series (IPMI 2.0-compliant) enables remote update BIOS, standalone KVM/Java utility, video recording and BSOD capture. Based on out-of-band management, even if the server operating system is down or offline, the KVM module can still provide round-the-clock remote monitoring and diagnosis through a web-based user-friendly graphical interface via all major browsers.

In addition, ASUS Control Center (ACC) software provides one-to-multiple centralized management including BIOS flash, software dispatch, task scheduler, remote control, and power control, all through a colorful and informative graphical interface. Through ASUS remote management solution, users can save time and effort on server management and troubleshooting.

Z11PR-D16

Ideal for datacenter rack compute node and cloud-computing environments

Z11PR-D16 comes with a wide range of ports to provide a flexible and cost-effective computing environment with the ability to grow together with your business. Dual M.2 slots provide main system disk or for memory caching to enhance data access speeds.

2 CPU Number

16 Memory Number

Z11PA-U12/10G-2S

ATX server board with high speed networking

Z11PA-U12/10G-2S features an ATX form factor with an EEB mounting hole location and lets customers benefit from up-to-date server technologies. With built-in dual 10 Gb/s SFP+ to increase data throughput and improve data transmission efficiency, Z11PA-U12/10G-2S is ideal for SMB, entry storage servers, workstation graphics applications, and high speed networking environment.

1 CPU Number

12 Memory Number

WORKSTATION BOARD

Workstation Board

Unleashing your graphic investment for maximum performance

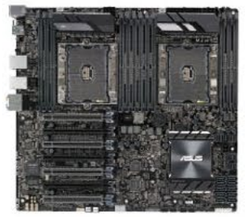
ASUS provides a variety of workstation motherboards that can accommodate up to four dual slot graphic cards, supporting up to 4-way multi graphic cards. Being the best choice for professionals who depend on powerful graphics performance for tasks such as modeling, design, simulation and 3D-rendering applications or even for multi-screen gaming and live streaming, ASUS workstation motherboards are always ready to run fast and smooth.

Expandable and scalable, customize the configuration to fit your demands

ASUS workstation motherboards are built to fit ultra-fast storage and I/O devices. With onboard M.2 sockets and U.2 connectors, NVMe SSDs can operate with a bandwidth of 32Gbps for transfer bandwidths up to 5.3x faster than traditional storage devices. Also with the rear, backward-compatible USB 3.1 Gen 2 Type-A™, reversible USB 3.1 Gen 2 Type-C™ and future proof USB 3.1 Gen2 front-panel connector, you'll experience ultimate connection flexibility and blazing data-transfer speeds of up to 10Gbps.

Stable, reliable and efficient

Each component is carefully chosen and validated to provide the best stability, reliability, and efficiency. PCIe slots are protected with ASUS SafeSlot, providing 1.6x stronger retention and 1.8x stronger shearing resistance. The DIMM slots are protected by the newly designed DDR4 Safe slots, and Dr. MOS, Beat Thermal Chokes, DIGI+VRM and ProCool Power connectors lower temperature and provide VR efficiency of +90%.



WS C621E SAGE

WS C621E SAGE supports dual Intel® Xeon® Scalable family processors with highly expandable super-fast storage options and 12 DDR4 memory slots supporting pure x16 link 4-way multi-graphics, making WS C621E SAGE excellent for running CPU, GPU or memory-intensive applications, such as content creation, modeling, simulation, 3D-rendering applications.

2 CPU Number

12 Memory Number

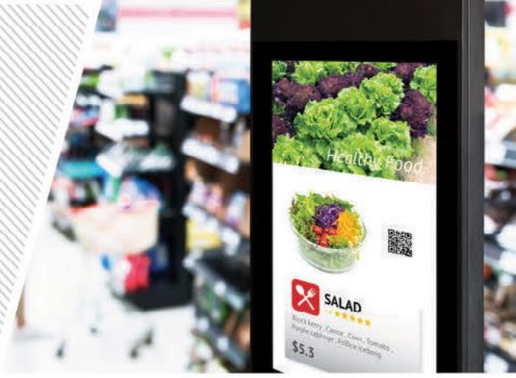
WS X299 SAGE

WS X299 SAGE is designed for extreme overclockers, or those seeking powerful performance for graphics-intensive applications, such as deep learning or 3D rendering. With the support of 4-way multi-graphic cards and the latest Intel® Core™ i9 X-Series 18 core processor, WS X299 SAGE is designed to deliver maximum performance.

1 CPU Number

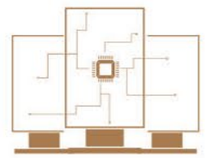
8 Memory Number

MINI PC



FEATURE

Digital Signage



ASUS Mini PCs pack all the power and functionality you need into a package so small, These miniature marvels are powered by a selection of the latest up to Intel® Core™ processors and give you up to 4K UHD graphics, extensive connectivity, and support for multiple displays. Their space-saving, low-profile design makes them perfect for a wide range of business applications, from digital signage and information kiosks to office desktops.

Conference and Meeting Rooms — Enhanced Communication

Tools that ensure a smooth and uninterrupted flow of information among staff, partners' customers and the market are essential to building trust and understanding, reaching consensus quickly, and meeting business goals. ASUS Hangouts Meet hardware kit is a full video conferencing solution, featuring an ASUS Chromebox, a 4K UHD camera, an echo-cancellation speaker mic and a touchscreen control panel. It's perfect for use in small meeting areas or large conference rooms, where users can daisy-chain up to 5 speaker mics for clearer conferencing quality.

Retail Stores and Restaurants — Ensure Efficiency During Service

ASUS has a comprehensive product range and can provide competitive tailored solutions for any retail environment, helping you make the most of your budget. ASUS Mini PC PB Series and PN Series are ideal for those with limited space and a modest budget. These mini PCs are suited for retail and commercial use and are compatible with a wide range of point of sale (POS) peripherals. ASUS Control Center (ACC) management software makes routine PC maintenance easy by supporting simple BIOS updates and automatic syncing across multiple devices.

Classroom — Use Progressive Teaching and Learning Methods

ASUS Mini PCs can help educators modernize the classroom to make learning more effective and fun. ASUS Mini PB Series and PN Series are ideal for use with digital whiteboards, and their compact designs means they are unobtrusive and can be kept easily out of sight. ASUS Chromebox 3 provides new and enriching experiences in and out of the classroom.

UN68U

ASUS VivoMini UN68U puts full-fledged performance into a lightweight mini PC that's only slightly thicker than the average laptop. It features the latest 8th Generation Intel® Core™ processor, a flexible dual-storage design and blazing-fast M.2 PCIe 3.0 x4 NVMe data transfers. Even with all this power VivoMini UN68U is a quiet performer, with a low-speed-fan design that keeps noise levels to a minimum. It'll deliver incredible 4K UHD images to a single display or HD output to up to three screens simultaneously*, making multitasking enjoyable and effortless.

Intel® 8th generation Core™ Processor

Back: 1xU2, 1xU3.1 G1
Front: 4xU3.1 G1, 1xU3.1 G1 Type-C

Back: 2xU2, 1xU3.1 G2
Front: 2xU3.1 G1, 1xU3.1 G2 Type-C, 2xU3.1 G2

Display port, RJ45 LAN, Audio Jack(s) , DC-in, HDMI

Support 4096*2160 @60Hz. (HDMI)
Support 3840*2160 @60Hz. (DP)

reddot award 2018 winner

E420/E520

ASUS VivoMini E420/E520 Unclutter your desk with the ultraslim ASUSPRO E520, a reliable mini PC powered by 7th Generation Intel® Core™ processors and fast DDR4 2400MHz memory for efficient multitasking. With business-focused features, you'll enjoy superior productivity in all professional scenarios.

E420
Intel® Celeron® Processor

E520
Intel® 8th generation Core™ Processor

E420
Back: 2xU3.1 G1
Front:1xU2, 1xU3.1 G1, 1xU3.1 G1 Type-C
E520
Back: 2xU3 G1, 1xU3.1 G1 Type-C (Support DP)
Front:1xU2, 1xU3.1 G1, 1xU3.1 G1 Type-C

E420
Configurable Port, HDMI
E520
Display Port, HDMI

Support 4096*2160 @60Hz. (HDMI)

PN Series

ASUS Mini PC PN series is an ultra-compact and lightweight mini PC ideal for a wide range of uses. Measuring just 115 x 115 x 49mm, Mini PC PN series blends easily into any environment, yet delivers great performance with the latest Intel® Celeron® , Pentium® Silver or Core™ processors. Comprehensive I/O ports — including a front-mounted USB 3.1 Gen1 Type-C port and a configurable port — provide superior connectivity and expandability. For even more flexibility, a sliding chassis design enables easy storage and memory upgrades in just two steps.

reddot award 2018 winner

PN40
Intel® Celeron® Processor
PN60
Intel® 8th generation Core™ Processor

PN40
Back: 2xU3.1 G1
Front:1xU2, 1xU3.1 G1, 1xU3.1 G1 Type-C
PN60
Back: 2xU3 G1, 1xU3.1 G1 Type-C (Support DP)
Front:1xU2, 1xU3.1 G1, 1xU3.1 G1 Type-C

PN40
Configurable Port, Mini-DP, HDMI
PN60
Configurable Port, HDMI

Support 4096*2160 @60Hz. (HDMI)

VC65-C Series

VC65-C Series mini PCs deliver staggering performance with compact dimensions and are perfect for home or office use. An embedded power adapter saves even more space, and a versatile, modular design with a selection of storage and optical drive configurations provide improved data performance and flexibility.

Intel® 8th generation Core™ Processor
Intel® Celeron and Pentium Processor

VC65-C1
Back: 2 x U3.1 G2 (1@type C), 2 x U3.1 G1
Front:1 x U3.1 G1, 1 x U3.1 G2 (@fast charging)
VC65-C
Back: 2 x U2, 2 x U3.1 G1(1@type C)
Front:2 x U3.1 G1(1@fast charging)

HDMI, DP, D-SUB

COM Port, 1 x 4-in-1 Card Reader Slot

PB Series

ASUS Mini PC PB series is an ultraslim, versatile and powerful PC suited to a range of business applications, including office computing, conference rooms, retail store kiosks and digital signage. Powered by the latest Intel® Celeron®, Pentium® Gold or Core™ T Series processors, PB series delivers desktop-grade performance. Its durable metal chassis and extensive testing exceeding industry standards ensures reliable, 24/7 operation, even in harsh environments, making PB series the perfect companion for your business.

reddot award 2018 winner

PB40
Intel® Celeron® Processor
Intel® Pentium® Processors
PB60
Intel® 8th generation Core™ Processor

PB40
Back: 1xU2, 1xU3.1 G1
Front: 4xU3.1 G1, 1xU3.1 G1 Type-C
PB60
Back: 2xU2, 1xU3.1 G2
Front: 2xU3.1 G1, 1xU3.1 G2 Type-C, 2xU3.1 G2

PB40
Configurable Port, DP, COM
PB60
Configurable Port, DP, HDMI

Support 4096*2160 @60Hz. (HDMI)
Support 3840*2160 @60Hz. (DP)

VC66-C

VC66-C mini PCs offer versatility and high-performance with desktop-grade 8th Generation Intel Core processors. Combined with fast DDR4 RAM, convenient connectivity, and a triple-storage design that fits SSDs, HDDs or a combination, VC66-C is built to suit any computing need.

Intel® 8th generation Core™ Processor
Intel® Pentium Processor

Back: 2 x U3.1 G1
Front: 2 x U2, 2 x U3.1 G1 (1@type C)

HDMI, DP, DVI-I

1 x M.2 M Key support storage with PCIe and SATA mode,
COM Port, 1 x 4-in-1 Card Reader,

iF DESIGN AWARD 2017

VivoStick & Chrome OS

VivoStick PC (TS10)

ASUS VivoStick is a pocket-sized Windows PC that gives you desktop-like computing whenever you need it. It is powered by an Intel® Atom™ processor to turn any HDMI TV, display, or projector into a fully-functional PC for work or play. VivoStick opens up a world of computing possibilities for your home, office, or anywhere else you need it.

- Intel® Atom™ Processor
- Side Port :
  1 x USB 3.0
  1 x USB 2.0
- Micro USB (For Power Only)
  USB 3.0, USB 2.0
  Audio Jack(s)
  (Mic/Headphone Combo)
- Wireless Data Network
  802.11 a/b/g/n/ac, Bluetooth V4.1

GOOD DESIGN AWARD 2015

CES INNOVATION AWARDS 2016

DESIGN AWARD 2016

Chromebit (CS10)

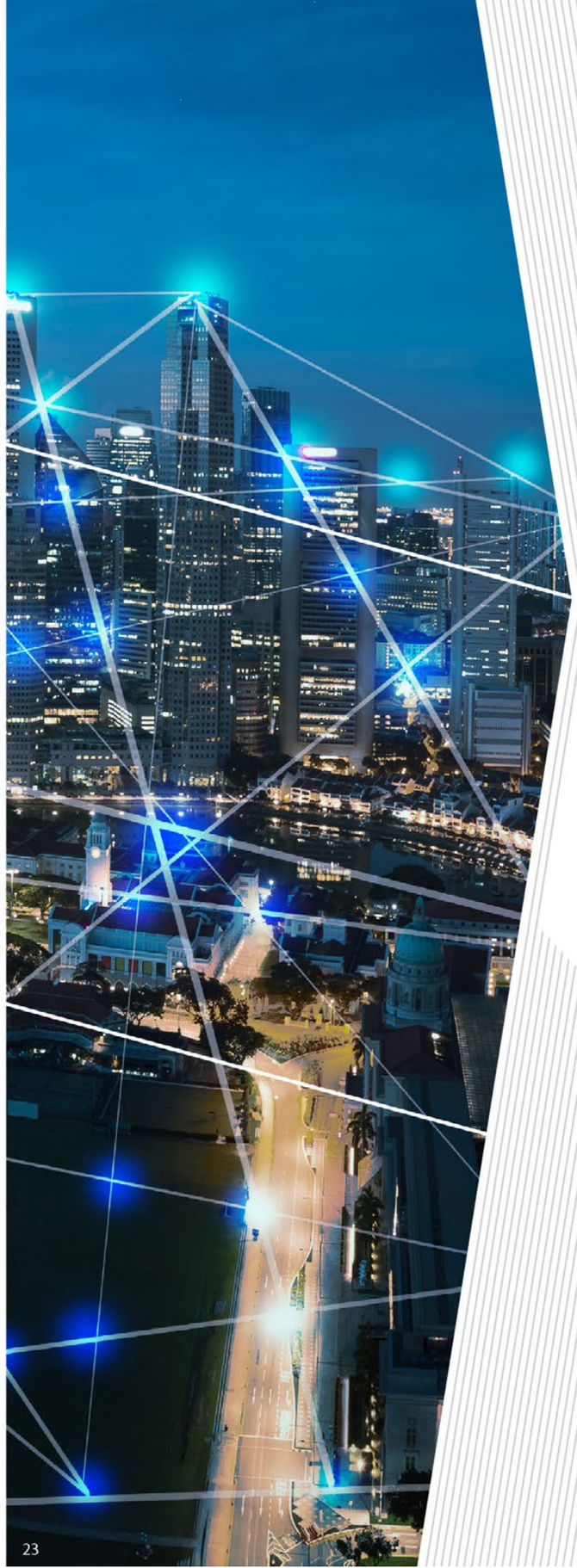
ASUS Chromebit CS10 measures just 12cm long and is the world's smallest Chrome OS device. Turning your large monitor or TV into a computer running the latest Chrome OS is easy – simply plug Chromebit CS10 into the HDMI port and pair it with a Bluetooth keyboard and mouse. Chromebit CS10 gives you all the computing essentials so you can conduct online research, catch up with friends, or watch Full HD movies on the big screen. You can even use it for business applications or digital signage and self-serve kiosks. Explore the possibilities with ASUS Chromebit CS10 – the minimalist and cost-effective computer for your home or business, you can even take it with you on the road.

- Rockchip Quad-Core Processor
- Back I/O Ports
  1 x USB 2.0
- DC in, HDMI, USB 2.0
- Wireless Data Network
  802.11 a/b/g/n/ac , Bluetooth V4.0

ASUS Chromebox 3 (CN65)

ASUS Chromebox CN60 is the world's smallest yet most powerful Chrome computer. Powered by 4th Generation Intel® processor with the latest Chrome OS ensures work gets done fast. Compact and VESA mountable to free up desk space. Chrome management console is Chrome's web-based management console that lets you easily manage users, applications or devices across your organization. Thus, it provides a low total cost of ownership (TCO) by saving on operation and maintenance costs, allowing management to focus on growing the business.

- Intel® Core™ Processor
  Intel® Celeron Processor
- Front I/O Ports
  2x USB 3.1 Gen 1
- Kensington Lock
  3 -in-1 Card Reader
  USB 3.1 Gen 1 , DC-in
  Audio jack, HDMI, RJ45 LAN
- Support 4096*2160 @60Hz. (HDMI)
  Support 3840*2160 @60Hz. (DP)



SINGLE BOARD COMPUTER

FEATURE

Fully Embedded Design

The new Tinker Board S is ideal for your business requirements, featuring a fully-embedded design, with CPU, memory, and storage onboard.

Extensive OS support

Tinker Board series supports several operating systems, with fully prepared documents for Debian 9, as well as Android 6 and 7, allowing your business to decrease product development time.

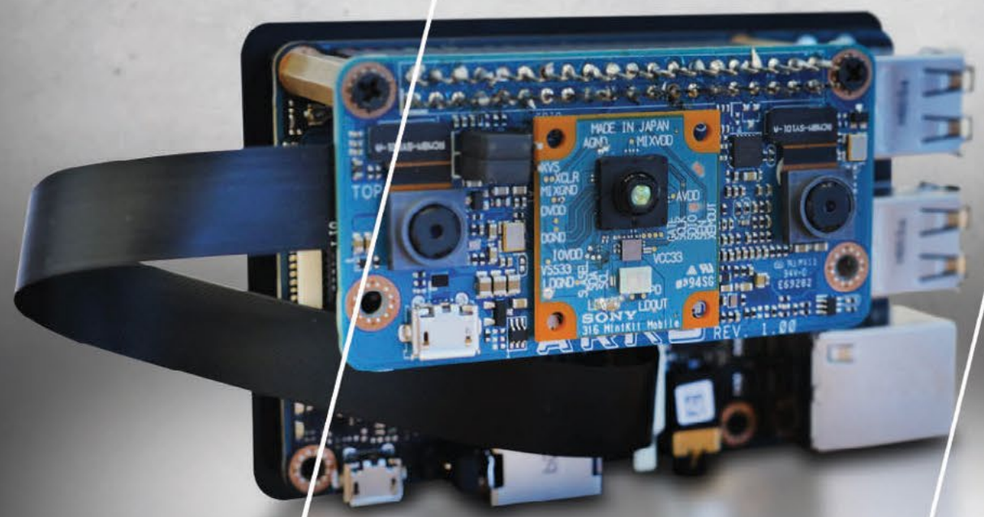
Energy-Efficient and Fanless Design

With power-efficient RISC architecture, Tinker Board series provides excellent performance with lower power consumption, in comparison to the x86 platform.

Powerful Edge Device

With a compact size, quad-core processor and 4K ready GPU, Tinker Board series also features GbE Ethernet, Wi-Fi, Bluetooth and more, and is an ideal IoT edge device.

The world's 1st 3D Depth-Sensing Kit in SBC field.



What is a ToF Depth-Sensing Camera?

A time-of-flight (ToF) camera is a range-imaging camera system that resolves distance based on the known speed of light by measuring the time of flight of a light signal between the camera and subject for each point of the image.

Usage Scenarios

The 3D ToF Depth-Sensing Camera Kit features two cameras with Sony® image sensors for stereo vision and the latest Sony active ToF sensor module for highly accurate depth data. The vision board is also equipped with a discrete digital signal processor (DSP) to accelerate the vision processing and increase flexibility for different usage scenarios.

The 3D ToF Depth-Sensing Camera Kit can be used to create accurate depth maps for various applications, such as gesture recognition, object recognition and obstacle detection. It can also be integrated in robotics and drones that require autonomous operations, as well as virtual reality, augmented reality and mixed reality systems.

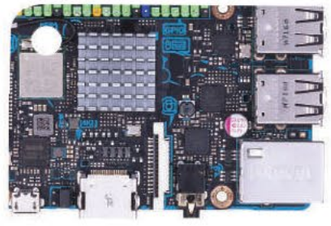
Key Features

- Faster vision performance with DSP pre-processing
- High flexibility For different purposes with DSP firmware upgrades

Single Board Computer

Tinker Board S

The new and improved Tinker Board S is a fully embedded solution, offering a business-grade single board computer in a compact size with rugged design, high flexibility and easy expansion capabilities.

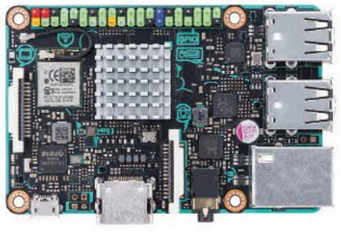


- Name card sized
- 1 x 40pin GPIO header (SPI/I2C/UART/PWM/ PCM/5V/3.3V/GND)
- C/Python API for GPIO control
- 4U2
- Operation Temp. 0~60C
  Non-operation Temp. -40~85c
  Relative Humidity: 85%

Tinker Board

The Tinker Board offers a reliable and extremely capable platform for building and tinkering customers' ideas into reality.

- Name card sized
- 1 x 40pin GPIO header (SPI/I2C/UART/PWM/ PCM/5V/3.3V/GND)
- C/Python API for GPIO control
- 4U2
- Operation Temp. 0~55C
  Non-operation Temp. -40~85c
  Relative Humidity: 85%



tinker board

Official Accessories

Power Supply

Tinker Power Supply is specially designed with a 5V/3A power output, featuring short circuit protection, over voltage protection, over current protection and over temperature protection, ensuring the power supply works safely. In addition, it has received safety validations from LPS and UL94 to further prove its quality, and is ideal for the Tinker Board series.

Aluminum Fanless Case

The Tinker Fanless Aluminum Case is designed using anodized aluminum with a gun-gray brushed surface finish, and features reserved space for peripheral expansions* and VESA mounting*. The metallic case also enhances heat dissipation, keeping your system cool at all times. In addition, a specially designed rotating assembly mechanism lets you assemble your Tinker Board with ease using only a thumbscrew, making your tinkering experience easy and enjoyable.

*Items purchased separately

Open-Case Test Bench

The Tinker Open-Case DIY Kit lets your Tinker Board keep cool in an open air environment. It also serves as a great test bench, giving makers the freedom to add peripheral extensions with no obstructions. The backplate prevents short circuiting and protects your Tinker Board from bending. Simply add the active thermal solution to help cool down your system, and you're ready for optimal performance from your Tinker Board.

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ZenScreen™ MB16AC Portable USB Monitor

Extend Your Vision. Free Your World.

One port does it all
Hybrid-signal solution: A single cable transmits power and video

Effortless mobility
Stylish ultraportable design: Weighs just 780g and features an ultra-slim 8mm profile

Automatic screen rotation
Senses the display orientation and switches to landscape and portrait modes automatically

Prop it up easily
Use the smart case or a pen to prop the monitor up in either portrait or landscape orientation

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10-point Touch | LED Backlight | Wall Mountable | QuickFit *Patent Pending | Windows 8 Compatible | ENERGY STAR | TCO CERTIFIED

ASUS VT168H Multi-Touch Monitor

10-Point Multi-touch
10-point multi-touch capability with superb image quality, flexible connectivity and great ergonomics.

Windows 10 compatible
Best compatibility and reliability with Windows10 operating system.

Slim Elegant Design
Slim Elegant Design with VESA mount

Perfect Comfort and Flexibility
Multiple video and peripheral connectors, including VGA and HDMI, making it suitable for use anywhere, either in the home or at the office.

*Product specifications are subject to change without notice, although every effort is made to ensure that they are correct up to the point of launch. Please contact your suppliers or local dealers for exact product launch schedules, specifications and availability.

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The Award-Winning Brand for Business Growth

- Unrivaled Coverage
- Dual WAN Up to 2Gbps
- Free Wi-Fi Welcome Page
- Dual Core CPU (1.7 GHz)
- Hardware IPsec VPN
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- Multi-User MIMO
- Built-In RADIUS server

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ASUS AiMesh

Powerful Whole-home Wi-Fi. The Way You Want.

Get More From Your Routers!

Turn your ASUS routers into a whole-home Wi-Fi system with a simple free firmware upgrade.

Better Than The Rest!

AiMesh Wi-Fi System		Rival Wi-Fi System
Up to 5300Mbps	Wi-Fi Speed	From 1200-3000Mbps
Use a mix of ASUS routers*	Flexibility	Fixed bundles only
Choose single or multiple SSIDs	Wi-Fi Network	Single SSID only
Supports all router features	Features	Limited router features

Seamless Wi-Fi, Everywhere!

Powerful mesh technologies deliver seamless roaming and reliable coverage in every room

*Selected models
Full list of supported models will be available on release date

			
Model Name		**ESC8000 G4**	**RS700-E9-RS12**
Processor Support		2 x Socket P0 (LGA 3647)	2 x Socket P0 (LGA 3647)
		Intel® Xeon® processor Scalable family (up to 205 W) Intel® Xeon® processors family with Omni-Path Architecture (up to 205W)	Intel® Xeon ® processor Scalable family Intel® Xeon ® processors family with Omni-Path Architecture (supported on CPU2)
		UPI 10.4 GT/s	UPI 10.4 GT/s
Core Logic		Intel® C621 PCH	Intel® C621 PCH
Memory	Total Slots	24 (6-channel per CPU, 12 DIMM per CPU)	24 (6-channel per CPU, 12 DIMM per CPU)
	Capacity	Maximum up to 3072GB	Maximum up to 3072GB
	Memory Type	DDR4 2666/2400/2133 RDIMM/LR-DIMM/LR-DIMM 3DS *Refer to ASUS server AVL for the latest update	DDR4 2666/2400 RDIMM/ LR-DIMM/LR-DIMM 3DS *Refer to ASUS server AVL for the latest update
	Memory Size	4GB, 8GB, 16GB, 32GB (RDIMM) 32GB, 64GB (LRDIMM) 64GB, 128GB (LRDIMM/RDIMM 3DS) *Refer to ASUS server AVL for the latest update	32GB, 16GB, 8GB, 4GB (RDIMM) 64GB, 32GB (LRDIMM) 128GB, 64GB (LRDIMM 3DS) *Refer to ASUS server AVL for the latest update
Expansion Slots	Total PCI/PCI-X/ PCI-E Slots	11	3+1
	Slot Type	8x PCI-E x16 (Gen3 x16 link) , FH, FL Low-profile(Rear): 2 x PCI-E x16 (Gen3 x16 link), LP, HL Low-profile(Front): 1 x PCI-E x8 (Gen3 x8 link) , LP, HL	1 x PCI-E x16 (Gen3 x16 link), FH, HL (Default for NVME4-OCuLink Card) 1 x PCI-E x16 (Gen3 x8 link), LP, HL 1 x PCI-E x8 (Gen3 x8 link), LP, HL 1 x OCP 2.0 Mezzanine (Gen3 x16 link)
	SATA Controller	Intel® 621 PCH - 8 x SATA 6Gb/s ports + 2 x M.2 connector(SATA 6Gb/s & PCI-E Gen3 x4 link) or 6 x SATA 6Gb/s ports + 2 x NVMe + 2 x M.2 connector(SATA 6Gb/s & PCI-E Gen3 x4 link) Intel® RSTe (Support software RAID 0, 1, 10 & 5) Intel® VROC (Support software RAID 0, 1, 10 & 5)	Intel® Lewisburg PCH - 10 x SATA 6Gb/s ports + 1 x M.2 connector(SATA 6Gb/s & PCI-E Gen3 x4 link) or 9 x SATA 6Gb/s ports + 2 x M.2 connector(SATA 6Gb/s & PCI-E Gen3 x4 link) Intel® RSTe (for Windows and Linux; Support software RAID 0, 1, 10 & 5)
	SAS Controller	Optional kits: ASUS PIKE II 3008 8-port SAS HBA card ASUS PIKE II 3108 8-port SAS HW RAID card 12G SAS Support	Optional kits: ASUS PIKE II 3008 8-port SAS HBA card ASUS PIKE II 3108 8-port SAS HW RAID card 12G SAS Support
HDD Bays	I = internal A or S will be hot-swappable	8 x 2.5" Hot-swap Storage Bays	12 x 2.5" Hot-swap Storage Device Bays (4 x Default NVMe,4 x Hybrid NVMe/SAS/SATA, 4 x Hybrid SAS/SATA) 2 x M.2 (22110, 2280, 2260, 2242) (Support SATA/PCIe M.2,SATA RAID) *SAS support via PIKE
Networking	LAN	1 x Dual Port Intel I350-AM2 Gigabit LAN controller 1 x Management Port	1 x Dual Port Intel® I350-AM2 Gigabit LAN controller 1 x Management Port
Infiniband		Optional kits: PEM-FDR	-
Graphic	VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Front I/O Ports		2 x USB3.0 ports 2 x USB 2.0 ports 1 x VGA port, 1 x COM port	2 x USB 3.0 ports, 1 x VGA port 2 x RJ-45 GbE LAN ports 1 x RJ-45 Mgmt LAN port
Rear I/O Ports		2 x RJ-45 GbE LAN ports 1 x RJ-45 Mgmt LAN port	Rear Switch/LED: 1 x Power switch 1 x Q-Code/Port 80 LED 1 x Message LED 1 x Drive LED 1 x Location LED
Switch/LED		Front Switch/LED: 1 x Q-Code/Port 80 LED 1 x Power switch/LED 1 x Location switch/LED 1 x HDD Access LED 1 x Message LED LAN 1-4 LED	Front Switch/LED: 1 x Power switch/LED 1 x Location LED 1 x Message LED 1 x DriveD LED LAN 1-2 LED
OS Support		Windows® Server 2016 Windows® Server 2012 R2 RedHat® Enterprise Linux SuSE® Linux Enterprise Server CentOS Ubuntu VMware Citrix XenServer Please find the latest OS support from http://www.asus.com/	Windows® Server 2016 (x86_64) indows® Server 2012 R2 RedHat® Enterprise Linux SuSE® Linux Enterprise Server CentOS Scientific Linux Ubuntu Fedora Vmware Citrix XenServer Please find the latest OS support from http://www.asus.com/
Management Solution	Software	ACC	ACC
Out of Band Remote Management		On-Board ASMB9-iKVM for KVM-over-IP	On-Board ASMB9-iKVM for KVM-over-IP
Regulatory Compliance		BSMI, CE, FCC (ClassA)	BSMI, CE, C-TICK, FCC (Class A)
Dimension		798 x 439 x 175.6 mm(4U)	686 x 444 x 44 mm(1U) 27" x 17.48" x 1.73"
Net Weight Kg (CPU, DRAM & HDD not included)		-	16.8 Kg
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)		-	18.35 Kg
Power Supply		2+1 Redundant 1600W 80PLUS Platinum Power Supply; 1600W: 100-127/200-240 Vac, 25.8/19 A, 47-63 Hz, Class I	1+1 Redundant 800W 80 PLUS Platinum Power Supply Rating: 100-127/200-240Vac, 9.4A/4.72A, 47-63Hz Class I or 240Vdc, 4.6A (240Vdc Only for China)
Environment		Operation temperature: 10℃ ~ 35℃ Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing)	Operation temperature: 10℃ ~ 35℃ on operation temperature: -40℃ ~ 60℃ Non operation humidity: 20% ~ 90% (Non condensing)

			
Model Name		Z11PA-U12	Z11PR-D16
Processor / System Bus		1 x Socket SP3 (LGA 3647)	2 x Socket P0 (LGA 3647)
		Dual Intel® Xeon® Processor Scalable Family (up to 150 W)	Intel® Xeon® processor Scalable family (Up to 150W)
Core Logic		Intel® C621 PCH	Intel® C621 PCH
Form Factor		ATX, 12" x 9.6" (EEB Mounting Hole Locations)	SSI EEB, 12" x 13"
ASUS Features	FAN speed control	V	V
	Rack Ready (Rack and Pedestal dual use)	V	-
	Rack Optimized (Dedicated for Rack)	-	V
	ASWM Enterprise	V	V
Memory	Total Slots	12 (6-channel per CPU, 12 DIMM per CPU)	16 (6-channel per CPU, 8 DIMM per CPU)
	Voltage	1.2V	1.2V
	Capacity	Maximum up to 1536GB	Maximum up to 2048GB
	Memory Type	DDR4 2666/2400/2133 RDIMM/ LRDIMM/ NVDIMM/ 3DS DIMM	DDR4 2666/2400/2133 RDIMM/LR-DIMM/ LR-DIMM 3DS
	Memory Size*	4GB, 8GB, 16GB, 32GB (RDIMM) 32GB, 64GB (LRDIMM) 64GB, 128GB (LRDIMM 3DS)	4GB, 8GB, 16GB, 32GB (RDIMM) 32GB, 64GB (LRDIMM) 64GB, 128GB (LRDIMM 3DS)
Expansion Slots (follow SSI Location #)	Total PCI/PCI-X/ PCI-E Slots	4	6+1
	Slot Location 1	1 x PCI-E x8 (x4 Gen3 Link)	1 x PCI-E x16 (X16 Gen3 Link)
	Slot Location 2	-	1 x PCI-E x8 (X8 Gen3 Link)
	Slot Location 3	1 x PCI-E x8 (x8 Gen3 Link)	1 x PCI-E x8 (x8 Gen3 Link)
	Slot Location 4	1 x PCI-E x16 (x16 Gen3 Link)(Auto switch to x8 Gen3 Link if slot 3 is occupied)(support riser)	1 x PCI-E x8 (X8 Gen3 Link)
	Slot Location 5	-	1 x PCI-E x8 (x8 Gen3 Link)
	Slot Location 6	-	1 x PCI-E x16 (X16 Gen3 Link)
	Slot Location 7	-	-
	Additional Slot 1	M.2(NGFF) support (1 x2 Gen3 Link)	OCP 2.0 module support (X16 Gen3 Link)
	Additional Slot 2	-	-
Storage	IDE Controller	-	-
	SATA Controller	13 SATA 6Gb/s ports form C621 (3xmini SAS HD + 1x SATA) 1 x M.2 (Gen3 x2 Link) connector ; NGFF Type 2280	Intel® Lewisburg C621 - 11 x SATA 6Gb/s ports (8 by 2 mini-SAS Connector) -2 x M.2 connector (SATA 6Gb/s & PCI-E Gen3 x4 link) Intel® RSTe (for Windows only; Support software RAID 0, 1, 10 & 5) Intel® VROC (for Windows only; Support software RAID 0, 1, 10 & 5)
	SAS upgrade	Optional kits: ASUS PIKE II 3008 8-port SAS 12G RAID card ASUS PIKE II 3108 8-port SAS 12G HW RAID card	Optional kits: ASUS PIKE II 3008 8-port SAS 12G RAID card ASUS PIKE II 3108 8-port SAS 12G HW RAID card
Networking	LAN	2 x Intel® I210AT 1 x Management Port with 2 x USB 3.0 ports	2 x Intel® I350-AM2 1 * Management Port
Graphic	VGA	Aspeed AST2500 64MB	Aspeed AST2500 64MB
Onboard I/O Connectors	TPM header	-	1
	PSU Connector	24-pin SSI power connector + 8-pin SSI 12V	24-pin SSI power connector + 8-pin SSI 12V
	Management Connector	Onboard ASMB9-iKVM	Onboard ASMB9-iKVM
	USB Connectors	1 x USB 3.0 pin header (up to 2 devices) 1 x USB 2.0 pin header (up to 2 devices) 2 x USB 3.0 connector (Type A USB socket)	1 x USB 3.0 pin header (up to 2 devices) 2 x USB 2.0 pin header (up to 4 devices)
	Fan Header	6 x 4pin	9 x 4pin
	SMBus	1	2
	Chassis Intruder	1	2
	Front LAN LED	2	2
	Serial Port Header	1	1
	Oculink connector	2	-
	VROC header	1	-
	M.2 Connector	1 (NGFF Type 2280)	2 (NGFF Type 2280/2260/2242)
Rear I/O Connectors	External Serial Port	-	-
	External USB Port	4x USB 3.0 2x USB2.0	2x USB 3.0
	QSFP port	-	-
	IEEE1394	-	-
	Mic/Line-in/ Line-out	-	-
	VGA Port	1	1
	SFP+	-	-
	RJ-45	2 x GbE LAN, 1 x Mgmt LAN	2 x GbE LAN, 1 x Mgmt LAN
	S/P DIF Out	-	-
Management Solution	Software	ACC	ACC
	Out of Band Remote Management	ASMB9-iKVM for KVM-over-Internet	ASMB9-iKVM for KVM-over-Internet
Monitoring	CPU Temperature	V	V
	FAN RPM	V	V
Environment		Operation temperature: 10℃ ~ 35℃ Non operation temperature: -40℃ ~ 70℃ condensing)	Operation temperature: 10℃ ~ 35℃ Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing)

			
Model Name		ESC700 G3	
Processor Support		1 x Socket R3 (LGA 2011-3)	
		Intel® Xeon® E5-2600 v4/v3 and E5-1600 v4/v3 processors Next Generation Intel® Core™ i7 processors	
Core Logic		Intel® X99 Express Chipset	
Memory	Total Slots	8 (4-channel per CPU, 8 DIMM per CPU)	
	Capacity	Maximum up to 128GB (UDIMM)/Maximum up to 256GB (RDIMM)	
	Memory Type	DDR4 2400/2133 ECC/non-ECC UDIMM DDR4 2400/2133 ECC RDIMM (Refer to www.asus.com for detail memory AVL & CPU Support list)	
	Memory Size	8GB, 16GB(UDIMM) / 8GB, 16GB, 32GB(RDIMM)	
Expansion Slots	Total PCI/PCI-X/ PCI-E Slots	5	
	Slot Type	40-Lane CPU- 5 x PCI Express 3.0/2.0 x16 Slots (x16, x16/x16, x16/x16/x8, x8/x8/x8/x8 Mode)* 28-Lane CPU- 5 x PCI Express 3.0/2.0 x16 Slots (x16, x16/x8, x16/x8/x4, x8/x8/x8/x4 Mode)* *When Installing 28-Lane CPU, PCIe 3.0/2.0x16_4 cannot Work	
	SATA Controller	Intel® X99 Express Chipset with RAID 0, 1, 5, 10 (Controller 1 and Controller 2) 8 x SATA 6.0 Gb/s Ports (4 x Right Angle Connectors from Controller 1 , 4 x Vertical Connectors from Controller 2) 1 x SATA Express port (gray, compatible with 2 x SATA 6.0 Gb/s ports) 1 x M.2 Socket 3 with M Key, type 2260/2280 storage devices support (SATA/PCIE mode)* *M.2 Socket 3 shares bandwidth with SATAExpress	
	SAS Controller	-	
HDD Bays	I = internal A or S will be hot-swappable	3 x Internal 3.5" HDD Bays 1 x Internal 2.5" HDD/SSD Bays	
Networking	LAN	2xIntel® I210-AT Gigabit LAN Controller	
Audio		Realtek® ALC1150 8-Channel High Definition Audio CODEC featuring Crystal Sound 2 - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, Front Panel MIC Jack-retasking - High quality 109 dB SNR stereo playback output (Line-out at rear) and 104 dB SNR stereo playback input (Line-in) - High-fidelity audio OP AMP(s) Audio Feature : - DTS Ultra PC II - DTS Connect - Optical S/PDIF out port(s) at back panel - BD Audio Layer Content Protection - Audio Shielding: Ensures precision analog/digital separation and greatly reduced multi-lateral interference - Dedicated audio PCB layers: Separate layers for left and right channels to guard the quality of the sensitive audio signals - Audio amplifier: Provides the highest-quality sound for headphone and speakers Premium Japanese-made 12K hours capacitors - Absolute Pitch 192khz/24bit true BD lossless sound Separate layer for left and right track, ensuring both sound deliver equal quality	
Graphic	VGA	-	
Auxiliary Storage Device Bay (Floppy / Optical Drive)		2 x 5.25" media bays (Options: No ODD/DVD-RW/DVD-ROM)	
Onboard I/O		Front: 2 x USB 3.0, 2 x USB 2.0 1 x Headphone port, 1 x Microphone port Rear: 1 x USB BIOS Flashback Button 2 x USB 3.0 Ports, 2 x USB 2.0 Ports 1 x Optical S/PDIF Out Port 2 x Intel LAN (RJ45) Ports, 8-channel Audio I/O Ports	
OS Support		Windows® 10 Windows® 8.1 64 bit, Windows ® 8 64 bit Windows® 7 32/64-bit	
Regulatory Compliance		BSMI, CE, FCC, CCC, Energy star	
Dimension		423 x190 x 435 mm	
Net Weight Kg (CPU, DRAM & HDD not included)		11 Kg	
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)		17.2 Kg	
Power Supply		700W 80PLUS Single Power Supply, Gold 100-240V, 10-5A, 50/60Hz, Class I	
Environment		Operation temperature: 10℃ ~ 35℃ / Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing)	

			
Model Name			TS700-E8-RS8 V2
Motherboard			Z10PE-D16 WS
Processor Support			2 x Socket R3 (LGA 2011-3)
			Intel® Xeon® Processor E5-2600 v4 Product Family (145W) Intel® Xeon® Processor E5-2600 v3 Product Family (145W)
			QPI 6.4 / 8.0 / 9.6 GT/s
Core Logic			Intel® C612 PCH
Memory	Total Slots		16 (4-channel per CPU, 8 DIMM per CPU)
	Capacity		Maximum up to 1024GB
	Memory Type		DDR4 2400/2133/1866/1600 RDIMM/LRDIMM *Refer to ASUS server AVL for the latest update
	Memory Size		32GB, 16GB, 8GB, 4GB(RDIMM) 64GB, 32GB (LRDIMM) *Refer to ASUS server AVL for the latest update
Expansion Slots	Total PCI/PCI-X/ PCI-E/PIKE Slots		6
	Slot Type		4 x PCI-E x16 (Gen3 x16 link), FH, FL 1 x PCI-E x16 (Gen3 x8 link), FH, FL 1 x PCI-E x16 (Gen3 x8 link), FH, HL
	Proprietary Slot 1		-
	Proprietary Slot 2		-
Disk Controller	IDE Controller		-
	SATA Controller		Intel® C612 - 10 x SATA 6Gb/s ports or 9 x SATA 6Gb/s ports + 1 x M.2 connector Intel® RSTe (for Windows only; Support software RAID 0, 1, 10 & 5)
	SAS Controller		Optional kits: ASUS PIKE II 3008 8-port SAS HBA card ASUS PIKE II 3108 8-port SAS HW RAID card 12G SAS Support
Storage Bays	I = internal A or S will be hot-swappable		8 x 3.5" Hot-swap Storage Bays 2 x 2.5" Hot-Swap SSD Bays (Rear) 1 x M.2 (NGFF 22110/2280/2260)
Networking	LAN		2 x Intel® I210AT 1 x Management Port
Infiniband			-
Graphic	VGA		Aspeed AST2400 32MB
Auxiliary Storage Device Bay (Floppy / Optical Drive)			3 x 5.25" media bays (Options: No Device / DVD-RW)
Front I/O Ports			1 x Headphone jack 1 x Microphone jack 2 x USB 2.0 ports 2 x USB 3.0 ports
Rear I/O Ports			1 x PS/2 KB/MS port 1 x SPDIF port 1 x RJ-45 Mgmt LAN port 2 x RJ-45 GbE LAN port 1 set of Audio ports (6 ports) 4 x USB 3.0 4 x USB 2.0 1 x VGA port
Switch/LED			Front Switch/LED: 1 x Power switch 1 x Location LED 1 x Reset switch 1 x HDD Access LED 1 x Message LED 1 x Power LED LAN 1-2 LED Rear Switch/LED: 1 x Q-code Logger button w/ LED 1 x BIOS flashback button w/ LED
OS Support			Windows® Server 2016 Windows® Server 2012 R2 Windows® Server 2012 Windows® Server 2008 R2 RedHat® Enterprise Linux SuSE® Linux Enterprise Server CentOS Ubuntu VMware Citrix XenServer Please find the latest OS support from http://www.asus.com/
Management Solution	Software		ASWM Enterprise
	Out of Band Remote Management		On-Board ASMB8-iKVM for KVM-over-Internet
Regulatory Compliance			BSMI, CE, C-TICK, FCC (Class B)
Dimension			455mm x 217.5mm x 545mm 17.91" x 8.54" x 21.45"
Net Weight Kg (CPU, DRAM & HDD not included)			17.68kg
Gross Weight Kg (CPU, DRAM & HDD not included, Packing include)			23.15kg
Power Supply (following different configuration by region)			1+1 Redundant 800W 80 PLUS Gold Power Supply Rating: 100-127Vac/200-240Vac,9.9A/4.79A ,47-63Hz, Class I
Environment			Operation temperature: 10℃ ~ 35℃ Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing)

		
Model Name	WS X299 SAGE	WS C621E SAGE
CPU	LGA2066 Socket for Intel® Core™ X-Series Processors Supports 14nm CPU Supports Intel® Turbo Boost Max Technology 3.0* * The Intel® Turbo Boost Max Technology 3.0 support Depends on the CPU types.	Dual Intel® Socket-P/LGA-3647 for Xeon® Processor Scalable Family (205W) UPI 9.6, 10.4 GT/s Supports Intel® Hyper-Threading Supports Intel® Turbo Boost Technology * The Intel® Turbo Boost & Hyper-Threading Technology 2.0 support depends on the CPU types. ** Refer to www.asus.com for CPU Support List
Chipset	Intel® X299 Chipset	Intel® C621 PCH
Memory	*Intel® Socket 2066 Core™ X-series Processors (6 cores and above) 8 x DIMM, Max. 128GB, DDR4 4133(O.C.)/3600(O.C.)/ 2666/2400/2133* MHz, non-ECC, un-buffered memory* Intel® Socket 2066 Core™ X-series Processors (4-core) 4 x DIMM, Max. 64GB, DDR4 4133(O.C.)/3600(O.C.)/ 2666/2400/2133 MHz Non-ECC, Un-buffered Memory Supports Intel® Extreme Memory Profile (XMP) * Memory capacity supported depends on both CPU installed and Memory installed. * Hyper DIMM support is subject to the physical characteristics of individual CPUs. Please refer to Memory QVL(Qualified Vendors List) for details.	DDR4 12 x DIMM (6-channel per CPU, 6 DIMM per CPU), Max. 768 GBDDR4 2666*/2400/2133 RDIMM/LR-DIMM 4GB, 8GB, 16GB, 32GB (RDIMM)32GB, 64GB (LRDIMM) *Maximum memory capacity support depends on CPU type **Refer to www.asus.com for the Memory QVL (Qualified Vendors Lists).
Expansion Slots	7 x PCI Express 3.0/2.0 x16 Slots (Single at x16, Dual at x16 / x16, Quad at x16/x16/x16/x16,Seven at x16/ x8/ x8/ x8 x8/x8)	3 x PCIe 3.0 x 16 slots (@x16 link) 2 x PCIe 3.0 x 16 slots (single @ x16, dual @ x8/x8 link) 2 x PCIe 3.0 x 16 slot (@x8 link)
Multi-GPU support	Supports AMD® 4-Way CrossFireX™ Technology Supports NVIDIA® 4-Way SLI™ Technology * Actual numbers of Multi-graphic supported differs per Vendors' Graphic cards. Please check with Vendor beforehand.	Supports NVIDIA® 4-Way SLI™ Technology Supports AMD® 4-Way CrossFireX™ Technology * Actual numbers of Multi-graphic supported differs per Vendors' Graphic cards. Please check with Vendor beforehand.
Storage	Intel® X299 Chipset with RAID 0, 1, 5, 10 and Intel Rapid Storage Technology 15 support - 1 x M.2_1 (Gen 3 x4) socket3, type 2242/2260/ 2280/22110 storage devices support (PCIe mode) - 1 x M.2_2 (Gen 3 x4) socket3, type 2242/2260/ 2280 storage devices support (PCIe mode) - 8 x SATA 6.0 Gb/s Ports 2 x U.2 connector (supports U.2 NVMe device) - Intel® Optane™ Memory Ready - Intel® Virtual RAID (VROC) suport for CPU RAID* * Intel® VROC is supported via RSTe, and Intel® VROC_HW_key. VROC_HW_ Key are to be purchased separately. * NVMe RAID type and function will depend on Intel® VROC_HW_key installed * PCIEX16_1 to PCIEx16_3 & PCIEX16_4 to PCIEx16_7 support Intel® VROC seperately	Intel® C621 with Intel RSTe(for Windows only, Support software RAID 0, 1, 10 &5) 8 x SATA 6Gb/s ports (gray) ASMedia® SATA RAID Controller* 2 x SATA 6Gb/s ports 4 x U.2 Connectors 1 x M.2 Socket 3, supporting type 2242/2260 /2280/22110 (PCIe Gen 3 x4 and SATA mode) *Supports Intel® Virtual RAID on Chip (Intel® VROC) *The functions will work depending on the CPU installed.
	1 x Intel® I210-AT Gigabit LAN controller, 1 x Intel® I219-LM Gigabit LAN	2 x Intel® i210-AT Gigabit LAN Controller
LAN	Realtek® ALC S1220A 8-Channel High Definition Audio CODEC featuring Crystal sound 3 - Power pre-regulator reduces power input noise to ensure consistent performance. - Separate layer for left and right track, ensuring both sound deliver equal quality - Impedance sense for front and rear headphone outputs - Audio Shielding: Ensures precision analog/digital separation and greatly reduced multi-lateral interference - Internal audio Amplifier to enhance the highest quality sound for headphone and speakers - Unique de-pop circuit: Reduces start-up popping noise to audio outputs - Premium Japanese-made audio capacitors provides warm, natural and immersive sound with exceptional clarity and fidelity - High quality 120dB SNR stereo playback output (Line-outputback) & 113dB SNR input (Line-in) support - Supports up to 32-Bit/192kHz playback* - DTS Connect - DTS HeadphoneX - Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking(MIC) - Optical S/PDIF out port(s) at back panel * Due to limitations in HAD bandwidth, 32-Bit/192kHz is not supported for 8-channel audio. 32-Bit/192kHz is only available under Windows®10	Realtek® ALC S1220A 8-Channel High Definition Audio CODEC - Impedance sense for front and rear headphone outputs - Supports : Jack-detection, Multi-streaming, front Panel MIC Jack-retasking - High quality 120 dB SNR stereo playback output and 113 dB SNR recording input (Line-in) - Front panel audio connector (AAFP) - Supports up to 32-Bit/192kHz playback* Audio Feature : - DTS Connect - DTS Headphone:X - Premium Japanese-made audio capacitors: Provide warm, natural and immersive sound with exceptional clarity and fidelity - Unique de-pop circuit: Reduces start-up popping noise to audio outputs - Power pre-regulator: Reduces power input noise to ensure consistent performance *Due to limitations in HDA bandwidth, 32-Bit/ 192kHz is not supported for 8-Channel audio. 32-Bit/192kHz is only available under Windows®10.
Audio		
USB	Intel® X299 Chipset - 8 x USB 3.1 Gen1 ports (6 ports @ rear, 2 ports @ front) - 4 x USB 2.0 ports (4 ports @ rear) ASMedia® USB 3.1 Controller - 2 x USB 3.1 Gen2 ports @ rear (1 x Type A; 1 x Type C) - 1 x USB 3.1 Gen2 @ front (optional Type A or Type C)	ASMedia USB 3.1 Controllers - 1 x USB 3.1 Type A port at back panel - 1 x USB 3.1 Type C port at back panel Intel® C621 Chipset - 8 x USB 3.0/2.0 Ports (4@ back panel, 4@ mid-board) 4 x USB 2.0/1.1 Ports (2@ back panel, 2@ mid-board)
Back Panel I/O Ports	1 x USB BIOS Flashback Button 2 x USB 3.1 Gen2 ports (Type C & Type A) 6 x USB 3.1 Gen1 ports (Blue) 4 x USB 2.0 ports (1 Supports USB BIOS Flashback) 1 x Optical S/PDIF Out Port 2 x Intel LAN (RJ45) Ports, 8-channel Audio I/O Ports	2 x USB 3.1 (1 x type C & 1 x type A) 4 x USB 3.0/2.0 ports (blue) 2 x USB 2.0/1.1 ports (1 supports USB BIOS Flashback) 1 x USB BIOS Flashback button, 1 x PS/2 KB port 2 x LAN (RJ45) ports (2 x Intel® LAN) 1 x Optical S/PDIF Out port 8-channel Audio I/O
Internal I/O Connectors	1 x Aura Addressable Strip Header 1 x AAFP connector 1 x Aura RGB Strip Header 1 x USB 3.1 Gen 1 connector(s) support(s) additional 2 USB 3.1 Gen 1 port(s) 1 x USB 3.1 Gen 2 front panel connector 1 x M.2 Socket 3 with M key, type 2242/ 2260/2280 storage devices support (PCIE 3.0 x 4 mode) 1 x M.2 Socket 3 with M key, type 2242/2260/ 2280/22110 storage devices support (PCIE 3.0 x 4 mode) 8 x SATA 6Gb/s connector(s) 1 x VROC_HW_Key, 2 x CPU Fan connector(s) 2 x Channel Fan connector(s), 1 x PUMP Fan connector(s) 1 x AIO_PUMP connector 1 x Thunderbolt header(s) 1 x 24-pin EATX Power connector(s) 2 x 8-pin ATX 12V Power connector(s) 1 x 6-pin ATX 12V Power connector(s), 1 x PANEL 1 x 5-pin EXT_FAN(Extension Fan) connector 1 x MemOK! button(s), 1 x Thermal sensor connector(s) 1 x Power-on button(s), 1 x Reset button(s) 1 x Clear CMOS button(s), 2 x U.2 connector 1 x CPU_OV jumper, 1 x COM port header	2 x USB 3.0/2.0 connector support additional 4 USB ports (19-pin) 1 x USB 2.0/1/1 connectors support additional 2 USB ports 4 x U.2 Connectors 1 x M.2 Socket 3 10 x SATA 6.0Gb/s connectors (10 x gray) 2 x CPU Fan connector (4-pin) 7 x Chassis Fan connectors (4-pin) (5 x front, 2 x rear) 1 x Serial Port headers (COM port header) 1 x VROC key header 1 x VGA connector 1 x Front panel audio connector(AAFP) 1 x System Panel header (20 pin) 1 x AUX panel header 1 x SMBus headers 1 x Clear CMOS header 1 x TPM connector (14-1 pin) 2 x 8-pin EATX 12V Power connectors 1 x 6-pin EATX 12V_3 Power connector(s) 1 x PWR button 1 x Reset button 1 x Chassis Intrusion (2-pin)
Operating System Support	Windows 10 PRO 64bit	Windows®Server 2016 64bit Windows®Server 2012 R2 64bit Windows® Server 2012 64bit, Windows®10 (64 bits)
Form Factor	CEB Form Factor, 12"x 10.5"	EEB Form Factor, 12"x 13"

Model		Mini PC PB Series	
		PB50	
			
OS		Windows®10 Pro, Windows®10 Home, or W/O OS	Windows®10 Pro, Windows®10 Home, or W/O OS
CPU		Intel® Celeron® N4000 Processor	Intel® Core™ i7-8700T/i5-8400T/i3-8100T Series Processors Intel® Pentium Gold® G5400T Processor
Chipset		Integrated	Intel® B360
Graphics		Integrated - Intel® UHD Graphics	Integrated - Intel® UHD Graphics
Memory		2 x SO-DIMM DDR4 2400MHz (up to 8GB)	2 x SO-DIMM DDR4-2400MHz memory (up to 32GB)
Storage		1 x eMMC onbocrd (32GB/64GB) 1 x SATA 6Gb/s; 2.5" 500G/1TB HDD	1 x M.2 2280; 128G/256G SATA/PCIE G3X4 1 x SATA 6Gb/s; 2.5"" 7200RPM 500GB/1TB HDD
Wireless Network		Intel 802.11ac + BT V5.0	Intel 802.11ac + BT V5.0
LAN *Only Intel branding been noted		Intel® LAN, 10/100/1000 Mbps	Intel® LAN, 10/100/1000 Mbps
Optical Drive		N/A	8X Super Multi DVD Drive (optional)
Integrated Speaker		Optional	Optional
Weight		1.02KG	1.19 KG
TPM		fTPM or TPM chip optional	fTPM or TPM chip optional
Interface	Front I/O	1 x USB 3.1 Gen1 Type-C 4 x USB 3.1 Gen1 (1 w/ Fast Charge) 1 x Audio jack 1 x Microphone jack	2xUSB 3.1 Gen2 1xUSB 3.1 Gen1 Type-C 2 x USB 3.1 Gen1 (1 w/ fast charging) 1 x Audio jack 1 x Microphone jack
	Rear I/O	1 x USB 3.1 Gen1 1 x USB 2.0 1 x DisplayPort 1.2 1 x COM port 1 x Configurable port (options: COM, VGA, DisplayPort) 1 x LAN (RJ45) Port 1 x DC-in 1 x Kensington Lock 1 x External Wi-Fi antenna jack	1 x DisplayPort 1.2 1 x HDMI 1 x Configurable port (options: COM, VGA, DisplayPort) 1 x USB 3.1 Gen2 2 x USB 2.0 1 x RJ45 LAN 1 x Kensington Lock 1 x DC-in 1 x External Wi-Fi antenna jack
Dimension		175 x 175 x 34.2 mm	175 x 175 x 34.2 mm

Model		Mini PC PN Series	
		PN40	PN60
			
OS		Windows®10 Pro, Windows®10 Home, or W/O OS	Windows®10 Pro, Windows®10 Home, or W/O OS
CPU		Intel® Celeron® N4000 Processor Intel® Celeron® J4005 Processor	Intel® Core™ i3-8130U Processors
Chipset		Integrated	Integrated
Graphics		Integrated Intel® UHD Graphics 600	Integrated - Intel® UHD Graphics
Memory		2 x SO-DIMM , DDR4-2400MHz memory (2GB to 8GB)	2 x SO-DIMM DDR4 2400 MHz (up to 32GB - 16G *2)
Storage		eMMC onboard (32GB / 64GB) 1 x M.2 2280 connector, SATA & PCIe SSD; 128GB/ 256GB* 1 x SATA 6Gb/s;2.5" 500GB/1TB HDD *M.2 connector support may vary from model	1 x SATA 6Gb/s for 2.5" 500G/1TB HDD 1 x M.2 2280 for SATA & PCIe 128G/256G SSD* optane 16G *M.2 connector support may vary from model
Wireless Network		Intel 802.11ac + BT V5.0	Intel 802.11AC+BT4.2
LAN *Only Intel branding been noted		10/100/1000 Mbps	Intel® LAN, 10/100/1000 Mbps
Weight		0.7 KG	0.7 KG
TPM		fTPM or TPM chip (Optional)	fTPM or TPM chip (Optional)
Interface	Front I/O	1 x USB 3.1 Gen1 Type C 1 x USB 3.1 Gen1 1 x USB 2.0 (Quick charge) 1 x Audio Jack(1 Combo)	1 x USB3.1 Gen1 Type-C (Quick charge) 1 x USB 3.1 Gen1 1 x USB 2.0 1 x Audio(Combo)
	Side I/O	1 x Kensington Lock	1 x Kensington Lock
	Rear I/O	1 x HDMI,1 x Mini-DisplayPort ++ 1.2 1 x Configurable port (options: COM, VGA) 2 x USB 3.1 Gen1 , 1 x RJ45 LAN 1 x DC-in	1 x USB3.1 Gen1 Type-C (support DP) 2 x USB 3.1 Gen1 , 1 x HDMI 1 x Configurable port (options: COM, VGA, HDMI, DisplayPort, Intel LAN) 1 x RJ45 LAN Port , 1 x DC-in
Dimension		115 x 115 x 49 mm	115 x 115 x 49 mm

Model		Mini PC E Series	
		E420	E520
			
OS		Windows®10 Pro, Windows®10 Home	Windows®10 Pro, Windows®10 Home
CPU		Intel® Celeron® 3865U Processor	Intel® 7th generation Core™ i7-7700T Processor Intel® 7th generation Core™ i5-7400T Processor Intel® 7th generation Core™ i3-7100T Processor
Chipset		Integrated	Intel® H110
Graphics		Intel® HD Graphics	Intel® HD Graphics 630
Memory		DDR4-2133MHz memory (2GB to 32GB)	2 x SO-DIMM, DDR4-2400MHz memory (4GB to 32GB)
Storage		2.5" 32GB Up to 32GB SATA 6Gb/s Hard Drive 2.5" 32GB Up to 32GB SATA 6Gb/s Hybrid 8GB SSD 1GB Up to 1GB SSD 100G ASUS Webstorage for free usage	SSD SATA III Up to 512GB 2.5" Up to 512GB M.2 SSD 128GB SATA III 2.5" Hard Drive Up to 1TB Support up to 2 storage *
Wireless Network		802.11 a/b/g/n/ac	802.11 a/b/g/n/ac
LAN *Only Intel branding been noted		10/100/1000 Mbps	10/100/1000 Mbps
Card Reader		4-in-1: SD/SDHC/SDXC/MMC	4-in-1: SD/SDHC/SDXC/MMC
Interface	Front I/O	1 x 4 -in-1 Card Reader	1 x Headphone 2x USB 3.1 Gen 1 1 x Microphone
	Back I/O	1 x Kensington Lock	1 x USB 2.0 1 x COM Port(Serial Port) (Optional) 1 x Parallel Port (Optional), 1 x DC-in 1 x RJ45 LAN, 2 x USB 3.1 Gen 1 1 x Kensington Lock, 1 x DisplayPort 1 x HDMI-Out
Dimension		219 x 172.5 x 29 mm (WxDxH)	185 x 210 x 27 mm (WxDxH)

Model		Mini PC VC Series		Mini PC UN Series
		VC65	VC66	UN68U
				
OS		Windows®10 Pro, Windows®10 Home, or W/O OS	Windows®10 Pro, Windows®10 Home, or W/O OS	Windows®10 Pro, Windows®10 Home, or W/O OS
CPU		Intel® Core™ i7-8700T/i5-8400T/i3-8100T Processors Intel® Pentium® G5400T Processor Intel® Celeron® G4900T Processor	Intel® Core™ i7-8700/i5-8400/i3-8100 Processors Intel® Pentium® G5400 Processor Intel® Celeron® G4900 Processor	Intel® 8th generation Core™ i7-8550U Processor Intel® 8th generation Core™ i5-8250U Processor
Chipset		Intel® H310	Intel® H310	Integrated
Graphics		Integrated - Intel® UHD Graphics 630 (vary by CPU sku)	Integrated - Intel® UHD Graphics 630 (vary by CPU sku)	Intel ®UHD Graphics 620
Memory		2 x SO-DIMM DDR4-2400MHz memory (up to 32GB)	2 x SO-DIMM DDR4-2400MHz memory (up to 32GB)	Dual Channel DDR4-2400MHz memory (4GB up to 32GB)
Storage		1 x M.2 connector(PCIe/SATA mode) 4 x SATA 6Gb/s connector (Support 2.5" HDD or SSD) *ODD sku supports up to 2 SATA	1 x M.2 connector(PCIe/SATA mode) 2 x SATA 6Gb/s connector (Support 2.5" HDD or SSD) *ODD sku supports up to 1 SATA	Up to 1TB Hard Drive 500GB 2.5" Up to 512GB M.2 SSD 128GB
Wireless Network		Intel 802.11ac + BT V5.0	Intel 802.11ac + BT V5.0	Intel 802.11a/b/g/n/ac + BT V4.2
LAN *Only Intel branding been noted		Intel® LAN, 10/100/1000 Mbps	Intel® LAN, 10/100/1000 Mbps	Intel® LAN, 10/100/1000 Mbps
Optical Drive		8X Super Multi DVD Drive (optional) UHD BD Writer (optional)	8X Super Multi DVD Drive (optional) UHD BD Writer (optional)	8X Super Multi DVD Drive (optional) UHD BD Writer (optional)
TPM		fTPM or TPM chip (optional)	fTPM or TPM chip (optional)	fTPM or TPM chip (optional)
Interface	Front I/O	2 x USB3.1 Gen1 (1 with fast charging)	1 x USB 3.1 Gen1 Type-C 1 x USB 3.1 Gen1 2 x USB 2.0 1 x Audio(Line out/Mic in/Headphone out)	2x USB 3.1 Gen 2
	Side I/O	1 x 4-in-1 Card Reader	N/A	1 x 4 -in-1 Card Reader 1 x Kensington Lock
	Rear I/O	1 x USB3.1 Gen1 Type C 1 x USB3.1 Gen1 2 x USB2.0 1 x HDMI 1 x DisplayPort 1 x VGA 1 x COM port 1 x LAN (RJ45) Port 2 x Audio Jacks (1x Mic in/Line out, 1 x Line out) 1 x Kensington Lock 1 x AC-in	2 x USB 3.1 Gen1 1 x HDMI 1 x DisplayPort 1 x DVI-I 1 x COM port 1 x LAN (RJ45) Port 1 x Kensington Lock 1 x 4-in-1 Card Reader 1 x DC-in	1 x RJ45 LAN 1 x Audio Jack(s) 1 x DC-in 1 x HDMI 1 x DisplayPort 2 x USB 3.1 Gen 1
Dimension		197.5 x 196.3 x 49.3 mm (with 2 storages) 197.5 x 196.3 x 61.9 mm (with ODD or 4 storages)	177.4 x 153 x 74.1 mm	131 x 131 x 52 mm

Model		Vivostick	Chromebox		Chromebit
		IS10	ASUS Chromebox		CS10
					
OS		Chrome OS	ChromeOS		Chrome OS
CPU		Intel Atom X5-Z8350	Intel® Celeron 3865U Processor	Intel® Core™ i7-8550U Processor Intel® Core™ i5-8250U Processor Intel® Core™ i3-7100U Processor	Rockchip Quad-Core RK3288-C Processor
Chipset		Integrated	Integrated		Integrated
Graphics		Quad-core ARM® Mali-T764 GPU Full HD, plays up to 1080p	Integrated - Intel® HD Graphics 610	Integrated - Intel® HD Graphics 620	Quad-core ARM® Mali-T764 GPU Full HD, plays up to 1080p
Memory		LPDDR3-1600, 2G	2 x SO-DIMM, DDR4 2133/2400MHz memory (4GB to 16GB)		LPDDR3-1066, 2G
Storage		32G eMMC 100G ASUS Webstorage for 1 Year free usage	M.2 SSD (32GB to 256GB)		16G eMMC
Wireless Network		802.11 a/b/g/n/ac	Intel 802.11ac, BT V4.2		802.11ac + BT V4.0
LAN *Only Intel branding been noted		N/A	Intel® LAN, 10/100/1000 Mbps		N/A
Optical Drive		N/A	N/A		N/A
TPM		N/A	dTPM		N/A
Interface	Front I/O	1 x HDMI	2 x USB 3.1 Gen1 (support BC1.2) 1 x Audio Jack (Combo Mic/Headphone Jack) 1 x Micro SD card		1 x HDMI
	Side I/O	1 x Micro USB (For Power Only), 1 x USB 3.0 , 1 x USB 2.0 , 1 x Audio Jack(s) (Mic/Headphone Combo)	1 x Kensington Lock		1 x DC-in
	Rear I/O	1 x USB 2.0	2 x USB 2.0 1 x USB 3.1 Gen1 1 x USB 3.1 type-C (USB3.0/PowerDelivery/DisplayPort) 1 x HDMI 1 x LAN (RJ45) Port 1 x DC-in	3 x USB 3.1 Gen1 1 x USB 3.1 type-C (USB3.0/PowerDelivery/DisplayPort) 1 x LAN (RJ45) Port 1 x HDMI 1 x DC-in	1 x USB 2.0
Dimension		123 x 31 x 17 mm	148.5 x 148.5 x 40 mm		123 x 31 x 17 mm

Model	Single Board Computer	
	TINKERBOARD	TINKERBOARD S
		
Processor	Rockchip RK3288 Quad-core Processor	Rockchip RK3288 Quad-core Processor
GPU	ARM Mali-T760 MP4 GPU	ARM Mali-T760 MP4 GPU
Display	1 x HDMI with CEC support, 1 x MIPI DSI	1 x HDMI, 1 x MIPI DSI
Memory Size	2GB	2GB
Storage	16GB eMMC Micro SD(TF) card slot	Micro SD(TF) card slot
Connectivity	RTL8211E-VB-CG GB LAN	RTL8211E-VB-CG GB LAN
	802.11 b/g/n wireless & Bluetooth 4.0 + EDR	802.11 b/g/n wireless & Bluetooth 4.0 + EDR
Audio	RTL ALC4040 Codec with 1 x 3.5mm audio jack Supports audio jack plug-in detection	RTL ALC4040 Codec with 1 x 3.5mm audio jack
USB	4 x USB 2.0 ports	4 x USB 2.0 ports
Camera Interface	1 x MIPI CSI	1 x MIPI CSI
I/O header/port	1 x 40-pin headers includes: - up to 28 x GPIO pins - up to 2 x SPI bus - 8 x ground pins - up to 2 x I2C bus - up to 4 x UART - 2 x 3.3V power pins - up to 2 x PWM - up to 1 x PCM/I2S - 2 x 5V power pins 1 x 2-pin eMMC recovery header , 1 x 2-pin Power-on header 1 x 2-pin contact points includes: - 1 x PWM signal - 1 x S/PDIF signal	1 x 40-pin headers includes: - up to 28 x GPIO pins - up to 2 x SPI bus - 8 x ground pins - up to 2 x I2C bus - up to 4 x UART - 2 x 3.3V power pins - up to 2 x PWM - up to 1 x PCM/I2S - 2 x 5V power pins 1 x 2-pin contact points includes: - 1 x PWM signal - 1 x S/PDIF signal
Power Connector	5V/2~3A Micro USB power input	5V/2~3A Micro USB power input
OS Support	Debian 9 / Android 6	Debian 9 / Android 6
Dimension	3.37" x 2.125"	3.37" x 2.125"

Model	LCD Monitor	
	MB 16AC	VT168H
	 Ultra-low Blue Light Flicker-free Most Number of Certifications	 10-point Touch Ultra-low Blue Light Flicker-free Most Number of Certifications
Panel Size	Wide Screen 15.6"(39.6cm) 16:9	Wide Screen 15.6"(39.6cm) 16:9
True Resolution	1920x1080	1366x768
Panel Type	IPS	-
Brightness(Max)	220 cd/㎡	200 cd/㎡
Contrast Ratio (Max)	800:1	50000000:1
Response Time	-	10ms
Signal Input	USB Type-C (USB-C or USB3.0* signal)	HDMI, D-Sub
Earphone jack	-	3.5mm Mini-Jack
Touch Screen	YES	YES
Flicker free Technology	YES	YES
SPLENDID	8 Modes	8 Modes
QuickFit	YES	YES
GamePlus	YES	-
HCDP Support	YES	YES
Low Blue Light	YES	YES
Weight	YES	YES

Model	NETWORKING ROUTER (AI MESH)		
	GT-AC5300	RT-AC5300	RT-AC88U
	 AiMesh AiProtection TREND MICRO RT AP	 AiMesh AiProtection TREND MICRO RT AP	 AiMesh AiProtection TREND MICRO RT AP MB
Wi-Fi Speed	1000Mbps (2.4GHz) 2167Mbps (5GHz-1, 5Ghz-2)	1000Mbps (2.4GHz) 2167Mbps (5GHz-1, 5Ghz-2)	1000Mbps (2.4GHz) 2167Mbps (5GHz)
Wi-Fi Range	Very large home	Very large home	Very large home
Antenna	External dual-band antenna x 8	External dual-band antenna x 8	External dual-band antenna x 4
Ethernet Port	Gigabit WAN x 1, Gigabit LAN x 8	Gigabit WAN x 1, Gigabit LAN x 4	Gigabit WAN x 1, Gigabit LAN x 8
USB 3.0 Port	2	1	1
USB 2.0 Port	--	1	1
QoS	Adaptive	Adaptive	Adaptive
MU-MIMO	YES	YES	YES
Guest Network	9	9	6
Multi-purpose USB	YES	YES	YES
AiCloud	YES	YES	YES
Parental Control	YES	YES	YES
AiProtection	YES	YES	YES
ASUS Router App	YES	YES	YES

Model	NETWORKING ROUTER (AI MESH)	
	RT-AC86U	RT-AC68U
	 AiMesh READERS' CHOICE PC 2017 RT AP MB	 AiMesh AiProtection TREND MICRO RT RE AP MB
Wi-Fi Speed	750Mbps (2.4GHz) 2167Mbps (5GHz)	600Mbps (2.4GHz) 1.3Gbps (5GHz)
Wi-Fi Range	Large home	Large home
Antenna	External antenna x 3 Internal 3dBi antenna x 1	External dual-band antenna x 3
Ethernet Port	Gigabit WAN x 1, Gigabit LAN x 4	Gigabit WAN x 1, Gigabit LAN x 4
USB 3.0 Port	1	1
USB 2.0 Port	1	1
QoS	Smart (traditional)	Adaptive
MU-MIMO	YES	YES
Guest Network	6	6
Multi-purpose USB	YES	YES
AiCloud	YES	YES
Parental Control	YES	YES
AiProtection	YES	YES
ASUS Router App	YES	YES

Model	NETWORKING ROUTER (BUSINESS)	Model	LYRA
	BRT-AC828		 AiProtection TREND MICRO
	 BUSINESS PC CHOICE 2016 RT AP		
Wi-Fi Speed	800Mbps (2.4GHz) 1734Mbps (5GHz)	Product Segment	400+867+867 Mbps
Wi-Fi Range	Very large home	Wi-Fi Range	Very large home
Antenna	External dual-band antenna x 4	Operating Frequency	2.4G Hz, 5 GHz-1, 5 GHz-2
Ethernet Port	Gigabit WAN x 2, Gigabit LAN x 8	Transmit/Receive	2.4 GHz 2 x 2 5 GHz-1 2 x 2 5 GHz-2 2 x 2
USB 3.0 Port	2	Antenna	Internal antenna x 7
USB 2.0 Port	-	AC Input	110V~240V(50~60Hz)
QoS	Adaptive	DC Output	12 V with max. 2 A current
MU-MIMO	YES	Dimensions	149.8 x 149.8 x 49.5 ~ mm (LxWxH) (Without Bezel)
Guest Network	6		
Multi-purpose USB	YES		
AiCloud	YES		
Parental Control	YES		
AiProtection	YES		
ASUS Router App	YES		

ASUS Router Support : TIME MAXIS UNIFI

Operation Mode: RT - Router RE - Range Extenter AP - Access Point MB - Media Bridge

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