ComX Computers
Product Specification Sheet

90MB14U0-M0EAY0

Asus Prime B550-Plus B550 Chipset AMD Ryzen AM4 Socket Motherboard

Product Overview

Asus Prime B550-Plus, AMD AM4 Socket 3rd Gen AMD Ryzen Processors, Memory: 4 x DIMM, Max. 128GB, DDR4, Expansion Slots: 1xPCIe 4.0x16 (x16 mode), 1x PCIe 3.0x16, 3xPCIe3.0x1 Storage and USB : 1xM.2 Socket 3(PCIE 4.0x4 and SATA modes), 1 x M.2 Socket 3(PCIE 3.0 x4 and SATA modes), 4 x SATA 6Gb/s port(s), USB 8xbk 6xfnt, Onboard VGA Output Available: 1xDP + 1 x HDMI. Supports AMD 2-Way CrossFireX Technology





Specifications

Features:

Prime
ASUS Prime series is expertly engineered to unleash the full potential of 3rd Generation AMD Ryzen platform. Boasting a robust power design, comprehensive cooling solutions and intelligent tuning options, Prime B550 series motherboards provide daily users and DIY PC builders a range of performance tuning options via intuitive software and firmware features.

Tune It Your Way
Comprehensive controls form the foundation of the ASUS Prime series. The Prime B550 motherboard packs flexible tools to tune every aspect of your system, enabling you to tweak performance settings to perfectly match the way you work - maximizing your productivity.

UEFI BIOS
The renowned ASUS UEFI BIOS provides everything you need to configure, tweak and tune your system. It offers intelligently simplified options for PC DIY beginners, as well as comprehensive features for seasoned veterans.

Advanced Tuning for Serious Tweakers
An intuitive Advanced mode offered via the UEFI lets you take complete control. A built-in search feature makes it easy to find options, and various Advanced functions let you intelligently make nuanced adjustments so you can dial in performance just the way you want.

Search Function
Quickly and easily find the option or setting you need.

ASUS User Profile
Port configuration settings between different BIOS versions or share them with friends.

Quick and Simple Setup
EZ mode displays vital settings and stats and also offers guided wizards, drag-and-drop functionality, and one-click application of important settings - all to help you get your rig up and running in no time.

Intuitive Graphical Fan Control
Fine-tune individual fan settings simply by dragging a curve with the mouse.

EZ XMP
Improve DRAM performance with one click.

Aura On/Off mode (Stealth)
Easily enable or disable Aura RGB lighting or every onboard LED, for a subdued aesthetic touch.

Cool to the Core
Prime B550 series is engineered with multiple onboard heatsinks and an array of hybrid fan headers to ensure your rig stays cool and stable under intense workloads.

VRM Heatsink and Thermal Pads
Two massive VRM heatsinks with underneath thermal pads improve heat transfer from the MOSFETs and chokes for better cooling performance.

Cooler by Design
Prime B550 series features comprehensive cooling controls that are configurable via Fan Xpert 2+ software or via the UEFI BIOS.

Multiple Temperature Sources
Each header can dynamically reference three thermal sensors. Fan Xpert 2+ allows you to map the temperature of supported ASUS graphics cards to optimize cooling for GPU- and CPU-intensive tasks.

AIO Pump Header
A dedicated PWM/DC header for self-contained water-cooling setups.

Smart Protection
A dedicated integrated circuit protects each fan header from overheating and overcurrent.

4-Pin PWM/DC Fan
Each onboard chassis fan header supports PWM and DC mode.

Build on a Solid Foundation
Prime B550 motherboard provides all the fundamentals to boost daily productivity, so your system will be ready for action with stable power, intuitive cooling and flexible transfer options.

Achieve Speed With Onboard M.2
PCIe 4.0 M.2 Slot supports up to 22110 and provide NVMe SSD RAID support for an incredible performance boost. Create a RAID configuration with up to 64Gbps PCIe 4.0 storage device to enjoy the fastest data-transfer speeds on the 3rd Generation AMD Ryzen platform.

USB 3.2 Gen 2 Type-A & Type-C
Numerous USB ports support high-end rigs loaded with peripherals, including a USB Type-C® and a Type-A® connectors with fast USB 3.2 Gen 2 connectivity for compatible cases.

Thunderbolt™ 3 Support

Prime B550-Plus supports ThunderboltEX 3-TR, an Intel certified Thunderbolt™ 3 add-on card that enables bi-directional speeds of up to 40 Gbps via a single cable. Additionally, an integrated Thunderbolt 3 header can support up to six devices in a daisy-chain and provide up to 100 watts of power to fast-charge devices.

Little Things Make a Big Difference
Prime B550 series adds the nuanced details that improve every experience, from exclusive codecs that provide pristine audio quality to intuitive RGB lighting controls that let you customize your system to create a uniquely personal look.

Combined onboard features deliver elevated audio
Intelligent design and premium hardware create audio quality unlike anything you've ever experienced.

Audio Shielding
Separates analog/digital signal domains, significantly reducing multi-lateral interference.

Separate Layer for Left and Right Tracks
Ensures minimal crosstalk between audio paths.

Premium Japanese Capacitors
Premium parts provide an immersive sound signature, with exceptional fidelity.

Outshine the Competition
A well-tuned enthusiast system deserves a matching aesthetic. ASUS Aura offers full RGB lighting control with a variety of functional presets for RGB LED strips connected to the onboard RGB headers. And it can all be synced with an ever-growing portfolio of Aura-capable hardware.

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Addressable Gen 2 RGB Header
The addressable Gen 2 RGB header is now capable of detecting the number of LEDs on second-gen addressable RGB devices, allowing the software to automatically tailor lighting effects to specific devices. The new header also offers backward-compatibility with existing Aura RGB gear.

Armoury Crate
Armoury Crate is a new software utility designed to give you centralized control of supported products. From a single intuitive interface, Armoury Crate allows you to easily customize RGB lighting and effects for every compatible device in your arsenal. The software also provides control of settings for ASUS products, including keyboard and mouse preferences. Armoury Crate even features dedicated product registration and highlight to help you stay in touch with the ASUS community.

Protect Your Graphics Card
SafeSlot is the PCIe slot reinvented by ASUS and engineered to provide superior retention and shearing resistance. Manufactured in a single step using a new insert-molding process, SafeSlot integrates fortifying metal for an inherently stronger slot, which is then firmly anchored to the PCB through additional solder points.

World-class circuit-protecting power design
An exclusive circuit design with built-in voltage regulators to protect your motherboard from damage caused by unexpected high-level voltages from unstable or inferior power supplies.

Short-circuit damage prevention
Onboard resettable fuses prevent overcurrent and short-circuit damage. This extends beyond I/O ports to DRAM to safeguard

the lifespan of your system and connected devices.

3X corrosion-resistance for greater durability
Corrosion-resistant stainless-steel back I/O panels bonded with chromium oxide have a lifespan that's three times longer than ordinary panels.

Pumped-up throughput 2.5X higher surge tolerance
ASUS LANGuard is a hardware-level network protection feature that integrates advanced signal-coupling technology and premium anti-EMI surface-mounted capacitors to improve throughput and ensure a more reliable connection.

1000+ Compatible devices and components
The Prime B550 series provides superior compatibility with thousands of components and our Qualified Vendor List (QVL) identifies memory compatibility, giving you more choices for worry-free PC-building experiences.

8000+ Validation hours
Every ASUS motherboard is subjected to more than 8,000 hours of stringent tests, including burn-in, environmental, compatibility, software and safety tests to confirm their durability. ASUS reliability surpasses industry standards, ensuring that every component is designed to function flawlessly in any environment.

Temperature and humidity tests
Ensures components withstand extreme conditions.

Thermal measurement tests
Ensures that the system remains cool and stable under the heaviest loads.

Insertion tests
Every port and connector is put through repeated installation cycles.

Aging tests
Up to 48-hour aging test ensures reliability.

Power-consumption tests
Checked for world-class energy efficiency.

Temperature and DC margin tests
Ensures that the motherboard is capable of coping with voltages fluctuations caused by varying temperatures.

Thermal-shock tests
Ensures ability to survive temperature changes during transportation.

Non-operation shock tests
Built to withstand jolts that may occur during shipping.

Burn-in tests
Every component is checked to ensure flawless operation.

Installation tests
Connector placement is double-checked to ensure hassle-free installation.

Drop tests
Drop tests from various heights ensure durability.

Salt and spray tests

Tested for I/O reliability, prolonged lifespan and rust-resistance.

Specifications:

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Specifications	
Product Code	90MB14U0-M0EAY0
CPU	Build in AMD AM4 Socket 3rd Gen AMD Ryzen Processors
Chipset	AMD B550
Memory	4 x DIMM, Max. 128GB, DDR4 4600(O.C) / 4400(O.C) / 4266(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3733(O.C.) / 3600(O.C.) / 3466(O.C.) / 3333(O.C.) / 3200 / 3000 / 2800 / 2666 / 2400 / 2133 MHz ECC and non-ECC, Un-buffered Memory
	Next Generation AMD Ryzen PRO Processors
	4 x DIMM, Max. 128GB, DDR4 4800(O.C.) / 4600(O.C) / 4466(O.C.) / 4400(O.C) / 4266(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3600(O.C.) / 3466(O.C.) / 3200 / 3000 / 2800 / 2666 / 2400 / 2133 MHz ECC and non-ECC, Un-buffered Memory
	Dual Channel Memory Architecture
Graphic	1 x DisplayPort 1.2
	1 x HDMI 2.1(4K@60HZ)
	*Graphics specifications may vary between CPU types.
Multi-GPU Support	Supports AMD 2-Way CrossFireX Technology
Expansion Slots	3rd Gen AMD Ryzen Processors
	1 x PCIe 4.0 x16 (x16 mode)
	AMD B550 Chipset
	1 x PCIe 3.0 x16 (x4 mode)
	3 x PCIe 3.0 x1
	* Support PCIe bifurcation for RAID on CPU function.
Storage	Total supports 2 x M.2 slots and 6 x SATA 6Gb/s ports
	3rd Gen AMD Ryzen Processors :
	1 x M.2 Socket 3, with M key, type 2242/2260/2280/22110 storage devices support(SATA & PCIe 4.0 x4 mode)
	AMD B550 Chipset :
	1 x M.2 Socket 3, with M key, type 2242/2260/2280/22110 storage devices support (SATA & PCIE 3.0 x 4 mode)
	6 x SATA 6Gb/s port(s)
	Support Raid 0, 1, 10
LAN	Realtek RTL8111H
	ASUS LANGuard

Audio	Realtek ALC887 7.1-Channel High Definition Audio CODEC
	- Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback
	Audio Feature :
	- Optical S/PDIF out port(s) at back panel
	- LED-illuminated design
	- Audio Shielding
	- Dedicated audio PCB layers
	- Premium Japanese audio capacitors
	- Unique de-pop circuit
USB Ports	Rear USB Port (Total 8)
	2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C)
	4 x USB 3.2 Gen 1 port(s)(4 x Type-A)
	2 x USB 2.0 port(s)(2 x Type-A)
	Front USB Port (Total 6)
	2 x USB 3.2 Gen 1 port(s)(2 x Type-A)
	4 x USB 2.0 port(s)(4 x Type-A)

Software Features	ASUS Exclusive Software
	Armoury Crate
	- Aura Creator
	- Aura Sync
	AI Suite 3
	- Performance And Power Saving Utility
	TurboV EVO
	EPU
	Digi+ VRM
	Fan Xpert 4
	- EZ update
	ASUS CPU-Z
	AI Charger
	DAEMON Tools
	Norton Anti-virus software (Free Trial for 60 days)
	WinRAR
	UEFI BIOS
	ASUS EZ DIY
	- ASUS CrashFree BIOS 3
	- ASUS EZ Flash 3
	- ASUS UEFI BIOS EZ Mode

ASUS Special Features	ASUS 5X PROTECTION III
	- ASUS DIGI+ VRM
	- ASUS Enhanced DRAM Overcurrent Protection
	- ASUS ESD Guards
	- ASUS LANGuard
	- ASUS Overvoltage Protection
	- ASUS SafeSlot Core
	- ASUS Stainless-Steel Back I/O
	ASUS Q-Design
	- ASUS Q-DIMM
	- ASUS Q-LED (CPU [red], DRAM [yellow], VGA [white], Boot Device [yellow green])
	- ASUS Q-Slot
	ASUS Thermal Solution
	- Aluminum heatsink design
	ASUS EZ DIY
	- SafeSlot
	AURA Sync
	- Standard RGB headers
	- Addressable Gen 2 RGB header
Back I/O Ports	1 x DisplayPort
	1 x HDMI
	1 x LAN (RJ45) port(s)
	2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C)
	4 x USB 3.2 Gen 1 (blue) Type-A
	2 x USB 2.0
	1 x Optical S/PDIF out
	5 x Audio jack(s)

Internal I/O Ports	1 x CPU Fan connector(s)
	1 x CPU OPT Fan connector(s)
	3 x Chassis Fan connector(s)
	1 x AIO_PUMP connector
	2 x Aura RGB Strip Headers
	1 x Addressable Gen 2 header(s)
	1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s)
	2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s)
	1 x M.2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support(SATA & PCIe 4.0 x4 mode)
	1 x M.2 Socket 3 with M key, type 2242/2260/2280/22110 storage devices support (SATA & PCIE 3.0 x 4 mode)
	1 x SPI TPM header
	6 x SATA 6Gb/s connector(s)
	1 x Thunderbolt header(s)
	1 x 24-pin EATX Power connector(s)
	1 x 8-pin EATX 12V Power connectors
	1 x Front panel audio connector(s) (AAFP)
	1 x Thermal sensor connector(s)
	1 x Clear CMOS jumper(s)
	1 x System panel connector
	1 x COM port header
Accessories	User's manual
	I/O Shield
	2 x SATA 6Gb/s cable(s)
	1 x Supporting DVD
	1 x M.2 SSD screw package(s)
BIOS	256 Mb Flash ROM, UEFI AMI BIOS
Manageability	WOL by PME, PXE
Operating System	Windows 10 64-bit
Form Factor	ATX Form Factor
	12 inch x 9.6 inch (30.5 cm x 24.4 cm)
Note	*1 PCIE 3.0 X16_2 runs x2 mode when PCIEX1_2 or PCIEX1_3 slots is populated.
	*2 M2_2 shares bandwidth with SATA6G_56. When M.2_2 is populated, SATA6G_56 will be disabled.

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/90MB14U0-M0EAY0-Asus-Prime-B550-Plus-B550-Chipset-AMD-Ryzen-AM4-Socket-Motherboard-p-244754.php

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