ComX Computers
Product Specification Sheet

PRIME-A520M-K

Asus Prime A520M-K AMD A520 Chipset AMD Ryzen AM4 Socket mATX Motherboard

Product Overview

Asus Prime A520M-K AMD A520 (Ryzen AM4) micro ATX motherboard with M.2 support, 1 Gb Ethernet, HDMI/D-Sub, SATA 6 Gbps, USB 3.2 Gen 1 Type-A



Specifications

Features:

- AMD AM4 socket: Ready for 3rd Gen AMD Ryzen™ and 3rd Gen AMD Ryzen™ with Radeon™ Graphics Processors
- Comprehensive cooling: PCH heatsink and Fan Xpert
- Ultrafast connectivity: M.2 support, 1 Gb Ethernet, USB 3.2 Gen 1 Type-A
- 5X Protection III: Multiple hardware safeguards for all-around system protection

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 A520 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 A520 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.

Cooler by Design
PRIME A520M-K is engineered with an array of hybrid fan headers and features comprehensive cooling controls that are configurable via Fan Xpert software or via the UEFI BIOS, ensuring your rig stays cool and stable under intense workloads.

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

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

4-Pin PWM/DC Fan
The onboard chassis fan header supports auto-detection of PWM or DC fan.

Build on a Solid Foundation
Prime A520 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
M.2 Slot supports data-transfer speed up to 32Gbps via x4 PCI Express® 3.0 bandwidth. It's the perfect choice for an operating system or application drive, providing fast access to data.

USB 3.2 Gen 1 Type-A
Numerous USB ports support high-end rigs loaded with peripherals, including four rear-panel USB Type-A connectors with fast USB 3.2 Gen 1 connectivity for compatible cases.

Little Things Make a Big Difference
Prime A520 series adds the nuanced details that improve every experience, from exclusive codecs that provide pristine audio quality to intuitive interface that let you customize your system to create a unique 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.

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 provides control of settings for ASUS products, including keyboard and mouse preferences. This software even features dedicated product registration and highlight to help you stay in touch with the ASUS community.

Fortified PCIe slot prevents damage
SafeSlot Core is the ASUS-exclusive PCIe slot. Featuring a fortified design that's anchored to the motherboard by a special hook, SafeSlot Core provides 1.6x stronger retention and 1.3x greater shearing resistance than standard expansion slots.

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 A520 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	PRIME-A520M-K
Model	PRIME A520M-K
CPU	Build in AMD AM4 Socket for 3rd Gen AMD Ryzen and 3rd Gen AMD Ryzen with Radeon Graphics Processors Processors
Chipset	AMD A520
Memory	2 x DIMM, Max. 64GB, DDR4 4600(O.C) / 4400(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 Un-buffered Memory
	Dual Channel Memory Architecture
	ECC Memory (ECC mode) support varies by CPU.
	* The maximum memory frequency supported varies by processor.
Graphic	1 x D-Sub
	1 x HDMI 2.1(4K@60HZ)
Expansion Slots	3rd Gen AMD Ryzen and 3rd Gen AMD Ryzen with Radeon Graphics Processors
	1 x PCIe 3.0 x16 (x16 mode)
	AMD A520 Chipset
	2 x PCIe 3.0 x1

Storage	Total supports 1 x M.2 slot(s) and 4 x SATA 6Gb/s ports
	3rd Gen AMD Ryzen and 3rd Gen AMD Ryzen with Radeon Graphics Processors :
	1 x M.2 Socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support
	AMD A520 Chipset :
	4 x SATA 6Gb/s port(s)
	Support Raid 0, 1, 10
LAN	Realtek RTL8111H 1Gb Ethernet
	ASUS LANGuard
Audio	Realtek ALC887 7.1 Surround Sound High Definition Audio CODEC
	- Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback
	Audio Feature :
	- Audio Shielding
	- Dedicated audio PCB layers
	* Choose the chassis with HD audio module in front panel to support 8-channel audio output.
USB Ports	Rear USB Port (Total 6)
	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
	AI Suite 3
	- Performance and Power Saving Utility
	TurboV EVO
	EPU
	Digi+ VRM
	Fan Xpert
	- 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 LANGuard
	- ASUS Overvoltage Protection
	- ASUS SafeSlot Core
	- ASUS Stainless-Steel Back I/O
	ASUS Q-Design
	- ASUS Q-DIMM
	- ASUS Q-Slot
	ASUS Thermal Solution
	- Aluminum heatsink design
Back I/O Ports	1 x PS/2 keyboard/mouse combo port(s)
	1 x D-Sub
	1 x HDMI
	1 x LAN (RJ45) port(s)
	4 x USB 3.2 Gen 1 (blue) Type-A
	2 x USB 2.0
	3 x Audio jack(s)

Internal I/O Ports	1 x CPU Fan connector(s)
	1 x Chassis Fan connector(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 storage devices support (SATA & PCIE 3.0 x 4 mode)
	1 x SPI TPM header
	4 x SATA 6Gb/s connector(s)
	1 x S/PDIF out 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 Clear CMOS jumper(s)
	1 x System panel connector
	1 x COM port header
	1 x Speaker connector
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	mATX Form Factor
	8.9 inch x 8.7 inch (22.6 cm x 22.1 cm)

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/PRIME-A520M-K-Asus-Prime-A520M-K-AMD-A520-Chipset-AMD-Ryzen-AM4-Socket-mATX-Motherboard-p-307585.php

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