

Frequently Asked Questions (FAQ)

Recommendations for An AMD Athlon™ Processor-Based Computer

Power Supplies and Computer Cases

ONLY AMD RECOMMENDED POWER SUPPLIES SHOULD BE USED. FAILURE TO USE A RECOMMENDED POWER SUPPLY MAY RESULT IN DAMAGE TO YOUR MOTHERBOARD.

For the most current information on power supplies and cases for your AMD Athlon processor-based system, be sure to refer to the configuration information page at the following URL:

www1.amd.com/athlon/config

- Q.** What size power supply will I need with my AMD Athlon processor?
- A.** For a minimally configured low power-consumption system, you can use any of the approved power supplies listed on our website. A 250-watt power supply is the minimum but you need to estimate the system configuration requirements to ensure system stability. Minimally configured means: 128-Mbyte RAM, 16-Mbyte AGP graphics, internal V.90 modem, 10/100 NIC, floppy drive, CD-ROM or DVD, and 5400-RPM hard disk.

If you are not certain of the final user-configuration, it is safer to install one of the approved 300-watt (or larger) power supplies listed on the recommended power supply listing. If the Athlon processor-based system will have more power-consuming accessories than the basic minimum, we recommend you build your system using 300-watt (or larger) power supplies. By using a larger power supply, the system is also robust enough to handle future enhancements.

For the latest recommended power supply list, you must consult our web site at:

www1.amd.com/athlon/config

Q. What do I need to consider when acquiring a computer case for my AMD Athlon processor and recommended ATX motherboard?

A. You should consider the number of devices you plan to use before making your computer case purchase. The size of the tower case can have a direct impact on heat and cooling issues, and can limit the number of devices you can use. For an approved computer case list, you must consult our web site at:

www1.amd.com/athlon/config

When acquiring a computer case, make sure it has the following features:

- Designed for an ATX power supply and motherboard
- Has room for an additional rear cooling fan in the area of the processor
- Has the proper number of standoff posts for mounting your motherboard correctly and that they are aligned properly as well
- Has easy side access that doesn't require removing all of the cables first
- Has good air ventilation for proper air circulation in the case

Note: *The AMD Athlon processor was not optimized to run in a desktop case. You should use an approved mid-tower, full tower, or server case only.*

Memory

For the most current information on memory for your AMD Athlon processor-based system, be sure to refer to the configuration information page at the following URL:

www1.amd.com/athlon/config

Q. Can buffered memory be used with my AMD Athlon processor?

A. No. Use unbuffered memory only.

Q. I already have EDO memory or 66-MHz DIMM memory. Do I have to use PC-100-MHz DIMM memory to run my AMD Athlon processor?

A. YES. The AMD Athlon processor does not run on EDO memory or 66-MHz DIMM memory. The AMD Athlon processor requires, at a minimum, PC-100-MHz memory. Table 1 outlines the PC-100 memory requirements.

Table 1. AMD Athlon™ Processor PC-100 Memory Requirements (PC-100 Rev 1.0 minimum)

Description	Mandatory	Preferred
Unbuffered	YES	
Speed of PC-100 memory chip	8 ns (or faster)	
CAS/Latency of either 2 or 3	3	2
Error Correction Controlled (ECC)		YES
6 ply (thickness)		YES
Lifetime warranty		YES
All of the above confirmed (written) on the invoice	YES	

Q. Can I mix different brands of memory in my computer?

A. It is not advisable because some brands of memory are incompatible with other brands regardless of whether the speed is the same or not. We recommend that you use only one brand of memory in your computer system.

Q. Can I mix different nanosecond speeds of my memory modules?

A. Yes, but it is not advisable because the system will only use the memory speed of the slowest memory chip. In other words, if you had two 32-Mbyte 7 ns memory chips and one 32-Mbyte 8 ns chip, the system memory will operate at 8 ns. We recommend you acquire memory modules of the same speed for consistent performance.

Q. What is the minimum amount of memory I should use with my AMD Athlon processor?

A. We recommend a minimum of 64 Mbytes of PC-100 memory to operate current software satisfactorily, but it is strongly recommended that you have 96 Mbytes to 128 Mbytes (or more) in order to enjoy all of the benefits that the AMD Athlon processor has to offer you.

- Q.** Can I use generic or no-name brands of PC-100 memory with my AMD Athlon processor?
- A.** We recommend that you do not use generic or no-name memory modules because you really don't know what you're getting or what type of quality control your memory chip was subjected to. There is no way to tell compatibility of one generic or no-name memory module with another module. We strongly recommend you purchase and use well-known and approved memory modules for the following reasons:
- Uniformity and consistency of the memory module
 - Compatibility issues
 - Warranty and technical support
 - Verified specifications

Heat and Cooling Issues

- Q.** Are there any special requirements for keeping my AMD Athlon processor cool?
- A.** Yes. As with any modern processor, as well as current peripherals and components, heat is always a problem to contend with. New hard drives and devices generate a substantial amount of heat, so you should never operate your AMD Athlon processor without an approved processor heatsink and fan.

In addition to the processor cooling fan, make sure you have a least one fan (not including the power supply fan) in your case that will reduce the temperature. We recommend that the fan be in the back of the case, drawing air over the processor, and exhausting the air out the back of the case.

Many mid-tower cases allow at least one fan in the bottom-front. Since the power supply fan exhausts air out of the case, the additional fan in the bottom-front *must draw* air in.

Muffin fans (case fans) are very inexpensive and easy to install. Just be sure to mount the fan in the proper direction based upon the airflow arrow that you will find on the outer fan housing.

If you can install more than one fan, it is recommended that you have at least the same number of exhaust fans as draw fans. For example, in a full-tower case you can install two draw fans in the bottom-front and have two or three exhaust fans (including the power supply fan) in the top-back of the computer case. This arrangement provides excellent airflow throughout the case and reduces heat build-up. Be careful not to block the intake or exhaust of your fans.

Installation of Your Motherboard

- Q.** Are there any special requirements for installing my approved ATX motherboard?
- A.** No. There are no special requirements for installing your ATX motherboard, but the following recommendations will help enable proper installation:
- Perform a dry-run installation of the motherboard into the case without the AMD Athlon processor or memory installed. Get familiar with how each component positions itself and where the standoffs will fit.
 - If possible, install the processor module in the motherboard before installing the motherboard in the PC case. Place the motherboard on a softer surface like foam from the box or cardboard during this process. This is not possible with some cases where you cannot install the motherboard with the processor module on it due to power supply clearance or other problems.
 - Do not plug the power supply into a wall outlet until all the components have been installed and cables are attached. This is because there is power in the system as soon as it is plugged into the wall, even when the power switch is turned off.
 - If there is not a heatsink support on the motherboard, install the heatsink support that is supplied with the AMD Athlon Processor-in-a-Box.
 - Do not install the motherboard in the case with memory installed. You may damage the components when installing the standoff screws.
 - Use as many of the mounting postholes in your motherboard as possible. If you cannot use all the mounting holes in the motherboard, place non-metal spacers between the bottom of the motherboard and the case (of the same size as a standoff) to take up the slack.
 - Do not over-tighten the metal standoffs into the computer case.
 - Do not over-tighten the metal screws that fit into the metal standoffs.
 - Do not use screws for the metal standoffs that are the same size or larger than the solder ring around the mounting hole in the motherboard. (This could lead to damaging or shorting out of your motherboard.)

Using UDMA/66 (ATA-66) or UDMA/33 (ATA-33) Devices

- Q.** Can the AMD Athlon processor-based systems be used with UDMA/66 (ATA-66) devices (i.e. hard drives)?

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