





# New Solution Series NSK6500

# **User's Manual**

Manuel de l'utilisateur Anwenderhandbuch Manuale per l'operatore Manual del usuario 取扱説明書 At Antec, we continually refine and improve our products to ensure the highest quality. So it's possible that the new case may differ slightly from the descriptions in this manual. This isn't a problem; it's simply an improvement. As of the date of publication, all features, descriptions, and illustrations in this manual are correct.

# Disclaimer

This manual is intended only as a guide for Antec's Computer Enclosures. For more comprehensive instructions on installing the motherboard and peripherals, please refer to the user's manuals which come with the components and drives.

# New Solution Series User's Manual

# NSK 6500 - Quiet Super Mid Tower Case

This case is designed to meet Intel's Thermally Advantaged Chassis (TAC) design guide requirements.

### The Power Supply

NSK 6500 comes with a 430Watt universal input, active PFC, single 80mm fan cooled power supply compatible with the ATX12V version 2.01 specification and above. This includes dual 12V output rails that delivers safer and more reliable output to the system's components, as well as higher energy efficiency, which reduces power consumption by up to 25% saving you money on your electricity bill. In addition we've included a variety of industrial-grade protective circuitry: OPP (over power protection), OVP (over voltage protection), UVP (under voltage protection), and SCP (short circuit protection).

The power supply comes with a main power switch. Make sure you turn the switch to the ON (I) position before you boot up the computer for the first time. Normally, you won't need to switch to the OFF (O) position, since the power supply includes a soft on/off feature. This lets you turn the computer on and off by using the soft switch on the computer case. If the computer crashes and you can't shut it down using the soft switch, you can switch the main power to the OFF (O) position, to clear the fault, then reboot.

This power supply model features Power Factor Correction (PFC) circuitry in accordance with European standard regulation code EN61000-3-2. By altering the input current wave shape, PFC improves the power factor of the power supply. This results in increased energy efficiency, reduced heat loss, prolonged life for power distribution and consumption equipment, and improved output voltage stability. Together with the high efficiency design and the quiet 80mm fan, the power supply delivers not only a cleaner but also a quieter operating environment.

# Setting Up

- 1. Place the case upright on a flat, stable surface. The power supply fan should be at the back, facing you.
- 2. Remove the screws from the right side panel.
- 3. There are two latches on the side panel. Slide the latches towards the front of the case and swing open the panel.

4. Inside the case you should see the power supply, some wiring with marked connectors (USB, PWR etc.), and installed I/O panel and a power cord.

# Installing the Motherboard

This manual does not cover CPU, RAM, or expansion card installation. Please consult the motherboard manual for specific mounting instructions and troubleshooting.

- 1. Lay the case down, with the open side facing up. The drive cages and power supply should be visible.
- Make sure you have the correct I/O panel for the motherboard. If the panel provided with the case isn't suitable, please contact the motherboard manufacturer for the correct I/O panel.
- Line up the motherboard with the standoff holes, and remember which holes are lined up. Not all motherboards will match with all the provided holes; this is normal, and won't affect functionally. Remove the motherboard by lifting it up.
- 4. Screw the brass standoffs into the threaded holes that line up with the motherboard. Do not overtighten the standoffs. Some standoffs may be pre-installed for your convenience.
- 5. Place the motherboard on the brass standoffs.
- 6. Screw in the motherboard to the standoffs with the provided Philips-head screws. The motherboard is now installed.

# Connecting the Power and LED

The power supply conforms to the ATX12V Version 2.01 standard.

If the motherboard has a 20-pin power receptacle, detach the 4-pin attachment on the 24-pin power connector (see pictures 1 and 2). Before you connect the power supply to any of the devices, please consult the appropriate user manuals for the motherboard and other peripherals.

 Connect the 24-pin Main Power Connector and the 4-pin connector to the motherboard as needed. If the motherboard uses a 20-pin connector, detach the 4-pin attachment on the 24-pin power connector (see pictures 1 and 2).



Picture 2





For 24-pin motherboards

For 20-pin motherboards

- Connect the Reset switch (labeled RESET SW) to the motherboard at the RST connector. Make sure the label always faces the front of the case.
- 3. Power LED (labeled POWER LED) connector is located behind the Reset connector.
- 4. Power Switch (labeled POWER SW) connects to the PWR connector on the motherboard.
- 5. Hard Drive LED (labeled H.D.D. LED) connects to the IDE connector.

# Connecting the USB Ports

You will find a single 10-pin connector on a cable attached to the front USB ports. This is an Intel standard connector, which is keyed so that it can't be accidentally reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to the motherboard headers so that the blocked pin fits over the missing header pin. Note: Please check the motherboard manual for the USB header pin layout and make sure it matches the attached table. If it does not match this Intel standard, please call Antec customer support at (800) 22ANTEC (North America) or at + 31 (0) 10 462-2060 (Europe) to buy a USB adapter. This adapter will allow you to connect the front USB to the motherboard on a pin-by-pin basis.

1 2		Pin	Signal Names	Pin	Signal Names
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1	USB Power 1	2	USB Power 2
		3	Negative Signal 1	4	Negative Signal 2
		5	Positive Signal 1	6	Positive Signal 2
		7	Ground 1	8	Ground 2
9 10	I	9	Key (No Connection)	10	Empty Pin

### Motherboard Pin Layout

# Connecting the IEEE 1394 (FireWire®, i.Link®) Port

You will find a single 10-pin connector on a cable attached to the front IEEE 1394 connection. This is an Intel standard connector, which is keyed so that it can't be accidentally reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to the motherboard header so that the blocked pin fits over the missing header pin.

Note: Please check the motherboard manual for the IEEE 1394 header pin layout and make sure it matches the attached table. If you intend to connect the front FireWire<sup>®</sup> port to an IEEE 1394 add-on card that comes with an external-type IEEE 1394 connector, please call Antec customer service at (800) 22ANTEC (North America) or +31 (0) 10 462-2060 (Europe) to buy an adapter. This adapter will allow you to connect the front IEEE 1394 port to the external-type connector.

1 2	Pin	Signal Names	Pin	Signal Names
	1	TPA +	2	TPA-
0 0	3	Ground	4	Ground
	5	TPB+	6	TPB-
0	7	+12V (Fused)	8	+12V (Fused)
9 10	9	Key (No Pin)	10	Ground

Pin Assignment for Front Panel IEEE 1394 Connector

# Connecting the Audio Ports

There is an Intel standard 10-pin connector (with 7 individual wires with connectors) coming out from the front panel speaker and microphone connection. If the motherboard supports Intel's standard onboard audio connector, you can plug in the 10-pin connector directly onto the board. For non-Intel standard audio connection, you need to plug the 7 individual connectors to the motherboard. See instruction below:

Locate the internal audio connectors from the motherboard or sound card. Consult the motherboard or sound card manual for the pin-out positions.

- 1. Microphone Signal Pin: Connect the MIC connector to this pin.
- 2. Microphone Power: Connect the MIC-BIAS connector to this pin.
- 3. Ground Pin: Connect the AUD GND connector to this pin.
- 4. Front Right Speaker Out Pin: Connect the FPOUT-R connector to this pin.
- 5. Front Left Speaker Out Pin: Connect the FPOUT-L connector to this pin.
- 6. Rear Right Speaker Out Pin: Connect the RET-R connector to this pin.
- 7. Rear Left Speaker Out Pin: Connect RET-L connector to this pin.

# 3.5" Device Installation

There is a 5.25'' to 3.5'' drive bay adapter installed inside the lowest 5.25'' drive bay. Use this for the floppy drive or other external 3.5'' device.

- 1. Remove the lowest 5.25" drive bay cover that has a 3.5" drive bay cover in it from the bezel.
- 2. Remove the 3.5" cover from it.
- 3. Loose the two screws that fasten the adapter to the drive bay and slide the adapter out through the front of the case.
- 4. Mount the floppy drive or other external device into the adapter.
- 5. Slide and fasten the adapter back into the case.
- 6. Find a small 4-pin power connector on the power supply and connect it to the male 4-pin connector on the device.
- 7. Reinstall the drive bay cover back to the bezel.

There is a HDD cage under the external 5.25" drive bays for hard drives. Inside the cage there are five HDD bays. Each comes with an individual drive tray with soft silicone grommets to absorb and isolate the HDD noise.

- 1. Loose the two thumb screws from the HDD cage.
- 2. Slide the HDD cage out from the case.
- 3. Squeeze the metal clips on each side of the tray and slide the tray out.
- Mount the hard drive into the drive tray through the bottom silicone grommets with the special screws provided. Note: Don't over-tighten the screws. Doing so will reduce the vibration and noise-dampening ability of the rubber grommets.
- 5. Slide and lock the tray back into the case.
- Repeat the same procedure for the other devices as necessary. Note: If you choose to install the optional front 92mm fans to the case, please do it now. See the instructions under "Cooling System" for more information.
- 7. Slide the HDD cage back to the case and fasten the two thumbscrews.
- 8. Find the appropriate power connector on the power supply and connect it to the connector on the device.

# 5.25" Device Installation

There are four external 5.25" drive bays (one with 5.25" to 3.5" Adapter).

- 1. Remove the left side panel of the case.
- 2. Remove the plastic cover for the drive bay you want to use.
- 3. Slide the drive into the bay from the front of the case.
- Fasten the drive using the screws provided in the tool bag.
   Note: you need only to fasten the drive through the open side of the drive bay.

- 5. Mount the other devices accordingly.
- 6. Connect a large 4-pin connector from the power supply to the male 4-pin connector on each of the devices.
- 7. Replace the left side panel of the case.

### Chassis Air Guide

The new case includes a chassis air guide, to provide cooling air directly to the CPU. The air guide consists of three parts: an upper duct, flange, and lower duct. If you prefer, you can adjust the distance between the lower duct and the CPU, for maximum cooling efficiency.

You may also install a 80mm intake fan between the air guide and the case's side panel to further improve the system's cooling airflow. To install the optional fan:

- 1. Remove Chassis Air Guide from the side panel
- 2. Attach the fan to the side panel (see picture 3).
- 3. Using the fan screws, attach the flange of the air guide to the fan (see picture 4).
- 4. Connect a large 4-pin peripheral connector from the power supply to the make 4-pin connector on the fan.

# **Cooling System**

### The Rear Exhaust TriCool<sup>™</sup> fan:

The NSK 6500 comes with one 120mm TriCool<sup>™</sup> fan preinstalled. This fan has a three-speed switch that lets you choose between quiet, performance, or maximum cooling. (See specifications below.) The fan is installed so that the air is blowing out of the case. Connect a large 4-pin connector from the power supply to the male 4-pin connector on the fan. **Note**: The default setting of the fan is Low. We recommend this speed to maximize quiet computing.

Note: The minimum voltage to start the fan is 5V.

We recommend setting the fan speed to High if the fan will be connected to a fan control device or to the Fan-Only connector found on some of Antec's power supplies. A fan-control device regulates the fan speed by varying the voltage to it. The voltage may start as low as 4.5V to 5V. Connecting a TriCool<sup>™</sup> set on Medium or Low to a fan-control device may result in the fan not being able to start. The already lowered voltage from the fan control device will be further reduced by the TriCool<sup>™</sup> circuitry below 5V.

Picture 3



Picture 4

### Specifications:

Size:	120 x 120 x 25.4mm		
Rated Voltage:	DC 12V		
Operating Voltage:	10.2V ~ 13.8V		

Speed	Input Current	Air Flow	Static Pressure	Acoustical Noise	Input Power
High 2000 RPM	0.24A (Max.)	2.24 m³ / min (79 CFM)	2.54 mm-H2O (0.10 inch-H2O)	30 dBA	2.9 W
Medium 1600 RPM	0.2A	1.59 m³ / min (56 CFM)	1.53 mm-H2O (0.06 inch-H2O)	28 dBA	2.4 W
Low 1200 RPM	0.13A	1.1 m³ / min (39 CFM)	0.92 mm-H20 (0.04 inch-H20)	25 dBA	1.6 W

### The Front 92mm Fans

This case comes with two optional 92mm fan mounts in the front of the HDD cage. The front fan should be installed so that the air is blowing into the case from the front. We recommend using Antec TriCool<sup>TM</sup> 92mm fans and set the speed to LOW.

- 1. Remove the HDD cage from the case. **Note**: there is no need to remove the front bezel in order to install the fan.
- 2. Find four special fan screws inside the tool bag and mount the fan to the front panel from inside of the case.
- 3. Replace the HDD cage.

### Antec, Inc.

47900 Fremont Blvd. Fremont, CA 94538 USA tel: 510-770-1200 fax: 510-770-1288

### Antec Europe B.V.

Sydneystraat 33 3047 BP Rotterdam The Netherlands tel: +31 (0) 10 462-2060 fax: +31 (0) 10 437-1752

### Customer Support: US & Canada

1-800-22ANTEC

customersupport@antec.com

### Europe

+ 31 (0) 10 462-2060 europe.techsupport@antec.com

### www.antec.com

<sup>©</sup> Copyright 2006 Antec, Inc. All rights reserved. All trademarks are the property of their respective owners. Reproduction in whole or in part without written permission is prohibited. Printed in China.

Version 1.0.1 02/23/2006