Antec
The Power of You

New Solution Series

NSK3480

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. It's possible that your new case will 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 that come with those components.

New Solution Series User's Manual
NSK 3480
Quiet microATX Case

The NSK3480 Case with EA-380 power supply

The NSK3480 comes with an EarthWatts 380 watt PSU. Universal input, active PFC single 80mm fan cooled power supply that follows the ATX12V version 2.2 specifications. This includes dual +12V output rails that deliver safer and more reliable output to your system's components. Featuring higher energy efficiency, which reduces power consumption by up to 25%, saving you money on your electricity bill. EarthWatts power supplies have achieved 80 PLUS® Certification, the latest independent standard in power supply efficiency. In addition EarthWatts includes a variety of protective circuitry: OPP (over power protection), OVP (over voltage protection), and SCP (short circuit protection).

This power supply is backwards compatible with previous ATX form factor power supplies. To make sure you connect the power supply properly, please refer to the user manuals supplied with the motherboard and peripherals before connecting any of them to the power supply.

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.

Antec power supply models feature 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 PSU. A better Power Factor increases energy efficiency, reduces heat, improves output voltage stability and prolongs the life of your equipment. The PSU's high efficiency design and quiet fan deliver not only a cleaner but also a quieter operating environment.

The Dual Chamber Structure

The case is divided into two chambers. The motherboard chamber and the power supply chamber are separated from each other for maximum quiet and optimal cooling.

Set Up

1. Take the case out of the box. Remove the foam packing material and plastic bag.
2. Place the case upright with the power supply fan at the back facing you on a stable flat surface.
3. Remove the two thumbscrews fastening to the top cover of the case. Set these screws aside and keep them separate from the other screws.
4. Slide the top panel toward the rear of the case and lift it up.
5. There are tabs at the top of each side panel located in front the power supply. Lift and pull the side panels out using the tabs.
6. Inside the case you should see the power supply, some wiring (LED's, etc.), an installed I/O panel, a power cord and a plastic bag containing more hardware (screws, brass standoffs, plastic stands, etc.).

Motherboard Installation

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

1. Lay the case down so that the open side is up. You should be able to see the drive cage and power supply.
2. Make sure you have the appropriate I/O panel for the motherboard. If the panel provided is not suitable for the motherboard, please contact the motherboard manufacturer for the correct I/O panel.
3. Line up the motherboard with the standoff holes, and determine which ones line up and remember where they are. Not all motherboards will match with all of the provided screw holes, and this is not necessary for proper functionality. Some standoffs may be pre-installed for your convenience.
4. Lift up and remove the motherboard.
5. Screw in the brass standoffs to the threaded holes that line up with the motherboard.
6. Place the motherboard on the brass standoffs.
7. Screw in the motherboard to the standoffs with the provided Phillips-head screws.
8. The motherboard is now installed.

Connecting the Power and LED

The power supply conforms to the ATX12V v2.2 standard. Before you connect the power supply to any of the devices, please consult the appropriate user manuals for the motherboard and other peripherals.

1. You will need to route the cables from the power supply to the rest of the case. You can use either of the two holes in picture 1. One is narrow and will work for all types of power and interface cables except PCI-E or the main 20 or 24-pin connector. Those larger connectors must be routed through the side.

Picture 1

2. Connect the 24-pin Main Power Connector and the 4-pin 12V connector to the motherboard. If the motherboard uses a 20-pin connector then detach the 4-pin attachment on the 24-pin power connector (see pictures 2 and 3).

Note: the detachable 4-pin section cannot be used in place of a 4-pin +12V connector.

3. Connect the Reset switch (labeled RESET SW) to the motherboard at the RST connector. Polarity (positive and negative) does not matter for switches.

4. Power Switch (labeled POWER SW) connects to the PWR connector on the motherboard.

5. Power LED (labeled POWER LED) connector is located behind the Reset connector. For LEDs, colored wires are positive (+). White or black wires are negative (−). If the LED does not light up when the system is powered on, try reversing the connection. For more info on connecting LEDs to your motherboard, see your motherboard manual.

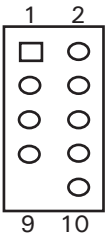6. Hard Drive LED (labeled HDD LED) connects to the IDE connector.
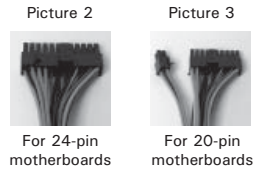
USB Connection

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 table below. If it does not match this Intel® standard, please visit Antec's web store at http://www.antec.com/StoreFront.bok and search for part number 30095 to order a USB Internal Adapter Cable. This adapter will allow you to connect the front USB to your motherboard on a pin-by-pin basis.

Motherboard Pin Layout

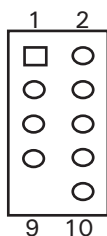| Pin	Signal Names	Pin	Signal Names
1	USB Power 1	2	USB Power 2
3	Negative Signal 1	4	Negative Signal 2
5	Positive Signal 1	6	Positive Signal 2
7	Ground 1	8	Ground 2
9	Key (No Connection)	10	Empty Pin

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 your IEEE 1394 header pin layout and make sure it matches the table below. If you intend to connect the front FireWire port to an IEEE 1394 add-on card that comes with an external-type IEEE 1394 connector, you will need a FireWire Internal Adapter. To order one, please visit Antec's web store at http://www.antec.com/StoreFront.bok and search for part number 30031. This adapter will allow you to connect the front IEEE 1394 port to the external-type connector.

Pin Assignment for Front Panel IEEE 1394 Connector

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

Connecting the Audio Ports (AC'97 and HDA)

There is an Intel standard 10-pin AC'97 connector and an Intel 10-pin HDA (High Definition Audio) connector; you can connect either the AC'97 or the HDA connector to your motherboard depending on the spec of the motherboard. If your motherboard supports Intel's standard onboard AC'97 audio connector, plug in the AC'97 connector directly onto the board. If your motherboard supports Intel's High Definition Audio, you can plug HDA onto the board. See instruction below:

Pin Assignment for Audio Ports (HDA and AC'97)
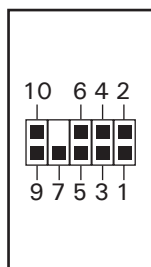
Pin	Pin Assignment (HD AUDIO)	Pin	Pin Assignment (AC'97 AUDIO)
1	MIC2 L	1	MIC In
2	AGND	2	GND
3	MIC2 R	3	MIC Power
4	AVCC	4	NC
5	FRO-R	5	Line Out (R)
6	MIC2_JD	6	Line Out (R)
7	F_IO_SEN	7	NC
8	Key (no pin)	8	Key (no pin)
9	FRO-L	9	Line Out (L)
10	LINE2_JD	10	Line Out (L)

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

3.5" External Device Installation

There is one external 3.5" drive bay under the 5.25" drive bays.
1.   Carefully remove the 3.5" drive bay cover from the bezel. Load the drives from the front, lining them up to the front of the drive cage.
2.   With one hand supporting the drive, fasten the drive with the screws provided.
3.   Find a small 4-pin white connector on the power supply and connect it to the male 4-pin connector on the floppy drive.

3.5" HDD Installation

There is one 3.5" HDD mounting point in the bottom 5.25" drive bay, and another at the bottom of the case. Using the HDD bay at the bottom of the case may

result in being unable to use the 4th PCI slot depending on the length of the card used. Both HDD trays use soft silicone grommets to mount the HDD.

1. Remove the screw fastening the HDD tray to the case and slide the tray out of the case.
2. 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. Over-tightening the screws will reduce the vibration and noise-dampening ability of the silicone grommets.
3. Slide and fasten the tray back into the case.
4. Repeat the same procedure for the other as necessary.
5. Find a peripheral power molex connector on the power supply and connect it to the male 4-pin or SATA connector on the device.

5.25" Device Installation

There are two external 5.25" drive bays (with one HDD tray inside the lower 5.25" bay). If you choose to use the lower drive bay for the HDD, you can only install one 5.25" device to the case. **Note**: The 5.25" bay will not support devices more than 6.9" deep.

1. Looking from the rear of the case you can see some metal grilles covering the 5.25" drive bays. Carefully push a screwdriver through the metal grille and gently push the plastic drive bay cover outwards until it comes off.
2. Use your hands to twist the metal plate back and forth until it breaks off. Be careful of the newly exposed metal where the grille was attached, as these areas are likely to be sharp.
    Note: Don't break off the metal grilles covering the drive bays that you are not using.
3. Slide the 5.25" device into the bay from the front.
4. Fasten the 5.25" device into the drive bay with screws provided.
5. Repeat the same procedure for other devices.
6. Connect a 4-pin large white connector from the power supply to the male 4-pin connector on each of the devices.

Cooling System

The Rear Exhaust TriCool™ fan:

The NSK 3400 comes with one 120mm TriCool 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 for quiet computing.

Note regarding using fan speed controllers with TriCool fans: 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 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 circuitry below 5V.

Specifications

Size: 120 x 120 x 25.4 mm
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-H2O (0.04 inch-H2O)	25 dBA	1.6 W

The Front 92mm Fans

This case comes with two optional 92mm fan mounts in the front of the case. The front fan should be installed so that the air is blowing into the case from the front. We recommend using Antec TriCool 92 mm fans and setting the speed to LOW. There are four special fan screws included with the case. Use these to fasten the fan in place from the inside. Connect the fan to the power supply or onto the motherboard.

Learn more about 80 PLUS®:

80 PLUS® is an innovative, electric utility-funded incentive program to integrate more energy-efficient power supplies into desktop computers and servers. The 80 PLUS performance specifications require power supplies in computers and servers to be 80% or greater energy efficient. This makes an 80 PLUS certified power supply at least 33% more efficient than current power supplies. 80 PLUS certified power supplies:

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- Minimize the need for noisy fans, creating a quieter environment
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