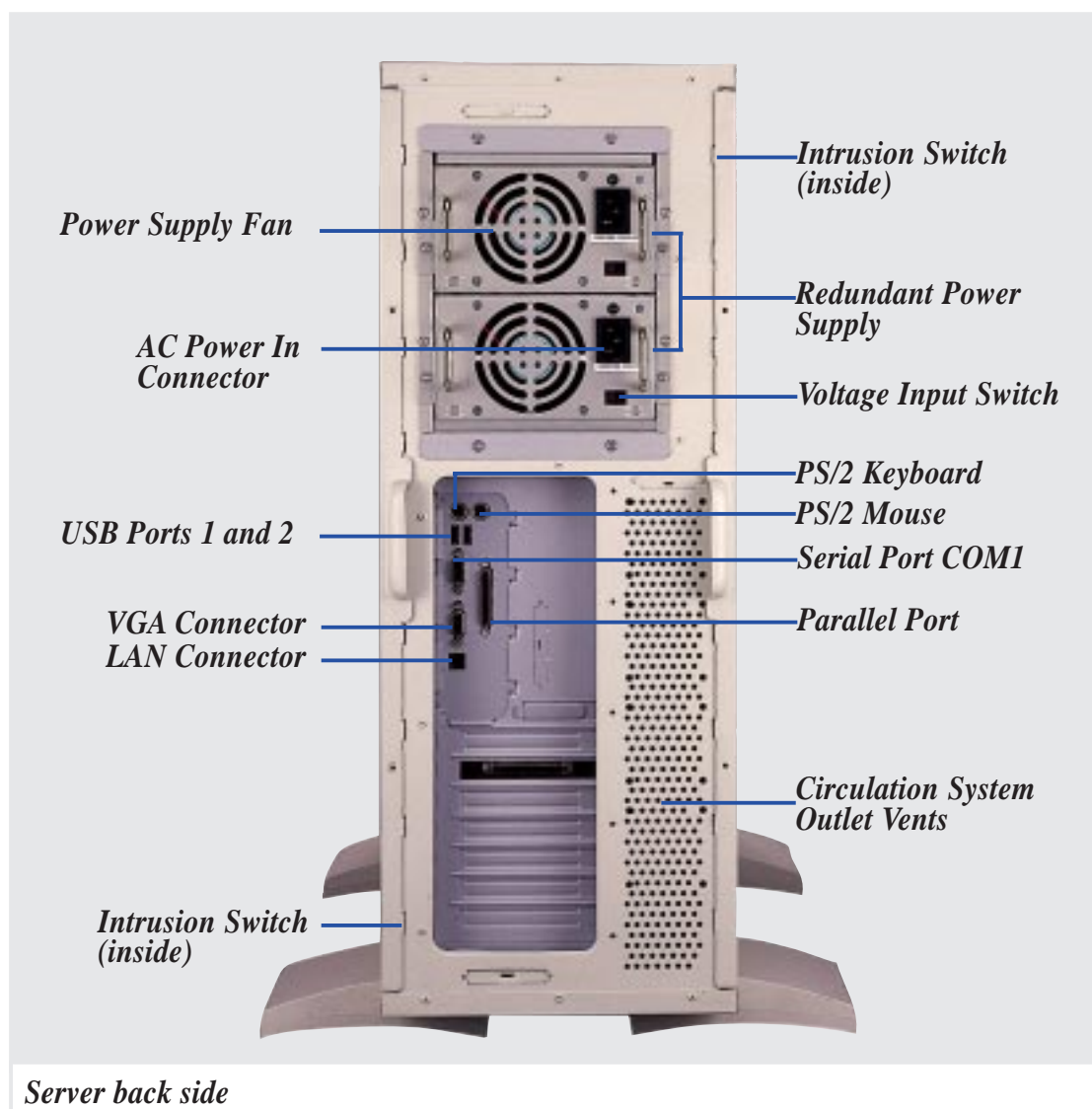


AP6000 Redundant Power

This insert is to be used with the AP6000 server with the optional 400W redundant power supply.

Server Back Side

The back side of the server is provided to show the back exterior components of this server.




Chassis Security


To protect the server chassis from unauthorized intrusion, the chassis side panels and front panel can be locked with the built-in keylock. Chassis intrusion switches can be connected to the motherboard's "chassis" connector to allow monitoring of the chassis side panels' open/close status. If either one or both of the side panels are opened, the motherboard's onboard hardware monitor can provide alerting and logging with the provided management software.

AP6000 Redundant Power

Redundant Power Supply

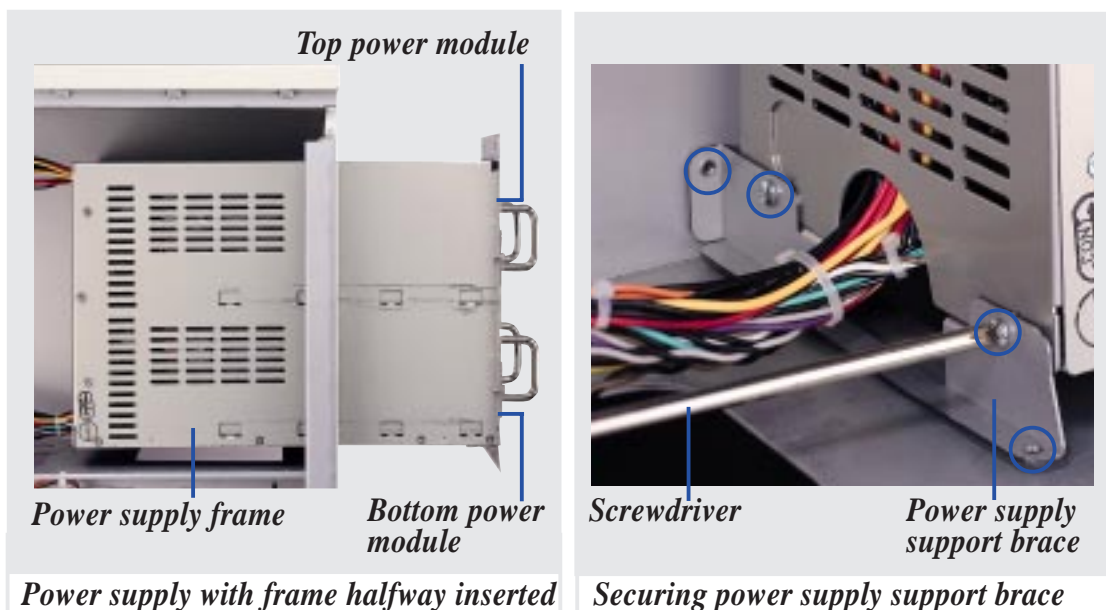
This server has a special redundant power supply with specifications to surpass this server's requirements. A clearly marked label gives detailed specifications of the power supply. A power switch is not provided therefore it is necessary to remove the power cord before opening the side panel in order to shut off the standby power. With the power cord removed, you can ensure there are no voltages which can cause shorts while installing or removing internal components.

 **CAUTION:** Before turning ON your server for the first time, set the power supply's voltage. Some products may have auto voltage switching to accommodate 220V-240V or 110-120V but this power supply must be set manually. The factory default should be on 230V to accommodate the higher voltage but it is safer to visually inspect the switch yourself in case it is not. Using the power modules set on 115V in 230V environments may cause damage to the power modules.

 **IMPORTANT:** For countries using 110V-120V, you must slide the switch to 115V or else power up is not possible (but no damage will occur).

Power Supply Mounting

The redundant power supply is swappable within its own frame. Two screws secure the power supply in the inserted position. The entire frame can also be unscrewed for servicing if necessary. A support brace must be used to support the frame under the inner edge. The support brace can only be secured *after* the power supply frame is inserted and must be removed *before* the power supply frame is removed from the chassis because it will not fit through the chassis opening. There are four screws securing the power supply support brace as circled below.




AP6000 Redundant Power

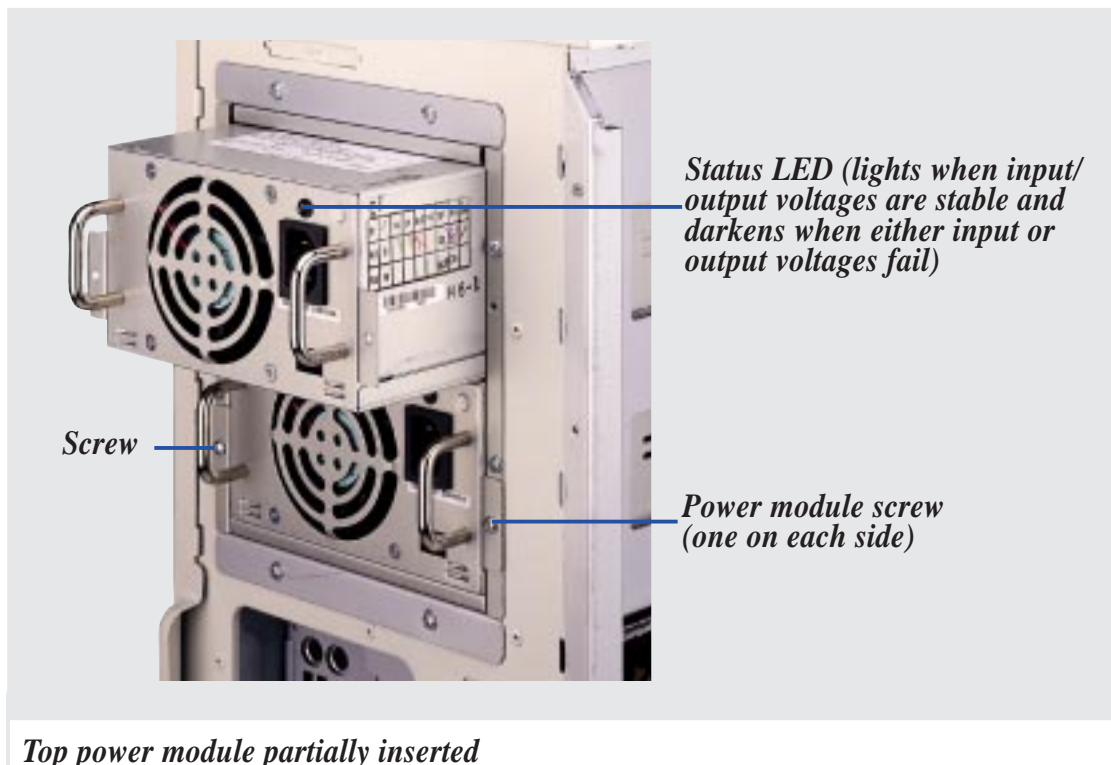
Power Module Rating

The redundant power supply consists of one frame and two identical ATX power modules. The power supply must be turned on or off through an ATX power switch connected to the motherboard's panel connector. The power modules are rated at 400W each and have passive current sharing on all outputs. Each power module supplies up to 400W to share the load but do not provide 800W combined. If one power module fails, 400W load is supported using one power module.

Power Module Failure

If any of the power modules fail to provide a voltage on any of its outputs, an audible alarm (located in the frame) will sound and the failed power module's LED will turn OFF. The power module's status LED lights when both input and output voltages are stable and darkens if either the input or output voltages fail. If the alarm sounds, perform the following steps:

-  1. Remove the power cord to the failed power module (with dark LED).
2. Remove the two screws and slide the failed power module out. The alarm should stop. If not, there may be a problem with the other module or with the redundant power supply frame (very unlikely).
3. Reinsert the failed power module and plug in the AC cord to confirm.
4. If the alarm sounds again, remove the failed power module and replace it with a good one as soon as possible.



AP6000 Redundant Power

Redundant Power Supply Specifications

Input Voltage

<u>Range</u>	<u>Min (V)</u>	<u>Nom (V)</u>	<u>Max (V)</u>
Range 1	90	120	132
Range 2	180	230	264

Input Current

<u>Input Voltage</u>	<u>Max In Cur.</u>	<u>Max Inrush Cur.</u>
Range 1	10A	100Ap-p
Range 2	5A	200Ap-p

Output Current Capacity

<u>Output</u>	<u>Nom Out (Vdc)</u>	<u>Min (A)</u>	<u>Max (A)</u>
1	3.3V	0	30*
2	5.0V	3.0	40*
3	12.0V	0.5	15
4	-5.0V	0	0.5
5	-12.0V	0	0.5

* Total output power for 3.3V and 5V combined shall be 210W

Output Voltage Regulation, Ripple, and Noise

<u>Output</u>	<u>Output Voltage Limits (Vdc)</u>			<u>Ripple/Noise</u>
	<u>Min</u>	<u>Nom</u>	<u>Max</u>	<u>Maximum</u>
1	3.17V	3.30V	3.46V	50mVp-p
2	4.80V	5.00V	5.25V	50mVp-p
3	11.40V	12.00V	12.60V	120mVp-p
4	-4.75V	-5.00V	-5.25V	120mVp-p
5	-11.40V	-12.00V	-12.60V	120mVp-p

Regulatory Information

Safety

The power system meets all applicable clauses for UL 1950 2nd edition without D3 deviations. The power system passes all tests for CUL and TUV safety.

EMI

The power system, operating with resistive load, meets FCC class B and CISPR 22 class B conducted limits.

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