

Thermaltake Case Wiring Considerations

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Top Panel External I/O

Firewire (IEEE-1394)

With no explanations from Thermaltake at this time as to why their data pin signal wiring is crossed from what it should be, this is the wiring scheme for the external top panel IEEE-1394 socket as I found it to function. Doing an ohmmeter trace from the top panel IEEE-1394 female connector to the signal designations printed on the interface cable pin sockets (the motherboard end of the cable) shows the TPA+ and - and the TPB+ and - wire pair connectors are switched from specified connector designations according to the IEEE-1394 spec.

I ended up wiring the Thermaltake top panel external IEEE-1394 socket to the motherboard through the supplied IEEE-1394 interface (I/O) cable in accordance with the printed cable pin-socket connector designations, but found I had to leave the two I/O cable ground wires disconnected from pins 3 and 4 on the Intel D865PERL Motherboard's IEEE-1394 connector block(s). I don't know yet why the grounds should not be connected, nor do I understand yet why wiring the data pins backwards from spec seems to work, and I don't know if the signal transfers will be in accordance with spec, but again, this configuration seems to function properly when I connected an external Firewire hard drive to the socket wired in this configuration. So, here's how I wired the Thermaltake IEEE-1394 I/O cable to an Intel D865 PERL Motherboard to get it to work:

<u>Thermaltake External IEEE-1394 I/O Socket Cable Wire Designation</u>	<u>D865PERL IEEE-1394 Motherboard Connector Block(s) Pin Designation</u>
TPB -	Pin 6, TPB -
TPB +	Pin 5, TPB +
TPA -	Pin 2, TPA -
TPA +	Pin 1, TPA +
VP	Pin 7, +12V DC
VG	Pin 10, Ground
Ground 1 of 2	No Connection to pin 3
Ground 2 of 2	No Connection to pin 4

Audio

The Thermaltake V1000D case provides top panel access to what would normally be rear panel access to various audio signals. Page 64, table 28 in the “Intel Desktop Board D865PERL Technical Product Specifications” manual shows the external (“Front Panel”) audio connector pin assignments. The Thermaltake external top panel Audio I/O socket connections to Intel Motherboard D865PERL audio connection block J7A1 pins are as follows.

The following is an extract from the Thermaltake manual, with equivalent connection points for an Intel D865PERL Motherboard:

3.4 Ear & MIC Connections

1. Connect “MIC-VCC” to “MIC POWER” or “MICPWR” on your motherboard

INTEL: Connect “MIC-VCC” to “Mono Mic Bias,” pin 3

2. Connect “MIC-IN” to “MIC INPUT” or “MIC2” on your motherboard

INTEL: Connect “MIC-IN” to “Mono Mic In,” pin 1

3. Connect “GND” to “GROUND” or “AGND” on your motherboard

INTEL: Connect “GND” to “Ground,” pin 2

4. Connect two ‘EAR L’ to “BLINE_OUT_L” and ‘Line out_L”

INTEL: Connect one of the two wires marked “EAR L” to “LEFT_OUT” pin 9 and the second to “Left Channel Return” pin 10.

5. Connect two “EAR R” to “BLINE_OUT_R” and “Line out_R”

INTEL: Connect one of the two wires marked “EAR R” to “RIGHT_OUT” pin 5 and the second to “Right Channel Return” pin 6.

USB2.0

The Thermaltake external top-panel USB2.0 (compatible with USB1.1 as well) socket interface cable provide connectivity for two USB connections to the motherboard. You will find two 5-pin connectors, USB1 and USB2, on the motherboard side of the I/O cable. Each connector has VCC1, USB-, USB+, a power and a signal ground.

Pins 1, 3, 5, and 7 on a USB connector block corresponds to one USB port, while pins 2, 4, 6, and 8 corresponds to a second USB port. Pin's 1 and 2 respectively provides the +5 volts DC power for each of the respective USB port connections, while pins 7 and 8 provides power ground for each port.

Connect the Thermaltake USB I/O cable connectors, one to each motherboard USB connector block port, being mindful to connect the Thermaltake USB connector VCC socket to pin 1 for port one, and pin 2 for port 2.