



# **R440LX Chassis Thermal Test Summary**



*Revision 1.0  
April 1998*

Revisions:

| Revision Level | Notes                      |
|----------------|----------------------------|
| 0.5            | Draft Copy For Review Only |
| 1.0            | TME edits                  |

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## **Overview**

The purpose of this report is to facilitate the identification of third party ATX compliant chassis that are mechanically and thermally compatible with the N440BX server baseboard. The areas of focus for this testing were chassis mechanical fit, chassis thermal performance.

Intel's extensive computer system and chassis design experience has shown that the thermal characteristics of a server chassis design are of far greater importance than commonly considered. The thermal testing information provided in this summary is intended as a guide for the integrator/reseller in choosing chassis that can reliably support their targeted server configurations.

## **Chassis Testing Premise**

Mechanical Testing – The chassis were tested for ATX Specification 2.01 compliance at the I/O opening and for physical fit with the R440LX server baseboard.

Thermal Testing – The chassis were tested to see if they provided adequate cooling airflow so as to keep critical server components within the individual manufacturer's temperature specifications. Components specifically targeted for thermal monitoring were the Pentium® II processor(s), the Intel® 440LX PCIset host bridge chip, and the hard disk drive(s). The table below briefly describes the tested server configurations.

## **Test Configuration Summary**

| Test Level | Processor(s) | Memory | HW RAID | Hard Disk | RPM   | Disk Type                    |
|------------|--------------|--------|---------|-----------|-------|------------------------------|
| 1          | 1 x 300Mhz   | 64MB   | No      | 1 x 4.5GB | 7,200 | Seagate* Barracuda* ST34572W |
| 2          | 2 x 300Mhz   | 128MB  | No      | 1 x 9GB   | 7,200 | Seagate Barracuda ST19171W   |
| 3          | 2 x 300Mhz   | 256MB  | Yes     | 3 x 9GB   | 7,200 | Seagate Barracuda ST19171W   |

The next table illustrates the results of all the individual chassis tested for compatibility with the R440LX server baseboard.

**R440LX - Chassis Compatibility List**

| Supplier   | Model#      | Type (1) | Dimensions (2) | P/S Capacity (3) | P/S Type (4) | Thermal Test Level (5) | 5.25 Bays (6) | 3.5 Bays (6) | HotSwap Drives | Comments |
|------------|-------------|----------|----------------|------------------|--------------|------------------------|---------------|--------------|----------------|----------|
| Chieftec   | FT01W       | FT       | 18x8x25        | 300              | S            | 2                      | 6             | 4            | No             |          |
| Yeong Yang | YY-1240     | FT       | 17x8x23        | 300              | S            | 2                      | 5             | 4            | No             |          |
| In-Win     | Q500I       | FT       | 17x8x24        | 300              | S            | 2                      | 5             | 5            | No             |          |
| Shin-G     | GT312ATX    | FT       | 17x9x24        | 300              | S            | 2                      | 4             | 5            | No             |          |
| Axxion     | IPC2480     | FT       | 17x8x23        | 300              | S            | 3                      | 4             | 3            | No             |          |
| Intel      | Columbus-II | FT       | 18x8x19        | 300              | S            | 3                      | 3             | 6            | No             |          |
| Chenbro    | A9661       | FS       | 27x15x27       | 300              | RD           | 3                      | 24            | 8            | No             |          |

Notes:

- (1) Chassis Type: MT = Mid Tower, FT = Full Tower, FS = File Server, Rack = Standard 19" Rack Mount
- (2) Dimensions in Inches
- (3) Power supply output capacity in watts (w)
- (4) Power Supply: S=Single, H/S = Hot Swap, RD = Redundant,
- (5) Thermal test level refers to the highest level of testing that was successfully completed.  
Refer to the table on the previous page for a description of each system configuration level.
- (6) Drive Bay data provided as rough estimate of chassis capacity.