



PRODUCT MAINTENANCE RELEASE BULLETIN



Product Information:

Product Line : Servers
Product Family : Express5800
Product Type: LS2400
Model Name(s) : see below
Market Introduction : June 1998

PMRB Revision : 1.0
PMRB Date : 09 / 07 / 98



Model Identification:

Machine	MI	Description
LS2400	ISG-5470-HU	PPRO 350Mhz, 512KB cache Model 0, NORAM, NOHDD
	ISG-5491-XU	PPRO 350Mhz, 512KB cache, 128MB/9GB

** = Country codes: AA = Danish, BB = British, CD = Swiss/German, CF = Swiss/French, DD = German, EE = Spanish, FF = French, JJ = Dutch, NN = Norwegian, PP = Portuguese, SS = Swedish, TT = Italian, TU = Italian /American, UU = Euro/American, YY = Belgian/Flemish

Board supports the following features:

DESCRIPTION

COMMENTS

CPU

Pentium II Klamath 266 L2 cache
 Deshutes up to 400MHz L1/L2 cache
 Up to 2 with a 100 MHZ BUS
 512KB cache ECC

Memory Sockets

4

Memory Sticks

DIMM 32/64/128/256

Max. Memory

1GB

Memory type, Speed, ECC

SDRAM 72 Pin, 100MHZ, Yes

Incr. Memory

1 Stick, 4 Times

Internal Bays

4

Drive Bays, 5.25"

3

Drive Bays, 3.5"

1

TOTAL DRIVE BAY

8

SCSI Integrated

Ultra-Wide SCSI x 2 ch SYMBIOS
 53C876

IDE integrated

2 channels with PIIX4 up to 22 MB/s

RAID Contr.

NEC SECUR RAID 100/ 500 optional

Integrated NIC

On board 82558 10/100 PCI LAN

Integrated Graphics

CL-GD5480 1280x1024, 16.7M colors

1MB not upgradable

CDROM

24xCDROM 8240B

Expansion Slots

3 PCI

1 PCI/ISA shared

1 ISA

TOTAL Expan SLOT

External I/F

CRT,

Keyboard,

Mouse

Serial x 2

EPP Parallel x 1

Rj45 Network

Yes (SMB Pro(PCI) or SMB Lite (ISA) :

TBI)

I/F for RAS Board

260W

Power Supply

NO

Redundant and Hot Swap Power

NO

Redundant and Hot swap FAN

NO

Hot Swap FAN

ATX

Dimensions

21.54x43.18x45.21cm

(H x W x D)

Server supports the following features:

<u>DESCRIPTION</u>	<u>FEATURE</u>	<u>COMMENTS</u>
CPU		
Family	Pentium II Klamath Pentium II Deshutes	
Internal frequency	266mhz, 300-400 mhz	2CPU :512KB cache
External frequency	100 MHz	Supports 100 MHz
Total # of CPUs	2 CPU	The CPU's must be the same Mhz, CACHE must be same size and CPU stepping may be a consideration.
CACHE	On CPU Chip	No Option Available
Memory		
Sockets	4	Gold sockets only
Capacity	1GB	Supports 1GB using 256MB
Type	X72	SDRAM
Data Protection	ECC with error logging SDRAM	
SCU & BIOS		
BIOS Type	Phoenix	Browse our Web
Languages	FLASH Update	
Flash	1MB	
Graphics		
Controller	CIRRUS Logic 5480	OS Dependent BIOS Independent
Bus	PCI	
Memory	2MB capacity standard	2MB
Resolutions	640x480, 800x600, 1024x768, 1280x1024	
Colors	16MEG @ 640x480 & 800x600, 64K @ 1024x768 & 256 @ 1289x1024	
Output Port	15 pin analog	
Disk Controllers		
SCSI	Ultra Wide Symbios53C876 (2 channels)	1 channel : for Internal HDD bays 1 channel : for Internal 5» bays and CHA A ultra Wide connector CH B Narrow
IDE	2 Channels	
Floppy	connector on board	
I/O		
Slots (Total)	6	
Dedicated ISA	1	
Dedicated PCI	3	One of them is shared with SCSI
Shared PCI/ISA	1	

Server supports the following features (con't)

<u>DESCRIPTION</u>	<u>FEATURE</u>	<u>COMMENTS</u>
Ports & Connectors On Base Board and Riser Card	1 x Fan headers 1 x FDD interface 2 x SCSI 68 Pin Ultra Wide High Density cabled to 2 connectors (A Ultra, B Narrow) 1 x Power Supply 1 x Server management board I/F*	On System IO Board On System IO Board On System IO Board On System IO Board On System IO Board On System IO Board On System IO Board On System IO Board On System IO Board
Output Ports I/O Ports	All Located On Riser Card - Contains the Following: 1 Mouse, 1 Keyboard port, 1 Serial 1 Parallel Port, 1 RJ45	
Board Dimensions Length / Width	ATX format	
Real Time Clock	National PC87306	I/O Chip
Server Management Via PIAZZA & HECETA	SMB Pro or SMB Lite(not fixed) CPU and Chassis Fan Alarm Temperature Sensor Voltage Sensor Intrusion Detection SMI Shut Down Event Log SMB Interface(SMB Pro or Lite) → BMC (Board management)	PIAZZA HECETA HECETA PIAZZA + HECETA HECETA + OSB2 PIAZZA PIAZZA + NVRAM PIAZZA Hot Swap Backplane
Logging	All critical events to on board non volatile memory	ECC Events, Voltage, Temperature, Fan & Etc.
Ease of Upgrade	Easy upgrade of 2nd, CPU, Main Memory, (end user, not technician)	

Chassis supports the following features:

<u>DESCRIPTION</u>	<u>FEATURE</u>	<u>COMMENTS</u>
Rack Mountable	Fits into Std. 19" Rack Frame	Side Rails fit both NEC Rittal 19" Rack Frame (VR383551) and Compaq Rittal 19" Rack Frame (165753-293)
3.5» Removable B	One 3.5» Bays	Bay 1 - 3.5" FDD
5.25» Removable I	Three 5.25» Bays	Supports 5.25" SCSI Devices connected to Internal SCSI controller
HDD Bays	Four SCSI SCA HDD Device Bays	Support 18GB/10Krpm
Power Supplies	One 260 Watt Power	
Hot - Swap	NO	
Cooling	For CPU	
Add In Board Slot:	6	ISA, PCI
I/O Ports	Riser Card	
Switches	Power, Reset	Labeled on chassis with international icons
Indicators	Power, Fault, Activity, NIC Activities	Labeled on chassis with international icons

Operating System Specific Solutions

NOS specific information is key installation information for those NOS's covered in the Configuration Guide.

Utilities

- **Express Builder Version 2.1 Setup and Configuration**
 - ⇒ **SYM53C876 DRIVERS**
 - ⇒ **Express5800 LS2400 UTILITIES, SSU**
 - ⇒ **On Line service Manual, user's Guide**
 - ⇒ **AMI configuration Utilities,**
- **ESMPro Management Suite Version 1.4**

Bios

- **Express5800 LS2400 Flash PHENIX BIOS (see latest version on WEB)**
- **User & supervisor passwords supported**
- **DMI 2.0 capable**

MAINTENANCE PLAN:

Under limited warranty, maintenance is performed to the major module assembly level. After warranty, approved ZDS service organizations can perform maintenance as required. The Field Replaceable Units (FRU) section of this PMRB lists the major assemblies.

APPROVED SERVICE ORGANIZATION:

Commercial Sales : **Approved ZDS Service Centers and Field Engineers.**
Contract Sales : **Refer to applicable contract.**

Zenith Data Systems reserves the sole right to determine, direct, and conduct any and all factory-authorized reworks or upgrades, including the choice of service providers, based on quality and cost of provider.

DATE OF FIRST SHIPMENT:

July 1998

TRAINING:

For service training in Europe, contact the Zenith Data Systems or Bull subsidiaries in each country. A list of subsidiaries and phone numbers may be obtained by **calling ZDS in France at + (33) 1 5523 7200**

MEAN TIME TO REPAIR (MTTR)

At the major module assembly level, **30 minutes**.

MEAN TIME BETWEEN FAILURES (MTBF)

20 000 h at 25°C and 40 % R.H.

PREVENTATIVE MAINTENANCE

Clock/Calendar **battery** replacement at seven years.

SPECIAL TOOLS OR UTILITIES REQUIRED

Full static prevention measures should be taken! Perform all work on a static mat using a wrist strap. Utilities will be available on the Information Resource Program Technical Support Bulletin Board until released on the Information Resource ZD-ROM.

Flash-BIOS

(Use latest available from WEB)

Diagnostics

TESTVIEW (License required)

9-pin Serial Loopback Connector

438-0073-00

LIMITED WARRANTY:

Three years on site Warranty with high end class conditions.

MANUALS:

It is recommended to keep a copy of the following manuals:

- | | | |
|----|----------------|-------------------------------------|
| A. | Service Manual | Ref. : online / Express builder 2.1 |
| B. | User Manual | Ref. : online / Express builder 2.1 |

Information:

Zenith data systems	standard:	+(33).(0)1.5523.7200
	Web:	WWW.ZDS-EUROPE.COM




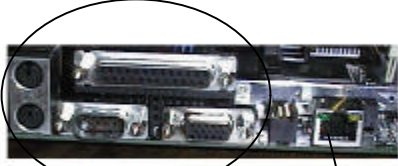
ATTACHMENTS:

- A. Detailed views
- B. I/O board layout
- C. Exploded View

ATTACHMENT A

DETAILED VIEW

Express5800 LS2400 Front & back Views

	
<p>Front View</p>	<p>Side view</p>
	 <p>I/O</p> <p>NIC</p>
<p>Back view</p>	<p>I/O board view</p>

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System Board Connector and Component Locations

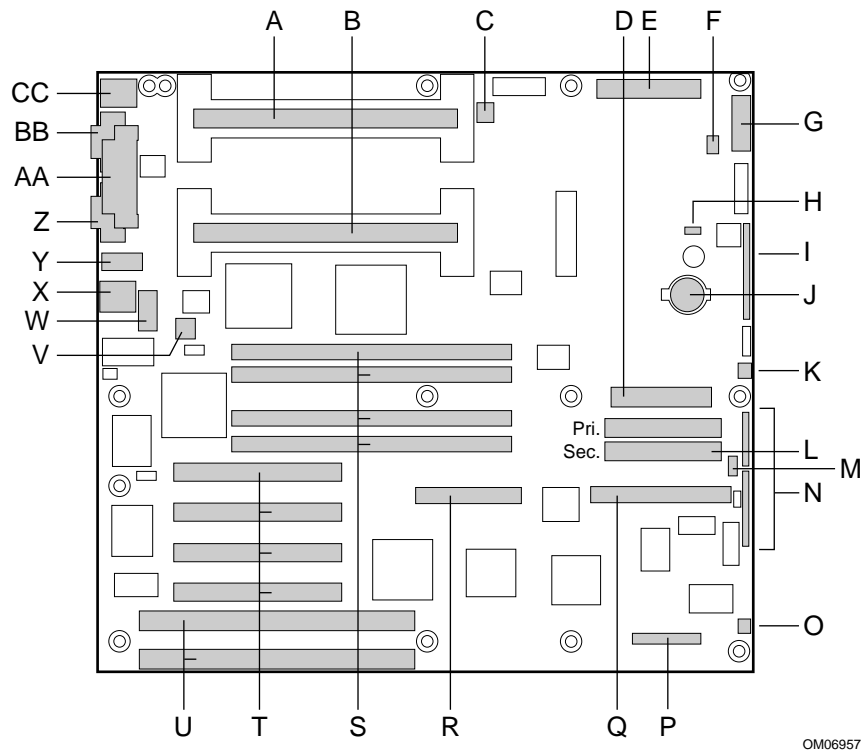


Figure 2. System Board Connector and Component Locations

- | | |
|--|---|
| A. Secondary processor connector | P. Server monitor module (SMM) connector |
| B. Primary processor connector | Q. Narrow SCSI connector |
| C. Heatsink fan connector | R. Wide SCSI connector |
| D. Diskette drive connector | S. Memory sockets for four DIMM components |
| E. Main power connector | T. PCI slots for add-in boards |
| F. Hard drive LED connector | U. ISA slots for add-in boards |
| G. Front panel connector, 16 pin | V. Heatsink fan connector |
| H. Speaker connector | W. USB connector |
| I. AT front panel connector | X. RJ-45 network controller |
| J. Lithium backup battery | Y. Serial port B (COM 2) |
| K. System fan connector | Z. VGA monitor port |
| L. IDE connectors, primary and secondary | AA. Parallel port |
| M. External I ² C connector | BB. Serial A (COM 1) |
| N. Configuration jumper blocks | CC. Keyboard and Mouse PS/2 compatible connectors |
| O. System fan connector | |

EXPLODED VIEW

Unavailable Yet

PARTS LIST

No	Description	O	KIT MODEL	Part Number
1	MOTHERBOARD			1818970000
5	CPU 350 MHZ ECC W/512		UBP-2482-1C-xx	0820570000
7	RETENTION BRKT PII			1499770000
8	TERMINATOR BOARD			1301520000
10	HEATSINK PII → 300Mhz			1499520000
11	HEATPAD PII → 300Mhz			1499530000
12	DIMM, 32MB, 100MHz SDRAM Unbuffered		AMS-4032-xx-30	0820610000
13	DIMM, 64MB, 100MHz SDRAM Unbuffered		AMS-4064-xx-00	0820620000
14	DIMM, 128MB, 100MHz SDRAM Unbuffered		AMS-4128-xx-00	0820590000
19	HDD, 4GB, 7200RPM, LVD, ST34573LW,		ADH-7400-xx-30	3009110100
20	HDD, 9GB, 7200RPM, LVD, ST39173LW,		ADH-7900-xx-30	3009130100
22	ADAPTEC AHA-2944UW HVD	O		1301630000
32	Power Supply, (260 W) Hi-Pro			1901720000
33	CD-ROM, 24X EIDE 8240B		ADR-0240-xx-04	7303020200
34	Diskette drive, 3.5", Mist White			3200610000
38	CBL, IDE			Z221100100
39	CBL, FDD			0700170000
40	CBL, POWER CORD			6701850000
41	CBL, USB			1301550000
45	BEZEL			1499690000
46	I/O PANEL			1499700000
52	POWER SWITCH			1499760000
56	FAN ASSY 3W PULSE QUABBIN			1301610000

TBD= To Be Defined

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