

**BHARAT HEAVY ELECTRICALS DIVISION
CORPORATE RESEARCH & DEVELOPMENT DIVISION
VIKAS NAGAR, HYDERABAD -500 093, INDIA**

We require about 100 no.s Central Processor Units (CPU) as per the enclosed specifications. Reputed suppliers who are willing to supply these units may register with us by filling the enclosed vendor registration form and sending it to the undersigned on or before 25-04-06. In case you are already a registered vendor at any BHEL unit, convey your interest to the undersigned, giving particulars about your organization and your registration particulars before the above date.

If the vendors require any technical clarifications, they can contact Sri NVL Addanki, AGM(PCS) on phone +91 40 23770599 or +91 98661 92568 or by email addanki@bhelrnd.co.in

In case of any other clarifications contact the undersigned on phone +91 40 23778474 or +91 98495 57025 or by email madhu@bhelrnd.co.in

A Madhu
Senior Deputy General Manager(Purchase)

Technical Features of Central Processor Unit(CPU) :

1.0 Electrical

- a. Processor : Low Power Pentium III® CPU, 700 MHz 256 kB ECC protected cache (L2 Cache) 64-Bit Data Bus Intel processor out of Embedded Program
- b. Chip Set : Intel 440BX with 100 MHz host bus speed
- c. BIOS : 256 kb Flash EEPROM,
- d. SDRAM : 144-pin SO-DIMM socket for one module Up to 128 MB SDRAM
- e. FLASH : 44-pin header for Flash modules Up to 1 GB Flash(IDE)
- f. Multi Purpose Socket , Support for Disk On Chip , SRAM, FLASH, EPROM 28 & 32-pin DIL, up to 512 kB
- g. RTC backed with on-board battery, field exchangeable CMOS setup can be saved in EEPROM
- h. SVGA Interface C&T69000 video accelerator 15-pin DSUB resolution up to 1280 x 1024 refresh rate up to 85 Hz
- i. 4 x Serial Ports 2 ports can be modified optionally to RS422/485 2 x 9-pin D-SUB and half & full duplex, electrically fully isolated 1 x 25-pin D-SUB connector
- j. 2 x USB Interface USB 1.1 (up to 12 Mb/s) 2 x Type A connectors
- k. Parallel Port configurable as LPT1...3, SPP, EPP, ECP (IEEE1284) 25-pin D-SUB connector
- l. E-IDE Port PIO mode 4, bus master IDE, ultra DMA/33 44-pin header & 40-pin header
- m. FDD Port one port for up to 2 drives Connection for external FDD
- n. Expansion full 16-bit PC/104 and 32-bit PC/104+ interface
- o. Speaker Port : Over 10-pin header
- p. Keyboard : PS/2 keyboard interface 6-pin mini DIN connector
Mouse : PS/2 mouse interface 6-pin mini DIN connector
- q. Watchdog: Programmable time-out Indicator
6 activity LED's (2 user definable) Power, Reset, HDD, SCSI, LAN, LAN100
Reset Button on chassis (protected) and a remote reset button

On-board option

SCSI Interface ASPI, SCAM and Fast SCSI compatible, bootable 50-pin SCSI-2 connector

Ethernet 10BaseT /100BaseTX RJ45

Fast 10/100 Mbit/s support IEEE802.3 auto negotiation

Physical / power

Chassis : Rugged chromated aluminum with best EMI protection
DIN-rail mounting,

Size : 270 x 162 x 62 mm (L x W x H) approx.

Power : On board high efficiency switching regulator 8 – 28VDC
Input power

Power consumption : Typically 17 Watt (DOS Prompt) 12 VDC, 700 MHz, 128 MB SDRAM, HDD

Temperature range : 0°C up to +60°

Ventilation : No fan or openings in housing

Humidity : 10% - 90% non condensing (Optional coating)

Shock & Vibration : compliance with EN60068-2-6

EMC : compliance with EN50081-2, EN50082-2 , EN61000-6-2
test data shall be available for review

Compatibility : 100% PC/AT

O.S Support : Vx works RTOS drivers,BSPs etc. required .

Expansions required:

- Hard Disks
- Flash Disks
- External Floppy I/F on D- connector
- PCMCIA slots
- PC/104 & PC/104+ for the below boards
- Digital I/O's
- Analog I/O's
- Fieldbus
- Or any other PC/104 Module

2.0 PC104 Digital I/O module for the above CPU:

48 High current O/Ps with Programmable port directions

Input Voltage : LOW 0.0v to 0.8v

High 2.0v to 5.0v

Output Voltage: LOW 0.0v to 0.55v

High 2.0v to 4.7v

Input Current : LOW -1.2 ma.

High 5 μ A Max.

Output Current: LOW 64 ma max @0.55v

High 15 ma max @ 2.0v

Ambient temp: 0-70 °C

Termination details of 48 I/O lines:

48 lines shall be terminated on two SCSI-ii (50 pin D-Sub)connectors as given below
or will be given at the time of placement of Purchase Order.

50 pin DSUB –1	PIN OUT DETAILS	50 pin DSUB –2	PIN OUT DETAILS
Pin1 1 A7	Pin2 GND	Pin1 2A7	Pin2 GND
Pin3 1A6	Pin4 GND	Pin3 2A6	Pin4 GND
Pin5 1A5	Pin6 GND	Pin5 2A5	Pin6 GND
Pin7 1A4	Pin8 GND	Pin7 2A4	Pin8 GND
Pin9 1A3	Pin10 GND	Pin9 2A3	Pin10 GND
Pin11 1A2	Pin12 GND	Pin11 2A2	Pin12 GND
Pin13 1A1	Pin14 GND	Pin13 2A1	Pin14 GND
Pin15 1A0	Pin16 GND	Pin15 2A0	Pin16 GND
Pin17 1C7	Pin18 GND	Pin17 2C7	Pin18 GND
Pin19 1C6	Pin20 GND	Pin19 2C6	Pin20 GND
Pin21 1C5	Pin22 GND	Pin21 2C5	Pin22 GND
Pin23 1C4	Pin24 GND	Pin23 2C4	Pin24 GND
Pin25 1C3	Pin26 GND	Pin25 2C3	Pin26 GND
Pin27 1C2	Pin28 GND	Pin27 2C2	Pin28 GND
Pin29 1C1	Pin30 GND1	Pin29 2C1	Pin30 GND
Pin31 1C0	Pin32 GND	Pin31 2C0	Pin32 GND
Pin33 1B7	Pin34 GND	Pin33 2B7	Pin34 GND
Pin35 1B6	Pin36 GND	Pin35 2B6	Pin36 GND
Pin37 1B5	Pin38 GND	Pin37 2B5	Pin38 GND
Pin39 1B4	Pin40 GND	Pin39 2B4	Pin40 GND
Pin41 1B3	Pin42 GND	Pin41 2B3	Pin42 GND
Pin43 1B2	Pin44 GND	Pin43 2B2	Pin44 GND
Pin45 1B1	Pin46 GND	Pin45 2B1	Pin46 GND
Pin47 1B0	Pin48 GND	Pin47 2B0	Pin48 GND
PIN49 +5V	PIN50 GND	PIN49 +5V	PIN50 GND

BHARAT HEAVY ELECTRICALS LTD.
Corp. R&D DIVISION
VIKAS NAGAR,
HYDERABAD-500 093 (INDIA)

VENDOR REGISTRATION FORM (INDIAN SUPPLIER)

Before filling please refer to instructions on page-4

1.0 VENDOR PROFILE:

1.1 & 1.2 Name and address of the vender:

Phone Nos.:

Fax No.:

Email:

1.4 Local representative of the vender in India/ Hyderabad:

Phone Nos.:

Fax No.:

Email:

Contact person:

Mobile No.:

2.0 & 2.1 Type of Organisation:

PROPRIETORSHIP	COMPANY	SISTER CONCERN	ANY OTHER (Please specify)
PARTNERSHIP	CORPORATION	Small Scale Industry	

3.0 Annual Turn Over:

Name and address of the Banker:

Sr.No.	Bank	Address

4.0 REGISTRATION PARTICULARS

4.1 IT Permanent Account No.(PAN):

4.2 State tax Registration No.:

4.3 Central sales tax Registration No.:

4.4.1 ED Registration No.:

4.4.2 Service Tax Registration No.:

PF Account No.:

Labour Licence No.:

ESI Account No.:

5.2 Contact person:
Mobile No. :

5.3 Total Number of employees:

Graduates (Engr./Scientists/Mgmt/Fin.)	Consultants	Workers		
		Sup./Skilled	Semiskilled	Unskilled

6.0 Wish to register for supplies/ services :

<u>Sr.No.</u>	<u>Service/Supplies</u>	<u>Capacity</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

6.1 Reference list :

(Only recognized public and private sector companies, attach if printed copy available)

<u>Sr.No.</u>	<u>Customer</u>	<u>Volume / Year</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

7.0 & 8.0 Infrastructure / facilities :

<u>Sr.No.</u>	<u>Facility (with specifications)</u>	<u>Age/ Year procured</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		
<u>8</u>		
<u>9</u>		
<u>10</u>		

9.0 Registration with other BHEL Unit/Units:

<u>Sr.No.</u>	<u>9.1.1 Unit</u>	<u>9.1.2 Registration No.</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		

Any Other information :

Declaration:

The information furnished above is true and authentic.

(CEO / Proprietor)

SEAL:

Date:

The competent authority reserves the right to accept or reject the registration. Registered vendors will be informed by mail / email, as convenient. Contact Sr.DGM (MM) for clarification/ additional information on registration.

A separate communication will be sent to you in case of non-registration, citing reasons thereof.

Instructions

1. Answer all items, use NA for items not applicable.
2. BHEL units do not require this registration.
3. Submit the form in duplicate.
4. Use additional sheets for want of space if required.
5. Attach copies of latest documents in respect of items 4.0 (Registration no.s)
6. Photographs of registered office and the chief executive/proprietor shall be furnished.
7. Use A4 sheets for this document and the enclosures.

* REGISTERED BIDDERS, HAVING A BHEL (R&D) REGISTRATION NO. / HAVE SUBMITTED THIS FORMAT EARLIER, NEED NOT FURNISH THIS INFORMATION SECOND TIME (UNLESS DESIRE TO UPDATE IT).

BHEL
SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

ALL COLUMNS SHOULD BE PROPERLY FILLED IN THE SPACE PROVIDED FOR. WHEREVER IT IS NOT APPLICABLE PLEASE WRITE “NOT APPLICABLE”. INCOMPLETE OR INCORRECT FORMS MAY NOT BE CONSIDERED.

1.0 GENERAL INFORMATION:

1.1....NAME OF COMPANY

1.2....DETAILS OF HEAD OFFICE:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.3....DETAILS OF FACTORY/WORKS:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.4....DETAILS OF MARKETING AGENT

ADDRESS :
TELEPHONE :
.FAX :
.EMAIL :
.WEB SITE :

1.5 CHIEF EXECUTIVE

NOTE: PLEASE ATTACH SEPARATE SHEETS, IF SPACE FOUND IS INADEQUATE

AUTHORISE SIGNATORY

BHEL
SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

1.6 CONTACT PERSON(S)
FOR PRODUCT OFFERED
NAME(S)
OFFICIAL CPACITY
ADDRESS:
TELEPHONE
FAX
E-MAIL

1.7 YEAR OF ESTABLISHMENT

1.8 PRODUCTION CAPACITY PER ANNUM

1.9 PARTICULARS OF PRODUCT INCLUDING
SPECIFICATION AND RANGE OFFERED
FOR REGISTRATION
(ATTACH BROCHURES AND CATALOGUE)

1.10 NAME(S) OF BANKERS

1.11 BANKER'S CERTIFICATE

1.12 PORT OF LOADING

1.13 NEAREST AIRPORT

1.14 NAME OF THE INDIAN AGENT, IF ANY
WITH AUTHORISATION LETTER

1.15 ANY OTHER INFORMATION:

AUTHORISE SIGNATORY

BHEL
SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

2.0 FINANCIAL INFORMATION

2.1...TOTAL CAPACITY

2.2...ANNUAL TURN OVER FOR LAST 3 YEARS

2.3...WHEHER CREDIT LICENSE ACCEPTABLE YES/NO

3.0 QUALITY MANAGEMENT SYSTEMS
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS
TO BE ENCLOSED

4.0.....FUTURE EXPANSION PLANS:
(GIVE DETAILS)

5.0 LIST OF ENCLOSURES:
INCLUDING BROUCHERS, CATALOGUES, TECHNICAL
LITERATURE ETC.

6.0 ANY OTHER INFORMATION

SIGNATURE OF SUPPLIER
NAME
DESIGNATION
DATE
.....OFFICIAL SEAL

AUTHORISE SIGNATORY
