Global Tender Notice No.PUR/IMP/SPKR/753/10-11

M/s.

Dear Sir/s,

The Director, Indian Institute of Astrophysics, Bangalore, invites Sealed Tenders Two bid system for the Import of "GPU Server – Dual Processor Server with GPU Cards - 01 No" (As per specification in the Annexure B) detailed in the Tender form hereto annexed. The terms and conditions may be noted carefully and if you are in a position to quote for the supply in accordance with the requirements, please submit your quotation. The Tender documents and other details are available on IIA web site <u>www.iiap.res.in/tenders.htm</u>

The Tender bids must be in foreign currency only. Your completed Tender bids both Technical bid and commercial bid must reach our office on or before 14/03/2011 by 15 00 hrs. Both bids with sealed separate envelopes duly superscribed with the name of the supply and the Due Date must reach our office within the due Date and Time. The Technical bids will be opened in presence of the bidders or authorized representative of the company by 15.30 hrs on 14/03/2011. The commercial bids will be opened only those are successful in the Technical bids. The date and time of commercial bids opening will be intimated later. Incomplete Bids are liable for rejection.

Thanking you,

Yours faithfully,

Y.K.Raja Iyengar Asst.Admin.Officer

GLOBAL TENDER DOCUMENT No : PUR/IMP/SPKR/753/10-11. DT : 03/03/2011.

TENDER FORM

FROM:

TO

THE DIRECTOR Indian Institute of Astrophysics, Bangalore - 560 034.

Sir,

I/We hereby offer to supply the Items/Equipment indicated below at the price hereunder quoted and agree to hold this office open till . I/We shall be bound to supply the items/Equipment hereby offered upon the issue of the Purchase Order communicating to the acceptance thereof on or before the expiry of the last mentioned date. You are at liberty to accept any one or more of the items such Items/Equipment. I/We not withstanding that the offer in this tender has not been accepted in whole, shall be bound to supply such items and such portion or portions of one or more of the items as may be specified in the said Purchase order communicating the acceptance.

S No.	Description of the item(s)	Qty.	Unit	Rate	Dely. Period

01. GPU Server – Dual Processor Server with GPU Cards - 01 No (As per specification in the Annexure B) (Tender bids should be in foreign currency only)

Place at which the Delivery is required	: Indian Institute of Astrophysics Bangalore - 560 034.
Date by which the supplies are required	: 4 weeks from the date of order.

2 I/We have understood the items of the tender annexed to the invitation to the Tender and have thoroughly examined the specifications/drawing and / or pattern quoted or referred to herein and / are fully aware of the nature of the items/ Equipment required and my / our offer is to supply the items/ Equipment strictly in accordance with the requirements subject to the terms and conditions contained in the Purchase order communicating the acceptance of this tender either in whole or in part.

Date :

Signature and Seal of Supplier

Annexure - A

INSTRUCTIONS TO SUPPLIERS

- 1. Tenders should be sent in sealed and superscribed envelopes with mention of Tender No. date and date of opening. Only one Tender should be sent in each envelope.
- 2. Late and Delayed tender will not considered at all.
- 3. Duties, Taxes where legally leviable and intended to be claimed should distinctly shown separately in the Tender.
- 4. a) Your quotation should be valid for 90-120 days from the date of opening of Tender.

b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the Tender from, relationship between the two sets of units must be furnished.

5. a) All available Technical Literature(s), Catalogue(s) and other data in support of the specifications and details of the item(s) should be furnished along with the offer.

b) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should indicated in your offer.

c) Air freight/sea freight charges up to Bangalore Airport may be sent along with the offer.

d) Specifications:

Items / Equipment offered should strictly conform to our specifications. Deviation, if

any should be clearly indicated by the Supplier in their quotation. The supplier should also indicate the Make / type No. of the stores offered and provide catalogue(s), Technical literature(s) and sample(s), wherever necessary along with the quotations. Test certificates wherever necessary should be forwarded along with the supplies. Whenever options are called for in our specifications, the Supplier should address all such options. Wherever specifically mentioned by us, the Supplier could suggest changes to specifications with appropriate response for the same.

- 1. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
- 2. The supplier should supply along with the tender, the Banking information for payment or any other purpose.
- 3. A complete set of instruction and operation manual should be supplied.
- 4. Final performance should be guaranteed.

TERMS AND CONDITONS OF CONTRACT

1. **DEFINITIONS:**

- a) The terms 'Purchaser' shall mean the Director, Indian Institute of Astrophysics, Bangalore 560 034.
- b) The term 'Supplier' shall mean, the person, firm or company with whom or with which the order for the supply of Items / Equipment is placed.
- c) The terms 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an officer duly authorized intimating the acceptance on behalf the Purchaser on the terms and conditions mentioned or referred to in the said communications accepting the tender or offer of the supplier for supply of Items/Equipment.

2. PRICES:

The price may please be indicated on unit basis only.

Duty Exemption:

Please note that we may issue "Customs duty Exemption Certificate", if acceptable under the Govt. of India notification No.51/96 valid till 2011.

3. <u>GUARANTEE AND REPLACEMENT</u>:

The Supplier shall guarantee that the Items/Equipment supplied shall comply fully with the specifications laid down, for material workmanship and performance. The Guarantee should be for a period of one year minimum for the date of supply.

4. PACKING, FORWARDING AND INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by air / Sea to withstand transit hazards ensure safe arrival at the destination. The packing and marking of packing shall be done by and at the expenses of the contractor. The Purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the supplier and the Purchase shall pay only for such Items/Equipment as are actually received in good condition, in accordance with contract.

5. <u>TEST CERTIFICATE:</u>

Wherever required Test Certificate should be sent before dispatch of the items.

6. ACCEPTANCE OF ITEMS / EQUIPMENT:

a)It is expressly agreed that the acceptance of Items/Equipment, is subject to final approval by the Purchase, whose decision shall be final.

7. <u>DELIVERY PERIOD:</u>

Delivery is the essence of the contract. The supplier should adhered to delivery schedule as indicated in the Purchase order.

8. EXTENTION OF DELIVERY TIME:

As soon as it is apparent that Supplier dates cannot be adhered to, an application shall be sent by the Supplier to the Purchaser. If failure, on the part of the Supplier to deliver the Items/Equipment in proper time shall have arisen from

any cause which the Purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final he may allow such additional time as he considers it to the justified by the circumstances of the case). In case of Letter of Credit the banking charge for the LOC amendment will be on suppliers account.

9. PAYMENT:

Preference will be given to the supplier whose payment terms is on Site Draft.

10. SECURITY FOR PAYMENT:

Successful Supplier will have to furnish in the form of a Bank Guarantee or any other form as called for by the Purchase towards any payments before supply of items/equipment. In case of payment through Letter of Credit the Banking charges outside India and inside India will be on suppliers account.

11. IIA reserves the right to reject any or all Tenders without assigning any reason.

Asst. Admin. Officer IIA, Bangalore - 34. ANNEXURE-B

Supply and installation of

Dual Processor Server with 4 GPU Cards

Request For Proposals

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Calender of Events

- 2. Clarification Meeting: < *clarification-date* >
- 3. Last date for submitting proposals: < *rfpendudate* >

1 Introduction

Indian Institute of Astrophysics is the countrys premier research institution devoted to studies in astronomical sciences and related areas. Its aim has been to promote, guide and conduct research in all branches of astrophysics - from studies of the Sun and the solar system to exploration of the farthest reaches of the visible universe populated by galaxies and clusters of galaxies. IIA has established and maintains major astronomical observatories in the country, trains personnel and motivates them to take up research in astrophysics, fosters national and international collaborations in the fields of astronomy and astrophysics and disseminates knowledge and information on astronomy and astrophysics as widely as possible. Its activities have grown many fold and its efforts are directed towards developing multi-wavelength capabilities. IIA has its own optical, infrared and radio facilities and it has just completed the installation of a high altitude gamma-ray array in Hanle. The Institute is a major participant in the ASTROSAT mission, ISROs first fully dedicated astronomy satellite, and has taken the full responsibility of developing its ultraviolet payload. IIAs main campus is located in Bangalore in the southeastern part of the city. The observational facilities are spread across the length of the country, in four major field stations - Hanle (Ladakh, Jammu and Kashmir), Gauribidanur (Karnataka), and Kavalur and Kodaikanal (Tamilnadu). The Hosakote campus in the Bangalore Rural District houses the Centre for Research and Education in Science and Technology (CREST). The website <u>www.iiap.res.in</u> has more details of the range of IIAs activities.

1. Background

This RFP here addresses a novel and affordable alternative to high-cost computing needs that have been normally associated with 'high performance computing' (HPC): current trends in this field now focus on Graphics Processor Unit (GPU) based computing, which had conventionally been restricted to graphics display computing and manipulations. GPUs have evolved into programmable, highly parallel computational units with very high memory bandwidth. GPU designs are optimized for the computations found in graphics rendering, but are general enough to be useful in many data-parallel, compute-intensive programs common in HPC. In this RFP we give a detailed technical description and requirements of the GPU-based Computing Server.

The institute is presently in the process of evaluating a proposal to install a state of the art 20 node cluster (480 logical processing core, which will have a computing power of 2.4TFlops. Each node of this proposed cluster is chosen to have 2 additional PCIe slots that can host 2 NVIDIA Tesla GPU cards, which are the same as those in the high-performance GPU machine, whose configuration and design are proposed here in this RFP. This stand alone GPU machine would have a computing power of more than a TFlop but only at a small fraction of the cost of the HPC cluster, and hence a successful utilisation of this proposed GPU machine would pave way for augmenting the cluster nodes with GPU cards and about 10 fold increase in the computing power of the HPC cluster.

2. Technical Specifications

Technical requirements for the server are listed below.

INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to increase/decrease the specified quantities of any item(s) given in the tender. It also reserves the right to revise the technical specifications at any point of time, with notification to the vendors.

- 1. The preferred operating system is any stable flavour of Linux.
- 2. The proposed solution should have single point system monitoring and control features.
- 3. Vendors are requested to submit, along with the technical bid, benchmark data carried out on a single node of specifications given below, for the following codes on the platform that they are proposing.
 - HPL in double precision both sequential and parallel.
 - · Vendors may be asked to run additional codes utilising the GPU cards

All relevant details concerning these codes, including contact persons for technical queries or assistance, will be posted at the IIAP website, at http://www.iiap.res.in/rfp/benchmark.html. In all the above applications, single CPU performance and multiple CPU performance data (MPI) parallel runs) must be submitted.

- 4. Vendors must include all details of space, power, and cooling requirements for their proposed solution. Heat generated by the machines in standard units for peak and sustained load conditions must be mentioned.
- 5. The technology road map for the proposed solution should be provided.
- 6. Installation of software(s) is an optional add on. Pricing information for this component should be given separately. Details should be given as per the following categories:
 - Compilers. Intel compilers are preferred.
 - PGI Fortran compiler which includes CUDA Fortran and PGI accelerator
 - · Libraries inclusive of LAPACK and BLAS. This should include MKL and VTUNE.
- 7. If multiple options are available satisfying the basic specifications and offer different price/performance advantages, the vendors may submit more than the options given below, in separate and clearly marked quotations.

3.1 Hardware: Dual Processor Server with 4 GPU Cards

S.No	Item Specification	Qty	Model, Make and Devi- ations, if any
[1]	[2]	[3]	[4]
1.	Dual Processor Server with 4 GPU Cards	1 unit	
	CPU: 2 x Intel Xeon X5670 Processor (six cores, 2.93		
	GHz, 6.4 GT/s, 12 MB L3 cache)		
	Chipset: Intel 5520		
	Memory: 48 GB (12 x 4GB) ECC 1333 MHz DDR3		
	dual ranked RDIMMs (for two processors) should be used. Expandable. Optionally UDIMMs.		
	Storage: 2 x 1TB 7.2K RPM NLSAS RAID 1 HDD.		
	Access speed and cache size should be specified. Option- ally CD/DVD Drives.		
	NIC: Dual 10/100/1000 Mbps Ethernet		
	Infiniband: Populated with QDR Cards		
	Ports: 1 Serial, at least 4 USB 2.0, 2 x Network, 1 x		
	Infiniband, 1x Management, 1 x Video.		
	Expansion Slots: Full technical details should be given		
	about the PCI-slots provided.		
	GPU: 1 x NVIDIA Tesla (Fermi) M2070Q and 3 x		
	NVIDIA Tesla (Fermi) M2070		
	Graphics: ATI ES1000 with 32MB or more, or equiva-		
	lent.		
	Management: IPMI 2.0 compliant with dedicated port.		
	Chassis: 4U rack mountable. Blade or other chassis may		
	be quoted. Rails and other items for mounting the chassis on a rack must be provided.		
	Power Supply: Please mention efficiency and rating of		
	the power supply. Efficiency should at least be 85% at 100% load		

[1]	[2]	[3]	[4]
	Power: Please give complete details of power requirements of the		
	server with a breakup in terms of individual components. You may		
	assume that the CPUs will work at full throttle and all of memory will		
	be in active use all the time. You may assume that the hard disk will		
	be idle most of the time.		
	Cooling: Please give an estimate of cooling required. This may be in		
	terms of cold air flow per minute. If this is not given then we will		
	estimate cooling based on power dissipation within the system.		

Note: Parties must mention make & model no. of the Equipment, with detail specification (on separate sheet). Otherwise their tender will not be accepted.

All the items specified in the tables above should be with minimum 5 year onsite full comprehensive free warranty.

4 Scope of Work

The installation of Dual Processor Server with 4 GPU Cards will be at the Indian Institute of Astrophysics, Koramangala, Bangalore.

The scope of the work includes Supply, Installation and Testing of the whole system. Warranty period will start from the date of successful installation, as certified by the competent authority of IIA, of all the items at site.

The supply and installation of the Dual Processor Server with 4 GPU Cards shall be made by the vendor within 6 weeks from the date of issue of the purchase order by INDIAN INSTITUTE OF ASTROPHYSICS to the vendor. All the deliveries should be on CIF basis up to INDIAN INSTITUTE OF ASTROPHYSICS, KORAMANGALA, BANGALORE. If any loss or damage occurs in transit then it will be the responsibility of the supplier to make good the loss, within the time stipulated in the tender/purchase order for installation. The vendor may take necessary action to claim the insurance money, for the item(s) lost/damaged during transit, from insurance Company.

5 Eligibility Criteria of Vendor

The bidder must attach the experience for Supply & Installation of servers that utilise GPU cards for high performance scientific computing during the last 3 financial years in State Government or Govt. of India Department(s) or Reputed Organisation(s) (in Nos. and Value). Please attach a list of clients.

Bidders shall submit general information about the Company in the following format:

1.	Name of the Company :
2.	Full Address of the Company along with : Telephone Number Fax Number Email Address
3.	Local Address of Company, if any, for communi- : cation
4. 5a.	 Are you a manufacturer or dealer/re-seller : Annual turn over in last 3 financial years in Rs. : Crores. i. 2007-2008 ii. 2008-2009 iii. 2009-2010
5b.	Supply & Installation of equivalent to our ten- : dered DUAL PROCESSOR SERVER WITH 4 GPU CARDS during last 3 years in State or Cent ral Govt of India Departments/ Reputed Organi sations (in Nos and Value). Please attach list of clients.
5c.	Trade Tax/ Sales Tax Registration No. with place. :
5d.	Income Tax Registration with place. :

6 Expected Deliverables and Acceptance Criteria

The Vendor should provide facility for basic testing and performance verification of the machine after installation. Inspection shall be done by our scientists/engineers.

All relevant test reports and operational/maintenance manuals should be provided.

All the items to be supplied should be new, of good quality and standard and as per the technical specifications (section 3) mentioned in this document.

The vendor will provide operational manuals, OEM documents for peripherals, set of diagnostics to test all the sub-systems etc. along with the systems.

The supply and installation of the Dual Processor Servers shall be made by the vendor within 8 weeks from the date of issue of the purchase order by INDIAN INSTITUTE OF ASTROPHYSICS to the vendor. All the deliveries should be on CIF basis up to INDIAN INSTITUTE OF ASTROPHYSICS, KORAMANGALA, BANGALORE. If any loss or damage occurs in transit then it will be the responsibility of the supplier to make good the loss, within

the time stipulated in the tender/purchase order for installation. The vendor may take necessary action to claim the insurance money, for the item(s) lost/damaged during transit, from insurance Company.

INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to reject any items supplied against the purchase order, if found not working satisfactorily at the time of installation at site(s). The rejected items, if any, shall have to be taken back and replaced by good quality items forthwith at the cost of the supplier. No payment will be made for the rejected item(s).

If the installation of the items at site gets delayed from the stipulated period given above and to be given in the Purchase Order, then INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to cancel the order and forfeit the balance payment, if any, due to the supplier for the items supplied against the purchase order.

7 Expected Time Schedule

Supply, assembly, configuration, testing and commissioning should be completed within 3 months after acceptance of the offer.

8 Contract and General Terms and Conditions

- 1. Authorized manufacturers/dealers/resellers are allowed to take part in the bid for the supply and installation. Bid should be accompanied by proofs that the vendor is authorized dealer/reseller of manufacturer. Authorization letter specific to this tender should be attached with the technical bid.
- 2. The bids submitted by the vendors should be valid for a minimum period of 120 days from the date of the opening of tender and the prices should be valid till execution of purchase agreement.
- 3. The sealed envelope containing "Terms & Conditions", "Technical Bid" and "Financial Bid" on prescribed tender document of the Indian Institute of Astrophysics, Bangalore should reach the Director, Indian Institute of Astrophysics, Bangalore on or before 14th March 2011 upto 15.00 hours otherwise the tender will not be accepted and opening of bids (Technical bids) on 14th March 2011 at 15.30 hours.
- 4. The supply and installation of the Dual Processor Servers shall be made by the vendor within 6 weeks from the date of issue of the purchase order by INDIAN INSTITUTE OF ASTROPHYSICS to the vendor. All the deliveries should be on CIF basis up to INDIAN INSTITUTE OF ASTROPHYSICS, KORAMANGALA, BANGALORE. If any loss or damage occurs in transit then it will be the responsibility of the supplier to make good the loss, within the time stipulated in the tender/purchase order for installation. The vendor may take necessary action to claim the insurance money, for the item(s) lost/damaged during transit, from insurance Company.
- 5. All the items to be supplied should be new, of good quality and standard and as per the technical specifications mentioned in technical bid document.
- 6. The vendor will provide operational manuals, OEM documents for peripherals, set of diagnostics to test all the sub-systems etc. along with the systems.
- 7. The installation of Dual Processor Servers will be at the Indian Institute of Astrophysics, Koramangala, Bangalore.
- 8. INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to reject any items supplied against the purchase order, if found not working satisfactorily at the time of installation at site(s). The rejected items, if any, shall have to be taken back and replaced by good quality items forthwith at the cost of the supplier. No payment will be made for the rejected item(s).
- 9. If the installation of the items at site gets delayed from the stipulated period given above and to be given in the Purchase Order, then INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to cancel the order and forfeit the payment, if any, due to the supplier for the items supplied against the purchase order.
- 10. The prices quoted in the technical and financial bid should be inclusive of power cables, interface cables, packing, forwarding, freight upto Indian Institute of Astrophysics, Koramangala, Bangalore, transit insurance from supplier godown to Indian Institute of Astrophysics, Koramangala, Bangalore and installation charges at sites. Tax, if applicable, should be quoted separately at the appropriate columns provided for them in the technical/financial bid (INDIAN INSTITUTE OF ASTROPHYSICS is exempted from Excise Duty / Customs duty.

- 14 In case, excise duty and/or trade tax/sales tax are reduced or increased subsequently by the Government at the time of placement of the purchase order or delivery, then the same will be adjusted by either party on production of requisite proof.
- 15 Payment for the items to be supplied by the vendor against the purchase order shall be made by INDIAN INSTITUTE OF ASTROPHYSICS as follows:- (In case of import material will be imported in the name of INDIAN INSTITUTE OF ASTROPHYSICS and same payment terms will be applicable) 80% of the total payment will be released on receipt and verification of material. Remaining 20% of the total payment will be made after satisfactory installation and commissioning of the servers.

Payment shall be released on receipt of the original bills in triplicate complete in all respect and original delivery challans of all the items duly signed and stamped by the authorized representative of the user department.

Agency commission, if any, included in the price should be explicitly stated. Agency commission will be paid to the Indian agent in Indian Rupees only after installation and commissioning.

- 16 Complete Dual Processor Servers will carry minimum three years on site comprehensive warranty. Options for extending the warranty and maintenance over a 5 year period should also be included. Warranty period will start from the date of successful installation, as certified by the competent authority of IIAP, of all the items at site.
- 17 Parties should specify the make and model of each Item along with all other details.
- 18 The tender must be submitted on the prescribed tender document issued by the INDIAN INSTITUTE OF ASTROPHYSICS. Any other technical details required to supplement the information quoted in the prescribed tender document may please be attached separately. The information asked in the tender document should be given at the place provided for it in the tender document. The tenders in which information is not given at the place provided for it or not in the similar format given in the tender document may be rejected.
- 19 All the documents required for technical information should be submitted along with the technical bid of the tender only.
- Printed conditions of the vendor submitted with the tender will not be binding on INDIAN INSTI-20 TUTE OF ASTROPHYSICS.

The documents containing bids shall be free from cutting and erasures. However, alterations, if any, in the tender should be attested properly by the bidder, failing which the tender is liable to be rejected.

The tenders submitted by telex/telegrams/fax/email will not be considered. No further correspondence will 22 be entertained on this matter.

- INDIAN INSTITUTE OF ASTROPHYSICS will not be responsible for any delay in downloading the tender 23 document from the INDIAN INSTITUTE OF ASTROPHYSICS website or submission of the completed tender document to INDIAN INSTITUTE OF ASTROPHYSICS. IIAP is not responsible for any delay/loss of documents in transit.
- The registration number of the firm along with the CST/U.P.T.T. No. allotted by the sales tax/trade tax 24 authorities and I.T. registration number (P.A.N.) along with the place of registration should invariably be given along with the technical bid.
- Tender will be rejected, if technical specifications offered by the firm in the technical bid differ from that of financial bid.
- Tender not conforming to any or all the above terms and conditions will be rejected.
- Incomplete tenders are liable to be rejected.
- ²⁷ INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to increase/decrease the specified quan tities of any item(s) given in the tender. It also reserves the right to revise the technical specifications at any point of time, with notification to the vendors.
- INDIAN INSTITUTE OF ASTROPHYSICS reserves the right to reject any or all the tenders without assigning any reason whatsoever. INDIAN INSTITUTE OF ASTROPHYSICS would not be under any obligation to give any clarifications to those vendors whose tenders have been rejected.

All disputes are subject to Bangalore jurisdiction.

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9 Further Information/Clarifications

For further information/clarification in this respect, please contact Dr. Rekhesh Mohan (e-mail: <u>reks@iiap.res.ini</u>) or Dr. S.P. Rajaguru (e-mail: <u>rajaguru@iiap.res.in</u>). Only e-mail inquiries will be entertained. Drs. Rajaguru and Rekhesh Mohan will also be available for discussions on technical aspects in person on < working days > between 2:00pm and 5:30pm. Non technical queries will not be entertained.

10 Part 2: Financial Bid

S.No	Systems	Qty	Unit price including allUnit price including a taxes, customs duty, clear-taxes, freight an ing and forwardinginsurance (delivered a charges, installation and IIAP, Koramangal warranty charges on CIFBangalore), servic basis upto IIAP, Ko-charges, installation an ramangala, Bangalore inwarranty charges in INR Foreign Currency
1a.	Dual Processor Server with 4 GP Cards	U ¹ unit	
1b.	PGI Fortran compiler with CUD. Fortran and PGI accelerator	A	
2.	Excise Duty included in the quote price	dAs % of basic price (Custom duty exemption certificate will be issued)	
3.	Any other charges included in th quoted price (i) Trade tax/Sales tax (no sale tax concession form will be issued) (ii) Any other levies	custom duty	
4.	Single 5 Year Extended Warrant Charges	yAs %	