

ज्ञापांक 5814 / आपूर्ति

95-1-12-2015

पुलिस महानिदेशक का कार्यालय, बिहार, पटना।

पटना, दिनांक- 31-10-16

सेवा में,

निदेशक,
सूचना एवं जनसम्पर्क विभाग,
बिहार, पटना।

विषय- निविदा आमंत्रण सूचना सं०-47/2016-17 के प्रकाशन के संबंध में।

निदेशानुसार उपर्युक्त विषय के संबंध में निविदा आमंत्रण सूचना सं०-47/2016-17 की पाँच प्रतियाँ (सी०डी० सहित) संलग्न करते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी०आर०डी० वेबसाइट पर भी प्रसारित करने की कृपा की जाय।

इस निविदा आमंत्रण सूचना का प्रकाशन किन-किन समाचार पत्रों में किया गया इसकी सूचना देने की कृपा की जाय।

अनु०-यथोपरि।

पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना।

प्रतिलिपि:-

1. आई०टी० मैनेजर, पुलिस महानिदेशक का कार्यालय, बिहार, पटना को कृपया सूचनार्थ। कृपया इसे आज ही वेबसाइट पर अपलोड किया जाय। साथ ही Indian Trade Journal, Kolkata के अंक में प्रकाशन हेतु Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis@nic.in के पतेपर भी अनिवार्य रूप से भेजा जाय।
2. Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis@nic.in को कृपया सूचनार्थ एवं आवश्यक क्रियार्थ प्रेषित। अनुरोध है कि उक्त निविदा का प्रकाशन Indian Trade Journal, Kolkata के अंक में करने की कृपा की जाय।

पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना।

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Police Headquarters, Bihar, Patna
Notice Inviting Tender No.47/2016-17

1. Name of the Department : Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the tender : 23/11/2016, Till 11:00 AM
3. Date & time fixed for the opening of the tender : 23/11/2016 At 11:00 AM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job :

S.N.	Item name	Quantity
1	CDR Analysis, Advance Link Analysis and Network Visualization System, Integrated Crime Data Management System with Hardware Description/ Specification, Social Media Monitoring System	01
2	UPS 10 KVA with 1 Hour backup	01

Specifications and other terms & conditions of the tender may be obtained in person from this office or may be downloaded from the website www.prdbihar.gov.in or www.biharpolice.bih.nic.in.

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Terms & Conditions Of Tender No.-47/2016-17

1. Tender of the firm will be accepted only on the condition that if their tenders are approved, the firm shall get registered with the Commercial Tax Department, Bihar, before the purchase order is issued.
2. The tender should be submitted in two parts : (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
3. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
4. The rates of the items shall be quoted in the Financial Bid only.
5. All charges like BST/CST/Service Tax /VAT etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
6. The rates of the items shall be quoted in the Financial Bid in two parts :
(i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
7. There should be no cutting, over writing or correction on the rates.
8. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
9. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
10. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Tender No-47/2016-17 (Technical Bid) and Tender No-47/2016-17 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Tender No-47/2016-17. This envelope should not bear the name and address of the firm.
11. Income Tax Returns of last three years, a photocopy of PAN of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
12. The turn over of the firm for the last reported financial year should be at least double the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
13. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
14. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
15. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.

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16. In case of Bullet Proof/Bullet Resistant items, test report of TBRL is compulsory.
 17. Firms participating in this tender shall also submit duly sworn affidavit to the effect that " this firm has not been black listed/debarred by any Government or Semi Government or Private Agency and no sister concern of this firm is participating in this tender."
 18. Firms participating in this tender shall also submit the self attested list of users of its equipments.
 19. All items shall be received at Central Clothing Store, Patna, therefore price should be quoted FOR Central Clothing Store, Phulwari Sharif, Patna.
 20. Firms will have to deposit a sum of Rs.50,000/- (Fifty Thousand) only as an earnest money deposit in the form of Bank Draft duly pledged in favour of the undersigned along with the quotations. The small scale units located in Bihar shall not be liable to deposit earnest money. Exemption from submitting E.M.D. will also be available to those who are registered with the Central Purchase Organisation/State Purchase Organisation and National Small Industries Corporation (NSIC).
 21. Technical Bids will be opened on scheduled date and time in the office chamber of Police Headquarter. Representatives of the firms competing in the tender may remain present at the time of opening of the technical bid.
 22. The technical bids will be opened first and placed before the Technical Committee of the Police Headquarters, Bihar. If the technical bids are found satisfactory as per tender conditions, it will be put before Central Purchase Committee of the Police Headquarters, Bihar. The firms may be required to participate in the demonstrations of the quoted product and discussions with this committee.
 23. Any paper/document will not be accepted after opening the tender.
 24. Successful firm will have to enter into an agreement after depositing a sum of 5% of the total value of the order as security money in the form of Bank Guarantee duly pledged in favor of undersigned.
 25. The firm will be required to provide satisfactory after-sales service after the delivery of the product.
 26. The firm will be required to supply all the items within the stipulated time frame as mentioned in the purchase order.
 27. Payment for the delivered items will be made only after the acceptance report of the Inspection Committee of the Police Headquarters, Bihar.
 28. The firm whose quotation is approved by the Central Purchase Committee of the Police Headquarters, Bihar, shall be invited to enter into an agreement with the undersigned.
 29. It is expected to submit the duly filled chart attached herewith, along with the technical bid.
 30. Indexing of the requisite documents must be done and submitted along with the technical bid.
 31. Hands on training of the equipment must be imparted to the user group by the firm.
 32. Director General of Police Bihar, Patna reserves the right to reject any or all the quotations partially or fully, without assigning any reason thereof.
 33. The Quantity indicated may increase or decrease at the time of issuing purchase order.

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CDR Analysis, Advance Link Analysis and Network Visualization System, Integrated Crime Data Management System with hardware Description/ Specification, Social Media Monitoring system

A	CDR analysis and Normalization tool
1	Data should be imported/uploaded without any extra manual efforts made (the data which is received from various Telecom service Providers in different formats). It should have features of: -converting exponential values, -interchanging columns, -prefixing number, -removing LRN number
2	-Should accept (able to upload) CDRs (Target No. CDR, IMEI CDR) from Excel, txt, xls,xlsx, csv, Html Format and all other common formats. Able to define, modify and update import formats for data across telecom service providers and software systems to ensure automated acquisition and process it in batch mode. -The software should be able to import different types of files (Call Detail Records, Tower Dump Records, Subscriber Detail Records, Cell IDs, Internet Protocol Detail Records, ILD data etc.) according to the cases.
3	It should show the relation between other parties to target (s) in single screen, and it should also generate the common numbers between them in single click.
4	It should show the relation between IMEI and Target(s) in single screen with common IMEI among them if any. It should also specify the period of time the IMEI has been used by one party, number of days used, calls made, period starts from/to, common called/calling numbers, common locations.
5	Auto alert after matching Telephone/Mobile Number List.
6	Auto alert after matching with Suspect IMEI Number List.
7	Should be able to filter this data time/date wise on the basis of different Countries, different subscribers (their frequencies), Location etc.
8	It should apply different filters (like-date, time, duration, suspect number, B party number, cell ID, B party service provider, City/Circle-state-company, IMEI no.) on CDR. (Diagrammatical and Tabular representation). Frequency chart generation with SDR for a selective frequency (> or <) should be available in the Software.
9	Duration (Average Duration per calling/called party) Analysis.

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10	Location analysis of single or multiple target numbers or IMEI with reference to different time and date frames.
11	Location Analysis Should be of three types. First one will be based on Global Unique Cell ID, second one will be based City, States & Country, and third one will be based on Latitude and Longitude.
12	Analysis on the basis of days e.g. talks on only Fridays; talks to a particular imei number of from a particular location on particular day.
13	It should handle and store the Cell ID, so that all cell ids can be decoded. It should be capable of preparing route chart automatically.
14	There should be a facility for marking any telephone number or IMEI number as suspect while analysing a particular CDR, this suspect list should be matched at every level of analysis.
15	It should accept app reports from data extraction devices as XRY, UFED, Tarantula etc.
16	Maps and tracks suspects' geographic location and movements across time and space on the basis of CDRs on Google Map.
17	Automated Email generation for CDR/IMEI Scan request to various service providers.
18	New Number Analysis - Search of a New Number of a target whose old number and instrument is now inactive, based on CDRs of important numbers of inactive number.
19	Should Allow export of reports in popular formats like HTML, TSV, CSV, XLS etc.
20	Software should run only after inserting a security dongle (USB Type) for preventing unauthorized use.
B	Advance Link Analysis and Network Visualisation System
1	Should be a standalone software for link analysis and Visualization of complex networks
2	Should import data directly without sending it to a database system.
3	Should have more than 20 different data transformation combinations to normalize the structure data like following
i	Should add prefix
ii	Should remove prefix
iii	Should substitute from selected files
iv	Should Merge Columns
v	Should Replace values
vi	Should Trim characters
4	Should quickly visualize and identify the common elements and connections hidden within data
5	Should graphically present results making them more accessible and



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	easier to understand
6	Should produce dynamic briefing charts by including photographs, video clips and electronic documents
7	Should Rapidly change the representation and emphasis of chart from link style to timeline style and vice versa
8	Should easily navigate charts and search for elements of data within them
9	Should Print Charts or distribute them electronically
10	Should support Social Network Analysis on various centralities like betweenness, Closeness, Degree etc
11	Should run only after inserting a security dongle (USB Type) for preventing ;unauthorized use
12	Should be able to perform automated CDR analysis
13	Should obtain the maximum value from tour data be using the advanced analysis tools to analyse your investigation from a high level overview right down to the smallest detail.
14	Should find association paths
15	Should identify clusters
16	Should find matching items
17	Should construct visual searches for your investigation.
18	Should support creation of charts by dragging and dropping entities, links and attributes onto the chart
19	Should allow to automatically generate charts by importing data from source data files & from data held in the clipboard.
20	Specification should able be saved and used again
21	Should provide a range of analytical tools designed to help convert high volumes of low value data into low volume high value intelligence
22	The range of analytical tools available include
i	The list items
ii	The entity matching
iii	The visual search
iv	Find path
v	Find Linked analysis
vi	Find Cluster Analysis
23	Should support mapping of chart entity on maps li Google earth as well as their export as .kmz files
24	GEO Analysis : Should plot and make a virtual map with respect to time and be capable of graphical presentation of location fixation over either GIS street level map to be provided with the system or on the freely available street level maps from providers

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i	Should intelligently animate the path on map travelled by the suspect
ii	Should be able identify and highlight the towers that are located or closest to selected area.
iii	Crime mapping should be able to map, visualize, and analyze crime incident patterns.
iv	Find Route Directions: It should find the nearest route directions between 2 places selected on maps; which enable the I.O to choose between given different routes to travel from Source to Destination addresses.
v	Geo Fencing: Should be able to defines a virtual boundary on geographical MAPs.
25	Quick analysis: A feature that enables users without importing CDRs into software and enables the user to Quickly analyse and generate quick reports such as Frequent Calling Nos, Night locations, WDN Nos, Suspect Nos etc; after which the I.O can decide whether to continue with the further Analysis.
26	Behaviour Analysis : System should gauge any change in behaviour of suspects between user defined time periods.
27	Intelligence Analysis : System should extract intelligence from huge volumes of data based on user defined criteria.
28	Search Features :
i	Search Out of Box: Users can search for suspect numbers in whole system.
ii	Phonetic Search (for ex: andees, andis, andese)
iii	SDR Search by Names, Numbers, Address, DOA, Service Provider, State vice.
iv	IMEI Search/IMSI Search
v	CDR Search Parameters according to Date, Time, Numbers
vi	Cell ID's search, Lat/Long search, Service provider/State vice Cell IDs search
vii	Geo Search (Area, Cell IDs, Nearest Tower Search for selected area)
29	Case Management: Software should contain an option to store all the case related data; like persons involved, their numbers, its media etc. This data can be considered/compared with the current crime scene; which will help the I.O's to find out the modus operandi or can get assistance from the police station/I.O of crime reported.
i	Adding persons names and their Mobile/IMEI/IMSI Numbers
ii	Crime Scene (on Maps with Lat/Long Info)
iii	Weapons used during crime
iv	Statements of various persons involved in case



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v	Articles Seized
vi	Media Files (Audio/Video/CCTV)
30	Data Matching : Should be able to match the data with other external / internal sources without being taken into the application and should have the following functionality:
i	Should be able to match with external data files.
ii	Should be able to match with the ODBC
iii	Should be able to match with other analysis
iv	Should be able to match with the Geo-Fence which is drawn on geographical maps like Google maps / Bing maps.
31	Data Repository
	Should be able to add entities.
	Should be able to add data files, documents, media files like audio video images.
	Should be able to add notes, links to the entities.
	Should be able to store and show the gathered intelligence.
32	System should have inbuilt mailbox, where a user can send & receive mails directly from the software avoiding numerous windows onto system and get baffled between the same.
33	SMS based information retrieval system
34	Android App based information retrieval system.
35	The whole software system should incorporate the future technical up-gradations/advancements.
C	Integrated Crime Data Management System
1	should be able to establish link data from various types of data-base like criminal data base, Aadhar, Passport, Banking Data, Voter ID, facebook, & other social media, Vahan (Vehicle registration data) etc.
2	Should easily create own multi-user databases without advanced technical expertise or jump-start design using predefined templates
3	Should incorporate data from multiple sources for analysis in one single environment.
4	Should save time populating database by using built-in forms and by scheduling batch imports to occur automatically
5	Should query data by 'drawing' the question - avoiding the need to learn a complex database query language, designing powerful, complex queries easily
6	Should manage all data and benefit from a scalable database solution to handle ever-increasing volumes of data
7	Should work individually or as part of a team to build and use

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	standalone or shared databases
8	Should set up comprehensive security at the field, record or case level to restrict access by user or user group
9	Should have following key Functionality
10	Should be able to 'draw' the question the investigator wishes to ask - simple or complex - by dragging and dropping relevant icons and links. Then save, organize and share queries with colleagues to promote best practices.
11	Should visually establish the shortest path between two data elements even if the relationship involves several degrees of separation. This information can be vital to the case and is not readily available via traditional database queries or reports
12	Should reveal all relationships between a selected chart item and other entities in the database. This allows the analyst to add relevant data to analysis without constructing query
13	Should quickly find exact matches, synonyms or word that sound similar to those in the search criteria. This can be especially useful when searching for names with spelling variations
14	Should save provide full text search of documents embedded in database
15	Should save time searching database when only a few details are known. Pick lists and weighted scoring identify the data most relevant to the investigation
16	Should maintain the quality of the database by quickly searching a set, a query result or entire database for duplicate information
17	Should easily create reports that can be printed, posted to a Web page or sent to Microsoft Word, facilitating communication within the organization
18.	It should maintain the integrity of files imported/data using standard and accepted algorithms.
19	It should be able to integrate with the software system and similar nature of database located across the State.
20	It should facilitate crime database management system with server for 4 client license of call data normalisation and analysis solution.
D	Rack Server
1	Intel Xeon E7-8890v3 /18 Core /2.5 Ghz / 45MB with Hyper-Threading and Turbo-Boost technologies
2	2.5-Inch Chassis
3	Risers with up to 4 x8 PCIe Slots and 2 xl6 PCIe Slot
4	DIMM Blanks for Systems with 2/4 Processors

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5	1333/1866 MHz RDIMMs
6	64 GB RDIMM, 1333/1866 MHz, Low Volt, Dual Rank, x4 Bandwidth
7	12 TB 10K RPM, SAS6 2.5" Hot Plug Hard Drive
8	2.5" Chassis with up to 16 Hard Drives
9	PERC H710 Integrated RAID Controller, 512 MB NV Cache, Mini-Type
10	Factory Install - Qlogic (QLE2562) 8 Gbps PCI-E FC HBA-Dual Port
11	2-10GbE SFP+, Short Range Optical Transceiver, LC Connector
12	2 Heat Sink
13	PLDS DS-8D3SH 12.7 tray DVD ROM
14	Dual, Hot-plug, Redundant Power Supply (1+1), 750w
15	2 5M, Multi-Mode, LC-LC, Fibre Cable
16	Monitor 21/24"
17	Broadcom 57800 2x10Gb DA/SFP+ +2x1Gb BT Network Daughter Card (Exclude SFP+ Optics/DA Cables)
18	2U Cable Management Arm
19	iDRAC7 Enterprise
20	C4 - RAID 5 for H710p/H710/H310(3-16 HDDs)
21	40/60 GB Boot Partition Setup (For Windows (R) OS only)
22	Windows SQL Server 2016 Enterprise (2 Core)
23	Microsoft (R) Windows(R) Server 2012x64 R2 Enterprise Edition Media, English
24	Cyberoam CR35ia: Firewall, Intrusion Prevention System, Wireless security, Anti-Virus /Anti-Spyware, Anti-Spam, HTTPS/SSL Content Security, Next-Gen UI, VPN, 3G/WiMAX Connectivity
25	Pro Support : 7x24 Technical Support & Assistance : 5 Yr
26	Rack
E	Social Media Monitoring system
1	<p>Dell PowerEdge R630 (very high-end)</p> <ul style="list-style-type: none"> ● Chassis Configuration: Up to 4 Hard Drives and Software RAID, 2 PCIe Slots ● Processor (2): <ol style="list-style-type: none"> 1. Intel® Xeon® E5-2600 2.50GHz, 30M Cache, Turbo, 12 Cores, Max Mem 1333MHz, 64-bit instruction set 2. Intel® Xeon®E5-2600 2.50GHz, 30M Cache, Turbo, 12 Cores, Max Mem 1333MHz, 64-bit instruction set ● Memory Capacity: <ul style="list-style-type: none"> 128GB RDIMM, 2133 MT/s ● Hard Drive: 8 TB 7.2K RPM nearline SAS

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	<ul style="list-style-type: none"> • Network Adapter: Broadcom 57800 2x10Gb DA/SFP+ + 2x1Gb BT Network Daughter Card • Power Supply: Dual, Hot-plug, Redundant Power Supply (1+1), 750
2	Server Operating System Ubuntu Server 14.04 LTS 64-bit
3	Desktop PC(3) 1.Processor: Intel Core i7- Processor (4MB Cache, 3.4 GHz, 64-bit), Turbo Boost Technology Memory: 8GB DDR3 1600MHz SDRAM Memory Hard Drive: 1TB SATA Windows 10, Monitor 21” 2. Processor: Intel Core i7- Processor (4MB Cache, 3.4 GHz, 64-bit), Turbo Boost Technology Memory: 8GB DDR3 1600MHz SDRAM Memory Hard Drive: 1TB SATA Windows 10, Monitor 21” 3. Processor: Intel Core i7- Processor (4MB Cache, 3.4 GHz, 64-bit), Turbo Boost Technology Memory: 8GB DDR3 1600MHz SDRAM Memory Hard Drive: 1TB SATA Windows 10, Monitor 21”
4	UPS 1KVA- 3 numbers.
5	Security software: Anti-virus, Firewall etc
6	other necessary auxiliary items
7	Pro Support : 7x24 Technical Support & Assistance : 5 Yr

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Technical specification of 10 KVA UPS

1. One 10 KVA Single phase input & single phase output on-line, double conversion, continuous operation, solid-state, DSP controlled, Uninterruptible Power Supply (UPS) along with external isolation transformer & battery bank for One hour backup .

2. WARRANTY

a) **UPS Module:** The UPS manufacturer shall warrant the UPS module against poor workmanship and materials for 2 years from the date of supply. The warranty shall include coverage of all internal parts and the supporting equipment.

b) **External Batteries:** For batteries connected to the UPS, the warranty should be at least ≥ 02 Years from the date of supply, installation and acceptance.

3. Preventive Maintenance of SMART UPS (PM)

a) Preventive Maintenance of complete setup of UPS system for a period of two years to be undertaken.

b) Minimum 04 Numbers of Preventive maintenance shall be carried out in an year. Breakdown calls to be attended within 12 hours from the time of call.

4. Environmental Requirements

a) Storage Ambient Temperature : 0°C to 50°C

b) Operating Ambient Temperature : 0°C to 40°C

c) Relative Humidity: 0 to 95% non-condensing.

5. SYSTEM RATINGS AND OPERATING CHARACTERISTICS

a) The rating of UPS should be 10 KVA .

b) UPS should be online-Double Conversion with Digital Signal Processor control.

c) SMF Batteries should be sized for back-up of one hour at full load.

d) Battery manufacturer's catalogue and stacking details to be provided.

6. SYSTEM INPUT

a) **Input Voltage Rating:** Nominal 230 V for 10 KVA .

b) **Input Voltage Range:** 120 – 275 V for 10 KVA. In this range UPS should not switch to Battery backup mode.

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c) **Input frequency Range:** 40 - 60 Hz. In this range UPS should not switch to Battery backup mode.

d) **Input power factor :** > 0.98 at 100% load

7. SYSTEM OUTPUT

a) **Output Voltage Rating:** 1 ph 230 V for 10 KVA .

b) **Output Frequency Regulation:** 50 Hz +/- 0.1 Hz

c) **Max. Voltage transient recovery time:** 10 milliseconds to nominal

d) **Output Voltage THD:** 2% at Nominal Voltage

e) **Overload capability:** 125-150% for 60 seconds in normal operation

8. UPS DESIGN AND FABRICATION

a) **Enclosure:** The UPS shall be housed in a free standing enclosure.

b) **Battery housing :** Battery housing cabinet to be supplied.

c) **Ventilation:** The UPS shall be cooled by forced air and shall be equipped with fan monitoring circuits. External battery systems shall be cooled by free-air ventilation and convection according to battery manufacturer requirements.

d) **Inverter/Battery charger:** The inverters shall be a high-speed insulated gate-bi- polar transistor switch module type (IGBT) and shall be controlled to precisely regulate system output voltage and battery charge current. The inverters shall be temperature protected. In case of inverter over temperature, the unit shall activate an alarm and automatically transfer to static bypass operation.

e) **Static bypass switch:** The static bypass switch shall be solid state, rated for continuous duty. The static bypass switch shall automatically transfer the critical load to mains supply without interruption after the logic senses one of the following conditions:

- i. Inverter overload beyond Rating
- ii. Battery runtime expired and bypass available
- iii. Inverter failure
- iv. Battery circuit breaker open
- v. Fatal error in control system

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9. DISPLAY AND CONTROLS

a) UPS status messages: The display unit shall display the following metered Parameters:

- i. Normal operation: Load power in %
- ii. Battery operation: Time in minutes
- iii. Bypass operation
- iv. Standby
- v. System off

b) Metered parameters: The display unit shall allow the user to display the following metered parameters:

- i. Year, Month, Day, Hour, Minute, Second
- ii. Source Input Voltage (Line-to-line, single-phase simultaneous)
- iii. Source Input AC current (Line-to-neutral, single-phase simultaneous)
- iv. Output AC voltage (Line-to-line, single-phase simultaneous)
- v. Output AC current (Line-to-neutral, single-phase simultaneous)
- vi. Output frequency
- vii. Battery voltage
- viii. Battery current (charge/discharge)
- ix. Battery temperature
- x. Output peak current

c) Alarms: the display unit shall allow the user to display a log of all active alarms.

d) Events log: The display unit shall allow the user to display a time and date stamped log of the 100 most recent UPS status and alarm events

e) Controls: The following control or programming functions shall be accomplished with the display unit:

- i. Silence an audible alarm
- ii. Display or program the time and date
- iii. Enable or disable the automatic restart feature
- iv. Transfer to or from static bypass operation
- v. Program the unit for economy operation
- vi. Program the battery charger
- vii. Calculate battery back-up time
- viii. Test battery condition on demand


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- ix. Program the unit to periodically test battery condition
- x. Program voltage and frequency windows
- xi. Calibrate metered parameters
- xii. Adjust set points for different alarms
- xiii. Set the delay for the common fault contact
- xiv. Program the unit for soft start for use with a generator

f) UPS ON and Off push buttons: Momentary UPS on and off push buttons shall be provided in a user-accessible compartment. Upon activation of the on push button, the UPS shall automatically connect the UPS output to the critical load. Upon activation of the off push button, the UPS shall remove power from the critical load.

10. Installation & Commissioning : The UPS must be installed and commissioned at ATS Bihar Headquarters, Patna, Bihar. The required inverter input and output switchgear & cables should be provided.

11. The delivery shall be within 8 weeks from the supply order.

12. The quotation to be submitted for 10 KVA UPS in the following format.

Sr No	Item description	Unit cost	Qty.	Taxes/VAT	Total
1	10 KVA on line UPS system stand alone /rack mountable working on single phase input single phase output, IGBT based double conversion digitally controlled microprocessor system, with SNMP card & LCD display with Two year warranty				
2	Battery bank for 60 Min(1 Hour) back up along with interconnecting cables, cable from UPS to Battery Bank through battery circuit breaker and MS open rack with Two years maintenance				
3	10 KVA SCVS with isolation transformer to be connected to the input of the UPS with Two years warranty				
4	Installation & Commissioning charges				