

POLICE

HEADQUARTERS

J&K

SRINAGAR.

NIT NO. 22 OF 2011

DATED: 07 - 07 -2011.

1. For and on behalf of the Governor J&K State, sealed tenders are invited from original manufacturers and approved authorized dealers affixing revenue stamp worth Rs 5/- duly sealed with sealing wax and stamp of the tenderer, for the supply of **Automatic finger Print Identification System(AFIS)** as specified in Annexure 'A' of this NIT. Approved/authorized dealers will attach valid & authenticated copy of authorisation of original manufacturer, **without which tender shall be rejected.**
2. The tenders shall be properly sealed and addressed to **ADGP (Headquarters) C/O Director General of Police J&K Srinagar.** The tender envelopes shall be superscribed "**TENDER FOR Automatic finger Print Identification System(AFIS) FOR NIT NO. Of 2011 dated. - 07.2011.**"
3. The tender fee has been fixed at Rs 2000/- which shall accompany the tender offer only, in the shape of a **crossed demand draft** favouring Chief Accounts Officer PHQ, J&K payable at Srinagar/Jammu. The tender fee is not refundable and the same will be deposited into Govt. Treasury under Head 0055-Police for the year 2011-12.  
The local SSI units are required to pay the tender fee prescribed as per J&K Govt rules. However, the Govt/Semi-Govt. concerns of the J&K State claiming exemption shall append authenticated orders, certificates etc. issued by competent authority in support of their claim.  
**Tenders without tender fee shall be rejected.**
4. **Earnest Money Deposit (EMD)**  
The intending tenderer/s will have to send the Earnest Money only in shape of CDR/FDR from any nationalized bank equivalent to 2% of the value of contract or Rs. 1.50 lacs (which ever is less) ,pledged to AIG (Prov/Tpt) PHQ J&K with the tender offer, which shall be valid for one year.. The earnest money in the case of unsuccessful tenderer shall be released after finalization of Tender, where-as in the case of successful tenderers it will be adjusted towards the security money (required to be deposited) on application, for due performance of the agreed contract/performance during the warranty period; No interest shall be payable by purchaser on the EMD deposited by the tenderer).  
J&K Govt. rules with regard to furnishing of **EMD** in respect of **local Registered SSI** units shall be applicable in letter and spirit. The local SSI units are required to pay the **EMD** prescribed as per J&K Govt rules which at present is 50% of the value of contract ( or items against which tender is quoted) or Rs 5000/- whichever is less. For the purpose, SSI units shall have to furnish registration certificate and Functional Certificate of SSI Unit, issued by the competent authority with their tender offer failing which the benefits of SSI units will not be allowed.  
The Government/ Semi Govt. or similar other concerns, claiming exemption from the payment of EMD shall have to append duly authenticated orders, certificate etc. from competent authority supporting their claims.

	<b>Tenders without EMD shall be rejected</b>												
5.	<b>Security Deposit.</b> The approved tenderers will have to supply the articles at the approved rate and as per approved sample (if any) and specification till the date of validity of the approved list. They will have to furnish <b>security deposit @ 5%</b> of the total value of the items contracted for, in the shape of CDR/FDR from a nationalized Bank, at the time of signing of <b><u>Deed of Agreement</u></b> to ensure satisfactory performance of the equipment supplied, for Warranty period from the date of acceptance of product. This security deposit will be released in due course after the expiry of specified warranty period/agreed contract. The charges on stamps etc. (cost of documents in totality) shall be borne by the supplier while executing the agreement. (No interest shall be paid by the purchaser on the Security deposit). J&K Govt Rules for EMD in respect of LOCAL SSI Units shall be applicable.												
6.	Despatch Instructions; Stores are required to be delivered at Consignee's location (Srinagar/Jammu), at freight, risk and cost of the supplier.												
7.	Store required at; Free delivery at Consignee location.												
8.	Delivery required; Within two months from the date of confirmed order or as mentioned in the supply order.												
9.	The successful tenderer will have to arrange onsite installation and training to end users free of cost as and when asked for.												
10.	<b>Comprehensive Guarantee/Onsite Warranty period;</b> The tenderers shall provide warranty for a minimum period of 01 years covering all the systems, sub systems .The cost of warranty period will be included in the quoted price .If during the aforesaid period, the said stores be discovered not conforming to the description and quality or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the contractor and purchaser shall be entitled to call upon the contractor to rectify the goods or such portion thereof as is found to be defective by the purchaser within a reasonable period or such specified period as may be allowed by the purchaser in his discretion on/an application made thereof by the contractor and in such an event, the above mentioned warranty period shall apply to the goods rectified from the date of rectification thereof. In case of failure of the contractor to rectify or replace the goods etc within specified time, the purchaser shall be entitled to recover the cost with all expenses from the contractor for such defective stores.												
11.	<b><u>TWO BID SYSTEM;</u></b> All bidders are required to submit their offers in two covers as under;- (A) <b><u>FIRST COVER</u></b> ( <u>Technical Bid</u> ) should contain the following;-												
	<table border="1"> <tr> <td>i.</td> <td>Tender documents duly completed and signed <b>BUT WITHOUT INDICATING THE RATES QUOTED.</b></td> </tr> <tr> <td>ii.</td> <td>Earnest money.</td> </tr> <tr> <td>iii.</td> <td>Tender Fee</td> </tr> <tr> <td>iv.</td> <td>Technical specifications of the item quoted alongwith original catalogues (Make &amp; Model).</td> </tr> <tr> <td>v.</td> <td>Delivery terms, delivery period quoted.</td> </tr> <tr> <td>vi.</td> <td>List of the orders received and executed during last two years giving</td> </tr> </table>	i.	Tender documents duly completed and signed <b>BUT WITHOUT INDICATING THE RATES QUOTED.</b>	ii.	Earnest money.	iii.	Tender Fee	iv.	Technical specifications of the item quoted alongwith original catalogues (Make & Model).	v.	Delivery terms, delivery period quoted.	vi.	List of the orders received and executed during last two years giving
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vi.	List of the orders received and executed during last two years giving												

	reference of the order, value of order, Name of the agency/department alongwith performance certificate.
vii.	Registration certificate/Industrial Licence of original manufacturer, for the material quoted.
viii.	Certificate of being authorized dealer having authorization of the original manufacturer to quote against the tender.
ix.	Authorised Dealer having authorisation to quote against this tender, shall furnish his Registration Certification with Central/State Sales Tax department.
x.	A copy of this NIT duly signed & stamped on every page by the tenderer, in token of having understood and accepted the specifications, terms & conditions of the NIT.
xi.	Any other relevant document which the firms wishes to submit.

A) **SECOND COVER** (Commercial/Price Bid) should contain the following:-

i.	<p><b>Details of rates, duties, taxes. These details should be submitted on their letter pad.</b></p> <p><b>(Note)</b> J&amp;K State entry tax rate currently is 13.5% extra. J&amp;K Police does not issue Road Permits <b>OR</b> Concessional Forms, as such; Rate so quoted shall be F.O.R Consignee.</p> <p>State Entry Tax shall be reimbursable on production of original documents by the successful bidder and need not be quoted in the rate column.</p> <p><b>(Rates shall be filled as per the enclosed format, at Annexure "B" )</b></p> <p>The rates quoted not in accordance with this format shall be at the consequence of tenderers and PHQ shall have no corresponding liability. It is in the interest of tenderers that rates are quoted in the prescribed format only)</p>
ii.	Rates must be clearly written in figures as well as in words, free from over writings, cuttings and alterations. Rates quoted should be on firm price basis.
iii.	Tenders shall be filled in clearly and with one ink. No cuttings/alterations/ over-writings shall be made in the tender. Correction, if any, be done clearly and properly initialed
iv.	Rates quoted shall be final till the validity of the contract i.e. upto <b>31:03.2012</b> with a provision of further extension if finally approved by State Level Purchase Committee for J&K Police Department.

Both the above mentioned covers should be sealed separately, and superscribed with the Tender No., Stores and date of tender opening. This cover should thereafter, be kept in a third cover and again sealed. This cover should also be super scribed with the Tender No, Stores and date of opening.

12. The tenders may be sent by post well in time or delivered personally, at J&K Police Headquarters Pirbagh, near ITI Airport Road Srinagar-190021 (Tel; 0194-2443031) or in Police Central Store Gulshan Ground Gandhi Nagar Jammu (Tel; 0191-2433571) or J&K CID Cell Harish Chander Mathur Lane Kasturba Gandhi Marg New Delhi.

Tender offers alongwith specifications duly accepted by tenderer and samples wherever required shall be received by **Police Headquarters J&K at Pirbagh Srinagar or PHQ Gulshan Ground Jammu or J&K CID Cell Harish Chander Mathur Lane Kasturba Ghandhi Marg New Delhi upto**

	<b>05.08.2011 (1600 hours).</b> The deptt. Shall not be liable for any postal delays. No Tender will be accepted after the due date and time..
13.	No conditional tender will be accepted/ entertained. It will be summarily rejected. No other condition than those mentioned (in the terms set-forth) will be entertained;
14.	On due date of opening of <b>tenders' i.e. 09. 08.2011 (at 1100 hours) at Police Hqrs J&amp;K Peerbagh Srinagar,</b> only technical bid of the tender shall be opened. Only authorized representative will be allowed to attend the meeting for opening tenderers. He/She should also bring authority letter on company/firms letter head that any decision/negotiation taken by him/her would be accepted by company/firm. In case of unforeseen circumstances the date of opening will be next working day or as notified separately. The Financial bid shall be opened only in case of such tenderers, who on scrutiny of Technical Bid are found to have qualified for opening of the same. The financial bid will be opened on any other day at the discretion of State Level Purchase Committee.
15.	The short listed tenderers will have to arrange for the Technical or field / Practical demonstration of the Equipments, if any required, at their own cost at the place and date to be fixed by the Authority. The bids of the firms / bidders who do not arrange / participate in the demonstration as above will be treated as rejected.
16.	The approved supplier shall be deemed to have fully understood the conditions, specifications, size, patterns, make etc. of the article/s etc. to be supplied and in case of any doubt may seek clarification;
17.	The supplies delivered by the successful tenderers shall be surveyed and verified at our Stores i.e. Police Central Stores Jammu/Srinagar by the Survey Committees constituted for the purpose.
18.	The successful tenderer shall have to enter into an agreement/deed on prescribed proforma (immediately after the issue of supply order) with the Department for due performance of the contract which shall be invariably furnished before the supply is made.
19.	The successful tenderers shall arrange supplies within the period mentioned in the supply orders. The period of delivery and validity may be extended, at absolute discretion of this Hqrs provided the delay is justifiable.
20.	After the rate is approved, the successful tenderer shall give in writing that if it is found subsequently that he has supplied the same product at the rates lower than offered to PHQ, the same rates will apply to J&K Police and the excess amount if any, paid to the firm shall be recovered from it in any manner.
21.	The tenderer is required to furnish an authenticated copy of latest Sales Tax/ VAT/ clearance certificates and PAN and VAT registration certificate(alongwith the tender offer or at the time of payments). The PHQ shall be at liberty to put to scrutiny, verification etc. the Sales tax clearance so furnished by the successful tenderer
22.	Payment shall be released by the department against each consignment delivered in entirety, inspected, accepted and properly brought on stock in the concerned stock registers of the Department.
23.	Remittance charges (Bank Commission) on payment made to the firms will be borne by the suppliers. The charges of stamp etc. shall be paid by the

	supplier while executing the agreement;
24.	As soon as the acceptance of the tender is communicated to the successful tenderers, the contract shall be binding on him. The <b>EMD</b> of the tenderer who backs out or withdraws his tender or fails to abide by it, after acceptance thereof, is communicated/posted to him shall be forfeited besides other penal remedies that may be available to the Govt. of the J&K under the law for the time being in force in the State of J&K;
	(a) If, after the registration/placement of orders/execution of the agreement and formally depositing the <b>security money</b> , the tenderer backs out or fails to supply the goods, the security deposit will be forfeited besides any other penal measures, the department may take as per norms in vogue;
	b) The formal deed incorporating the terms of the contract will be executed by the successful tenderer immediately after receipt of supply order. Failure to execute such bond/deed shall not however prevent the contract from being enforced against the tenderer. Any loss sustained by the Govt. as a result of re-tendering the contract, shall be recovered from the defaulter, besides other penal measures as the department may think proper;
	c) Goods shall be delivered (as per instructions in supply order) either at Police Central store, Gulshan Ground, Gandhi Nagar, Jammu or Police Central Store, Zewan, Srinagar duly packed in perfect condition. The supplier if he so desires may insure the goods against loss or theft, destruction, damages by the natural calamity loss by exposure to weather or other wise viz. war rebellion, riot etc. The insurance charges will have to be borne by the supplier and the department shall not pay such charges;
	d) If, the successful tenderer fails to supply the goods of the prescribed specification or fails to deliver the goods within the stipulated period as specifically mentioned in the supply order, the department shall be at liberty to arrange supplies by other possible means, at his risk and cost. The department may give prior notice to the approved supplier in writing to make supplies good. In case of failure to supply the consignment on specified qualitative & quantitative terms, the department shall be lawfully entitled to forfeit the amount of the security money and take penal action to make good the loss sustained or excess cost incurred by the state in arranging of the supplies and other remedies that may be available to the department, under the law for the time being in force in the state.
25.	The supplier shall not sublet the contract or any part thereof to any other agency without the concurrence of PHQ.
26.	The decision of the accepting authority shall be final as to the quality of stores and shall be binding on the supplier. In case the articles supplied are not according to the approved specifications they shall be rejected. The replacement of the rejected stores shall be allowed at the sole discretion of the department. The loss caused due to rejection of the supplies shall be entirely borne by the supplier. The rejected equipment shall be lifted by the supplier within one week from the date of rejection. The department shall in no case be responsible for any loss or damage that may occur to the

	rejected stores while these are in the premises of the consignee.
27.	The quantities indicated in the Tender Notification are tentative and this Headquarters reserves absolute rights to change the same without any prior notification upto the validity of rate contract of this NIT.
28.	The authorities reserve absolute discretion to reject or accept any tender or a part thereof without assigning any reason and without any legal obligations. Any clause incorporated in the bid (not conforming to the NIT in any manner) shall make such an offer liable for rejection. Therefore, all the terms and conditions of the Tender Notice including technical specification shall be carefully studied for the sake of complete and comprehensive tender. Failure to comply with any of the tender conditions or instructions or the offer with insufficient particulars/documents, which is likely to render fair comparison of tender as a whole impossible shall lead to rejection even if otherwise, it is a competitive offer/tender.
29.	The Department reserves the right to add or suitably modify the terms and conditions (without prior notification) as per exigencies that may arise for one or the other reason.
30.	All legal proceedings arising out of any dispute between the parties shall have to be settled in the Courts situated in Jammu and Srinagar and not elsewhere;
31.	Copies of tender can be had on any working day (during office hours) from AIG (Prov/Tpt) Police Headquarters J&K Pirbagh Srinagar or office of DIG of Police Jammu-Kathua Range, Jammu or SP J&K CID Cell II Harish Chander Mathur Lane Kasturba Gandhi Marg New Delhi 110001.
32.	The successful bidder shall have to organize a training programme for one month or as desired by the department without any extra cost to train J&K Police personnel for proper handling of the equipment/system

ADGP (Hqrs)  
For Director General of Police,  
J&K-Srinagar.  
**PIN-190021.**

**No. Prov-II/CR-30/2011-12/NIT-22/32361-76**

**Dated:07-07: 2011.**

POLICE

HEADQUARTERS

J&K

SRINAGAR

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**GIST OF NIT NO; 22 of 2011  
DATED; 07 /07 /2011.**

For and on behalf of the Governor Jammu & Kashmir State, sealed tenders affixed with revenue stamp of Rs. 5/- are hereby invited from original manufacturers or their authorised dealers having authorization from the manufacturer/s to quote against the tender for the purchase of **Automatic finger Print Identification System(AFIS)** as per specifications given in Annexure "A" to this NIT. The tenders shall be addressed to ADGP (Hqrs) PHQ J&K C/O Director General of Police J&K, Srinagar. The last date for receipt of tenders is **05.08.2011 upto 1600** hours. Tenders shall be received at **Police Headquarters J&K at Peerbagh Srinagar or PHQ Gulshan Ground Jammu or J&K CID Cell Harish Chander Mathur Lane Kasturba Ghandhi Marg New Delhi upto 05.08.2011 (1600 hours).**

Technical Bid of tenders will be opened **on 09.08.2011 at 1100** hours at Police Headquarters J&K Srinagar. In case of unforeseen circumstances, the date of opening will be next working day or as notified separately.

The detailed tender documents with terms and conditions is available on website **www.jandkpolice.org** and can be had on any working day from AIG (Prov/Tpt) PHQ J&K Srinagar or DIG of Police, Jammu, Kathua Range Jammu or SSP J&K CID Cell II Harish Chander Mathur Lane Kasturba Ghandhi Marg New Delhi 110001.

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ADGP (Hqrs)  
For Director General of Police,  
J&K-Srinagar

**ANNEXURE “B” TO NIT No: 22 OF 2011; DATED. 07: 07 :2011  
PROFORMA FOR QUOTING RATE/S**

<b>S.No</b>	<b>Rates structure (F.O.R. Police Central Stores Srinagar and Jammu).</b>	<b>Unit rate in Rs.</b>
1.	Basic Unit Cost.	
2.	Custom duty, Rate and amount (if applicable) should be mentioned. Besides, if the item is exempted from payment of custom duty, reference to relevant Govt. notification should be invariably mentioned so that custom duty exemption could be arranged and copy enclosed.	
3.	Excise duty with rate and amount of duty (if applicable).	
4.	<b>VAT/CS. (Rate and amount to be indicated separately).</b>	
5.	Packing, forwarding, freight, insurance etc. charges, up to place of destination/installation (Srinagar/Jammu).	
6.	Any other duty/charges. (Please specify the type of duty/charge, rate and amount, in absence of which it will not be accounted for.	
7.	Total Rate FOR Srinagar/Jammu (inclusive of all taxes/duties/charges etc).	
8.	J&K State Entry Tax is Extra (present rate of entry tax is 13.5%). Entry tax is reimbursed by the department to concerned firm, at actuals, against original documents of J&K Sales/Commercial Taxes Department at Lakhanpur.	

- (i) J&K Police do not issue Road permits, Excise duty/ entry tax exemption certificates or Concessional forms etc.

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ADGP (Hqrs)  
For Director General of Police,  
J&K-Srinagar

**Annexure 'A' of NIT 22 / 2011 dated 7-07-2011**

**PROPOSED HARDWARE SPECIFICATIONS OF AFIS:**

**(A) Hardware Requirements for SC RB -J&K Jammu:**

Workstations+ Terminal (TFT-19")	04 No's
Laptop	01 No
Flat bed Scanner	04 No
Laser-jet Printer	01 No
Live Scanner	01 No
Digital camera(12 mega pixel)	01 No
Networking Printer	01 No
Web Camera	01 No
UPS (7 KVA)	01 No
Networking Equipments	As per recommendation of Vendor

**(B) Minimum Hardware Specification:-**

S No.	Specifications	Units
	<b>Database</b>	
1	Ten Digit slip database	3,00,000
	Upgradeability	Upto 10 lacs
2	Number of prints to be stored/slip (rolled/flat)	20
3	Chance print (single print) database including S.O.C prints	50,000
	Upgradeability	1,00,000
4	Texture demographic and photographic database	yes
	<b>Daily record/searches</b>	
5	Number of record slips	100
6	Number of search slips	250
7	Updating of search & record data per day	500
8	Number of Latent prints (Chance)	50
	Working hours	
9	System working hours	Round the clock
10	Effective manual hours per day	12 hours

**(C) Hardware**

S No	Item	Particulars	Specification	Remarks
1	Workstation	Type	WS	
		Processor	Intel I3 Processor	
		RAM	2GB	Extendable up to 5 GB
		Storage Capacity	500 GB H/D	Extendable up to 1TB
2	Scanner		2400dpi optical resolution, 2400x2400 dpi hardware resolution	
3	Printer		Laser print Laser print with print speed 25ppm or above. Prints quality	

*(Handwritten signatures and marks)*

			1200x1200dpi
4	UPS	On line	7KVA on Line-UPS
5	Data Transfer Line	Broadband connection with minimum 512 Kbps speed	
6	Anti Virus	Updated Licensed	
7	Portable H/D	500 GB Portable H/D	
8	Operating System	Windows XP/2007 or later	
9	RDBMS	Oracle 11i or later	

**(D) TECHNICAL SPECIFICATION OF FINGER PRINT SLAP LIVE SCANNER**

Sr. No	Description
1	<p>Live Scanner with software Capability to collect to collect all elements on a ten print card. i.e. roll Scans, 4-finger flat and thumb Scans ( 4+4+2)</p> <p>All Live scan Components Proposed shall meet the following industry Standards governing image capture &amp; compression:</p> <ol style="list-style-type: none"> <li>1. Full Compliance with ANSI/NIST Data format for the interchange of Finger Print. Facial &amp; SMT Information ( ANSI/NIST-ITL-1-2007 or current)</li> <li>2. Certified to FBI Standard CJIS-RS-0010 (V7). Appendix F, IAFIS Image Quality specification for Scanner for 500 ppi and 1000 ppi identification flat system. Full Compliance with FBI NCIC CJIS WAN Protocol Specification, EFTS/EBTS and IAFIS Telecommunications Standard.</li> <li>3. Electronic image must be of sufficient quality to allow for: (1) conclusive fingerprint comparisons (identification or non-identification decision: (2) fingerprint classification: (3) automatic feature detection: and (4) overall Automated Fingerprint Identification System (AFIS) Search reliability:</li> <li>4. The fingerprint comparison process requires a high fidelity image without any banding. Streaking or other visual defects. Finger detail such as pores and incipient ridges are needed since they can play an important role in the comparison. Additionally, the grey- scale dynamic range must be captured with sufficient depth to support image enhancement and restoration algorithms.</li> <li>5. The fingerprint Scanner must be capable for producing images that exhibit good geometric fidelity, sharpness, detail rendition, gray- level uniformity, and grey scale dynamic range, with low noise characteristics. The images must be true representations of the input fingerprints without creating any significant artifacts, anomalies, false detail, or cosmetic image restoration effects.</li> <li>6. Vendor have to integrate Live Scanner with existing State Police AFIS in all aspect, i.e. live scanner can be directly operated from AFIS as well as Finger Print Images ( Rolled and slab) and demographic details captured through Live Scanner Application Software can be imported directly to AFIS. Vendor will develop all necessary interface and tools for AFIS and Live Scanner Integration. All required driver, SDK and API for integration will be procured and supplied by Vendor only.</li> </ol>
	<b>Key Features and Specifications:</b>
a.	Resolution of resulting images 1000ppi, 500ppi software Selectable.
b.	Gray Scale 256 Gray Scale, 8 bit.
c.	Dynamic Range At least 80.0% of the captured individual fingerprint images shall have a grey- scale dynamic range of at least 200 gray-levels.
d.	Sensing Area Single platen (Single prism, Single imager, uniform Capture area) for rolling and taking plain and slab impressions of finger. No moving parts in the Optics Deck.

e	Scan Area ( Min)	81x76mm
f	Image Area	
	-Rolled	41x38 mm (Roll Live Scanner must be capable of capturing a least 80% of full roll are length, where full roll are length is defined as arc length from nail edge to nail edge.)
	- Slap ( 4 fingers)	81x76 mm
g	Time for scanning a fingerprint	Maximum 4 second ( for Slaps- 5 seconds)
h	Image Compression Method	FBI- certifies JPEG 2000 compression module.
i	Image Quality	FBI's AFIS Image Quality Specification CJIS-Rs-0010 (v7) appendix F Certifies.
j	Interface	IEEE 1394 (Fire Wire)
k	<b>Capabilities</b>	
	i Automatic finger detection	System should detect finger automatically.
	ii Calibration & diagnostic Test	Factory Calibrated and sealed, with self-test/ diagnostics at start-up.
	iii Quality Check	The system issues a message regarding the quality of rolled and plain fingerprint images prior to capturing next finger.
	iv Automatic change to the next finger	If the image quality is good, the system offers to scan the next finger.
	v. Both Direction capturing	Capability to allow the fingers to be rolled in a left to right or right to left direction when taking the rolled impressions.
	vi. Capability to compensate complicated cases	Capability is capture significant ridge definition of dry and sweaty skin (Ignores moisture and sweat to prevent blobs that degrade image quality) along with capability to compensate Smudge (accuse While rolling the finger on platen) and smeared image.
	vii. Automatic Sequence	Automatic sequence checking of rolled print with respect to plain print
l	Protection from Dust, Debris and Liquid	Rugged enough to withstand extreme working conditions in law-enforcement environment.
3.	<b>Software</b>	
a.	Operating system.	OS Windows® XP/2007 or latest
b.	Application software	<p>The Live Scanner system Application</p> <ul style="list-style-type: none"> <li>• Capable to store minimum of 1000 complete 10 print card.</li> <li>• Preview, Zoom and 10 Print Card Printing facilities.</li> <li>• Ability to search for an individual data by his touch fingerprint.</li> <li>• On Screen Prompt feature indicating the direction of Finger roll and correct finger.</li> <li>• Exporting of Ten-print Cards files in the following formats: <ul style="list-style-type: none"> <li>○ International data exchange format ANSI/NIST ITL-1-2007:</li> <li>○ FBI IAFIS CJIS-RS-0010 (v.7):</li> <li>○ INTERPOL. ( INT-I) (v.4) November 19,2002;</li> <li>○ Print/reproduce 10digit Slip ( image and text data) in State Police/NCRB format:</li> <li>○ Conversation tool to JPEG to WSQ visa versa.</li> </ul> </li> </ul>

4	Accessories	All required Cables, Adaptors, IEEE 1394 ( fire Wire) PCI/PCI Express card ( As requires) for Desktop to connect Live Scanner through Fire-Wire Port by Fire- Wire cable, Suitable case/bag to carry live scanner
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**PROPOSED SOFTWARE SPECIFICATIONS OF AFIS:**

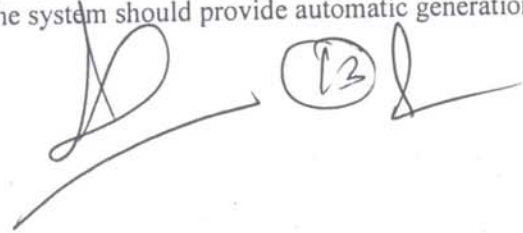
**A Compliance with the International Standards:**

The entire system should have compliance with the following International Standards (specified version or latest)

- a.1 NIST Compliance to Data Format for the Interchange of Fingerprint, Facial & other Biometric Information (ANSI (American National Standards Institute)/NIST-ITL 1-2007) or latest of NIST Standards.
- a.2 JPEG compression for mugshot images (ANSI/NIST – ITL 1-2007)
- a.3 Minutiae and related information encoded from a finger or palm: ANSI/NIST Type-9 (ANSI/NIST-ITL 1-2007)
- a.4 Ten-print Processing: 500 ppi ANSI/NIST Type-4 Images (ANSI/NIST-ITL 1-2007)
- a.5 Palm Print Processing: 500 ppi/1000 ppi ANSI/NIST Type-15 Images (ANSI/NIST-ITL 1-2007, ANSI/NIST-CSL 1-1993)
- a.6 Electronic Fingerprint Transmission Specification (EFTS)
- a.7 A certified version of the Wavelet Scalar Quantization (WSQ) algorithm as specified by IAFIS-IC-0110 (V3) for lossy compression of fingerprint images scanned and transmitted at 500 ppi (JPEG 2000 for those images scanned and transmitted at 1000 ppi)
- a.8 System should provide flexibility in terms of replacing its minutiae extraction algorithm & template structure with the national e-Governance standards for fingerprint technology, as and when released. The matching algorithm for such standard minutiae template shall be provided by the vendor with desired level of accuracy & performance.

**B. Standard Module Requirement of AFIS**

- b.1 The system should be capable of receiving, storing, matching and retrieving electronically transmitted finger & palm, latent prints from its workstations and remote workstations.
- b.2 The system should also be capable of receiving, storing and retrieving textual, demographic and photographic details of the criminal.
- b.3 The system should be capable of receiving and processing inked and inkless rolled, flat and palm print images at a resolution of  $\geq 500$  ppi and latent prints (preferably) at a resolution of  $\geq 500$  ppi or 1000 ppi (pixels per inch).
  - ✶ There should be facility of automated minutiae extraction, pattern recognition/Henry classification – atleast primary & secondary code. The vendor shall use maximum classifications of different attributes/features as per the system being provided by the vendor i.e. core & delta detection, ridge orientation/direction, ridge counting, skeleton, neighboring minutiae architecture etc.
- b.5 The system should perform image quality check and sequence check automatically and also able to capture Rolled Print & Plain Print area & sequence validation with interactive dialog for manual assistance, if required.
- b.6 In case of unacceptable, poor quality or out of order prints, the system should give alert for manual quality check with option for accepting or rejecting poor quality prints or swapping out of sequence prints.
- b.7 If the image is unacceptable, a message should be sent automatically to the exporting remote location/workstation.
- b.8 The system should have automated enhancement and encoding module.
- b.9 The system should provide automatic generation of transaction subject ID.



- b.10** System should provide following image pre-processing capability automatic and manual by the operator in cases of poor quality print:-  
 Smoothen, Sharpen, Equalize, Invert, Rotate-360°, Improve Bright Picture, Improve Dark Picture, Improve Contrast, Increase White area, Decrease White Area, Filters to improve the image, Density handling, Noise deduction, Background subtraction/removal, Flattening/Thickening, Thinning of Ridges, Reduction to single pixel level, Edge Detection, Distortion correction, selection of area of interest, histogram and able to separate overlaid chance prints.
- b.11** The system should be able to separate fingerprints on multi-coloured surfaces viz. currency notes, Revenue Stamps, Stamp papers, legal documents etc.
- b.12** The system should be capable of enrolling complete palm including phalange areas with automated features extraction like finger prints viz. minutiae and ridge flow, skeleton etc.
- b.13** If segmentation of palm is required by the system, it should be done automatically by the system internally.
- b.14** System should weed out time barred slips automatically based on age or years.

### C. Matching Module Requirements of AFIS

Matching Module should provide Ten Print, Palm Print, Latent print search on the following pattern

#### **C.1 Ten Print Matching**

- a) Ten Print to Ten Print Search
- b) Ten Print to Latent Print Search
- c) Ten Print to Both - Ten Print & Latent Print Database Search

#### **C.2 Latent Print & Unsolved Scene of Crime print matching**

- a) Latent Print to Ten Print Search
- b) Latent Print to Latent print Search
- c) Latent Print to Both – Ten Print & Latent print Database Search

#### **C.3 Palm Print matching**

- a) Palm Print to Palm Print Search
- b) Palm Print to Palm Latent Print Search
- c) Palm Print to both-Palm print & Palm Latent Print Database Search

### D. Demographic and Textual Data Module Requirements of AFIS

- d.1** Storage & retrieval module should have facility of Phonetic Name Search & Indexing.
- d.2** Should be seamlessly integrated with Finger & Palm Print Image database in all respects.
- d.3** Should be retrievable by clicking on shortlist of probable match results.
- d.4** Should maintain profile/dossier of a criminal viz. (i) Name (ii) Sex (iii) Parentage (iv) Addresses (v) Date of Birth (vi) Category (vii) FIR details viz. FIR No., Date, Year, U/S, P.S. & District (viii) Conviction details viz. Name of the Court, Date of conviction, U/S, Punishment awarded (ix) Photograph (x) MOB etc.
- d.5** Should provide for sub-system for separate categories i.e. Convicted, Arrested, Suspect, Inmate, Wanted, B.C., Proclaimed Offender, Absconder etc.
- d.6** Should have Input, Query and Report Module on the basis of different data fields and categories.
- d.7** System should be compatible with the NCRB codification standard for storage and retrieval of criminal data.

### Search module requirements of AFIS

Search Module: Search/comparison of ten prints, palm prints and latent prints to the AFIS database shall have the following functions

- e.1 Remote Query can be fired from multiple locations at the same time. The results will be sent to the respective terminals.




- e.2 System's ability to have priority based processing of matching requests received from workstations. The system should be capable of indicating Query No./Date-wise/ Time-wise to the transaction in need of priority and provide tools to initiate the priority processing.
- e.3 The system should generate flash to be displayed at concerned workstation (i) Sl. No. in Queue (ii) Searching (iii) Total No. of Records to be searched (iv) No. of Records searched counter (v) Approximate time to be taken to complete the processing. Total time taken shall be flashed after the completion of search.
- e.4 Automated comparison of each rolled or flat ten print image against the corresponding "flat" image, to ensure proper finger identification.
- e.5 Automated image quality rating to each ten prints, flat print, palm print & latent print.
- e.6 Multi-finger matching/searching of latent prints against all 20 finger prints (both rolled and flat) in Ten digits Print record.
- e.7 The latent search algorithms should also support search with no filtering and 100% data penetration to eliminate the need to perform multiple searches of the same latent print.
- e.8 Ten print & Latent print should be searched automatically against the ten finger print database and simultaneously unsolved latent database.
- e.9 The system should be capable to enroll and search/match a slip having less than ten print in case of amputated/bandaged/missing fingers.
- e.10 Palm print should be searched against the palm print database and simultaneously unsolved latent database.
- e.11 Latent fingerprints should be searched against the ten print finger database and simultaneously unsolved latent fingerprint data base.
- e.12 Latent palm prints should be searched against the palm print database and simultaneously unsolved latent palm print data base.
- e.13 The system should be capable of matching of latent prints of unknown scale with given accuracy standards.
- e.14 The system should be able to re-submit ten digit print, palm print and latent print from database to search against database with re-editing facility.
- e.15 Option for Ten print, palm print and latent print search for identity verification without entering the record into AFIS.
- e.16 AFIS should support the ranking of candidate matches for a selected print or set of prints with the highest potential of a likely match appearing in first position.
- e.17 Option for operator to use date field as filter for search.
- e.18 Support for retrieving and comparing of the existing ten digit print record with the finger prints of subject short listed from the demographic data.

#### **F. Verification Module Requirements of AFIS**

- f.1 Verification module should be available at Central AFIS.
  - f.1.i Ten-digit search should be based upon at-least four best finger print before the respondents are returned for manual verification and the system should perform ten finger matches automatically against each respondent to ensure accuracy.
  - f.1.ii The four highest quality finger print images available in the Ten digit search print should be selected automatically by the system through automated image quality assessment.
- f.2 On-screen side by side display presentation of the search print and potential matching prints from the AFIS database. The ranking of candidate matches from potential matching print(s) with highest potential should appear on the top in descending order.
- f.3 Should be able to selectively display or hide an overlay of extracted minutiae points in the on-screen image comparison and binary image display.
- f.4 The system should provide a convenient method to examine side-by-side same size images of the search prints compared with the candidate list prints and the ability to proceed forward and backward through the candidate list.
- f.5 The system should provide for user defined threshold candidate list.

Handwritten signature and initials, including a circled 'RS'.

f.6 The system should provide automatic charting of matching points on both the matching prints with examiner defined charting option for Court Opinion.

### G. System Security

System Security: The data of J&K Police is a valuable resource and key component of Technical Architecture. Information security is very important to maintain Integrity, Confidentiality & Availability of data.

g.1 Data needs to be protected against following threats.

- Unauthorized access to database or application
- Accidental modifications or deletions
- Confidentiality, Integrity & Availability breaches of data during data transport & physical storage.
- Disasters

g.2 Front end application should include features of MD 5/SHA encryption layer, SSL-based (for web-enabled), Prevention from BRUTE Force Attack, SQL Injection, other vulnerability patches etc.

g.3 Encryption/Decryption engine for encryption/decryption of records while Storing/loading the records to/from the database.

g.4 Multilayered security should be in place in order to access various features at Central Server, which must be exhibited by the vendor at the time of evaluation etc.

### H. Accuracy

h.1 The system should be capable of achieving accuracy not less than 99% for ten print, palm print and single digit search.

h.2 The system should be capable of achieving accuracy not less than 90% in case of latent print search.

### I. Response Time

i.1 Response time will be measured from the time the search is submitted until images are available at workstation for verification.

i.2 The time from submission of a ten print and palm print search should not exceed more than 5 minutes (or stipulated/normalized time on a connectivity of 256 Kbps bandwidth) from Remote Workstation to the Central AFIS Server until the identification message is returned, inclusive of simultaneous unsolved latent database search.

i.3 The time from submission of latent finger/palm print search at central AFPIS should not exceed more than 10 minutes (or stipulated/normalized time on a connectivity of 256 Kbps bandwidth) inclusive of simultaneous unsolved latent database search.

i.4 The time from submission of a Single Digit search from Web (browser) based Remote query to the Central AFIS until the identification message is returned should not exceed more than 3 minutes (or stipulated/normalized time on a connectivity of 256 Kbps bandwidth) inclusive of simultaneous unsolved latent database search.

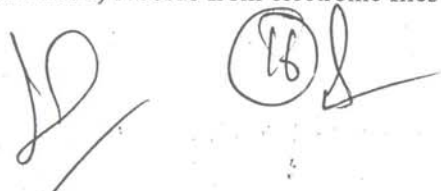
i.5 The application should be capable to run on multiple processing to accommodate either 50 concurrent single digit searches.

OR

30 concurrent single digit processes and 10 Ten digit print process and 3 latent print concurrent processing fired from the multiple locations.

i.6 AFIS should support image resolution of  $\geq 500$  ppi (or 1000 ppi (pixels per inch)) in all aspects of capture, processing and archiving. There should be no quality loss in transporting the data to the new system.

i.6.i Should have the capability to reproduce one to one hard copy of tenprint with flat/rolled print and Palm print (full hand) records from electronic files submitted to AFIS.



i.6.ii The system should provide for separate temporary database for document case, inmate/suspect examination.

### J General Requirements

- j.1 Redundant server architecture that automatically re-configures itself in case of failure.
- j.2 Disk mirroring to eliminate the possibility of lost data due to media failure. A system of automated database backups to ensure that key data is kept up-to-date in the event of a crash.
- j.3 The new system/solution must be user friendly with the ability for the Fingerprint Experts to quickly learn the operations of the application software.
- j.4 The System Software to be provided should be of latest version.
- j.5 The Hardware should be of known reputed brands.
- j.6 System should be capable of the following services: identify/verify, display and print on demand from archive record on standard format of Finger Print Slip, Latent Print Card, Palm images and other associated details.
- j.7 The system should have a Report Module capable of generating statistical reports periodically on various parameters for monitoring performance of system and its utilization by various users to be customized to meet day to day requirement.
- j.8 The system should be capable of providing AFIS (including Palm Print) Inter Connectivity and able to communicate electronically with other compliant and compatible AFIS systems.
- j.9 The system should have ports available to integrate applications e.g. Photo Imaging Systems, Digital Media, Live Scanner, Flatbed Scanner etc.
- j.10 The system should have automated monitor running processes to provide real time detection of the occurrence of system problems, including software problems and hardware component failure with descriptions of response requirements.
- j.11 Administrator Module should be provided with various easy to use tool/utilities to monitor and control the system.
  - j.11.i The system should have administration utilities to monitor system performance, manage transaction queues, balance workload, workflow control, view and review database records, update, modification and deletion etc.
  - j.11.ii The system should have central operation control to monitor process, re-do and re-direct if necessary of remote site work or any work of local workstation under supervision.
  - j.11.iii Utility tool should include facility to convert the AFIS data (including Palm Prints) into various standard formats with provision to export on external storage media devices.
- j.12 Backup/Recovery/Disaster Management Module
  - j.12.i The system should provide for backup to reclaim the work in process files within 2 hours of a detected failure and backup capabilities to reconstruct permanent files and operating system software. The system should provide for incremental backup in every 24 hours and full backup of database once in a week.
  - j.12.ii In case of natural or induced disaster or any occurrence that may render the AFIS partially or fully non functional, the system should provide for solution for recovery within 6 hours (or stipulated time) that will ensure continuous and proper performance of the system and sub systems.
- j.13 Initial communication between server, clients and workstations will be on broadband/dial-up network which will be switched over to M-SWAN Highway in due course.
- j.14 The system should bridge software or a module through which AFIS system can be integrated with & worked on Hardware & Software of Crime & Criminal Tracking and Network System (CCTNS).

### K. Miscellaneous Requirements

Miscellaneous Requirements: additionally, the following features should also be considered for New AFIS System

- k.1 Automated quality replacement of better prints

Handwritten signatures and initials. On the left is a large, stylized signature. To its right is a circular stamp containing the number '17' and a signature.

- k.2 Automatic Henry Classification of 10 digit F.P Record/Search Slip
  - Assign a primary pattern automatically
  - Provides secondary reference classification automatically.
  - Sub classification by measuring core and or delta distance and ridge count
- k.3 Automated ridge direction determination
- k.4 Automated core and delta detection and extraction
- k.5 Automated minutiae quality assignment
- k.6 Automated search chance print upto 360 degree Orientation.
- k.7 Capability to take chance print negative image directly & match it.
- k.8 Automated capture of logical rolled print area
- k.9 Automated capture of logical plain print area and comparison of plain prints with rolled prints.
- k.10 Automated integration of AFIS with personal information system (Criminal Attribute) for storage and retrieval.
- k.11 Automated selection of matching digit, which is best in quality in search slip and database.
- k.12 The system should fully support the capability to capture multiple chance/latent prints associated with a particular case.
- k.13 The system should provide the ability to capture the associated case data and link this data to each chance/latent in the case.
- k.14 The system should facilitate Chance/latent print images to be re-edited and launched for secondary searches without requiring a re-scan of the chance/latent.
- k.15 The system should also have a full range of integrated chance/latent and ten print image-enhancing capabilities.
- k.16 The system should have capability to distinguish superimpose finger prints.
- k.17 The System should have a provision for creating secondary/temporary database for document case examination.
- k.18 Data conversion tools to convert the data of existing AFIS.
- k.19 Automated Ten Digit Slip Update
- k.20 Automated Latent Print Update
- k.21 Automated Palm Print Update.
- k.22 Finger Print and Demographic Data acquisition: It should have the capacity to record and maintain interactive Finger Print and demographic data acquisition.
- k.23 Efficient case processing and linking with the captured latent/palm print.
- k.24 Automated search against unresolved latent records during new Ten Digit Slip registration/replace.
- k.25 Networking and Data Updating Capabilities
  - Between State AFIS and Remote Stations.
  - Between National AFIS and State AFIS.
- k.26 Inter AFIS Data Portability and Query Processing.
- k.27 Existing dial-up connectivity should be used till M-SWAN connectivity is in place.
- k.28 Secure and Stable Database
- k.29 Architecture should be scalable.
- k.30 System Administration
  - User Administration and Access Permission Control.
  - Audit trail, System Monitoring and Log Management
  - Database Backup and Recovery.
  - Report Generation.
  - Statistics Generation.
  - Online Help.
- k.31 Antivirus support
- k.32 Demographic Details Information Management.
- k.33 Availability of Interfaces for Integration with other Indian Police Software.
- k.34 Finger Print and Demographic Data Report Generation.



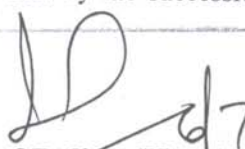
k.35 Maintenance and Support. It should have a capability of creating local removable data base for temporary comparison work.

k.36 Facility for high availability disaster recovery (HADR)

**L. Conditions**

- 1.1 It is mandatory that all the desired features should be demonstrated at the time of technical evaluation of the system. No second chance shall be provided for demonstration. Technical offers which shall be found half/partial complied shall be treated as cancelled.
- 1.2 The bidder should quote for comprehensive AMC rates separately for the next 5 (five) years after warranty period.
- 1.3 The successful bidder will organize a training program for one month or more time to train the J&K Police personnel for proper handling of the equipment/system.
- 1.4 All desired customization shall be provided free of cost. one computer programmers are to be provided for one year at no cost to J&K Police for customization.
- 1.5 Technical support of all types should be made available as per SLA
- 1.6 The successful firm shall provide comprehensive on-site warranty for all items /equipment (Hardware & Software) for a period of 5 years from the date of installation of the System.
- 1.7 The quantity of AFIS Workstations, Remote Workstations, Mobile AFIS system and Input Workstation or any other item can be increased or decreased at any stage till the delivery of consignment is complete.
- 1.8 Sole proprietary and ownership/License rights of all the hardware and software including data will be with the J&K Police.
- 1.9 Existing ten digit fingerprint slip data of app. 24,000 criminals along with textual demographic data have to be transported from the database in FACTS 3.0 of M/S CMC Ltd. by the successful bidder at its own cost and efforts.

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