



**NATIONAL CENTRE OF EXCELLENCE IN GEOLOGY
UNIVERSITY OF PESHAWAR**

Peshawar-25120, NWFP, Pakistan
Phone: +92-91-9216427; 9216429 Fax: +92-91-9218183
Web: <http://nceg.upesh.edu.pk/>

Last date of tender is **March 24, 2015.**
Opening date of tender is **March 24, 2015 at 12:00 PM**

Price= Rs.1500/-

(People who downloaded this file from NCEG site will have to deposit an amount of Rs.1500/- as the payment of Tender Document at the time they submit their bids or send a demand draft of Rs.1500/- in the name of Director NCEG, in case of submitting documents through courier/postal mail)

TENDER DOCUMENTS FOR THE PURCHASE OF ITEMS

(Note: Please must provide a soft copy (on a USB/CD drive) of all documents along with hard copy of the offer. Thanks)

Document Issued By:

NCEG Official

Dated: / / 2015



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Terms & Conditions

1) INVITATION TO BID

- The Director National Centre of Excellence in Geology invites bids for the items as per attached list.
- Bids must be submitted in sealed envelopes, including its due date on the face of the envelope.
- Earnest money @ 2% of the total bid cost shall be submitted with the tender without which the quoted bid will not be considered.
- The quoted price shall be inclusive of all duties / taxes.
- The Director, National Centre of Excellence in Geology, reserves the right to add, delete or amend any part of the tender documents during the bidding period.

INSTRUCTION TO BIDDERS/GENERAL CONDITIONS

2) SUBMISSION OF BIDS

- Bids in sealed envelope should reach the office of the director on or before the due date.
- Bids sent through courier should be delivered at least half an hour before the scheduled time of opening.
- After the bids / quotations are opened, no bidder shall be allowed to revise, propose or request any changes in bid, unless the committee decides to do so.
- The bidder or authorized representative shall sign on each page of the tender document. No corrections and overwriting are allowed.
- Item(s) should be quoted ANNEXURE-wise separately. Preference will be given to the firm(s) quoting maximum number of equipment ANNEXURE wise, along with installation and commissioning/Turnkey solution. However, NCEG reserves the right to opt any item from any bidder for the required items.
- ***Bidders are requested to read carefully the terms and conditions and sign the Tender Form in token of having understood and accepted the same in all respects. All or any of the provisions of the terms and conditions may be changed/alterd/modified/deleted/added or amended by the Centre as and when deemed suitable/necessary.***
- While quoting tender rates, the items should be given numbers as are numbered in the Tender Document.
- The tender Rate shall be item wise. And rate will be on both FOR basis in Pak Rupees and C&F basis *Peshawar Air Port. / NCE in Geology premises.*
- Prices of optional accessories should be quoted separately.
- *Taxes levied by the Government and freight charges, if any, shall be paid by the bidder and must be included in the quoted prices.*
- Bidder is responsible for timely delivery of bids. This office will not be responsible for misplacement / tampering / non-attendance delay or any other incident in case the bids are not delivered at the designated place & time.
- The bidders should be either established firm or sole distributor / authorized agent of the manufacturer having after sale service facilities, preferably, in Peshawar and/or Islamabad/Rawalpindi.
- The payment of equipment is coupled with installation / commissioning of equipment; therefore, supplier should make sure that bid is complete in all respects including consumables etc.
- The bidders must enclose original Performa Invoice / Quotation from their Principals or authorization certification of the Principal, failing which their offers will be ignored.
- **Bidders should preferably have office, workshop facilities and after sales services preferably in Peshawar and/or Islamabad/Rawalpindi.**
- Bidders must have trained engineers to provide after sales service. Copy of Training Certificate should be submitted along with their offer.

Note:

- Certificate of the Principle Vender.
- Only those suppliers will be entertained who have previously supplied similar equipments in Pakistan.
- ***Training of Two end users will be the responsibility of the bidder, in case of winning the tender.***

The price is to be quoted, essentially indicating the following:

- a. Original Country of origin.
- b. Estimated gross / net weight, dimension & volume of offered item.
- c. Delivery period.
- d. Original technical literature.
- e. List of Clients to whom the same natures of equipment are supplied in recent two years.



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- f. The supplier must submit a certificate that the equipment supplied are according to international standards at time of delivery, otherwise no supply will be accepted by the client and the call deposit will be forfeited.
- 3) **BID VALIDITY**
All offers shall remain valid for 180 days from the date of opening of bids, until any further extension required by the client.
- 4) **ACCEPTANCE/REJECTION**
The Director National Centre of Excellence in Geology reserves the right to reject all bids at any time prior to the acceptance of bids. The grounds of rejection will be communicated to the bidder(s) upon request. However, Director NCEG shall not be liable to provide any justification of those grounds.
- 5) **RATE ESCALATIONS**
Quoted price shall remain valid, firm, and irrevocable and fixed till the fulfillment of obligations by the supplier and will not be subject to escalation on any account.
- 6) **TECHNICAL LITERATURE & SAMPLES**
If applicable/required, the Bidder (s) shall submit the following;
a. Data/Fact sheets of the equipment.
b. Original technical literature/Evaluation Software (s)
- 7) **EVALUATION**
Evaluation will be done on item-wise basis unless specified otherwise. The Director National Centre of Excellence in Geology, for timely delivery or economic reasons/compatibility, may:
a. Split the tendered items/ quantities among more than one supplier.
b. Form a package of tendered items/quantities.
c. Omit, Decrease or increase any item of Bid.
- 8) **PURCHASE ORDER**
Purchase order of quoted material shall be placed on fulfillment of conditions mentioned at above.
- 9) **DELIVERIES**
a. Free delivery at the following location is required, unless specified otherwise:
a) Director National Centre of Excellence in Geology, University of Peshawar, Peshawar, Pakistan
b. The supplier shall replace defective material/software/hardware at his / her risk and cost. Including transportation duty, taxes etc.
c. The material shall be in original/sealed packing to ensure delivery without any damages during transit .
d. The supplier shall be responsible for and shall provide part of the work and services/functions and equipment related to packing, handling and general transportation requirements.
e. If any of the software/hardware is discovered to be damaged or unacceptable at the point of embarkation or disembarkation, the supplier shall be responsible for replacement of the software/hardware free of any charges and costs to the buyer / client.
f. Time of Delivery of all equipment will be Maximum 60 days (FOR) and 90 days (C&F) after the date of issuance of purchase order.
g. **The equipment should be new and the vendor/supplier will ensure originality of the procurement channel as well as equipment.**
h. The Equipment shall be supplied in packed form and shall only be opened in the presence of the Purchase Committee/NCEG Official. Working manuals and other related literature shall accompany the equipment in original at the time of delivery.
- 10) **SCOPE OF SUPPLY**
a. The bidder shall supply/deploy equipment/items, of the specifications given in the attached Annexure-II, III, IV.
b. The bidder shall also be responsible for their installation, calibration, free service and the supplies at least one year from the date the equipment makes warranty functional.
c. **All equipment should be accompanied by service manuals of the equipment/item separately in English.**
d. In case installation at the times of supply/delivery is not possible; the vendor/supplier has to fulfill the same on the new installation date, given by Technical/Concerned Person of the NCEG.
- 11) **INSPECTION**
Pre-delivery inspection may be carried out at the premises of supplier (s) and / or post delivery inspection at office of Director, by the Technical Committee/NCEG official.
- 12) **PAYMENT**



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The supplier, after delivery of goods and its acceptance/satisfactory report shall submit invoice to this office, containing relevant information i.e.

- a. Purchase order number and date
- b. Item number
- c. Quantity
- d. Price
- e. Delivery challan indicating delivery date.
- f. Sales tax return invoices.
- g. No Interim payment will be made.

13) TAXES

- a. **Income tax as applicable** under the prevailing Government rules will be deducted at source (except where the supplier provides an income tax exemption certificate).
- b. Quoted price shall be inclusive of all taxes, especially **GST 17%** will be applicable.
- c. Professional tax shall be deducted as applicable.

14) LIQUIDATED DAMAGES

- a. If supplier fails to deliver ordered material within the stipulated period / scheduled time specified in purchase order, The Director, without prejudice to any other remedies, shall deduct from the bills or any other due payments / guarantees, as liquidated damages, a sum equivalent to 0.1% per day of the undelivered goods up to maximum 10% of the bid price & forfeit 2% earnest money.
- b. The liquidated damages shall also be applicable for the cancelled quantity of goods.
- c. Whenever liquidated damages become payable, in the event that delivery of all goods and equipment is not made within the time period specified except on account of force majeure, the buyer shall quantity the same and shall serve notice to the supplier requiring payment thereof.
- d. If the supplier fails to remit payment within ten (10) days of receipt of such notice, the buyer shall forth-with become entitled to recover the same.

15) SECURITY DEPOSIT/RETENTION MONEY/PERFORMANCE SECURITY

10% Amount of bill price shall be deducted or bank guarantee provided by supplier & the same should be released after the issuance of FAC / Satisfactory report.

16) MAINTANANCE PERIOD

Maintenance period is one year from the date of successful installation.

17) INSTLLATION & COMMISIONING

- a. **Please note that system/supply should be completed in all respect in terms of hardware, software and accessories/spare parts. Any deficiency in acquisition of desired results at the time of installation and subsequent functioning will be the responsibility of the supplying firm/company, without any additional cost. All the supply should be based on National Centre of Excellence in Geology University of Peshawar.**
- b. The supplier will be responsible for installation, testing Commissioning and one year smooth running of equipment. And also arrange free of cost training for the buyer/client.

18) CONDITIONAL BIDS

Conditional, incomplete bid will not be accepted.

19) BID BOND/ EARNEST MONEY

- The bidder shall furnish, as part of his bid, earnest money equal to 2% of quoted price with their offer in the form of demand draft/ pay order in favour of Director, National Centre of Excellence in Geology, University of Peshawar, Peshawar.
- The earnest money shall be denominated in Pak rupees and shall be in the form of Demand Draft, Pay Order or Call Deposit issued by a Pakistani scheduled Bank or branch of a Foreign Bank, acceptable in favour of the National Centre of Excellence in Geology, University of Peshawar, Peshawar.
- In case of alternate prices, earnest money will be based on the maximum quoted price of the same item.
- The Demand Draft shall be returned to unsuccessful bidders.
- **The Earnest Money will be forfeited if a bidder withdraws his bid during the period of his bid validity or fails to supply the machinery / equipment ordered by the university.**

20) SIGNING OF BIDS

The person signing the bid shall initial all the pages of the bid, where entries are made and attach Tender Document cost receipt in original.

21) PURCHASER'S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS

The National Centre of Excellence in Geology, University of Peshawar, Peshawar (Purchase Committee) reserves the right to reduce or increase the quantity, accept or reject any bid and to stop the bidding process and reject all bids, at any time prior to award of supply order without incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidders of the ground for such actions.



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22) CONVENCING

Unsolicited advice/clarification and any personal approaches at any stage of evaluations/purchase process are strictly prohibited and may lead to disqualification.

23) PERFORMANCE SECURITY

- Within one week of issuance of the purchase order for C&F equipment only, the successful bidders shall furnish to National Centre of Excellence in Geology, University of Peshawar, the performance security bond as per Annexure-I, equivalent to 10% of the bid price in the form of a bank guarantee, before opening of LC.
- The performance security shall be payable to the National Centre of Excellence in Geology, University of Peshawar, as compensation for any loss resulting from the supplier's failure to complete its obligation.
- The performance security will be discharged by the National Centre of Excellence in Geology, University of Peshawar, and returned to the supplier after completion of the supplier's performance obligations under the contract.
- The security will be retained for one National Centre of Excellence in Geology, University of Peshawar, year starting from the date of successful installation and operation of the machinery / equipment.

24) CALIBRATION OF EQUIPMENT

- It will be the responsibility of supplier to arrange standards / consumables required for the calibration of the equipment at the time of installation.
- No TA/DA claim will be entertained by NCEG, in case of after sale services, whenever it requires within the premises.
- *In case of non-conformity with desired specification, the item shall be replaced by the supplier free of cost.*

25) WARRANTY

- The supplier shall furnish at least one year after sales service / warranty for successful operation of equipment(s) / item(s) from the date of installation.
- In case of Malfunctioning / defect in any equipment / item, the supplier shall replace them free of cost within 30 days; otherwise the supplier will return the entire paid amount to National Centre of Excellence in Geology, University of Peshawar immediately.

Note:

By signing this agreement, you acknowledge that you have read and understood, and agree to be bound by, the terms and conditions as outlined in the agreement and confirming that your company/organization terms and conditions stand eradicated.

Dated: _____

Name: _____

Designation: _____

Company Name: _____

Contact No: _____

Mailing Address: _____

E-Mail: _____

Signature and official Seal: _____

NCEG Official & Signature _____



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ANNEXURE-I

PERFORMANCE BOND

Director
NCE in Geology
University of Peshawar, Peshawar

Dear Sir,

RE: AGREEMENT DATE : _____ BETWEEN YOURSELVES
& M/S _____ No. _____ In consideration of your having concluded
a CONTRACT evidenced by purchase order No. _____ dated _____ with
m/s. _____ (SUPPLIER) for
_____ and in consideration of value received from the SUPPLIER, we agree and
undertake as follows:-

1. To make unconditional payment of _____ or unconditional payments from time to time as called upon totaling the said sum of _____ being 10% (Ten Percent) of the CONTRACT price mentioned in the said Purchase Order/ Agreement upon your written demand(s) without further recourse, question or reference to SUPPLIER the event of Supplier's default in compliance with its obligatory liabilities and responsibilities arising under and in pursuance of the warranties and guarantees committed by it in the said Purchase Order / Agreement.
2. To accept written intimation(s) from you as sufficient evidence of the existence of a default or non-compliance as aforesaid in the part of SUPPLIER and to make payment accordingly within fifteen (15) days of receipt of the written intimations.
3. To keep this guarantee in full force from the date of this guarantee up to two years after the date of installation and successful operation of equipment.
4. No grant of time or other indulgence to or composition or arrangement with SUPPLIER in respect of the performance of its obligations under and in pursuance of the said Agreement / Purchase Order of any Clause thereof, with or without notice to us shall in any manner discharge or otherwise, howsoever, affect this guarantee and out liabilities and commitments hereunder.
5. This guarantee shall also cover obligations of the SUPPLIER so far as liquidated damages is concerned, as provided in Agreement / Purchase Order any recovery on account of liquidated damages shall not reduce the value of 10% (Ten Percent) provided herein.
6. This guarantee shall be binding on us and our successors-in-interest and shall be irrevocable.

Yours faithfully,

Bank Seal



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ANNEXURE-II

BILL OF QUANTITY FOR SECURITY & SURVEILLANCE EQUIPEMENT

Section: A*

Serial Number	Item/Short Description	Unit Price
1	2MP Speed Dome Day/Night PTZ Camera	
2	3MP Outdoor Bullet Camera	
3	PTZ Joystick	
4	Network Video Recorder with Video Management Software (Recoding /Viewing) with SATA HDD-12TB	
5	Computer System with LED	
6	40" LED Display with Mounting Brackets	
7	Network Attached Storage (4TB)	
9	Onsite 3 Days Training for IT/Security Staff	

** Note. The cost must include any installation & configuration charges, if applicable.*

Section: B*

Serial Number	Item/Short Description	Unit Price
1	24(100Mbps) Port POE/POE+ Switch with 2 1-Gbps Fiber Uplinks Layer 2 Manageable	
2	8(100Mbps) Port POE/POE+ Switch with 2 1-Gbps Fiber Uplinks Layer 2 Manageable	
3	24-SFP Port Optical Fiber Switch Layer 3	
4	1-Gbps SFP Module (Single Mode Fiber – 1000meter Support)	
5	CAT6 UTP Cable Laying Services (As per Actual, Per Running Feet) Should include all required accessories.	
6	Outdoor 6-Core Single Mode Optical Fiber Cable (1Gbps) – Per Meter (10Gbps Link Supported)	
7	Lying of Optical Fiber Cable with 2-inch PVC Pipe with all required accessories (Per-Meter)	
8	Optical Fiber Splicing Per/Core	
9	6U Standard Rack with FAN	
10	24 port Patch Panel and Cable Manager with Complete Accessories	
11	Onsite 3 Days Training for IT/Security Staff	

** Note. The cost must include any installation & configuration charges, if applicable.*

Section: C*

Serial Number	Item/Short Description	Unit Price
1	Security Walk Through Gate	
2	Hand Held Metal Detector	

** Note. The cost must include any installation & configuration charges, if applicable.*



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Section: D*

Serial Number	Item/Short Description	Unit Price
1	Security Bar-Wire with Iron Hooks (10 Ft)	
2	Road Blocker with Manual Control Button	

** Note. The cost must include any installation & configuration charges, if applicable.*

Section: E *

Serial Number	Item/Short Description	Unit Price
1	Wireless Communication Kit for Security Staff with 6 Waki-Taki's and base station for coverage of 1Km Radius Indoor/Outdoor (Note Include all components that are the part of the system),It should be a Trunkey Solution	
2	Warranty 1 Years with Support Services	

** Note. The cost must include any installation, configuration & Training charges, if applicable.*

Section: F* Firefighting equipment

Serial Number	Item/Short Description	Unit Price
1	Fire Extinguishers - DCP (Dry Chemical Powder) Type/Co2 (Carbondioxide) Type/Halotron (Clean Agent) Type	
2	Fireproof suits with masks	
3	Fire hoses	
4	Fire Cylinders	
5	Firefighting foam equipment	

** Note. The cost must include any installation & configuration charges, if applicable.*

Section: G Biometric Attendance System*

Serial Number	Item/Short Description	Unit Price
1	Color TFT Screen with GUI (Min. 3") Optical Scanner Internal Backup Battery Stores Min. of 3,000 Templates Min. Transaction Capacity: 1,00,000/- Built-in Serial and Ethernet ports Built-on USB port Integrated Wi-Fi. Export to hosted/non-hosted applications Free SDK Availability for OEM Customers Proprietary software for attendance data management and reporting through PC	



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** Note. The cost must include any installation & configuration charges, if applicable.*

Section H (Network Management System)

Serial Number	Item/Short Description	Unit Price
1	A network management system with following capabilities <ul style="list-style-type: none"> • Web based management interface • Customizable dashboard • Can work as a traditional server or virtual appliance (SaaS) • Installable on Windows and Linux flavors • Unified management of entire network comprising of Alcatel-Lucent, D-Link and Aruba network equipment • Integration with 3rd party IPS/IDS solution * Prices must include any installation, configuration and training charges.	

Section I (DC Environment Monitoring Watchdog)

Serial Number	Item/Short Description	Unit Price
1	A DC environment monitoring watch dog with following features <ul style="list-style-type: none"> • Accessible through a web browser • 5 built-in Sensors (Temperature, Humidity, Dew Point, Air Flow, Sound Level) • 3 analog inputs for 0-5 VDC sensors • 5 digital sensor ports for ITW remote sensors • LCD display cycles through sensor readings • Multi level alarms with escalation • Alarm notifications sent by email and SNMP • Audible horn triggered by alarm 	



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TECHNICAL COMPLIANCE SHEET

(Section: A)

2MP Speed Dome Day/Night PTZ Camera:

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Speed Dome	
Maximum Resolution 2MP or Higher	
Image Sensor Progressive Scan CMOS	
Low Light Sensitivity Extreme	
Minimum Illumination Color: 0.1 lux, B/W: 0.05 lux at F1.6 or Better	
Mechanical IR Cut Filter	
IR LED's for 70Meter Range at 0 lux (Built-IN / External)	
Lens :Zoom, f4.3-129mm / F1.6-5.0, DC iris, Auto focus or Higher	
Zoom Ratio :30x optical, 16x digital or Higher	
Pan: 0°-360° endless; Tilt: -20°-200°	
Horizontal Viewing Angle 66.4°-2.61°	
Compression H.264 (Baseline/ Main/ High profile), MJPEG	
Dual streams Support	
Wide Dynamic Range Extreme (145 dB)	
Digital Noise Reduction 2D+3D DNR	
Digital Image Stabilizer	
Defogging Support	
S/N Ratio 56 dB	
Audio 2-way Support	
Network Protocol & Service :TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour	
RJ-45 100Mbps Network Connectivity	
MicroSDHC/MicroSDXC memory card slot Support	
AC 24V & High PoE	
Weatherproof (IP66) or Higher	
Vandal Proof casing (IK10)	
Bundled dome cover (IK09)	
Pendant, Wall, Corner, Pole	
ONVIF Compliant	
Heater	



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Fan	
Operating Temperature -30°C ~ 50°C (-40°F ~ 122°F)	
Approvals CE, FCC, NEMA 4X	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Warranty 3 Years	

3MP OUTDOOR BULLET LENS CAMERA:

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
3MP Resolution or Higher	
Image Sensor Progressive Scan CMOS	
Day / Night	
Low Light Sensitivity	
Minimum Illumination Color: 0.1 lux, B/W: 0 lux (IR LED on) at F1.8	
Mechanical IR Cut Filter	
IR LED	
IR Working Distance (30m)	
Lens : Fixed focal, f4.2mm / F1.8, Fixed iris, Fixed focus or Higher	
Horizontal Viewing Angle 50° or Higher	
Compression H.264 (Baseline/ Main/ High profile), MJPEG	
Wide Dynamic Range	
Digital Noise Reduction	
Network Protocol & Service Support : TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP	
Network Connection 100Mbps	
Local Storage Support (Memory Card Support)	
Power Source (Power Over Ethernet Support)	
Environmental Casing Weatherproof (IP68)	
Vandal Proof Support Metal Casing (IK10)	
Mount Type Wall, Ceiling, Corner, Pole	
Basic Software Based Analytics (e.g Motion Detection)	
ONVIF Compliant	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Warranty 3 Years	



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NETWORK VIDEO RECORDER WITH SATA HDD-12TB

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Intel Processor with 8GB RAM or Higher	
Pre-Installation Video Management Recording and Viewing Software (All Licences Included)	
12 TB Storage Included	
Support 100 Number of Cameras	
64 Licences Pre-Installed for Cameras	
Compression H.264, MPEG-4, MJPEG	
Network Connection 2, Gigabit Ethernet ports (1000 Base-T), RJ-45 connector	
Rack Mount	
Scheduled Recording	
Event Recording	
Manual Recording	
Speed Up	
Dual Stream Management	
Recording Throughput bitrate 300 Mbps or Higher	
HDD Interface 7 SATA Disks or Higher (Each Interface Must Support 4TB HDD)	
External Storage Interface :eSATA, iSCSI, USB	
RAID Level Support 0, 1, 5, 10	
Display Layout Mode :Local: 1, 4, 6, 8, 9, 10, 12, 16 or Higher ,Remote: 1, 4, 9, 16, 25, 36, 49, 64	
Digital Zoom	
Display event status upon alarm or upon connection loss or recovery between server and client or when the allocated disk space is full	
Instant Playback in live view window	
E-Map View	
PTZ Control	
Continuous forward and backward playback with speeds 1x/2x/4x/8x or frame-by-frame; pause; stop	
Synchronized Playback 9 channels (local), 64 channels (remote)	
Local Access HDMI & VGA port for monitor, USB joystick, keyboard & mouse	
Remote Access Workstation, Web Client (IE), Mobile Client (iOS & Android)	
Record video; Pop-up window; Hotspot window; Beep; Digital output; Snapshot to FTP; Execute system command; E-mail with snapshots; Go to PTZ preset point	
User Control of 30+ number of users, Active Directory, Customizable permissions for user groups	
Video Export Vai eSATA, iSCSI, USB	



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ONVIF Compliant	
Approvals CE, FCC	
Power Source AC 110-240V	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Warranty 3 Years	

PTZ JOYSTICK:

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
PTZ Camera Controlling Functionality	
Preset Configurations	
Zoom In / Out Functionality	
NVR (Network Video Recorder) 100% Compatibility	
Warranty 1 Years	

LED TV MONITOR 40":

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
RESOLUTION FULL HD 1080P	
INTERFACE HDMI	
WALL MOUNT BRACKET YES	
HDMI CABLE 5 METER MIN.	
POWER SOURCE 220 VAC, 50 Hz	
Warranty 1 Years	
Brand Samsung/Orient/Sony or Equivalent	

COMPUTER SYSTEM WITH LED:

MODULE	DESCRIPTION	COMPLIANCE (YES / NO)
Casing	Mini Tower	
Processor*	4th Gen Intel® Core™ i5 4590 Processor (Quad Core, Up to 3.7Ghz) Or higher	
Memory	4GB 1600MHz DDR3 1 DIMM	
Keyboard	Standard USB 2.0 Keyboard (English)	
Hard Drive	500GB SATA 7200 RPM 6.0gb/s	
Monitor	18.5" Widescreen LED or Higher	
Mouse	Standard Optical Mouse	
Optical Drive	DVD+/-RW SATA (Super)	
Network	Gigabit Network Builtin	
Power Cords	Yes	
Warranty	One Years Parts Warranty including Hard Disk	



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TECHNICAL COMPLIANCE SHEET

(Section: B)

8(100MBPS) PORT POE/POE+ SWITCH WITH 2 1-GBPS FIBER UPLINKS LAYER 2 MANAGEABLE

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
8 PoE/PoE+ 10/100Base-T ports	
2 x 1G SFP uplink ports or Higher	
802.3af/802.3at compliant	
Layer 2 Features Support (E.g. VLAN...)	
Minimum 120W power Budget	
Fully Managed via CLI and GUI	
Static and Dynamic routing including RIP v1 and v2.	
IPV6 ready	
Port-based mirroring for troubleshooting and lawful interception.	
Auto QoS for switch management traffic	
Virtual Router Redundancy Protocol (VRRP) to provide highly available routed environments	
Priority queues: Eight hardware-based queues per port for flexible QoS management.	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Minimum 5 year hardware and software warranty included with the product.	

24 (100Mbps) Port POE/POE+ Switch with 2 1-Gbps Fiber Uplinks Layer 2 Manageable

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
24 PoE/PoE+ 10/100Base-T ports	
2 x 1G SFP uplink ports or Higher	
802.3af/802.3at compliant	
Layer 2 Features Support (E.g. VLAN...)	
Minimum 350W power Budget	
Fully Managed via CLI and GUI	



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Static and Dynamic routing including RIP v1 and v2.	
IPV6 ready	
Port-based mirroring for troubleshooting and lawful interception.	
Auto QoS for switch management traffic	
Virtual Router Redundancy Protocol (VRRP) to provide highly available routed environments	
Priority queues: Eight hardware-based queues per port for flexible QoS management.	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Minimum 5 year hardware and software warranty included with the product.	

22-SFP Port Optical Fiber Switch Layer 3

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Fully Managed Layer 3 switch	
Gigabit Ethernet L3 with minimum 22 1000Base-X SFP Ports	
IP4/IP6 Support	
Support Upgrade to 10Gbps of all SFP ports	
Device on-boarding and automated IEEE 802.1x provisioning	
Integrated Policy with dynamic User Network Profiles	
Support of Layer 2 & layer 3 Features	
Provider Bridges (also known as Q-in-Q or VLAN stacking)	
Fabric virtualization services IEEE 802.1aq Shortest Path Bridging (SPB-M)	
sFlow v5 and Remote Monitoring (RMON)	
SDN ready Supporting OpenFlow and OpenStack or equivalent.	
Country of Origin (UK/USA/European/Taiwan/Korea)	
Minimum 5 year hardware and software warranty included with the product.	



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TECHNICAL COMPLIANCE SHEET
(Section: C)

Security Walk Through Gate*

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Weather Proof, Dust Proof	
Minimum 20 Zones	
Double display (Front & Back).	
High sensitivity, Capable to detect from guns, 9mm Bullets to ½ cutter blade	
Green and red metering signal, indicate the quantity of the metal	
Standard Alarms on LCD due medium size metal	
Intermittent / Different Alarm on LCD due medium size metal	
Approved by :Immediate selection of international Security standards. NILECJ, 3Gun TST,3GUN TSE, GA, GD, NIIJ-LO.	
Accurate detection of magnetic, non -magnetic and mixed alloy – metal weapons	
High detection speed 15m/Sec (70 Persons per minute).	
High precision both direction counter (in & Out Separate) with automatic rescreening compensation.	
RS-232 serial connection to PC or computer network.	
Access protected by mechanical lock and two alphanumeric passwords	
Harmless to wearers of pacemakers, defibrillators or other vital support systems, pregnant women and	
Magnetic storage media (floppy disk, audio cassettes, video cassettes and similar).	
Need for initial or periodic calibration.	
Country of Origin (UK/USA/European)	
Warranty 1 Years	



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Hand Held Metal Detector

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Power supply 9 Volt Alkaline Battery or Better	
Three- position power switch.	
Three- position switch with selection of Low sensitivity, medium sensitivity and high sensitivity	
High intensity pulsed acoustic alarm (75dB)	
Red Indicator Lamps for Power on and Alarms.	
Visible indicator of low battery	
Battery life Minimum 150 hours	
Operating Temperature -15C +60C	
Satisfies EC regulations and international standards relating to electrical safety and electromagnetic compatibility (EMC).	
Country of Origin (UK/USA/European)	
Warranty 1 Years	



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TECHNICAL COMPLIANCE SHEET

(Section: D)

Security Bar-Wire with Iron Hooks (10 Ft-Lengths)

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
High tensile strength wire (Minimum 14 Gauge)	
Minimum number of turns 40 with diameter of 2ft in 10Ft spacing.	
One "Y"-Shaped iron bar should be placed after every five feet.	
Complete Installation with all accessories and material needed including civil works.	

*For reference see below picture.



Road Blocker with Manual Control Button

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Length Approx. 18 ~ 22 Ft (Depending on Site)	
Mex Blocking Wedge	
Wedge Holding Base	
Ms Under Ground Casing	
Hydraulic Power unit (HPU)	
Anti-Slip Ms Plate	
Front Conver Skirt	
Yellow / Red Diagonal Strips	
Electrical Control unit Section	
Hpu/ Ecu mounting platform	
Status Signal	
Cabling Exit Plug	
All Civil Works Material Will be included	
Warranty 1 Years	



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TECHNICAL COMPLIANCE SHEET

Section: F*Firefighting equipment

REQUIRED SPECIFICATIONS	COMPLIANCE (YES / NO)
Fire Extinguishers - DCP (Dry Chemical Powder) Type/Co2 (Carbondioxide) Type/Halotron (Clean Agent) Type *Mention type of the quoted extinguisher	
Fireproof suits with masks	
Fire hoses	
Fire Cylinders	
Firefighting foam equipment	

TECHNICAL COMPLIANCE SHEET

Section: G Biometric Attendance System*

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Color TFT Screen with GUI (Min. 3")	
Optical Scanner	
Internal Backup Battery	
Stores Min. of 3,000 Templates	
Min. Transaction Capacity: 1,00,000/-	
Built-in Serial and Ethernet ports	
Built-on USB port	
Integrated Wi-Fi.	
Export to hosted/non-hosted applications	
Free SDK Availability for OEM Customers	
Proprietary software for attendance data management and reporting through PC	

TECHNICAL COMPLIANCE SHEET

Section: H Network Management System*

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
Single, consolidated interface for network deployment, troubleshooting, performance analysis, configuration operations	
Unified management of network services, resources, and users for wired and wireless networks	
Northbound interface RESTful APIs for application interoperability	
HTML5 web-based client, allowing access through any browser, including mobile browsers	
Available as Stand Alone Server application and virtual software appliance	
Real-time monitoring and analysis of critical network performance indicators through visual widgets	
Supports discovery for Alcatel-Lucent Enterprise and third-party devices	
Visual topology for logical and physical infrastructure, with actual neighbor linkage info (IP subnet, Layer 2 , LLDP adjacency protocols) and live device	



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status	
Dynamic, custom, logical map based on user-defined filters (IP subnet, location, model, user-provided descriptive info)	
Monitors and analyzes alerts, notifications and network performance from Alcatel-Lucent and third-party devices in real time	
Allows administrators to quickly search and pinpoint device location and associated devices, based on multiple criteria and live or historical searches	
Discovers third-party devices and indicates the nearest Alcatel-Lucent Enterprise operating system device to which the third-party device can be switched, showing the link on a topology map	
Manages complete device configuration lifecycle	
Automation tools to create infrastructure-wide software image update for baseline version management	
Unified user interface for wired and wireless Role Profiles for user based access	
Cohesive Authentication configuration and end-user profile definition for appropriate network access rights and dynamic business Policies	
Configures and deploys policies network-wide for bandwidth management and network access credentials through a task centric Workflow	
Integrates with ClearPass for unified authentication, with consistent checking for profile definition across all solution components • Authentication configuration and end-user profile definition for appropriate network access rights and dynamic business policies	
Provides threat mitigation through a secure perimeter against intrusion and malware attacks	
Provides mitigation and remediation through various actions (quarantine VLAN, port shut-down, blocking MAC addresses)	
Single pane-of-glass for end-to-end physical and virtual networks infrastructure operations	
Real time tracking between VM and its network location	

TECHNICAL COMPLIANCE SHEET

Section: I DC Environment Monitoring Watchdog

REQUIRED SPECIFICATION	COMPLIANCE (YES / NO)
On-board Sensors	
Temperature: -22 to 185 °F (-30 to 85 °C), +/- 0.5 °C	
Humidity: 0 to 100%, +/- 5%	
Air Flow: 0 to 99 (relative value)	
Light: Ambient light level	
Sound: Average sound level	
Remote Sensor Support	
Digital Sensor: 5 ports (expandable to 16 with splitters)	
Analog Sensor: 3 inputs (contact closure, 0-5 VDC)	
Physical: 19" Rack-mount, 1-U space (17" wide with two 1" brackets, total of 19" wide, 1.5" high and 1 5/8" deep).	



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Power: 6VDC (supplied wall transformer)	
Ethernet: 10/100 Mbps, RJ-45 receptacle	
Real Time Clock (RTC) with power backup	
Reset push-button: restores factory defaults	
LCD Display with scrolling text	
Built-in Audible Alarm	
HTTP / HTTPS: web access	
Web interface: 4 styles to choose from	
Access-control: 3 access levels (view, control, admin)	
Alarms: high/low values, multiple thresholds per sensor	
ESMTP / POP3: email alerts, ESMTP / POP3 auth	
SNMP (v1, v2c, v3): Gets, Trap and Clear alerts, MIB	
XML: meta-tagged sensor values, alarms, config	
Syslog: send debug messages to Syslog server	
Warranty: 1 Year (extended warranties available)	



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ANNEXURE-III

BILL OF QUANTITY FOR VIDEO CONFERENCE EQUIPEMENT

Section: A

Serial #	Item	Product Name/Model	Part Number	Unit Price
1	HD Video Conferencing (VC) System with camera and CODEC			
2	PTZ Camera with Mount (for presenter)			
3	Digital HD Video Camera Recorder with Stand			
4	DVD Recorder (Capable for recording/playback HD and non-HD)			
5	Multimedia Projector HD minimum 4000 lumens			
6	Projection Screens with wall mount			
7	LED TV Screen 46-50" Phillips/ Sony/ Panasonic/ Samsung/ Equivalent (Full HD)			
8	Moveable wall mount Kit for LED TV Screen 46-50			
9	Gooseneck Microphones			
10	Instructor's Microphone/ collar mics			
11	Wireless Microphones			
12	Digital Audio mixer 20 ports, echo cancellation and far end feedback reduction device			
13	Power Amplifier System			
14	Ceiling mounted Speakers			
15	S-video Distributor			
16	Interactive Pen Display			
17	Equipment Rack			
18	PTZ Camera Controller with LCD Display			
Total				



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TECHNICAL COMPLIANCE SHEET
VIDEO CONFERENCE EQUIPEMENT

Required Equipment	Technical Specs	Compliance (Yes/No)	Comments
<p>1. HD Video Conferencing (VC) System with camera and CODEC</p> <p>Origin: NorthAmerica/China/Europe/Japan</p>	<p>1. Interoperability Standard for IP (h.323,SIP) and ISDN</p> <ul style="list-style-type: none"> • H.320 • H.323 • SIP <p>2. Video standards</p> <ul style="list-style-type: none"> • H.261 • H.263 + • H.263 ++ • H.264 <p>3. Frame Rates (Point to point)</p> <ul style="list-style-type: none"> • Minimum 30 frames per second • Minimum 60 fields per second <p>4. Video Inputs:</p> <ul style="list-style-type: none"> • Integrated Main camera • Additional auxiliary camera • Document Camera on S-video/CVBS • Support DVDR recording on S-video/CVBS • Support plug-and-play DVI input • PC/Laptop (SXGA) connection provision for PowerPoint presentations etc <p>5. Video output:</p> <ul style="list-style-type: none"> • DVDR for recording <p>For Primary Display:</p> <ul style="list-style-type: none"> • LCD/LED • Multimedia Projector <p>For Secondary Display:</p> <ul style="list-style-type: none"> • LCD/LED • Multimedia Projector <ul style="list-style-type: none"> • Video Output : Standard for VC System / Camera Controller • Support DVI-HDMI to HD displays • Support Far Content Display <p>6. Video format</p> <ul style="list-style-type: none"> • PAL, NTSC • Graphics : XGA, SVGA, VGA, SXGA <p>Video Bandwidth</p> <ul style="list-style-type: none"> • H.323 - 2Mbps (minimum) • H.320 - 512Kbps (minimum) 		



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	<ul style="list-style-type: none"> • SIP - 2Mbps (minimum) <p>7. Integrated Main camera</p> <ul style="list-style-type: none"> • Ultra quite , Ultra – fast action pan /tilt / zoom • 60° Field view or better • Tilt Range : +/- 15° (UP/ Down) or better • Pan Rage : +/- 90° (left /right) or better • Total Field view : 240° or better • 14 x zoom or better • Auto focus • Automatic white balance <ul style="list-style-type: none"> • Camera Preset local and far end • Standard –based far end camera control (FECC) • Remotely operated snap shot <p>8. Video Resolution</p> <ul style="list-style-type: none"> • Full HD 1080p Resolution • Interlaced video (60 /50 field full – screen video for NTSC / PAL) • NTSC: 4 SIF (704 x 480) • NTSC: SIF (352 x 240) • PAL: 4 CIF (704 x 576) • PAL: CIF (352 x 288) • Advanced Screen Layouts to display multiple locations • Picture-in-picture <p>9. Dual Video Support/Resolution</p> <ul style="list-style-type: none"> • Dual Video Support to transmit PC/VCR/External camera and presenter • XGA (1024 x 768) ,SVGA (800 x 480) for graphic display • People Video support for 4 CIF and SIF on second VGA display <p>10. Audio protocols</p> <ul style="list-style-type: none"> • G.711, G.722.1, G.722, G.728 on IP or ISDN or Mixed calls • G.711, G.728 on IP/ ISDN <p>11. Audio Feature</p> <ul style="list-style-type: none"> • Full duplex audio • Stereo • Mono • CD Quality • Instant Adaptation Echo Cancellation • Automatic Gain Control (AGC) • Voice Activated Camera Tracking • Automatic Noise Suppression (ANS) • Audio Mixer Mic, VCR, Telephone , Line in • Ability to connect Audio calls <p>12. Videoconference system should be able to</p>		
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	<p>connect Audio conferencing system</p> <ul style="list-style-type: none"> • The system should have integration with wideband conference <p>13. Audio input</p> <ul style="list-style-type: none"> • 1 x Microphone Support standard XLR inputs • 2 x RCA inputs for stereo or mono input DVDR • 2 x RCA for mixer • Support for Audio Conferencing minimum 3- 5 mics <p>14. Audio output</p> <ul style="list-style-type: none"> • Primary Audio output • Secondary Audio output • DVDR (mono & stereo) <p>15. Digital Tabletop Microphone Array</p> <ul style="list-style-type: none"> • 360° degree voice pick up ; 4.8 dB less reverberant than omni microphone • Three Cardioid elements per microphone <ul style="list-style-type: none"> • Integrated mute button (local and far end) <p>16. Network interface support</p> <ul style="list-style-type: none"> • Ethernet port : (10/100Mbps) • 4 x ISDN BRI • PSTN <p>17. Network Features</p> <ul style="list-style-type: none"> • Automatic IP/ISDN calling • Down speeding over IP and ISDN • Auto SPID detection and configuration • SNMP for enterprise management • Audio and video Error Concealment over IP • ,ISDN and mixed call • Maximum call length digital timer • IP Address Conflict Warning <p>18. System Management / Directory Services</p> <ul style="list-style-type: none"> • Software Up-gradation via ISDN, PC, LAN • Downloading CDR • Directory Services <p>19. H.323 Quality of Service Features</p> <ul style="list-style-type: none"> • IP DiffServ • IP Precedence • TOS • RSVP • IP Packet Loss Recovery and Jitter Control • Support network diagnostics functions to test the following and produce diagnostics reports: n Connectivity between two nodes <ul style="list-style-type: none"> o QoS 		
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	<ul style="list-style-type: none"> ○ NAT ○ Available bandwidth <ul style="list-style-type: none"> ○ H.323 ALG ○ SIP ALG <p>20. Security</p> <ul style="list-style-type: none"> • Secure password authentication • Administration password • Management via HTTP, Telnet • SNMP security alerts <p>21. Encryption on IP/ISDN/Serial Ports</p> <ul style="list-style-type: none"> • RFP for Video Conferencing Equipment & Services • Page 29 of 42 • Software encryption on ISDN ,IP and serial / V.35 <p>22. User Interface</p> <ul style="list-style-type: none"> • User friendly graphical interface <p>23. Collaboration Solution</p> <ul style="list-style-type: none"> • Direct XGA port for data sharing, online presentations, and PC • desktop display in an ongoing video conference • Net-meeting Support • Web streaming supporting various media players and the latest • compression standards (optional) <p>24. Firewall Support</p> <ul style="list-style-type: none"> • System should able to operate behind Firewall <p>25. Electrical</p> <ul style="list-style-type: none"> • Auto sensing power supply • Operating voltage/power 110-240 VAC • 50-60 Hz <p>26. Environmental specification</p> <ul style="list-style-type: none"> • Operating Temperature : 0 ° to 40 ° C • Operating Humidity : 10 to 85 % RH non - condensing <p>27. Operations and Maintenance</p> <ul style="list-style-type: none"> • Easy interactive interface • SNMP V2 MIB • Telnet • FTP <p>28. Technology Evolution Features</p> <ul style="list-style-type: none"> • Software up-gradable to any new features/services <p>29. Warranty</p> <ul style="list-style-type: none"> • Min one Year Warranty from the date of System Installation for parts and after sales service <p>30. The system must be supported for medium room sizes with 50-100 people.</p> <p>31. Built in MCU for at least 1 plus 3 sites</p> <p>32. Provision of licensed P+C software ,</p> <p>33. Interoperability Standard</p> <p>for IP, ISDN with MGC100, & Codain MCU,</p>		
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	<p>TMS, TCS</p> <p>34. Video Bandwidth</p> <ul style="list-style-type: none"> • H.323 - 4Mbps (minimum) • H.320 -2Mbps (minimum) • SIP - 4Mbps (minimum) <p>35. Origin</p> <ul style="list-style-type: none"> • North America/China/Europe/Japan 		
<p>2. PTZ Camera with Mount (for presenter) Panasonic/Samsung/Sony/Equivalent</p>	<ol style="list-style-type: none"> 1) A high resolution CCD Camera with image sensor 1/4" CCD, that combines a high - speed 2) quiet pan/tilt with angle view 3) 2 Minimum 40x zoom (10 x optical and 4x digital) 4) Auto and manual focus 5) 4 VISCA camera control with at least 10 preset positions 6) IR remote control 7) Thin profile and wall - mount Bracket 8) EZ Camera Cabling System. 9) Effective Pixels : 768(H) X 494(V) 10) Vertical Signal : PAL/NTSC 11) Horizontal Field of view: 6.6 to 65 Degrees 12) Minimum Illumination : 3.5 lux (F1.8) 13) Auto exposure: Auto/Manual / Priority AE: Exposure 14) Compensation; Back Light Compensation 15) Pan / Tilt : Horizontal +/- 100 Degree (Max speed 300 Degrees/s); Vertical +/- 25 Degree (max speed 125Degree/s) 16) Video Output : Standard for VC System / Camera Controller 17) Operating Temperature: 32 to 104 F (0 to 40C) 		
<p>3. Digital HD Video Camera Recorder with Stand</p>	<ol style="list-style-type: none"> 1) Operation Modes: Digital Still Camera, Digital Video Camera, PC Camera, MP3 Player, Mass Storage Device, Video Player, Video Recorder. 2) 3- 4 inch LCD display 3) 8 to 10 megapixel still image; 30X Optical, 55X Extended Zoom 4) Touch-screen Clear Photo LCD display 5) 1920x1080 Full HD Recording 6) Up to 3 hours of recording with 160 GB embedded Flash Memory 7) Optical Sensor Resolution: 2.1 MP 8) Optical Sensor Technology: CMOS 9) Shutter Type: Electronic Rolling Shutter 10) Image Resolution: 3648*2736, 2592*1944, 1600*1200 11) White Balance: Auto / Daylight / Tungsten / Fluorescence 12) Exposure: Auto 13) Self-Timer: 10 second delay 		



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	<p>14) Flash: Auto / Off 15) Image Play: Single Image / Thumbnails / Slideshow 16) File Format: Picture: JPEG; Movie: MPEG- 4(ASF); Voice: WAV 17) PC Interface: Mini USB 2. 0 Port 18) TV In: YES 19) TV Out: YES (TV: NTSC/PAL; Audio: Stereo</p>		
<p>4. DVD Recorder Sony/ Philips/Equivalent</p>	<p>Progressive Scan Playable Disk Types: DVD Video · DVD-R · DVD-RW · CD (Audio) · CD-R · CD-RW Recordable Media: HDD · DVD-R · DVD+R · DVD-RW · DVD+RW · VR Supported Recording Speeds: P · LP · EP · SLP · HSP · HQ HDD Size: 500 GB HDD Recording Time: 21 Hrs. Minimum / 204 Hrs. Maximum DVD Recording Time: 1 Hrs. Minim / 6 Hrs. Maximum Dubbing: DVD to HDD, HDD to DVD, 24x DVD Recording Speed Recording Formats: MPEG1 · VBR Supported Programmable Timer: EPG, VCR Plus+, 30 Events I/O: Inputs: Composite x 2 · S-Video x 2 · Component x 1 · Analog Audio x 2 · RF (TV) x 1 Outputs: Composite x 2, S-Video x 2, Component x 1, Analog Audio x 2, Digital Audio Coaxial x 1, Digital Audio Optical x 1, RF x 1 Other I/O: Composite Input · S-Video Input · Audio Input · DV Input.</p>		
<p>5. Multimedia Projector HD minimum 4000 lumens Origin: North America/China/Europe/Japan</p>	<p>Full HD minimum 4000 lumens Optical Display Technology: 0.8" LCD w/ MLA Light Output(Lumens): 5000 normal / Eco = approx. 80% of normal mode Resolution: UXGA 1600 x 1200 Contrast Ratio (up to): 600:1 Throw Ratio : 1.5 to 2 (standard lens) Projection Distance: 2.5 to 68.5 ft. / 0.74 to 20.9m Projector Angle : 10.3 to 10.8° tele / 13.7 to 14.5° wide Zoom : 1 to 1.33 Focus : Manual Keystone Correction : +/- 40° horizontal, +/- 30° vertical SD/HD Video Signal Compatibility: 480p, 576i, 576p, 720p, 1080i Supported Video Standards: NTSC 4.43, PAL, PAL-60, PAL-M, PAL-N, SECAM</p>		



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	<p>PC Signal Compatibility: SVGA, XGA, WXGA, WXGA+, SXGA, SXGA+, UXGA Input/Output Terminals: VGA 15-pin D-sub, DVI-D w/ HDCP, S-Video. A/V Optional Lenses: NP01FL, NP02ZL, NP03ZL, NP04ZL, NP05ZL</p>		
<p>6. Projection Screens with wall mount Aurora/Equivalent</p>	<ul style="list-style-type: none"> • Size Min 8' x 8' • Motorized with remote control feature and Ceiling Mount • Style: Wall Mounted • Material: Matt White • Format: 16:9 • case color: white • Screen gain: 1.1 • Viewing angle: 50 		
<p>7. LED TV Screen 46-50" Phillips/ Sony/ Panasonic/ Samsung/ Equivalent (Full HD)</p>	<ul style="list-style-type: none"> • Widescreen LED Display • Full HD 1080p Resolution • 16:9 Image Aspect Ratio • True Motion 120Hz Refresh Rate • Inputs/Outputs: 2 x USB • Maximum Resolution: 1920 x 1080 • Brightness: 450 cd/m² • Refresh Rate: 120 Hz • Viewing Angle (Vertical x Horizontal) Degrees: 178 x 178 • HDMI Inputs port • PC Input port • Mounting, Table Stand Included • Minimum 1 year Warranty 		
<p>8. Moveable wall mount Kit for LED TV Screen 46-50</p>	<p>LED--LCD PLASMA TV TILT BRACKET WALL MOUNT 46 to 55"</p> <ul style="list-style-type: none"> • Fits most flat-panel plasma and LED from 46"-60" and up to 120 lbs. • tilt range: +8.5° to -10° • ProSet™ lets you make micro-adjustments in height and level after mounting 		
<p>9. Microphones (Gooseneck Mics) TOA/Universal /Equivalent</p>	<ol style="list-style-type: none"> 1) Gooseneck podium microphones 2) Consistent on-axis response 3) Structured ultra-thin gooseneck 4) Various mounting options, flexibility of cable to allow use by 6-8 participants 5) Push to talk 6) Element: Back electret condenser 7) Polar pattern: Super- Hyper Cardioid, preferably covering 6-8 participants 8) Polar Pattern: Selectable Omni (optional). 9) Low Impedence balanced: 200 ohms 10) Frequency response (-8db): 75-15000 Hz 11 Power level (0db- 1m W/Pascal) at 1,000 Hz: (-44db) 11) Open circuit voltage (at 1,000 Hz): 6.6mV/pascal 12) Equivalent noise (0db=20 microphones): 13) <28db SPC 		



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	14) SPC (1% reduction, 1,000 Hz): 130db 15) Minimum voltage/current requirement 16) Special: Transform less output device 17) Case material: Steel 18) Finish: Nonreflecting black 19) Included accessories: Windscreen 2 piece Shock mount CPSM-kit 20) Appropriate connector type for interface with mixer/VC System/Echo Canceller		
10. Instructor's Microphone/ collar mics TOA/Universal /Equivalent	1) Consistent on-axis response 2) Structured ultra-thin design 3) Preferably push to talk 4) Causes no interference to the Video Conferencing System, especially the audio sections 5) Supports interface with mixer/VC system with perfect matching 6) Polar pattern: Standard for collar mics 7) Low output Impedence 8) Works with Echo Canceller		
11. Wireless Microphones TOA/Universal /Equivalent	1) Consistent on-axis response 2) Structured ultra-thin design 3) Preferably push to talk 4) Causes no interference to the Video Conferencing System, especially the audio sections 5) Supports interface with mixer/VC system with perfect matching 6) Polar pattern: Super- Hyper Cardioid 7) Low output Impedence 8) Works with Echo Canceller		
12. Digital Audio mixer 20 ports, echo cancellation and far end feedback reduction device TOA/Universal /Equivalent	1. Frequency Response <ul style="list-style-type: none"> • 0-3db • Micro 100-17000 Hz • Aux:40-21000 Hz 2. Front / Rear Panel Controls <ul style="list-style-type: none"> • 20 microphones level control • 1 master gain control • 1 Fader and Headset volume • 1 bass and treble control each • indication lamp • power button switch • AC in • Low/High out put • Record Jack • Microphones input jack 3. Power Supply Requirements <ul style="list-style-type: none"> • 110-240 VAC, 50-60Hz • Operate-able maximum temperature up to 36oC. 4. Rack Mounting		



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<p>13. Power Amplifier System TOA/Universal /Equivalent</p>	<p>Speaker Rated Output: 120 W to 150 W Input:</p> <ul style="list-style-type: none"> • 2 program inputs (parallel), 0 dB*, 20 kΩ, balanced • 2 priority inputs (parallel), 0 dB*, 20 kΩ, balanced <p>Impedance: 83 Ω (100 V) S/N Ratio: 80 dB or more Total Harmonic Distortion: 1% or less (at rated output f = 1 kHz) Frequency Response: 80 - 16,000 Hz, ±3 dB (at 1/3 rated output)</p>		
<p>14. Ceiling mounted Speakers TOA/Universal /Equivalent</p>	<ul style="list-style-type: none"> • High-performance 40-Watt PA loudspeaker • Powerful 15" Woofers • Ultra-wide 50 Hz – 18 kHz frequency range (-10 dB); impedance 4 Ohms • Overload-protection circuitry ensures optimal HF driver protection • Parallel input connectors allow linking of additional loudspeakers • Operate-able maximum up to 36C 		
<p>15. S-video Distributor Deny/D-Link/Equivalent</p>	<p>2 x 8 ports for distribution of audio and video from main VC system (CODEC) to audio system multimedia, TV screen, instructor camera etc.</p>		
<p>16. Interactive Pen Display Panasonic/Acer/Equivalent</p>	<p>Screen Size: Active-matrix LCD display (17"-21") Screen Type: Electromagnetic resonance technology Tilt Stand: Adjust the console's tilt angle from a minimum position of 18° from vertical to a maximum position of 73° from vertical Mounting: Standard VESA 75 mm rear mounting plate Communication Interface: USB 2.0 (high speed) Resolution: XGA 1024 × 768 pixels or above Pen: Battery-free, tethered pen with convenient storage location for easy access Input/Output Interface: Video IN HD15 (F) Video OUT HD15 (F) USB 2.0 (×2) integrated hub to connect a mouse keyboard or memory storage device. Security: Advance security slot</p>		
<p>17. Equipment Rack</p>	<p>High standard equipment rack as per dimension of the equipment to be provided by the firm with moveable trays, can handle LED, CODEC with Integrated Audio System, Data Electric Cabling etc built in power sockets, lighting and fans..</p>		
	<ul style="list-style-type: none"> • PTZ Camera Controller with LCD Display • Screen Display 16 x 2 Characters 3.5" 		



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18.PTZ Camera Controller with LCD Display	LCD color picture <ul style="list-style-type: none">• Control Object High Speed Ball• PTZ decode• High Speed Ball• General Ball• 16 Picture Processor• Protocol Pelco-D, Pelco-P, Alec, Samsung• Vido-B01, Neon, HTSCAM, HD600, TOTA• Baud Rate 1200, 2400, 4800, 9600 and 19200 bps• Out Channel 2 Channels• Communication Distance Max : 2400m		
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ANNEXURE-IV

Lab Modifications/renovation

A. Partitioning of Labs

- a. Aluminum-Glass Partitioning per square ft. rate is required with 1.66 mm thick aluminum and 5mm thick glass. Rate must include all installation/labour charges. Estimated running sqft could be about 1400-1500ft.
- b. False ceiling per square ft rate is required (estimated total area could be about 700-800 sqft). Cast must include all installation/labour charges.
- c. Cable ladder and cable tray (inside IT Centre). Per sqft rate is required. Expected length of the tray could go for about 50 running feet. (Design of cable tray attached)

B. Shifting of labs

The Centre is in the process of shifting of laboratories from old building to the newly constructed building. These labs contain highly sophisticated instruments such as Electron Microprobe (Jeol, Japan) (X-ray Diffractometer (Rigaku, Japan) and X-ray Fluorescence (PANanalytical, UK) which need to be shifted from old to new building in working condition. The Bidder Firm will have to provide the Company profile with authentic supporting documents indicating that the firm has the expertise available and also has the capability of dismantling and reinstalling the sophisticated research instruments in working conditions. Each interested firm is requested to visit the sites and check the possibilities of shifting the equipments during office hours before submitting the bid

C. Air Conditioning of IT Center.

- a. Temperature & Humidity control solution (Floor mounted ACs) for IT center comprising of min. of 5 racked servers, 4-8 racked switches and routers (inside DC partition). 3 desktop computers, two printers, 3 laptops, 4 LEDs 40", 2 workstations (outside DC Partition).

Miscellaneous items

- A. Fiber-glass shades for vehicles (per sqft rate)
- B. Office Furniture for Assistant Professors etc. as per design.
- C. Construction of store and Generator rooms involving brick, concrete and iron sheets work (per sqft rate).
- D. Photostat Machine of following specifications

<p>25/30/35/cpm 600x600dpi scanning resolution A3 paper size support 1GB RAM Preferably large storage device/HDD Duplex unit USB support Network support with network card <i>Separate rates be quoted for models</i> <i>Accessories list please be attached and rate be provided</i></p>

E. Laptops of various specifications*

Core i7	<p>15.6" Professional Series Laptop FHD Antiglare LED Backlit Screen (1920x1080) Min. 2GB nVidia Graphics Card Intel Core i7/ 5th generation processor 8GB/16GB RAM 1TB 7200 RPM Harddisk</p>
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	DVD RW± USB 3.0 ports 9 Cell Battery Original Company Manufactured Carrying case Local Warranty No Operating System Models with front panel LEDs for HDD, Power, WiFi, charger etc.
Core i5	15.6" Professional Series Laptop Intel Core i5/4 th generation processor 8GB RAM 750GB/1TB 7200 RPM Harddisk DVD RW± USB 3.0 ports 9 Cell Battery Original Company Manufactured Carrying case Local Warranty No Operating System Preferably models with front panel LEDs for HDD, Power, WiFi, charger etc.
<p><i>* Separate prices be quoted for laptops with and without graphics card (min. 2GB nvidia) It is advised not to quote laptops of ordinary user class level. Bidders are advised to work around their options and come with different alternatives</i></p>	

F. Desktops of various specifications

<p>Intel 4th Generation Core i3 4GB RAM 500 GB HDD DVD RW+- Professional Chassis with 300Watt power supply 21/22/23" or higher LCD/LED USB Keyboard+Mouse</p> <p>Intel 4th Generation Core i5 4GB RAM 500 GB HDD DVD RW+- Professional Chassis with 300Watt power supply 21/22/23" or higher LCD/LED USB Keyboard+Mouse</p>

G. Branded Computer System (Core i7)

<p>Intel 4th Generation Core i7 8GB RAM 1TB HDD</p>
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DVD RW+-
Professional Chassis with 300Watt power supply
24" LCD/LED
USB Keyboard+Mouse



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Bidders are required to provide a comprehensive solution both in terms of efficiency, utilization and economic as well.

Note:

1. Please note that system/supply should be completed in all respect in terms of hardware, software and accessories/spare parts. Any deficiency in acquisition of desired results at the time of installation and subsequent functioning will be the responsibility of the supplying firm/company, without any additional cost. All the supply should be based on National Centre of Excellence in Geology University of Peshawar.
2. Please provide individual item prices (wherever possible) for item-wise comparison
3. The Equipments of which specifications are not given above, the suppliers are requested to quote all the models, which they can supply.
4. Submission of Data/Fact sheets, explaining the function and specification, of each equipment quoted is necessary.
5. The quotes should include all the accessories needed for the proper functioning of each equipment for the given task. The successful tenders will have to accept / abide by all the responsibilities regarding installation and proper functioning of the equipments and training to the end user.
6. Installation, commissioning and training of the end users on these systems will be responsibility of the supplier. The contract shall be liable to be cancellation if the supplier does not meet this condition.
7. The tender Rate shall be item wise. And rate will be on both **FOR basis in Pak Rupees and C&F basis Peshawar Air Port/NCE in Geology Premises.**
8. The bidders shall have to provide a certificate from the principle vendor a certificate that all the equipments are according to ASTM standards.
9. The cost should be inclusive of all the taxes as admissible as per rules.
10. **The specifications of the items where appropriate are given in this tender document. However, firms are encouraged to quote also the better quality items, if available in the market.**