TENDER FORMAT

TENDER FOR PURCHASE OF EQUIPMENTS FOR MIZORAM POLICE

1. NAME OF THE FIRM :_____
2. CORRESPONDENCE ADDRESS WITH TELEPHONE AND FAX NO :_____
3. LOCAL ADDRESS WITH TELEPHONE AND FAX NO. :_____
4. WHETHER REGISTERED WITH NSIC /DGS&D IF YES ATTACH COPY :_____
5. GST REGISTRATION & GST CLEARANCE CERTIFICATE :_____
6. COPY OF AUTHORISED DISTRIBUTOR /DEALERSHIP/MANUFACTURER :_____
7. SPECIFICATIONS OF THE SYSTEM ALONGWITH LITERATURE/BROCHURE: _____
8. APPLICATION FEE :_____
9. EARNEST MONEY DETAIL :_____
10. COPY OF TERMS AND CONDITION DULY SIGNED :_____

SIGNATURE OF THE TENDERER
WITH STAMP.

_____

_____

GOVERNMENT OF MIZORAM
POLICE HEADQUARTERS :: AIZAWL
*****

No.D.11014/CSS/SPI/17-DGP/43 : Dated Aizawl the 5th March, 2018.

TENDER NOTICE

Sealed tenders are invited in two bid systems i.e. Technical Bid and Price / Commercial bid by the undersigned from the manufacturers, authorized distributors for purchase of following item(s) through registered post or these can be put personally in the sealed tender box kept in the Construction Branch of the office of the Director General of Police, Mizoram, Aizawl.

Sl. No.	Name of items	Application fee	Earnest money
1.	Equipments for Mizoram Police at Annexure	₹ 1000/- (Non-refundable)	2 % of the value of the quoted items

TERMS & CONDITIONS

The specifications of required items are enclosed with this notice. Tenderers are advised to quote their Rate after careful study of the tender specifications as well as the following terms and conditions:-

1. The tenders should reach the office of Director General of Police latest by **1200 hrs on 3.4.2018.**

2. Tender envelop(s) must be sealed and super scribed "TENDER FOR EQUIPMENTS FOR MIZORAM POLICE" which shall be addressed to Director General of Police, Mizoram.

3. Separate envelope should be used for TECHNICAL BID as well as for PRICE BID. The word **"TECHNICAL BID / PRICE BID**" for purchase of Equipments for Mizoram Police due to open on **3.4.2018 at 2:00 PM** shall be prominently marked on the top of the envelope separately. Both these bids shall further be put in one envelope and sealed properly before putting in the tender Box duly super scribed. Tenderer (s) shall indicate complete specifications and all features of the items.

4. The Technical Bids will be opened first on **3.4.2018 at 2:00 PM** and the PRICE BIDS will be opened only after scrutiny of technical bid and technical evaluation of the system.

5. The item quoted with detail specification should be furnished in a separate sheet duly signed by the tenderer.

6. The tenderer can remain present himself or his authorize representative at the time of opening of tender.

7. A copy of terms and conditions duly signed by the tenderer, as a token of acceptance of the same should be attached alongwith the tender.

8. The tendering firm will also submit a certificate that the product offered by them is as per technical specifications of the tender.

Contd….2/-

9. All the bidders whose technical bid is declared qualified by the Purchase Committee will demonstrate their product before the Technical Evaluation Committee at a short notice.

10. **Only manufacturers, authorized distributors / authorized dealers can participate in the tender, the firm should submit proof of their manufacturing, authorized dealership / distributor. This is subject to verification if necessary**.

11. **Only GST payee agencies are eligible to fill this tender**. Interested agencies shall quote their GST Registration Number in their quotation and also attach documentary proof of having registered for the sale of such store/items etc. with the technical bid.

12. Latest/current sales clearance certificate in English on the enclosed prescribed proforma must be attached with technical bid.

13. The application fee is non refundable.

14. In case the firm fails to attach the receipt / draft of application fee, the tender shall be rejected.

15. Incomplete tender/conditional tenders will not be accepted.

16. All SSI units registered with NSIC/DGS&D for this item as per specification are exempted from the EMD. They have to enclose valid registration document /exemption certificate with their tender.

17. No tender will be accepted without requisite E.M.D. as mentioned in tender notice. The E.M.D. shall be in the shape of A/C Payee Demand Draft in favour of Director General of Police, Mizoram payable at Aizawl. The EMD can also be submitted either in the shape of FDR, Banker's cheque or Bank Guarantee. No interest will be given on E.M.D.

18. Tenderer would not be permitted to alter or modify their bids after expiry of the deadline for receipt of Bids.

19. The quoted price must be inclusive of all taxes and other charges etc. No claim for taxes/charges will be entertained at a later stage. Nothing over and above the quoted price would be payable to the successful bidder. Tenderer must quote the net price both in words as well as in figures. Any over writing/cutting etc. render the tender invalid.

20. The firm whose rates are accepted will have to deposit 2% of the total cost of the item as Performance Security in the shape of Bank Draft//Bank Guarantee FDR in favour of Director General of Police, Mizoram before the supply order is placed to the firm. In case, the firm does not complete the supply within the delivery period, **liquidated damage charges will be charged @ 2% of total cost per month of the item and action will be taken to blacklisting the firm and forfeiture of its Security money. No interest will be given on Security Money.**

Contd….3/-

21. In case the firm fails to deposit the security money, the EMD of the firm will be forfeited.

22. The purchase committee, in order to satisfy itself can order on the spot enquiry to verify the soundness & capability of the item and any other information given by the tendering firms.

23. The rates will be valid till supply of the item is completed, in all respect.

24. The rates will be F.O.R. at Aizawl - 796001.

25. In case the firm fails to supply the item within stipulated delivery period, the item will be procured from the open market and the difference of cost, if any, will be recovered from the Security Money and pending bills of the defaulting firm, by calling explanation after issuing notice.

26. The quantity of the items mentioned in the tender notice can be increased or decreased, at any stage till the delivery of consignment is completed.

27. Tenderer(s) shall indicate complete specifications and all features of the Equipment for Mizoram Police.

28. The payment will be made on receipt/acceptance of store in good condition as per prescribed specification. No advance payment will be made.

29. No claim for interest in case of delayed payment will be entertained by the Department.

30. **The Purchase Committee reserves the right to relax any terms and condition in the govt. interest, with the approval of competent authority.**

31. The purchase committee reserves the right to reject any tender or all tenders without assigning any reasons thereof.

32. All disputes are subject to the jurisdiction of the Courts in Aizawl.

33. Foreign Companies shall participate in the tender, only through their Distributors / Agent in India. No foreign company shall be entertained directly.

34. In case of violation of any clause of contract/agreement deed, the explanation of the firm can be called by issuing show cause notice, if the reply is not found satisfactory. Security money can be forfeited as well as action for blacklisting can also be taken prior to taking any legal action.

35. The tender will be rejected straight way without assigning any reasons if the firm involves in any criminal case, declared black listed by any Govt. / Semi govt. department/agencies etc.

Contd….4/-

36. In case of any differences, the firm can be called for negotiation to patch up the differences on table prior to approaching court.

37. The bidder should carry a warranty/guarantee of subjected store for a period of at least one year.

38. The Price bid should be in accordance with the format as at Annexure-A.

(LALBIAKTHANGA KHIANGTE) IPS, AIGP-II
for Director General of Police
Mizoram, Aizawl.

No.D.11014/CSS/SPI/17-DGP/43 : Dated Aizawl the 5th March, 2018.

Copy to :-

1. The Director, I&PR for publication in the newspaper. Gist of the tender enclosed herewith for publish in 2 (two) leading local newspaper at the size not more than 9 x 12 cms. for 2 consecutive days.
2. Officer-in-Charge, Mizoram Police Website for information and necessary action.
3. Notice Board.

(LALBIAKTHANGA KHIANGTE) IPS, AIGP-II
for Director General of Police
Mizoram, Aizawl.

NOTE :-

(A) DOCUMENTS REQUIRED TO BE ATTACHED WITH TECHNICAL BID IN THE FOLLOWING ORDER :-

1. E.M.D. in favour of Director General of Police, Mizoram, Aizawl - 796001 amounting ₹ _____/-.
2. GST Registration Certificate.
3. Latest GST Clearance Certificate / Tin No. of VAT.
4. Copy of authorized distributorship.
5. Certificate regarding registration with DGS&D, NSIC if claim EMD exemption.
6. **Copy of terms and conditions duly signed with seal of the firm, in token of acceptance of terms and conditions**.
7. **The Demand draft of application fee be attached with tender form.**
8. All Other supporting documents as required in the tender shall be attached.

(B) DOCUMENTS REQUIRED TO BE ATTACHED WITH COMMERCIAL/PRICE BID IN THE FOLLOWING ORDER :-

PRICE BID shall contain price only and no other documents shall be enclosed with the price bid.

1. Details of Rates, inclusive of all taxes including freight installation, commissioning & testing of each items quoted by the tenderer shall be submitted on their letter Pad in clear terms, in words and in figures. The cutting & over-writing not valid. The option in the rates will not be entertained.

( )

SIGN. OF TENDERER _____

NAME IN BLOCK LETTERS:_____

FULL ADDRESS : _____

ANNEXURE - A

PROFORMA FOR PRICE SCHEDULE

(Enclose with commercial bid)

TENDER FOR PURCHASE OF EQUIPMENTS FOR MIZORAM POLICE

Date of opening..... Time .....Hrs.

We_____hereby certify that we are established manufacturers/authorized representatives of M/s_____-with factories at _____which are fitted with modern equipment and where production methods, quality control and testing of all materials manufactured or used by us are open to inspection by the representative of the purchaser. We hereby offer to supply the following items at the prices indicated below :

S. No.	Description of work/ item	Qty.	Unit Price In Indian Rupees	Extended Price In Indian Rupees	Sales Tax/VAT In Indian Rupees	Other Govt. Levies, if any (To be specified)	Incidental charges, if any (To be specified)	Total Price FOR Destination In Indian Rupees
a	b	c	d	e	f	g	h	i
1.								

It is hereby certified that we have understood all the terms and conditions specified in the tender document and are thoroughly aware of the nature of job required to be done and goods/items to be supplied. We agree to abide by all the tender terms and conditions.

We hereby offer to carry out the job and (or) supply the goods/items detailed above or such portion(s) thereof as you specify in the notification of award.

(Signature and seal of Bidder)

Dated:_____

GOVERNMENT OF MIZORAM
POLICE HEADQUARTERS :: AIZAWL
*****

SHORT TENDER NOTICE

Sealed quotations are hereby invited for supply of Equipments for Mizoram Police from the bonafide manufacturers / authorized dealers. Tenders will be received upto 3.4.2018 at 1200 hrs and will be opened on the same day at 2:00 PM.

Details of the above items, terms and conditions can be had from the Office of the undersigned during office hours or Police Website **www.police.mizoram.gov.in**

(LALHULIANA FANAI) IPS, AIGP-II
for Director General of Police
Mizoram, Aizawl

ANNEXURE

TECHNICAL SPECIFICATION OF EQUIPMENTS FOR MIZORAM POLICE

Sl. No.	Items	Technical Specification
	Security Equipments	
1.	Multi zone DFMD (Portable) – 5 nos.	1. Dimension: ● Exterior: Width 120cm(±5cm) x Height 220 cm (±5 cm) x Depth 90 cm (±5 cm) ● Interior: Width 80 cm (±5cm) x Height 210cm (±5cm) x Depth 90 cm (±5 cm) 2. Portable Dimension: Width 61 cm x Height 94 cm x Depth 66 cm, or less. 3. The weight is 42 kg or less and the walk-through metal detector equips with integrated handle and wheel for easily carrying. The WTMD could be assembly in less than 10 minutes by one man with no tools required. 4. Multi zone detection: 3 detection zones (Top / Middle / Down area) and the sensitivity of each zone could be set up and adjustable. 5. The walk-through metal detectorcan indicate metal by audio alarm and visual alarm. The alarm volume could be adjusted. 6. The walk-through metal detector has self-test and calibration settings and shows the reason of trouble with error messages. 7. The walk-through metal detector has presetting programming for storing calibrations for specific applications. 8. The sensitivity could be adjustable, with 100 sensitivity settings for the overall sensitivity of the detector plus the ability to fine tune the sensitivity of each of the three zones. 9. Log in the walk-through metal detector with password is an option. 10. Gun test piece: Any zones of the walk-through metal detector can detect the test object which complies with FAA (OTP) requirements. 11. Each WTMD includes a batterysystem; the battery could be operated for 40 hours or more. The power can be switched from 110V and 220V. 12. The walk-through metal detector can continuously count the persons or reset the number of the records. 13. Accessories and Options: a. Protective bag cover to accommodate the WTMD in storage. b. Waterproof rain shelter to cover from rain. c. Power cable and y-cable for rapid recharge. • Fixing strap for fixing protective bag of WTMD • Battery operated (including AC adapter & recharge kit) • Compatible to NILECJ-0601.00 standard • Portable/folded dimension :40” x 27” x 30” approx. **ENVIRONMENTAL DESIGN SPECIFICATIONS** • Temp -20 C to +60 C (-4F to +140F) • Relative Humidity 95% non condensing
2.	Portable X Ray – 2 nos.	• Tunnel Dimension : 534mm widht & 333mm Height approx • Compact structure and light weight of approximately 140kgs • X-Ray Leakage around the equipment is close to natural background level, which meets all public international health and safety standards and ensures the radiation safety of operators as well as the public • Automatic detection and alarm of explosives and drugs • TIP (Threat Image Protection) provides a practical solution for operator performance monitoring and training • Support stepwise, continuous and magnifier functions to enlarge image • Images can be saved as general image format, such as BMP,JPG,PNG and TIFF and be transferred to USB storage devices • Ergonomic keyboard and user interface design to ensure efficiency and professionality of the X-Ray screening operation.

3.	Glove for Frisking – 10 nos.	**Hands Free Metal Detector/Gloves for frisking** **<u>Specification:</u>** **CONSTRUCTION:** *Neoprene - Velcro (HF-1 Kevlar and Neoprene)* **DIMENSIONS:** Medium or Large, standard generic size. (HF-1 Large - XL - XXL) **WEIGHT:** Weight: 5.2oz or (149 grams) including battery **SENSITIVITY:** Target Size 0.5 grams Fully automatic. No adjustment necessary. All metals, including alloys. **OPERATING TEMPERATURE:** -20°C to +65°C **STORAGE TEMPERATURE:** -30°C to +80°C **HUMIDITY:** 98% **INGRESS PROTECTION:** **(Waterproofing & environmental** IP64 (IEC 529) **protection)** **OPERATING TIME:** Up to 3 months with normal use 48 hours continuous at +25°C (alkaline battery) 40 hours continuous at +25°C (rechargeable battery single charge) **BATTERY:** Standard 9 Volt block battery MN 1604, 6LR61 or equivalent alkaline disposable or rechargeable. **Tested and approved to EEC EN5008-1 Table 1. EN50082-1 Table 1:1.1 Radiated emissions ("CE" mark)** Conforms to international standards IEC, N I LEC STANDARD-0602.02 - FCC, FAA. Medically tested and approved - No risk to persons with pacemakers. Non interference to magnetic recorded material. ***When the battery is exhausted a continuous tactile alarm signal is produced.*** Alarm indication by means of vibrating tactile indicator. Detection Speed: Ultra fast; 'Detect - alarm - reset' ready for another target - 0.1 second. Pinpoint target accuracy search head at the base of index finger, concealed inside water resistant *neoprene* fabric lining **Mass proportion discrimination alarm indication:** At constant sweep speed: short digital pulse small target. long pulse = large target Battery inserted inside water resistant *neoprene & velcro* pocket. No wires visible. No false alarms. Minimum pressure push button latching switch On/Off switch operation, inside water resistant *neoprene* fabric layer. Instant response to all metals.
4.	Portable Jammer 4G – 1 no.	**<u>Specification:</u>** • Radius (M): Up to 150m • Size : 28 x 38 x 12cm • Weight : 15kg. • Power Supply : AC110-220, DC5V output. • Total Output Watt: 37-45 Watt. • Available Frequency band : CDMA / TDMA + Nextel (851-894 MHz). AMPS (9869-894MHz), GSM (925-960MHz), DCS (1805-1880MHz), PCS 1900 [+PHS] (1930-1990MHz), 4G LTE (2300 to 2400 MHz). • Computer Communication Standards 2.4Ghz, WLAN, Bluetooth, WiFi. • Satellite Communication System GPs, CDMA450 Cellphone system. • Battery Time : Lithium Batter, 3H • Working Environment : n20-50 C. **Features** : Easy of mobility, Back-pack directly. Light in weight of case. About 15Kg. easier to carry. Jams simultaneously up to 4 selected frequency bands, maximum Ff output power up to 60Watt. Antennas type: High gains omni-directional antennas (Standard) for all bands (Directional antennas are also optional). Power source : Internal Battery (DC) & (AC) mains (External) both. Bbuil-in battery back up. Full system operation for up to 2Hours from internal rechargeable battery. High power RF amplifiers with VSWR and temperature self-protection technology.

<table>
<tr><td></td><td></td><td>Product Details: TG-VIP Manpack is a state-the-art efficient cellular / Satellite mobile phone jammer designed for bomb disposed security applications. Like Troop marching and filled operator. The jammer is constructed to block continuously and simultaneously up to four frequency bands. Its smart active cooling system enables non-stopped use even in every hard climatic and weather condition. The user friendly system is packed into a artistic- design and durable backpack housing. Frequency bands included all the cellular phone system or satellite system optional RF output power up to 60 Watt. It is up to 4 frequency bands from 800-2500 MHz.</td></tr>
<tr><td>5.</td><td>Push to talk wireless set – 25 nos.</td><td>

IP54 dust protection and splash-proof
Radio stun/kill/revive functions
Inbuilt VOX & PTT (push to talk) functions
Not less than 200 programmable channels
Frequency range : 136 – 173 MHz
Channel spacing : 25KHz (wide band), 20KHz (middle band), 12.5KHz (narrow band)
Phase-locked step : 5KHz, 6.25KHz
Operating voltage : 7.4V DC + 20%
Battery life : More than 12 hours (1500mAh) by 5-5-90 work cycle
Frequency stability : + 2.5ppm
Operating temperature : -20~+50C

<table>
<tr><th colspan="3">RECEIVER (ETSI EN300 086 standard test</th></tr>
<tr><td></td><td>Wide band</td><td>Narrow band</td></tr>
<tr><td>Sensitivity (12dB SINAD)</td><td>≥0.25 µV</td><td>≥0.35 µV</td></tr>
<tr><td>Adjacent Channel Selectivity</td><td>≥70 db</td><td>≥60 db</td></tr>
<tr><td>Intermodulauon</td><td>≥65db</td><td>≥60 db</td></tr>
<tr><td>Spurious Rejection</td><td>≥70db</td><td>≥70db</td></tr>
<tr><td>Audio Response</td><td>+1~ -3db (0.3 3KHz)</td><td>+1~ -3db (0.3 ~2.55KHz)</td></tr>
<tr><td>Hum & Noise</td><td>≥40 db</td><td>≥36db</td></tr>
<tr><td>Audio Distortion</td><td colspan="2">≥5%</td></tr>
<tr><td>Audio Power Output</td><td colspan="2">1W(10%)</td></tr>
</table>
<table>
<tr><th colspan="3">Transmitter (ETSI EN300 086 standard test)</th></tr>
<tr><td></td><td>Wide band</td><td>Narrow band</td></tr>
<tr><td>Power Output</td><td colspan="2">5/2/05.W</td></tr>
<tr><td>Modulation</td><td>16 Ø K F3E</td><td>Ø</td></tr>
<tr><td>Adjacent Channe Power</td><td>≥70db</td><td></td></tr>
<tr><td>Hum & Noise</td><td>≥40db</td><td></td></tr>
<tr><td>Spurious Emission</td><td>≥-36db</td><td></td></tr>
<tr><td>Audio Response</td><td>+1~ -3db (0.3~ 3KHz)</td><td>+1~ -3db (0.3~ 2.55 KHz)</td></tr>
<tr><td>Audio Distortion</td><td colspan="2">≥5%</td></tr>
</table>
</td></tr>
<tr><td>6.</td><td>Ceiling Inspection Mirror/Inspection Mirror for Anti Sabotage Checking – 6 nos.</td><td>

Usage: Searching of suspicious objects at overhead height.
Telescopic Metal Rod.
Convex Mirror fitted on top of telescopic Metal rod.
Mirror Size: Standard 9” x 5”
Additional attachment of different size mirrors can arrange (optional)
Night operation supported by Torch.
Fitted with reflective (plane/convex) mirror.

</td></tr>
<tr><td>7.</td><td>Under vehicle Search Mirror (Trolly) – 5 nos.</td><td>

14” / 11” diameter Convex Mirror for Clear Vision.
High Intensity LED Light system provided to search in dark
Sturdy Aluminum Carrying Case for Durability and easy Transportation.
12 Volt Rechargeable battery with Inbuilt Charger. Can work for 10 hrs continuously after full charge.
Light Weight with Telescopic Handle.
Smooth wheels provided for easy movement underneath the vehicle.
Switch for Power ON and LED for indicating Charge ON

</td></tr>
<tr><td>8.</td><td>Mine Prodder – 5 nos.</td><td>Product Capabilities
Locates mines buried at depths of up to 250mm

Lightweight for optimal portability and deployment.
The highly versatile non-magnetic mine prodder is also designed for use in situations where magnetic field is unlikely to cause a problem.

</td></tr>
</table>

		Product Specifications • Length: 510mm (Short assembled) 1030mm (long assembled), Mean Diameter: 20.5mm (main body) 6.4mm (spike) • Weight: 409 gm (prodder) 209 gm (stored) • Spike hardness: 45/50 Rockwell C • Colour: NATO Green Supplied as a kit with webbing carrying case, consisting of spike holder assembly, hand grip and tube assembly
9.	Non Linear Junction Detector (NLJD) – 5 nos.	**Details:** It detects both Analog (time bomb)and Digital (remote control or wireless bomb) signal which can be used for Ignition of IED/RCIED Bomb. Operators may check up tasks at a 120cm away, offering increased levels of safety. A very sensitive Improvised Explosive Device (Bomb) Detector has been made to detect very weak sound of mechanical run back timers and electronic timing systems in improvised explosive devices e.g. mechanical timing devices, Wrist watch, Analog and digital type timing devices by detection sensor. It's having Crystal detection sensor for detecting the conducted circuits commonly found in (bomb) improvised explosive devices and Mobile Phone, digital watch and similar devices, that can indicate the presence of an improvised explosive. It can detect all above mentioned items through solid materials, such as walls, bricks, glass, plastic, concrete, inside the ceiling, wood, packing materials etc. **Specifications** **Process Control Unit** (1) Size: 90×42×150(mm) (2) Weight: 900g (including battery) (3) Material: Anodized Aluminum (4) Operating temperature: -5º ~ +70 º (5) Humidity: RH 10-90% (6) 24 hours working capability (12V) (7) Weatherproof , Audio proof and high sensitive Sensor (8) Telescopic Detection Head (9) Sensor could detect both Analog and Digital signal (devices) **Detection Head** (1) Telescopic High-sensitive detection head containing Crystal Sensor. **Stereo headphone** (1) Using high-sensitive headphone (2) Operating frequency range: 10 ~ 25,000Hz **Equipment packing** (1) Engineering special plastic case (2) Lock keeping the inside safe as well as protecting form the impact (3) Not affected by chemicals (4) Weight: 9kg (including device) (5) Waterproof **Special features** • Light weight, portable • Easy and simple use • Detection capability of various devices (digital/analog devices, cellular phone, • wireless etc inside of concrete / inside of ceiling) • Accurate detection; its detection is very fast and find an accurate location • In the case of existing Detectors made by other suppliers are affected by surrounding noise because their detectors detecting audible frequency. • But It is audio proof It is not affected by surrounding noise as filtering audible frequency It does not require preparatory time and consumption materials like other products. As you turn on It and then you can use it directly

<table>
<tr>
<td>10</td>
<td>Drone Helicopter for capturing Video and still images – 1 no.</td>
<td>
1. A company/ Dealer should have Authorization as Enterprise Channel from OEM.
2. A company must have minimum 5 years experience in dealing with existing government departments.
3. Company should have service centre located in Aizawl to provide after sales services.
4. A company and its principle should have at least 2 orders for Drones from the government departments in the current calendar year.
5. A company should experience of supplying atleast 5 Drones or more in one of its order.
6. 3 days Training to be provided by drone supplier. The Engineer trainer should be experienced pilot or has obtained formal training in past for flying. He should also posses knowledge of DGCA rules and regulations in India.
Documentary proof is required to be submitted for trainer qualification in the tender.
<table>
<tr><td><u>I-AIRCRAFT</u></td><td></td></tr>
<tr><td>Weigh (Battery & Propellers Included)</td><td>: 1368 g</td></tr>
<tr><td>Diagonal Size (Propellers Excluded)</td><td>: 350 mm</td></tr>
<tr><td>Max Ascent Speed</td><td>: S-Mode: 6 m/s
P-Mode: 5 m/s</td></tr>
<tr><td>Max Descent Speed</td><td>: S-Mode: 4 m/s
P-Mode: 3 m/s</td></tr>
<tr><td>Max Speed</td><td>: S-Mode: 45 mph (72 KPH)
A-Mode: 36 mph (58 KPH)
P-Mode: 31 mph (50 KPH)</td></tr>
<tr><td>Max Tilt Angle</td><td>: S-Mode: 42^0
A-Mode: 35^0
P- Mode: 25^0</td></tr>
<tr><td>Max Angular Speed</td><td>: S-Mode: 250^0 /S
A-Mode: 150^0 /S</td></tr>
<tr><td>Max Service Ceiling Above Sea Level</td><td>: 19685 feet (6000 m)</td></tr>
<tr><td>Max Wind Speed Resistance</td><td>: 10 m/s</td></tr>
<tr><td>Max Flight Time</td><td>: Approx. 30 minutes</td></tr>
<tr><td>Operating Temperature Range</td><td>: 32^0 to 104^0F (0^0 to 40^0C)</td></tr>
<tr><td>Satellite Positioning Systems</td><td>: GPS/GLONASS</td></tr>
<tr><td>Hover Accuracy Range</td><td>: Vertical:
±0.1 m (With Vision Positioning)
±0.5 m (With GPS Positioning)
Horizontal:
±0.3 m (With Vision Positioning)
±1.5 m (With GPS Positioning)</td></tr>
<tr><td><u>II-VISION SYSTEM</u>:-</td><td></td></tr>
<tr><td>Vision Systems</td><td>: Forward Vision System
Downward Vision System</td></tr>
<tr><td>Velocity Range</td><td>: ≤1 mph (50 kph) at 6.6 ft (2 m) above ground</td></tr>
<tr><td>Altitude Range</td><td>: 0 – 33 feet (0 – 10 m)</td></tr>
<tr><td>Operating Rang</td><td>: 0 – 33 feet (0 – 10 m)</td></tr>
<tr><td>Obstacle Sensory Range</td><td>2 – 98 feet (0.7 – 30 m)</td></tr>
<tr><td>FOV</td><td>: Forward: 60^0 (Horizontal), $\pm 27^0$ (Vertical)
Downward: 70^0 (Front and rear), 50^0 (Left and Right)</td></tr>
<tr><td>Measuring Frequency</td><td>: Forward: 10 Hz
Downward: 20 Hz</td></tr>
<tr><td>Operation Environment</td><td>: Surface with clear pattern and adequate lighting (lux>15)</td></tr>
<tr><td colspan="2"><u>III-REMOTE CONTROLLER</u>:-</td></tr>
<tr><td>Operating Frequency</td><td>: 2.400 – 2.483 GHz</td></tr>
<tr><td>Max Transmission Distance</td><td>: 2.400 – 2.483 GHz (Unobstructed, free of interference)
FCC: 4.3 mi (7 Km)
CE: 2.2 mi (3.5 Km)
SRRC: 2.5 mi (4 Km)</td></tr>
<tr><td>Operating Temperature Range</td><td>: 30^0 to 140^0 (0^0 to 40^0)</td></tr>
<tr><td>Battery</td><td>: 6000 mAh LiPo 2S</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Transmitter Power (EIRP)</td><td>: 2.4700 – 2.483 GHz
FCC: 26 dBm
CE: 17 dBm
Srrc: 20 dBm
MIC: 17 dBM</td></tr>
<tr><td>Operating Current/Voltage</td><td>: 1.2 A@7.4V</td></tr>
<tr><td>Video Output Port</td><td>: GL300E: HDMI
GL300C: USB</td></tr>
<tr><td>Mobile Device Holder</td><td>: GLE300E: Built-in display device (5.5 inch screen, 1920 x 1080, 1000 cd/m^2, Android system, 4 GB RAM + 16 GB ROM)
GL300C: Tablets and Smart Phones</td></tr>
<tr><td>IV- INTEGRATED 1080p DISPLAY:-</td><td>: A 5.5 “ 1080p Screen integrated w offers 1000 cd/m^2</td></tr>
<tr><td colspan="2">V- INTELLIGENT FLIGHT BATTERY:-</td></tr>
<tr><td>Capacity</td><td>: 5870 mAh</td></tr>
<tr><td>Voltage</td><td>: 15.2 V</td></tr>
<tr><td>Battery Type</td><td>: LiPo 4S</td></tr>
<tr><td>Energy</td><td>: 89.2 Wh</td></tr>
<tr><td>Net Weight</td><td>: 468 g</td></tr>
<tr><td>Charging Temperature Range</td><td>: 14^0 to 104^0 (5^0 to 40^{0}C)</td></tr>
<tr><td>Max Charging Power</td><td>: 100 W</td></tr>
<tr><td>VI – GIMBAL:-</td><td></td></tr>
<tr><td>Stabilization</td><td>: 3-axis (pitch, roll, yaw)</td></tr>
<tr><td>Controllable Range</td><td>: Pitch: -90^0 to +30^0</td></tr>
<tr><td>Max Controllable Angular Speed</td><td>: Pitch: 90^0/S</td></tr>
<tr><td>Angular control Accuracy</td><td>: ±0.02^0</td></tr>
<tr><td>VII – CAMERA:-</td><td></td></tr>
<tr><td>Sensor</td><td>: 1” CMOS
Effective Pixels: 20M</td></tr>
<tr><td>Lens</td><td>: FOV 84^0 8.0 mm/24 mm (35 mm format equivalent)
f/2.8 –f/11 auto focus at 1 m - ∞</td></tr>
<tr><td>ISO Rang</td><td>Video: 100- 3200 (Auto) 100- 6400 (Manual)
Photo: 100-3200 (Auto)
100-12800 (Manual)</td></tr>
</table>
</td></tr>
<tr><td>11.</td><td>CCTV Complete set – 1 no.</td><td>
• IR Bullet Camera 5.0 megapixel or above (32nos.)
• 4 TB Surveillance HDD (4nos.)
• High Definition DVR-16 Channel (2nos.)
• 16 Video Input/Output; 2 HDD Bay
• 50” LED Monitor
• SMPS 12V 20amp
• All other accessories required for complete installation
</td></tr>
<tr><td>12.</td><td>Siren – 3 nos.</td><td>
Interfaces for siren control
• Binary inputs 8 user programable inputs
• Binary output 2 user programable outputs
• Port USB device 1x USB device: genaral use – TLG2 protocol
• Port RS232 or RS485 1x genaral use – TLG1/TLG2 protocol
• Wireless connectivity with optional submodule 1x 2.4 GHz XBee – replaced serial link or 2.4 GHz WiFi – replaced serial link a BUS CAN protocol based data bus + audio links
• Other connectivity Optional modules:
- SBR11 – Ethernet
- GPRS11 – GPRS or GSM/SMS
- RDM02 + transceiver (radio pack)
- ADIO11 – more I/O
- other
• Human interfaces Optional modules:
- button control
- RCT11 – 2 types
- LCU11 – 3 types
- OCP11 – 3 types, optionaly more
</td></tr>
</table>

<table>
<tr><td></td><td></td><td>Audio and power amplifier paramters
• Audio records memory SD card, up to 4 GB
• Audio processing stereo audio path with compressor, limiter and band-pass filters, audio matrix for aBUS interface
• Audio inputs 1x LINE input, 1Vrms
• 1x MICROPHONE input, 1Vrms</td></tr>
<tr><td></td><td>General Policing Equipments</td><td></td></tr>
<tr><td>1.</td><td>Handcuff – 400 nos.</td><td>• High quality handcuff made of chromed steel with dual hinge made of chains with minimal room for maneuver.
• The handcuff is very good processed and comes with a "Double Lock"-safety function.
• Instead of a usual chain with round chain links, this handcuff comes with a chain of flat chain links. So it is not possible to twist the chain links.
• Because of the short dual hinge, the room for maneuver is even more limited than with handcuffs that only have one hinge.
• This high quality finds use also at police and securities. Very well suitably to the appointment of delinquents.
Features:
• Double-Lock
• 3-row ratchet
• 2x3 teeth
• Locking strap with 21 teeth
Technical specifications:
• Material: chromed steel
• Dual hinge made of chains
• Double Lock
• Weight: 360 g</td></tr>
<tr><td>2</td><td>Weighing apparatus Small size (ND&PS Case) – 31 nos.</td><td>• Accuracy : 0.001 gm (with Wind Shield)
• Use : Industrial Home
• Weighing capacity : Upto 1 Kg
• Features :
Attractively designed
Portable & Desktop use
Large Digit LCD with Auto Off
<table>
<tr><th>Ultra Precision</th><th>Capacity</th><th>Accuracy</th></tr>
<tr><td>Ultra Precision</td><td>300 gms</td><td>0.1 gm</td></tr>
<tr><td>Ultra Precision</td><td>600 gms</td><td>0.1 gm</td></tr>
<tr><td>Ultra Precision</td><td>1000 gms</td><td>0.5 gm</td></tr>
<tr><td>Ultra Precision</td><td>2000 gms</td><td>0.5 gm / 1 gm</td></tr>
<tr><td>Ultra Precision</td><td>5000 / 6000 gms</td><td>1 gm</td></tr>
<tr><td>Ultra Precision</td><td>200 gms</td><td>0.01 gm (with wind shield)</td></tr>
<tr><td>Ultra Precision</td><td>200 / 300 gms</td><td>0.01 gm (with wind shield)</td></tr>
<tr><td>Ultra Precision</td><td>600 gms</td><td>0.01 gm (with wind shield)</td></tr>
<tr><td>Ultra Precision</td><td>750 gms</td><td>0.05 gm (with wind shield)</td></tr>
<tr><td>Ultra Precision</td><td>3000 gms</td><td>0.05 gm (with wind shield)</td></tr>
<tr><td>Ultra Precision</td><td>200 gms</td><td></td></tr>
</table></td></tr>
<tr><td>3.</td><td>Fake currency detector – 8 nos.</td><td>• Hopper Capacity : 200 notes
• Stacker Capacity : 150 notes
• Counting Speed : >1000 notes/minute
• Display : 3 Digits LED for counting / preset
• Power Supply : 220V / 50Hz
• Power Consumption :_80 W
• Dimension (in mm) : 287 (L) x 243 (W) x 248 (H)
• Weight : 7.6 kgs
• Should be able to detect double note, half note, chained note besides suspicious notes.</td></tr>
</table>

4.	Air compressor – 3 nos.	*Motor* • HP : 5 • KW : 3.70 • No. of Cyl. : 2 • RPM : 865 *Receiver* • CFT : 7.95 • Ltrs. 225 *Max Pressure* • PSIG : 175 • Kg/cm2 : 12.30 *Piston Displ :* • CFM : 17.32 • M3/m : 0.490 • Ltr / min : 490
5.	Tyre Changer – 5 nos.	Technical Specification : • Motor power : 75kw / 0.55kw / 1.1kw • Power supply : 220V / 400V / 110V • Max Wheel diameter : 45" (1143mm) • Max. Wheel width : 16" (406mm) • Outside clamping : 12" ~ 23" • Inside clamping : 14" ~ 26" • Air supply : 8 bar • Bead breaker force : 2500kg • Noise level : 75dB • Weight : 330 / 285kg • Package size (main body) : 1130*900*1030mm • Package size (help arm) : 1230*450*350mm Features : • Full automatic pneumatic tilting arm with pneumatic lock • Bigger and bending 360 degree special rotary type shovel press the tyre any angle • High strength steel pedal • Central positioning device make the tyre and turntable keep in one concentric circle • 26" large turtable and powerful motor, suitable for low profile tyre
6.	Night Vision Binocular – 4 nos.	• ED Lens : Yes • Fully Multicoated : Yes • Dielectric High Reflective • Prism Mirror Coating : Yes • Turn & Slide Eye cup : Yes • Water proof : Yes • FOV : 5.5 • Apparent FOV : 51.3 • FOV @1000m : 96 • E.R (mm) : 18.4 • Close Focus Distance (m) : 2.5 • Size (mm) : 145x129x54 • Weight (g) : 600
7.	Liquid Prismatic Compass (for 2nd Bn. MAP) – 3 nos.	**Udee Military Lensatic Prismatic Army Green Camouflage Matter Compass (Green)** Product Features : Camouflage color lensatic compass for outdoor activities Features camouflage color, shows your style. Coated metal case and foldable metal lid fitted a glass window with the sighting line etched into it Floating luminous arrow dial with sapphire bearing to ensure quick movement and optical precision. Extremely stable liquid filled prevents excessive oscillation of the magnet needle. Adjustable lens prism, easy to reading scale when to sighting at direction through sighting slot. There are cm and inch scales on both side of body as a map measuring ruler Brand : UDee. In the Box • Sales Package : 1 X Military Lensatic Prismatic Compass – Army Green Camouflage

		• No. of Contents in Sales Package : Pack of 1 General • Type : Prismatic Compass • Material : Metal • Liquid Fill : Yes • Waterproof : Yes
8.	Sun Glass Camera DVR (for CID SB) – 2 nos.	• Fashionable Design, 5.0 Mega Pixels Camera • Video @ High Resolution : 1920x1080p • Video Format : AVI * Video Compression Format : M-JPEG • Video Frame Rate : 25 / 30FPS • Maximum 32GB Micro SD Card support is desirable • Operating Battery Life : 50min • Charge Power Voltage : DC-5V
9.	Button Camera (for CID SB) – 2 nos.	• Portable • 249 gram (approx.) • Dimensions : 2.5cm * 2.4cm * 1.0cm • Format : AVI 30 frames • Video resolution : 1920*1080 • Loop Recording • Motion Detection • USB Adapter
10.	Spy Pen DVR (for CID SB) – 2 nos.	• 30fps, 1.0 megapixel • High Capacity Li-thion 180 mAH Rechargeable Battery • Including up to 32GB SD/TF Card • Charging with DC-5V
11.	Bullet Proof Jacket – 40 nos.	• Ergonomically designed to provide maximum flexibility and movement • Reinforced pockets for Armour Plates • Reinforced stitched ends for better durability of the over-vest • Ballistic inserts sealed in water proof & UV resistant fabrics to assure safety in adverse conditions • Water repellent, removable and washable outer carriers for enhanced durability and performance of over-vests • Shoulder straps supported by additional back-up straps for better positioning of vests • Concealed pockets for Armour Plates 8 cm wide waist belt for better grip and comfort
12	GPS Device – 4 nos.	• GPS satellite & LBS base station dual-mode positioning • Vibration alarm • Sensitivity is adjustable from 1 to 5 grade • Overspend alarm • Mileage statistics • Over voltage protection • Static state drifting keep within 2M • Built-in watchdog function, auto reboot when accident happens.

	Communication Equipments	
1.	Voice and data cable and software solution for Data communication – 10 nos.	• Voice and data cable compatible with our existing digital set MD 78 x (G) • Messagoing software capable of online/offline message preparation. • Maintaining of automatic messaging log • Automatic acknowledgement feature • Maintaining of station's code.
2.	High Band VHF Transreceiver Static (big) set 25 watt 136-174 MHz with full accessories including GPA feeder and vehicular antenna – 75 nos.	• Frequency range : 136 – 174 MHz • Sensitivity : 0.3 µ volt – 118dBm for 12 dB SINAD or better • RF output : 25 watt or high selectable with software • Environment protection : IP 54 or better • Channel spacing : 12.5/25 KHz • Modulation : Frequency modulation (Phase) • Battery capacity : 12 Volt DC • System interface facility i.e. Preferable Pin in/out to fabricate repeater or to connect external devices as per requirement.

		• It should have display caller ID with PTT ID • Built in scrambler (rolling code preferable) **OR** • Frequency range : 136 – 174 MHz full band • Number of channels : mininum 60 channel • TDMA : 2-Slot • Channel spacing : 12.5 KHz / 25 KHz • Frequency stability : ±1.5 ppm • Radio : Open standard Digital / Analog Protocol ETSI based DMR TDMA Radio. It should work in 12.5 KHz channel spacing and Analog 12.5/25 KHz • Antenna Impedance : 50 ohm • Protection : Reverse Polarity protection • Type of operation : Simplex/Semiduplex/Press to talk • Weight : < 2.0 Kg • Power source : 11V DC to 15V DC • Display : Alpha Numeric display • **Essential features** i) Front panel Functional Keys with lit LCD panel ii) Scan with priority on both Analog & Digital Mode iii) On/OFF Radio Password & Programme Password iv) Pre a signed messaging feature v) Radio must be capable to interface with PC for secured Data messaging up to Police stations. • **Transmitter** • RF Power output : Programmable/switchable up to 25W • Deviation : ± 2.5KHz @12.5 KHz and ± 5 KHz at 25KHz • FM Emission : 11KOF3E for 12.5KHz and 16KOF3E for 25 KHz • Analog Modulation : 4 FSK modulation 7K60FXE • Frequency stability : ± 0.5 ppm • Conducted/Radiated Emission : Better than – 30 dbm below 1GHz • Audio Response : +1,(-)3dB or better • Digital Vocoder : AMBE +2 • Audio distortion : Less than 3% @ 1KHz • TOT : For Disallowing inadverant keying of the transmitter, to prevent locking up one of the communication channel un-necessary. • FM Hum/Noise : i) for 25 KHz : 45 dB or better ii) for 12.5 KHz : 40dB or better • **Receiver** • Sensitivity Digital : 0.3uV at 5% BER or better • Adjacent Chanel Selectivity : 60 dB @ 25KHz or better • Inter modulation : 65dB as per ETSI standards • Audio output : 3W internal or 7.5 W external speaker on 8 Ω • Conducted spurious Emission : (- 57dBM or better) • **General Essential Features** • Accessories as per configuration i) 0dB GPA with 30 mtr RF cable RG-217 for static Radio sets ii) AC/DC SMPS Power Supply 12V, 10 Amp with Battery Revert iii) Whip Antenna with 3 mtr feeder ble for mobile Radios iv) Microphone with Radio Set v) Mounting fixtures for mobile Radios and inter connections for battery and mounting fixtures. • Manuals/Literature i) User manual with each radio ii) Service Manual • Conditions (OEM Undertaking) i) Bidder must indicate OEM Service Centre in India for after sales warranty and post warranty support

		ii) Warrant – 24 months for radios and 12 months for accessories iii) The Firm should enclose DOT/WPC Licence for supplying Wireless equipment in India • Environment Standard (ILAC Report) i) MIL standard 810E or equivalent ii) Operating temperature -30°to + 60°C iii) Storage temperature -40°to + 80°C iv) Humidity – 90% at 50°C (Mil std 810E) • Programming : Field programming and PC programming as per the user's communication needs.
3.	High Band VHF Transreceiver Handheld 1 to 5 watt 136-174 MHz with spare battery – 100 nos.	• Frequency range : 136 – 174 MHz • Sensitivity : 0.3 µ volt – 118dBm for 12 dB SINAD or better • RF output : High 5 watt, Low 1 watt selectable • Environment protection : IP 67 or better • Channel spacing : 12.5/25 KHz • Modulation : Frequency modulation (Phase) • Battery capacity : 7.2 V, 2000mAh or above • Built in scrambler (rolling code preferable) **OR** • Frequency Range : 136-174 MHZ full band. • TDMA : 2-Slot • Number of channels : 16 Channel minimum • Channel spacing : 12.5 KHZ /25 KHz • Battery Capacity : Li-ion 2000mAH or Higher • Frequency stability : ± 1.5 ppm or better • Radio : Open standard Digital Protocol ETSI based DMR TDMA Radio. It should work in 12.5 KHZ channel spacing and Analog 12.5 /25 KHz • Antenna Impedance : 50 Ohms • Antenna : Helical Antenna • Type of operation : Simplex/Semiduplex/Press to talk • Weight : Less than 500Grms • Weight : < 400gms without battery • EMI/EMC : ETSI EN-301 489-I & ETSI 301 489-5 • **Essential Features** DMO Mode - For TDMA dual slot without Repeater • **Transmitter** RF Power output : Programable/switchable up 1 to 5W • Deviation : ± 2.5KHZ @ 12.5 KHZ and ± 5 KHZ at 25 KHZ • Emission : 11K0F3E for 12.5KHZ ,7K60FXE • Digital Modulation : 4 FSK • Modulation Limiting : ± 2.5KHZ at 12.5KHz • FMHum &Noise : Better than - 40 dbm below 1GHZ • Audio distortion : Less than 3% @ 1KHZ • TOT : For Disallowing inadverant keying of the transmitter,to prevent locking up one of the communication channel un-necessary. • Digital Vocoder : AMBE+2 • Adjacent Channel Power : (-) 60dB or better • **Receiver** • Sensitivity : 0.3µV at 5% BER or better • Adjacent Channel Selectivity : 70 dB @ 25KHZ or better • Inter modulation : 65dB as per ETSI standards • Audio response((6dB /Octave pre-emphasis from 300 -3000HZ) : + 1 and -3 dB • Audio output : 500mW or higher • Conducted spurious Emission : (- 57dBM or better)

		• **General Essential features** • Accessories as per configuration : (i) RF flexible Antenna • Manuals/ Literature : (i) User manual with each radio • Conditions (OEM Undertaking) : (i) Bidder must indicate OEM Service Centre in India for after sales Warrenty and post warranty support. (ii) Warranty - 24 months for radios and 12 months for accessories. (iii) The Firm should enclose DOT/WPC Licence for suppling Wireless equipment in India. • Environmental Standard (ILAC Reports) : (i) MIL standard 810E or equivalent. (ii) Operating temperature -30° to + 60°C. (iii) Storage temperature - -40° to + 80° C. (iv) Humidity- 90% at 50%(Mil std 810E). • No. of Battery : Two Battery with each radio set. • Alert : Low battery • Mixed Mode : Analog and Digital • Protection : Reverse polarity protection • Programming : All necessary Software and Hardware require for programming of the set.
4.	Programming Kits for High Band Set – 3 nos.	Programming kit (Software and cable) – 2 Nos. each for above hand held set.
5.	Low Band VHF Transreceiver Static (big) set 25 watt 68-88 MHz with full accessories including GPA, feeder and vehicular antenna – 50 nos.	• Frequency range : 68 – 88 MHz • Sensitivity : 0.3 µ volt – 118dBm for 12 dB SINAD or better • RF output : 25 watt or high selectable with software • Environment protection : IP 54 or better • Channel spacing : 12.5/25 KHz • Modulation : Frequency modulation (Phase) • Battery capacity : 12 V, DC • System interface facility: preferable Pin in/out to fabricate repeater or to connect external devices as per requirement. • It should have caller ID with PTT ID
6.	Low Band VHF Transreceiver Hand held set 1 to 5 watt with full accessories and spare battery – 50 nos.	• Frequency range : 68 – 88 MHz • Sensitivity : 0.3 µ volt – 118dBm for 12 dB SINAD or better • RF output : High 5 watt, Low 1 watt selectable • Environment protection : IP 67 or better • Channel spacing : 12.5/25 KHz • Modulation : Frequency modulation (Phase) • Battery capacity : 7.2 V, 2000mAh or above
7.	Programming Kits for Low Band Set – 3 nos.	Programming kit (Software and cable) – 2 nos. each for above sets.
8.	Simulcast system – 4 nos.	• Frequency deviation between different repeater sites should be less than 16 Hz • Audio phase deviation from different sites analog 20 micro sec. and digital 50 micro sec. • System specification: Frequency range : 136 – 174 MHz DMR type II Standards Two slots TDMA Accurate frequency and synchronized by GPS System tropology to interconnect different sites capable of IP link, ether link and wireless link Max BS amount 100 Max carrier in 1 mso Call set up time less than 50 ms Voice delay less than 1000 ms Link required a. Delay less than 30 ms b. Jilter less than 20 ms c. Pack loss less than 3% d. BW – 64kbps per carrier

	Equipments for Traffic Management	
Sl. No.	Item	Specification
1.	Vehicle Smart Card Reader – 20 nos.	• *OS* : iOS • *Power supply* : 9 – 12 Volt • *Reading mode* : Master Slave mode • *Reading Range* : 100m • *Scan speed* : 0-100scans.sec • *Installation type* : Wall mounted • *Interfaces* : TCP / IP • *Identification time* : <300ms • *Frequency Mode* : Fixed Frequency Emission Mode
2.	Forensic Kit – 5 nos.	Crime Scene protection barrier post (set of 4) • *Crime Scene barrier tape* : 500 meters • Light baton, Flasher, Set of Photo eveidence number (0-9 & A-Z), Set of evidence markers, Set of photo direction indicators, Set of eveidence marking flag, Body suit
3.	Walkie Talkie – 200 nos.	• *General* : VHF 136-174MHz • *Frequency Range* : UHF : 400-470MHz, 350-390MHz, U/V 136-174MHz/400-470MHz • *Channel capacity* : 16 (15+5) • *Channel spacing* : 25.0KHz/12.5KHz • *Frequency stability* : $\pm$ 2.5ppm • *Antenna Impedance* : 50ohm • *Battery* : 1600Mah • *Receiver sensitivity* : 0.20uV (25KHz) / 0.22uV (12.5KHz)
4.	Sound Meter / Noise Meter – 5 nos.	• *Measuring Range* : 30-130dBA • *Accuracy* : $\pm$ 1.5dB • *Resolution* : 0.1dB • *Sampling time* : 2 times / second
5.	Traffic Monkey Cap (Blue) – 450 nos.	• Durable for sun and rain

	Requirements for e-challan system	
	HARDWARE	
1.	Mobile Phone – 20 nos.	• *Screen size* : 7 inches • *RAM* : 8 GB • *Network* : 4G Capable • *Camera* : 8MP • *OS* : Android 5 & above • *Processor* : At least 1.5GHz • *Battery* : 4000mAH
2.	Mobile Phone holder – 150 nos.	• Belt holster leather case with stylus holder for 7 inches tablet
3.	Stylus – 150 nos.	• Stylus for capacitive touch screen
4.	65 inches LED TV – 2 nos.	• *Screen size* : 65 inches • *Display port* : HDMI • *Screen type* : LED • *Resolution* : At least 1080p • *Accessories* : 2 (two) HDMI cables, 1 (one) Display Port 1.4 to HDMI cable
5.	Desktop PC – 1 no.	• *Processor* : IntelCore i5, 7th Generation, 3.4GHz • *Motherboard* : LGA1151 and DDR4 compatible • *RAM* : 8GB DDR4 • *Storage* : 1TB • *Graphic Card* : GeForce 1050 Ti, 4GB, 2HDMI port • *Monitor* : 24 inches HDMI Monitor
6.	Development & Maintenance of the Software	High Performance Laptop • *Processor* : TURBO BOOS UPTO 3.5GHz OF eDRAM • *Display* : Ultra High Definition • *Display Screen Size* : 15 inches • *Storage* : PCIe-based onboard SSD • *Memory* : 2133MHz LP DDR3 • *OS* : High Sierra • Touch bar with integrated touch ID sensor
	SOFTWARE	
7.	Firebase real time data base per annum	• *Real time data base* : 1,00,000 simultaneous connection, 2.5GB textual data storage with 20GB download per month. • *File Storage* : 50GB with 50GB download per day

	Smart Policing for Establishment of District Cyber Crime Centre in all District Capital	
1.	Cellebrite UFED – 1 no.	• Support for major mobile phone brands • Support for Chinese mobile and other unknown brands • Features to perform forensically sound advanced logical, file system and physical extractions of intact and deleted data from mobile phones including smart watches • Features to bypass pattern, password or PIN locks and overcome encryption challenges. • Features for carving data from mobile devices utilizing power tool such as SQLite Wizard, Hex Viewer, Python Shell and more, to locate and manually carve or parse hidden and unknown data to reveal the greatest amount of evidence.
2.	FRED – Forensic Recovery of Evidence Laptop – 1 no.	• **Processor :**Intel Core i7-7700K Skylake Quad Core Processor, 4.2 GHz, 8MB Intel Smart Cache • **RAM :**16 GB PC4-17000 DDR4 2133 Memory • **Storage :**256 GB Solid State Internal SATA Drive • **Mother Board :**Intel Z170 Express Chipset • **Screen size :**15.6" Full HD (1920x1080) IPS Display with G-Sync Technology, Matte Finish • **GPU :**NVIDIA GeForce GTX 1060 with 6 GB GDDR5 VRAM • **Operating System :**Windows 10 Professional (64 bit) with support for SUSE Professional Linux (64 bit) • **Integrated Components:** ▪ 1 RJ-45 LAN (10/100/1000Mbps) ▪ Intel Dual Band Wireless-AC 8260 - 802.11ac, Dual Band, 2x2 Wi-Fi + Bluetooth 4.2 ▪ Card Reader 6-in-1 (MMC/RSMMC/SD/Mini-SD/SDHC/SDXC up to UHS-II) ▪ 2.0 Megapixel FHD Video Camera ▪ Finger Print Reader ▪ 1 HDMI Port ▪ 2 Mini DisplayPort 1.3 ports ▪ 1 Thunderbolt 3 / USB 3.1 Gen 2 Combo Port (Type C) ▪ 1 USB 3.1 Gen 2 Port (Type C) ▪ 3 USB 3.0 ports ▪ 1 USB 2.0 Port ▪ 8 Cell Smart Lithium -Ion, 82WH Battery Pack ▪ **Ultrakit which includes:** write blockers, cables, adapters, and power supplies necessary for use in acquiring images in the field using a standard laptop with FireWire or USB support. Write Protected UltraBlock IDE/SATA, UltraBlock SAS, UltraBlock USB, two power supplies and all the cables required for connecting different hard drives.
3.	Cybercheck Suite – 1 no.	• Support for Supports FAT12/16/32, NTFS, EXT2FS, EXT3FS, UFS • Unicode and Indian Language support • Recovers data from deleted files, re-formatted or re-partitioned storage media • Recovers data from unallocated clusters, lost clusters, file/partition/disk/MBR slack, swap files • Multiple keyword and GREP search • Time-line analysis of normal, deleted and signature mismatched files • Mailbox, Registry and Internet History viewers • Bookmarking on selected data, files and folders • Facility to restore image to physical media • Disk Imaging facility with compression for any media
4.	Oxygen Mobile Forensic Detective – 1 no.	• Acquires data from mobile phones with different platforms such as Android, blackberry, IOS, Symbian systems etc. • Support for importing backups and images (iTunes, Android, JTAG, Chip-Off) • Data parsing capabilities of mobile phone applications • Recovery of deleted data • Support for data analysis (Social Graph, Timeline, Key Evidence) • Allows to search data by various criteria including keywords • Exports data to popular file formats, like PDF, RTF, XLS, XML, etc.

		• Finds passwords to encrypted backups and images • Bypasses screen lock on popular Android OS devices • Acquires locations history and media files. • Support for extracting cloud data from popular cloud storage such as iCloud, Google, Microsoft, etc. • Features to import and analysis of call data records • Visualizes routes and common locations of several users
5.	Hard Disk 2 TB – 2 nos.	• SATA interface @ 7200 RPM
6.	Pen Drive (San Disk Ultra Dual USB Drive 64 GB) – 2 nos.	• USB 3.0 / 3.1 interface • Inbuilt Micro USB type B or Type C port for OTG support
7.	Portable Hard drive 2 TB – 1 no.	• USB 3.0 / 3.1 interface • RPM @ 5400 / 7200 • Support for encryption of the storage device (inbuilt)
8.	Tableau Forensic Write Blocker T35U IDE/SATA Kit – 1 no.	• USB 3.0 Standard-B connector • **Compatibility** ▪ SATA Device - SATA 1 or SATA 2 hard disk devices ▪ IDE Device Parallel ATA hard disk devices with Logical Block Addressing (LBA) support • **Host OS** : Microsoft Windows version 7, 8, 10, Macintosh OS X, Most modern Linux distributions
9.	Tableau T7u Forensic PCIeBridge – 1 no.	• For forensic acquisition of PCIe solid-state-drives • Imaging speeds up to 330 MB/second • USB 3.0 Standard-B connector • **Compatibility** ▪ PCIe Device
10.	Tableau Hard Disk adapter kit – 1 no.	Support for the following list of drives ▪ IDE adapter for Notebook Drive Adapter (1.8 Inch) ▪ IDE adapter for Notebook Drive Adapter (2.5 Inch) ▪ IDE ZIF adapter for ZIF Drive Adapter (1.8 Inch) ▪ Micro SATA Drive Adapter ▪ IDE Signal Cable (2 inch) ▪ Toshiba ZIF Drive signal cable ▪ Hitachi ZIF Drive Signal Cable
11.	Tableau TC5-8 SATA style power adapter – 2 nos.	SATA Drive power connector
12.	SATA Cable – 4 nos.	Support for SATA 1 or SATA 2 device
13.	IDE Cable – 2 nos.	Support ofr Parallel ATA device
14.	Faradays Bag – 2 nos.	Faradays Bag is required for packing mobile phones from crime scene to block out electromagnetic fields and signals.
15.	Multi function Colour Printer – 1 no.	• Multifunctional i.e. print, copy and scan • Print Speed: ▪ Normal : 16 ppm for black, 4ppm fpr color • Print Quality : upto 600x600 dpi (2400 dpi) • Connectivity : USB 2.0 and Ethernet 10/100 Base-TX network port
16.	Desktop computer Core i5 7th gen 8 GB DDR4/Windows 10 with 22inch display – 2 nos.	• **Processor :**Intel Core i5-7600 7thGenreationSkylake Quad Core Processor, 4.1 GHz, 6MB Intel Smart Cache • **RAM :** 8 GB PC4-17000 DDR4 2133 Memory • **Storage :** 128 GB Solid State Internal SATA Drive and 1TB HDD for data storage • **Mother Board :** Intel Z170 Express Chipset • **Screen size :** 22" Full HD (1920x1080) IPS Display • **GPU :** NVIDIA GeForce GTX 1060 with 6 GB GDDR5 VRAM • **Operating System :**Windows 10 Professional (64 bit) • **22 in LED Monitor**

	Smart Policing for Establishment of District Cyber Crime Centre in three District Capital	
1.	Cellebrite UFED 4PC – 1 no.	• Software base Mobile Forensic Data Acquisition and analysis tool • Support for major mobile phone brands and platform (Android, IOS, Blackberry, Symbian OS etc) • Support for Chinese mobile and other unknown brands • Features to perform forensically sound advanced logical, file system and physical extractions of intact and deleted data from mobile phones including smart watches • Features to bypass pattern, password or PIN locks and overcome encryption challenges. • Features for carving data from mobile devices utilizing power tool such as SQLite Wizard, Hex Viewer, Python Shell and more, to locate and manually carve or parse hidden and unknown data to reveal the greatest amount of evidence.
2.	FRED – Forensic Recovery of Evidence Laptop – 1 no.	• **Processor :**Intel Core i7-7700K Skylake Quad Core Processor, 4.2 GHz, 8MB Intel Smart Cache • **RAM :**16 GB PC4-17000 DDR4 2133 Memory • **Storage :**256 GB Solid State Internal SATA Drive • **Mother Board :**Intel Z170 Express Chipset • **Screen size :**15.6" Full HD (1920x1080) IPS Display with G-Sync Technology, Matte Finish • **GPU :**NVIDIA GeForce GTX 1060 with 6 GB GDDR5 VRAM • **Operating System :**Windows 10 Professional (64 bit) with support for SUSE Professional Linux (64 bit) • **Integrated Components:** ▪ 1 RJ-45 LAN (10/100/1000Mbps) ▪ Intel Dual Band Wireless-AC 8260 - 802.11ac, Dual Band, 2x2 Wi-Fi + Bluetooth 4.2 ▪ Card Reader 6-in-1 (MMC/RSMMC/SD/Mini-SD/SDHC/SDXC up to UHS-II) ▪ 2.0 Megapixel FHD Video Camera ▪ Finger Print Reader ▪ 1 HDMI Port ▪ 2 Mini DisplayPort 1.3 ports ▪ 1 Thunderbolt 3 / USB 3.1 Gen 2 Combo Port (Type C) ▪ 1 USB 3.1 Gen 2 Port (Type C) ▪ 3 USB 3.0 ports ▪ 1 USB 2.0 Port ▪ 8 Cell Smart Lithium -Ion, 82WH Battery Pack • **Ultrakit which includes:** write blockers, cables, adapters, and power supplies necessary for use in acquiring images in the field using a standard laptop with FireWire or USB support. Write Protected UltraBlock IDE/SATA, UltraBlock SAS, UltraBlock USB, two power supplies and all the cables required for connecting different hard drives.
3.	Logicube Talon Ultimate – 1 no.	• Forensic Imaging Speed of 40GB/Min • Support for multiple source and multiple destination • Support for PCIe SSD (M.2 NVMe, AHCI, SATA), PCIe SATA, IDE, SAS, SCSI , ZIF, Firewire, USB storage (USB 2.0 and 3.0) and memory cards • AES 256 bit encryption
4.	ENCASE V8.05 with three years subscription – 1 no.	• Support for acquisition and analysis of all kinds of Storage device and operating systems • Support for EnScript • Support for Mobile acquisition from different platforms including android, IOS, Blackberry, Symbian OS etc. • Support for Supports FAT12/16/32, NTFS, EXT2FS, EXT3FS, UFS • Recovers data from deleted files, re-formatted or re-partitioned storage media • Recovers data from unallocated clusters, lost clusters, file/partition/disk/MBR slack, swap files • Multiple keyword and GREP search • Time-line analysis of normal, deleted and signature mismatched files • Mailbox, Registry and Internet History viewers

		• Bookmarking on selected data, files and folders • Facility to restore image to physical media • Disk Imaging facility with compression for any media
5.	Oxygen Mobile Forensic Detective – 1 no.	• Acquires data from mobile phones with different platforms such as Android, blackberry, IOS, Symbian systems etc. • Support for importing backups and images (iTunes, Android, JTAG, Chip-Off) • Data parsing capabilities of mobile phone applications • Recovery of deleted data • Support for data analysis (Social Graph, Timeline, Key Evidence) • Allows to search data by various criteria including keywords • Exports data to popular file formats, like PDF, RTF, XLS, XML, etc. • Finds passwords to encrypted backups and images • Bypasses screen lock on popular Android OS devices • locations history and media files. • Support for extracting cloud data from popular cloud storage such as iCloud, Google, Microsoft, etc. • Features to import and analysis of call data records
6.	Hard Disk 2 TB – 2 nos.	• SATA interface @ 7200 RPM
7.	Pen Drive (San Disk Ultra Dual USB Drive 64 GB) – 2 nos.	• USB 3.0 / 3.1 interface • Inbuilt Micro USB type B or Type C port for OTG support
8.	Portable Hard drive 2 TB – 1 no.	• USB 3.0 / 3.1 interface • RPM @ 5400 / 7200 • Support for encryption of the storage device (inbuilt)
9.	Tableau Forensic Write Blocker T35U IDE/SATA Kit – 1 no.	• USB 3.0 Standard-B connector • **Compatibility** ▪ SATA Device - SATA 1 or SATA 2 hard disk devices ▪ IDE Device Parallel ATA hard disk devices with Logical Block Addressing (LBA) support • **Host OS** : Microsoft Windows version 7, 8, 10, Macintosh OS X, Most modern Linux distributions
10.	Tableau T7u Forensic PCIe Bridge – 1 no.	• For forensic acquisition of PCIe solid-state-drives • Imaging speeds up to 330 MB/second • USB 3.0 Standard-B connector • **Compatibility** ▪ PCIe Device
11.	Tableau Hard Disk adapter kit – 1 no.	Support for the following list of different hard drives ▪ IDE adapter for Notebook Drive Adapter (1.8 Inch) ▪ IDE adapter for Notebook Drive Adapter (2.5 Inch) ▪ IDE ZIF adapter for ZIF Drive Adapter (1.8 Inch) ▪ Micro SATA Drive Adapter ▪ IDE Signal Cable (2 inch) ▪ Toshiba ZIF Drive signal cable ▪ Hitachi ZIF Drive Signal Cable
12.	Tableau TC5-8 SATA style power adapter – 2 nos.	SATA Drive power connector
13.	SATA Cable – 4 nos.	Support for SATA 1 or SATA 2 device
14.	IDE Cable – 2 nos.	Support ofr Parallel ATA device
15.	Faradays Bag – 2 nos.	Faradays Bag is required for packing mobile phones from crime scene to block out electromagnetic fields and signals.
16.	Multi function Printer HP color Laserjet Pro MFP M176n – 1 no.	• Multifunctional i.e. print, copy and scan • Minimum Print Speed: • Normal : 16 ppm for black, 4ppm fpr color • Print Quality : upto 600x600 dpi (2400 dpi) • Connectivity : USB 2.0 and Ethernet 10/100 Base-TX network port
17.	Desktop computer Core i5 7th Gen 8 GB DDR4/Windows 10 with 22inch display – 2 nos.	• **Processor :** Intel Core i5-7600 7th GenerationSkylake Quad Core Processor, 4.1 GHz, 6MB Intel Smart Cache • **RAM :** 8 GB PC4-17000 DDR4 2133 Memory • **Storage :** 128 GB Solid State Internal SATA Drive and 1TB HDD for data storage • **Mother Board :**Intel Z170 Express Chipset • **Screen size :** 22" Full HD (1920x1080) IPS Display • **GPU :** NVIDIA GeForce GTX 1060 with 6 GB GDDR5 VRAM • **Operating System :**Windows 10 Professional (64b) • **22 inch LED monitor**

Equipments required for setting up of Command Control Center

1.	84 inch LED TV (Touch Screen) – 3 nos.	• 10 point multi touchscreen • Minimum 60Hetz refresh rate • Minimum 2 HDMI ports • USB support • VGA display port • Wall mount
2.	Workstation Computer Desktop – 570-p052in – 4 nos.	• **Processor -** Intel® Core™ i7-7700 (3.6 GHz, up to 4.2 GHz • **RAM -** 8 GB PC4-19200 DDR4-2400 (19.2 GB/s) • **STORAGE** – 1 TB 7200 rpm SATA • **CONNECTIVITY -** Wireless 802.11b/g/n (1x1) and Bluetooth® 5.0 combo • **Network interface :** Integrated 10 / 100 / 1000 Gigabit Ethernet LAN • **USB interface –** USEB 2.0, USB 3.0 • **GPU :** Intel HD Graphics • **24inch** LED Monitor
3.	Unmanned Aerial Vehicle (UAV / drone) DJI-Mavic Pro (combo value pack) – 4 nos.	• Support for GPS & GLONASS • Upto 4K video recording capabilities • Transmission utpo 7 Km or more with live feed of 1080p or 720p video resolution • Minium of upto 30 Minutes flight time • 3-Axis Gimbal stabilization • Intelligent obstacle avoidance system • Still image capture up to 12 Megapixel • RAW file capture support
4.	Laserjet Printer – 2 nos.	• Multifunctional i.e. print, copy and scan • Minimum Print Speed: • Normal : 16 ppm for black, 4ppm for color • Print Quality : upto 600x600 dpi (2400 dpi) • Connectivity : USB 2.0 and Ethernet 10/100 Base-TX network port
5.	Server computer for social media monitoring tool – 2 nos.	• Form Factor – Tower Type • Processor - Intel® Xeon® E5-2600 v4 product family or above • RAM - 64 GB DDR4 minimum • Storage – 4 TB minimum • With Dynamic Array Controller • 24 inch Monitor
6.	Media converter – 1 no.	For network connectivity
7.	Optical Fibre (depending on the location of command control center) – 200 mtr.	Multi-Mode optical fiber with Plastic Optical Fiber (POF)

8.	Network Switch – 1 no.	• **PHYSICAL INTERFACES**
		  • 24 or 48 RJ-45 autosensing 10/100/1000 ports
		  • IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T support
		  • Duplex: 10BASE-T/ 100BASE-TX: half or full; 1000BASE-T:
		• **MEMORY AND PROCESSOR –**
		  • Dual Core ARM Coretex @ 1016 MHz (48G models) or Dual Core ARM Coretex A9 @ 1016 MHz (8G/24G models)
		  • 1 GB DDR3 SDRAM
		  • Packet buffer size: 12.38 MB 4.5MB Ingress/7.875MB Egress
		  • 4 GB eMMC
		• **PERFORMANCE**
		  • 1000 Mb Latency: < 3.8 µs (64-byte packets)
		  • 10 Gbps Latency (JL253A-JL258A): < 1.6 µs (64-byte packets)
		  • Routing table size: 10000 entries (IPv4), 5000 entries (IPv6)
		  • MAC address table size: 32768 entries

		• Throughput: up to 95.2 Mpps • Switching capacity: 128 Gbps

9.	Router – 1 no.	• 2 integrated 10/100/1000 Ethernet ports
		• 2 Enhanced High-Speed WAN Interface Card slots that can host 2 single wide or 1 double wide and 1 single wide (e)HWIC
		• 1 integrated 802.11n Wireless Access Point
		• Fully integrated power distribution to modules supporting 802.3af Power over Ethernet (PoE) and Cisco Enhanced PoE
		• Security
		  • Embedded hardware-accelerated encryption for VPN
		  • Secure collaborative communications with Group Encrypted Transport VPN, Dynamic Multipoint VPN, or Enhanced Easy VPN
		  • Integrated threat control using Cisco Firewall, Firewall, IPS, and Content Filtering
		  • Identity management that uses authentication, authorization and accounting (AAA), and public key infrastructure
		• Mobility
		  • Dual radios for 2.4-Ghz 802.11b/g/n. and 5-GHz 802.11a/n modes

10.	UPS 10KVA – 1 no.	• Power – 10KVA • 1 phase input, 1 phase output • Output power – 8000Watt • Input frequency range – 170 V to 280 V (Volt) • Battery Voltage – minimum 192 V • Battery Capacity – 8Ah upto 200 Ah (Ampere hour) • No.of Batteries 16 • RS-232 communication port • Minimum IP20 Protection • Fuzzy logic Controlled battery charging • Intelligent Battery Management system
11.	Generator Set – 1 no.	• Power – 10KVA • Single Phase • Diesel fuel • Output frequency 50Hz • 2 Cylinder motor • Water cooled • Fuel Capacity- Minimum 80 litres
12.	Computer Table – 4 nos.	Minimum width : 3 ft Depth : 1 ft 8 inch Height ; 2 ft 4 inch
13.	Computer Chair – 4 nos.	Rotatable ergonomic chair with back support with height adjustment
14.	Conference Table (9 seater) – 1 no.	• Oval conference table • Seating Capacity of 10 people
15.	Conference chair – 9 nos.	• Ergonomic conference chair • Long back support with adjustment, height adjustment and hand rest adjustment
16.	Sofa set – 2 nos.	4 seater sofa
17.	Infrastructure, installation and fittings	Wirings, room partition, Lighting systems, power supply etc.
18.	Air Conditioner (1.5 ton) – 2 nos.	For keeping the system cool and maintaining temperature of command control center.