

PAKISTAN AERONAUTICAL COMPLEX, KAMRA MIRAGE REBUILD FACTORY

TENDER NOTICE NO MRF/12-13/25 Dated 22 May, 2013.

1. Sealed tenders in the name of MD MRF PACB Kamra on **F.O.R Basis** from Pre Qualified Contractors / Suppliers for the following categories of items are invited:-

“Walkie Talkie Sets Handheld, Walkie Talkie Sets Vehicle Mounted , Walkie Talkie Set Base Station, Walkie Talkie Sets Repeater , Generator , Walk through Gate, Bullet Proof Jackets, Anti Ballistic Helmet, NVG , CCD Camera, PTZ Dome Camera, PTZ Controller, DVR U-5 (16 Channel), Video Optic Fiber Transceiver (16 Channel) , LCD 46”, LED 40”, Varie Pistols, Teaser Gun, Guard Post (Bullet Proof) and Misc (Tools, Grinders, Testers, Micrometers, Gauges, Oils, Lubricants, Chemicals, Ground Equipments and Material Etc).

2. Details can be downloaded from PPRA website www.ppra.org.pk and as well as PACB website www.pac.org.pk or can be collected from DTE of Log (LP Section) MRF PAC Kamra Distt Attock from 27-05-2013 during working hours (except holidays).

DUE DATE : **07-06-2013 before 1000 Hrs.**
TENDER OPENING TIME : **07-06-2013 at 1100 Hrs.**

3. Please contact **Tele # 051-9099-4294 / 4414, 4417** or **Fax No 057-9317412** for any other information.

TERMS & CONDITIONS:-

- GST may be indicated separately. The envelopes must be marked with “Item’s name and Commercial / Technical offer”. Literature / brochures of equipment must be attached with technical offer.
- Quotations must be submitted in two copies for single line item i.e. one copy with technical details without price and one copy as commercial offer in separate envelopes.
- Validity period should not be less than 90 days.
- Complete technical specifications, MSDS, OEM & Conformance Certificate, Calibration certificate, Fitness report where applicable are required. Sample of chemicals may be asked for test.
- Quotation received after due date / time will not be entertained. The CFA reserves the right to accept / reject the part or whole tender.
- Quantity can be increased / decreased at the time of order as per our requirement.**
- Earnest money (5%) would be submitted by Non-Registered PACB supplier in case of qualifying for any item.

(**ATIQU-UR-REHMAN**)
SQUADRON LEADER
FOR MANAGING DIRECTOR
MRF PAC KAMRA

Directorate of Logistics MRF, PAC Kamra
Contact No. 051-90994294 & 4414, Fax No. 057-9317412



**LIST OF OPEN TENDER NO MRF/12-13/25
DATED 22-05-13 OPENING DATE 07-06-2013**

SNo	Part No	Noun	Qty	U/I	Specification
1		Generators	2	Ea	Generators (100 KVA):- 1. Perkins Diesel Generator 100 KVA. Perkins (UK) Diesel Engine Model 1104C-44TAG2. Mecc Alte (UK) Alternator Model ECP34-2S/4. Water Cooled, 50 Hz, 1500 RPM, 400/230V, 3 phase, 0.8 p.f. 2. Sound and Weather Proof Canopy. Fabricated from Hot Rolled AISI 1010 Steel, 12/14 SWG, Modular Design for ease of maintenance. Acoustic, high density, open cellular, fire proof foam Paint powder coated to RAL 9010 with zine undercoat / Reputed brands like caterpillar, Honda, Kipor etc OR Equivalent.
2		Walk through Gate	3	Ea	Walk Through Gate:- 1. Archway inside 30 inch wide, 80 inch high, 20 inch deep 2. Overall Outside 35 inch wide, 80 inch high, 20 inch deep 3. Latest continuous wave multiple sensor measurement / technology. 4. LED display on the header panel as well as on the side panels. 5. Shows the height of the weapons being carried with respect to the human body 6. 18 independent detector zones 7. Integrated floor mounting boots 8. Traffic pacing stop & go lights 9.. 180 degrees view angle panel LEDs 10. Capability to show target left, right and center of the person being screened. Each of the three positions above are indicated by three separate independent lights 11. Multi zone system with true pin point detection capability 12. HAGC system to ensure uniform detection 13. It can be demonstrated and practically counted the total no. of zones by means of separate independent lights 14. Made in USA 15. IR sensors 16. Internal rechargeable batter Backup 8-10 hrs 17. Dimensions, Weight and Power Header:34"x11"x25" (85x27.5x62.5c) 371 lbs (15.45 Kg) Side Panels:91"x9"x27" (227.5x22.5x67.5c) 144 lbs (65.45 Kg) / latest specification available in the market OR Equivalent.
3		Bullet Proof Jackets	25	Ea	1. Design Features. (a) Protected Area: Back & Front, Neck (b) Vest Opening: Front both side shoulders using Velcro (c) Casualty drag Handles: Available on requested (d) Protection Plates: Front & Rear (e) Adjustable Features: Waist & Shoulder (f) Pocket: 2 Front pockets can be customized (g) Shoulder padding for carrying guns, Flexible & easy to use with stand rough handling.2. Physical Properties (a) Level of Protection: NIJ III (b) Outer cover: Nylon (Cardura 1000-D) (c) Chemically inert, water resistant, Weave, colour fastened, shrink proof, loatable, Provide max protection against full metal jacket, Blast trauma protection, Minimize blast trauma injuries, Excellent stopping power with multihit angle shot benefit. 3. Hard Armour Plates. (a) Strike Face: Silicon carbide multiple tiles of hexagonal shape of 30 mm dia, resin backed laminated with suitable ballistic / spall protection. (b) Backing Materials: Backing plate made of HPPE (High performance polyethylene, Dymema / Spectra) (c) Shock absorbent: Poly urethane edge injected to increase shock absorbance improvement for multihit capability (d) Weight per plate: Less than 1.7 Kgs (e) Size/shape: 250x300 (minimum) thickness 20 mm maximum / single / double curvature.(f) Outer cover: Laminated with suitable water proof fabric (g) Protection level: PK-III (i) 3 X rounds of 7.62 X 39mm of AK-47 from 15m (ii) 3 x rounds of 5.56x45mm (SS109) from 15m (iii) 3 x rounds of 7.62x51mm G-3 from 15m. 4. Soft Armour (a) Material: HPPE (Dyneema / Spectra) (b) Construction: Multiple layers of Dyneema UD SB-21 (c) Shape / Size: As per drawing approved by ITD (d) Protection level: PK-III 6 rounds of 7.62X51mm TT pistol Fired from 5M / latest specification available in the market OR Equivalent.
4		Anti Balistic / Bullet Proof Helmets	25	Ea	1. Fragmentation (V50). Fragmentation resistance ranging from 400 m/s up to 750 m/s; as tested with 1.1g, 22 Caliber, 17 grains Fragment Simulated Projectile, according to STANAG 2920 and US MIL STD 662F 2. Ballistic (National Institute of Justice) (a) NIJ IIA: Protects against 9mm FMJ and 44 Magnum SJHP, in accordance with NIJ Standard 0101.04. It has a V50 of 610 m/s (2000 ft/s). Make: Helmets are made in accordance with international standards having NIJ certifications. (b) Weight: Medium Size 53 to 59cm 1.25 KG large size 57 to 64 cm 1.35 Kg / latest specification available in market OR Equivalent



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5		NVG	3	Ea	<p>1. CAMERA SPECIFICATIONS System Binocular Thermal Night Vision Camera Un-cooled Micro-bolometer Detector Type: 640 x 480 VO x Micro bolometer Spectral Range (Wave Band): 7.5 – 13.5 pm Thermal Sensitivity: <50 Mk @ f/1.0 E-Zoom: 2x 4x Start-up from Stand-by <1.5 seconds Image Processing: Digital Detail Enhancement</p> <p>2. IMAGE PRESENTATION Built-in Display: Color VGA LCD Video Output NTSC or PAL composite video, RCA jack</p> <p>3. FILE STORAGE / DATA TRANSFER Still Image: SD or SDHC Card Video Storage: AVI format Real – time Clock Yes USB2 Port Yes .</p> <p>4. PHYSICAL CHARACTERISTICS Weight (w/o lens) 998 grams Size (L x W x H) 280 mm x 165 mm x 67mm</p> <p>5. POWER Battery Type 4AA Batteries: NiMH (including), Li-on or Alkaline (No other special Battery) Battery Life (Operation / Stand by):4.6 hours / 120 hours on NiMH Batteries</p> <p>6. ENVIRONMENTAL Rating:IP-67, Submersible Operating Temp: -4 °F – 140 °F (-20 °C-60 °C) Storage Temp: -40 °F-167 °F (-40 °C -75 °C) Drop 1m Drop</p> <p>7. LENS SPECIFICATION Lens Operation to be available: 65mm 100mm Size: Ht. – 84mm Ht-117mm Dia – 75 mm@ Dia-79mm @ FOV 10° x 8° 6° x 4°, E-Zoom FOV (Resolution) 2x: 5° x 4° 3° x 2° (320 x 240) (320 x 240) 4x: 2.5° x 2° 1.5° x 1° (160 x 120) (160 x 120)</p> <p>8. RANGE PERFORMANCE Detect Man (1.8 x 0.5 m) ≥ 1.900 KM ≥ 2.450 KM Recognize Man ≥ 490 M ≥ 650 M Detect Vehicle (4m x 1.5m) ≥ 4.800M ≥ 6.000KM Recognize Vehicles ≥ 1.350M ≥ 1.750M / latest specification available in the market OR Equivalent.</p>
6		CCD Camera	35	Ea	As per latest specifications available in market of reputed brand OR Equivalent.
7		PTZ Dome Camera	5	Ea	As per latest specifications available in market of reputed brand. OR Equivalent.
8		PTZ Controller	3	Ea	As per latest specifications available in market of reputed brand. OR Equivalent.
9		DVR U-5 (16 Channel)	3	Ea	As per latest specifications available in market of reputed brand. OR Equivalent.
10		Video Optic Fiber Transeiver (16 Channel)	3	Ea	As per latest specifications available in market of reputed brand. OR Equivalent.
11		LCD 46"	5	Ea	As per latest specifications available in market of reputed brand OR Equivalent.
12		LED 40"	5	Ea	As per latest specifications available in market of reputed brand. OR Equivalent.
13		Varie Pistols	2	Ea	Latest specification available in the market OR Equivalent.
14		Teaser Gun	2	Ea	Physical Characteristics 1Dimension without EPM (LxWxH) 8.2" [20.8 cm] x 2.1" [5.3 cm] x 4.1" [10.5 cm] 2 Weight 0.9 lbs [408 g] (w/o EPM and cartridges) 3 Dimensions with EPM (LxWxH) 8.2" [20.8cm]x2.1" [5.3 cm] x 5.0" [12.6 cm] 4 Weight 1.4 lbs [630 g (grams)] (w/EPM and 3 cartridges) Detailed Specifications 5 Housing High impact polymer unibody construction 6 Operating temperature range -4 °F [-20 °C] to 122 °F [50 °c] 7 Storage temperature range -40 °F [- 40 °C] to 167 °F [75 °c] , 8 Operating relative humidity Up to 80% (non-condensing) 9 Estimated useful life Approximately 5 year 10 Water resistance Drop retrieval in water up to 12" [30.5 cm] (Expected to function after drying 24 hours) / latest specification available in the market OR equivalent.
15		Guard Post (Bullet Proof)	1	Ea	1 Fiber Glass Guard Posts, 2 Size 7' x 7', 3 Bullet Proof , 4 Outer wall Fiber Glass sheet 4 to 5 mm, 5 Outer & Inner Wall Cavity 16" for sand filling , 6 Mosquito Net , 7 Inner Wall MS Sheet 18 Gauge, 8 Electric Fan , 9 Florescent light , 10 Electric Outlet, 11 Imported Door Lock with Keys. / latest specification available in the market OR equivalent
16		Walkie Talkie (Digital) Set Handheld	45	Ea	(Hytera PD788 or equivalent) Features Range, 1 Frequency Range VHF , 2 No of Channels >99 , 3 Channel Spacing 12.5/20/25 KHz, 4 Operating Temperature -20 °C to +55 °C , 5 Storage Temperature -40 °C to +85 °C, 6 Battery Battery having enhanced life with at least 9 hours operation in analogue and 13 hours in digital mode at 5/5/90 duty cycle , 7 RF Power Output 1W and ≥5W user selectable, 8 "Frequency Stability (-20 °C to +55 °C)" ± 1.5 ppm, 9 Hum and Noise " 40 dB @ 12.5 KHz 45 dB @ 20 / 25 KHz",



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					<p>10 Modulation Limiting "± 2.5 KHz @12.5 KHz ± 4.0 KHz @ 20 KHz ± 5.0 KHz @ 25 KHz",</p> <p>11 Conducted / Radiated Emission " -36 dBm < 1 GHz -30 dBm > 1 GHz",</p> <p>12 Adjacent Channel Power " 60 dB @12.5 KHz 70 dB @ 20/25 KHz",</p> <p>13 Digital Vocoder Type AMBE++ or SELP,</p> <p>14 Digital Protocol ETSI-TS 102 361-1, 2 & 3 ,</p> <p>15 Sensitivity Analogue "3.5 μV (12 db SINAD), 0.22 μV (typical) (12 db SINAD) 0.4 μV (20 db SINAD)", Digital 5% BER : 0.3 μV,</p> <p>16 Intermodulation 65dB,</p> <p>17 Adjacent Channel Selectivity "60dB @ 12.5 KHz 70 dB @ 20 / 25 KHz",</p> <p>18 Spurious Rejection 70 dB,</p> <p>19 Rated Audio 500 mW,</p> <p>20 Audio Distortion @ Rated Audio 3% (typical),</p> <p>21 Audio Response +1 ~ -3 dB,</p> <p>22 Conducted Spurious Emission < -57 dBm,</p> <p>23 Mode Dual mode (analogue + Digital), should be compatible with Motorola GP2000,</p> <p>24 Scan Allows to monitor multiple channels and receive calls.,</p> <p>25 Encryption Enhance built-in voice and data encryption with key management. Atleast RC41 and preferably user customizable 256 bits AES,</p> <p>26 Data Communication Integrated data port compatible with PC along with requisite software / drivers,</p> <p>27 Interface Flexible, menu-driven interface with user-friendly icons and at least two lines of text for ease of reading text messages.</p> <p>28 Indicator Tri-colour LED indicator for clear, visible feedback of calling, scanning and monitoring.,</p> <p>29 Display Large size TFT colour LCD Display,</p> <p>30 Buttons "** Large, easy to use navigation buttons allows easy access to intuitive menu-driven interfaces. * Programmable buttons for easy access to required features such as one-touch calling. * Large, textured push-to-talk button. Provides good tactile response and easy access, even when wearing gloves."</p> <p>31 Speaker Powerful, front projecting speaker,</p> <p>32 Antenna Single Antenna with integrated GPS Monopole</p> <p>33 Sealing Rated IP57. Protected against Harm from dust or water spray.,</p> <p>Optional Features ,</p> <p>34 GPS "Integrated GPS (with GPS location tracking) GPS performance : -TTFF (Time To First Fix) Cold Start < 1 minute -TTFF (Time To First Fix) Hot Start < 10 seconds - Horizontal Accuracy < 10 meters",</p> <p>35 IP Multi site IP Connection ,</p> <p>36 SMS Atleast 256 characters,</p> <p>37 Emergency Button To alert supervisor or dispatcher in an emergency situation , Accessories / Manual ,</p> <p>38 Operating Manual,</p> <p>39 Service Manual,</p> <p>40 Rapid Charger,</p> <p>41 Multi Charger Optional,</p> <p>42 Battery Optimizing System Optional,</p> <p>43 Headphone Optional,</p> <p>44 Bluetooth remote speaker microphone Optional,</p> <p>45 Leather Cover Optional,</p> <p>46 "Software & Cable (PC to Radio)" Optional,</p> <p>47 Clone Cable Optional,</p> <p>Misc</p> <p>48 Warranty minimum 02 years ,</p> <p>49 Spare & Maintenance Support atleast for 10 years,</p> <p>50 Military Standards : MIL-STD-810 C, D, E, F and G standards for temperature, shock, vibration, rain salt fog, dust and sand, humidity and solar./ OR Equivalent.</p>
17		Walkie Talkie Set Vehicle mounted	10	Ea	<p>(Hytera MD788 or equivalent) Features Range</p> <p>1 Operating Voltages Compatible DC adaptor for vehicular use ,</p> <p>2 Frequency Range VHF ,</p>

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				<p>42 Microphone Palm Microphone (optional keypad), 43 Vehicle Power Cord , 44 Speaker (External) Optional, 45 Mounting Bracket Optional, 46 "Software & Cable (PC to Radio)" Optional, 47 Clone Cable Optional, Misc, 48 Warranty minimum 02 years, 49 Spare & Maintenance Support atleast for 10 years , 50 Military Standards : MIL-STD-810 C, D, E, F and G standards for temperature, shock, vibration, rain salt fog, dust and sand, humidity and solar , 51 Firmware capable to support "Server functionally" for GPS tracking and voice recording features. OR Equivalent.</p>
18	Walkie Talkie (Digital)Set Base Station	4	Ea	<p>(Hytera MD788 or equivalent) Features Range 1 Operating Voltages 220 VAC or compatible DC adaptor, 2 Power Supply (External) To provide backup for atleast 10 mins in case of main failure., 3 Frequency Range VHF, 4 No of Channels >99, 5 Channel Spacing 12.5/20/25 KHz, 6 Operating Temperature -20 °C to +55 °C, 7 Storage Temperature -40 °C to +85 °C, 8 Current Drain "Standby < 0.8 A Receive < 2.0 A Transmit < 11 A (25 Watts) < 14.5 A (45 Watts)" , 9 RF Power Output 25-45 W, 10 "Frequency Stability (-20 °C to +55 °C) ± 1.5 ppm, 11 Hum and Noise " 40 dB @ 12.5 KHz 45 dB @ 20 / 25 KHz", 12 Modulation Limiting "± 2.5 KHz @12.5 KHz ± 4.0 KHz @ 20 KHz ± 5.0 KHz @ 25 KHz", 13 Conducted / Radiated Emission " -36 dBm < 1 GHz -30 dBm > 1 GHz", 14 Adjacent Channel Power " 60 dB @12.5 KHz 70 dB @ 20/25 KHz", 15 Digital Vocoder Type AMBE++ or SELP, 16 Digital Protocol ETSI-TS 102 361-1, 2 & 3 , 17 Sensitivity Analogue "3.5 µV (12 db SINAD), 0.22 µV (typical) (12 db SINAD) 0.4 µV (20 db SINAD)" Digital 5% BER : 0.3 µV, 18 Intermodulation 65-70 dB, 19 Adjacent Channel Selectivity "60dB @ 12.5 KHz 70 dB @ 20 / 25 KHz", 20 Spurious Rejection 70 dB, 21 Audio Power Output 3 W, 22 Audio Distortion @ Rated Audio 3% (typical), 23 Audio Response +1 ~ -3 dB, 24 Conducted Spurious Emission < -57 dBm, 25 Mode Dual mode (analogue + Digital), should be compatible with Motorola GP2000, 26 Scan Allows to monitor multiple channels and receive calls., 27 Encryption Enhance built-in voice and data encryption with key management. Atleast RC41 and preferably user customizable 256 bits AES, 28 Data Communication Integrated data port compatible with PC along with requisite software / drivers, 29 Interface Flexible, menu-driven interface with user-friendly icons and at least two lines of text for ease of reading text messages., 30 Indicator Tri-colour LED indicator for clear, visible feedback of calling, scanning and monitoring., 31 Display (Mobile Radio) "Large size TFT colour LCD Display Standard Package comprising:- (a) Radio with Display Control Head (b) , Trunnion (c) Cabling (d) Compact Microphone", 32 Buttons "** Large, easy to use navigation buttons allows easy access to intuitive menu-driven interfaces. * Programmable buttons for easy access to required features such as one-touch calling. * Large, textured push-to-talk button. Provides good tactile response and easy access,</p>



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				<p>even when wearing gloves.",</p> <p>33 Speaker Powerful, front projecting speaker,</p> <p>34 Antenna Compatible antenna with integrated GPS Monopole alongwith atleast 35 feet cable.,</p> <p>35 Sealing Rated IP54. Protected against Harm from dust or water spray.</p> <p>Optional Features,</p> <p>36 GPS "Integrated GPS (with GPS location tracking)</p> <p>GPS performance :</p> <p>-TTFF (Time To First Fix) Cold Start < 1 minute</p> <p>-TTFF (Time To First Fix) Hot Start < 10 seconds</p> <p>- Horizontal Accuracy < 10 meters",</p> <p>37 IP Multi site IP Connection,</p> <p>38 SMS Atleast 256 characters,</p> <p>39 Emergency Button To alert supervisor or dispatcher in an emergency situation. Accessories / Manual</p> <p>40 Operating Manual ,</p> <p>41 Service Manual,</p> <p>42 Front Case PC + ABS,</p> <p>43 Microphone Palm Microphone (optional keypad),</p> <p>44 Desktop Microphone Optional ,</p> <p>45 Speaker (External) Optional,</p> <p>46 Mounting Bracket Optional,</p> <p>47 "Software & Cable (PC to Radio)" Optional,</p> <p>48 Clone Cable Optional,</p> <p>Misc,</p> <p>49 Warranty minimum 02 years,</p> <p>50 Spare & Maintenance Support atleast for 10 years ,</p> <p>51 Military Standards : MIL-STD-810 C, D, E, F and G standards for temperature, shock, vibration, rain salt fog, dust and sand, humidity and solar ,</p> <p>52 Firmware capable to support "Server functionally" for GPS tracking and voice recording features. OR Equivalent.</p>
19		Walkie Talkie (Digital)Set Repeater	1 Ea	<p>(Hytera RD988 or equivalent) Features Range</p> <p>1 Operating Voltages 220 VAC, 13.6 VDC,</p> <p>2 Power Supply (External) To provide backup for atleast 10 mins in case of main failure.,</p> <p>3 Frequency Range VHF,</p> <p>4 No of Channels >16,,</p> <p>5 Channel Spacing 12.5/20/25 KHz,</p> <p>6 Operating Temperature -20 °C to +55 °C,</p> <p>7 Storage Temperature -40 °C to +85 °C,</p> <p>8 Current Drain "Standby < 1.2 A Transmit < 12 A",</p> <p>9 RF Power Output 5-45 W (100% continuous full duty cycle operation) ,</p> <p>10 "Frequency Stability (-20 °C to +55 °C)" ± 1.5 ppm,</p> <p>11 Hum and Noise " 40 dB @ 12.5 KHz 45 dB @ 20 / 25 KHz",</p> <p>12 Modulation Limiting "± 2.5 KHz @12.5 KHz ± 4.0 KHz @ 20 KHz ± 5.0 KHz @ 25 KHz",</p> <p>13 Conducted / Radiated Emission" -36 dBm < 1 GHz -30 dBm > 1 GHz",</p> <p>14 Adjacent Channel Power " 60 dB @12.5 KHz 70 dB @ 20/25 KHz" ,</p> <p>15 Digital Vocoder Type AMBE++ or SELP ,</p> <p>16 locking 100dB ,</p> <p>17 Sensitivity Analogue "3.0 µV (12 db SINAD), 0.22 µV (typical) (12 db SINAD) 0.4 µV (20 db SINAD)" Digital 5% BER : 0.3 µV ,</p> <p>18 Intermodulation 65-70 dB ,</p> <p>19 Adjacent Channel Selectivity "60dB @ 12.5 KHz 70 dB @ 20 / 25 KHz" ,</p> <p>20 Spurious Rejection 70 dB ,</p> <p>21 Audio Power Output 0.5 W Rated ,</p> <p>22 Audio Distortion @ Rated Audio 3% (typical) ,</p> <p>23 Audio Response +1 ~ -3 dB ,</p> <p>24 Conducted Spurious Emission < -57 dBm,</p>



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					<p>25 Mode Dual mode (analogue + Digital), should be compatible with Motorola GP2000 , Support,</p> <p>26 Encryption Atleast RC41 and preferably user customizable 256 bits AES., Multichannel Support atleast two simultaneous voice or data paths in digital TDMA mode.,</p> <p>27 Data □Communication Integrated data port compatible with PC along with requisite software / drivers ,</p> <p>28 Interface Flexible, menu-driven interface with user-friendly □icons and at least two lines of text for ease of reading text messages.,</p> <p>29 Indicator Colour LED indicators for clear, visible status indication. ,</p> <p>30 Display Large size TFT colour LCD Display and menu navigation knob to facilitate service and maintenance.,</p> <p>31 Buttons * Programmable buttons for easy access to required features such as one-touch calling.,</p> <p>32 Sealing Rated IP54. Protected against Harm from dust or water spray.,</p> <p>33 Heat Sink Alongwith thermal-controlled cooling fan,</p> <p>34 Antenna Compatible two broadband antennas alongwith atleast 150 feet cable (low loss) each. , Optional Features ,</p> <p>35 IP Multi site IP Connection ,</p> <p>36 Rack Compatible with desktop housing,</p> <p>37 Handles Ergonomics and Sturdy handles to make handling comfortable. ,</p> <p>38 Mobile Duplexer Internal installation , Accessories / Manual,</p> <p>39 Operating Manual ,</p> <p>40 Service Manual ,</p> <p>41 Desktop Power Supply Optional,</p> <p>42 Power cable,</p> <p>43 "Management Software & Cable (PC to Radio)" ,</p> <p>44 Microphone Palm Microphone (optional keypad),</p> <p>45 Directional Antenna Optional,</p> <p>46 Duplexer installation kit Optional,</p> <p>47 Mounting Bracket / kit Optional Misc,</p> <p>48 Warranty minimum 02 years,</p> <p>49 Spare & Maintenance Support atleast for 10 years ,</p> <p>50 Military Standards : MIL-STD-810 C, D, E, F and G standards for temperature, shock, vibration, rain salt fog, dust and sand, humidity and solar .</p> <p>51 Firmware capable to support "Server functionally" for GPS tracking and voice recording features. OR Equivalent.</p>
20		Binoculars	as reqd	Ea	<p>1 Magnification 5x to 7x, 2 Field of view 110 to 135 m @ 1000m , 3 Diopter Adjustment -5/ +7, 4 Interpupillary Distance 50 to 50 mm , 5 Operating Temperature -45 to +75 °C or better, 6 Dimension (200 to 220)mm x (75 to 210)mm x (70 to 160)mm, 7 Weight 1 to 1.5 Kg / latest specification available in the market OR Equivalent.</p>
21		Fabricated Guard Post	as reqd	Ea	<p>1 Ballistic Protection 5-sides of the guard cabin are bullet resistant with protection level B6 or B7 Roof: Confirming to B6 or B7 level Wall Panels: Confirming to EN1063 B6 level against 7.62x51 ammunition / B7 level against 7.62x54 AP ammunition 2 Roof & Base Floor Exterior: EN1063 B6 or B7 level bullet resistant galvanized steel, covered with heat insulating & warning-keeping GRC material. Interior ceiling: coated veneer with smooth flat surface. Base Floor will be constructed on galvanized steel framed comprised of aluminum treat plate finished floor 3 Wall Panels (Front, back, left & right) Exterior: EN1063 B6 or B7 level bullet resistant galvanized steel Interior Finish: coated veneer with smooth flat surface 4 Frame construction Mechanical tube framing as supports, with all joints welded 5 Ballistic Glass Window: Upper side of front, left & right wall panels, Bullet resistance: EN1063 B65 or B7 level. Glass framed using steel / aluminum framing system. 6 Door Opening / closing door on the right wall panel, EN 1063 B6 level bullet resistance. Switches of lights & exhaust fan on the side door. 7 Electrical 220V electrical cabinet installed on the bottom of back panel, 2 Electrical outlets on the middle bottom of front panel. 8 Ventilation 2 Air in-take: on the lower part of front panel with shutter. 1 Exhaust fan: close to the inside of front panel 9 Accessories & lighting Telephone line: connected and besides the electrical outlets, Working counter: close to the inside of front panel, 2x220v*28W lighting on the ceiling 10 Air Conditioner (2500W-cooling capacity; 000W – heating capacity) Gun ports on the 4 – sides of booth. Monitor & spotlight on the top of booth: by request latest / OR Equivalent. Specification available in the market.</p>
22		Jammers	as reqd	Ea	<p>1 Working Frequencies 850-894 MHz, 1805-1880 MHz , 2110-2170 MHz, 2 Optional Frequencies 925-960 MHz, 1930-1990 MHz,2400-2500 MHz, 3 Output Power 50-70 Watt, 4 Shielding Range 300 Meter, 5 Power supply voltage 230 VAC / 24 VDC, 6</p>



					Accessories (i) Omni-directional Antennas 04, (ii) Directional Antennas optional, (iii) RF Cable 04, (iv) AC Power Supply cable 01, (v) DC Power Supply cable Optional, 7 Backup Battery (As per load) Optional, 8 Warranty One to two years, / latest specification available in the market OR Equivalent.
23		Hand Metal Detector	As reqd	Ea	1 Made in USA 2 Received highest overall rating in USA for all US manufactured hand held metal detectors. 3 De-Sense button and tightly controlled detection pattern for efficient weapon screening near floors containing re-bar, 4 Automatic tuning for equal results on a wide range of metals, 5 Fast scan rate, 6 Light weight (400 gms), 7 Precise sensitivity adjustment as per requirement / latest specification available in the market OR Equivalent.
24		UVSS	As reqd	Ea	1. Camera a. Working Temperature: -10 to +50 degree b Working Voltage: 12 VDC c. Sensitive: 408DN/(nJ/square cm) & 10dB d. Scan Speed: 36 KHz e. Data type: 8/12bit GigE vision f. Data Transferring: RJ485 support up to 200 M remote installation g. Protection level: IP66 h. Cooling type: Aluminum fin cooling 2. Lightening a. LED type lighting; red color; protection level: IP66 b. Working temperature: -10 to +60 degree c. Cooling type: Aluminum fin cooling 3. I/O □ Control a. Working temperature: -10 to +50 degree b. Working voltage: 12~15VDC c. Control chip: 8 digit high performance MCU d. Input: 12 routes optoelectronic isolation NPN input, 10mA e. Output: 8 routes optoelectronic isolation relay output, 0~220v output, Max 5A 4. Sensor House a. High heat transferring performance aluminum. b. Two pieces structure easy for maintenance. c. Edge Max load weight: 2Ts except mirror area. / latest specification available in the market OR Equivalent.
25		RFID Biometric Devices	As reqd	Ea	Model FINGER007 or equivalent CPU 32 Bit ARM9 and Dual 8 Bit microprocessor Memory Fingerprint Module Program Memory: 1MByte Flash Memory Data Memory: 128 K Byte Flash Memory, Controller Program Memory: 1MByte Flash Memory Data Memory: 1 M Byte Flash Memory Fingerprint User 1,000 / 2,000 / 4,000 Users ID User 10000~50,000 Users (Including Fingerprint Registration) Event Buffer 10,000~50,000 Events (Selectable) Fingerprint Templates Size 800 Bytes for 2 Fingerprint Templates Read Range IDC80/IDC170: Up to 4 Inch(10cm) Reading Time (Card) 30ms Verification Time Less than 1 sec Identification Time Less than 2 sec Power / Current DC 12V / Max. 300mA External Reader Port 1 EA: 26bit Wiegand, 4/8bit Burst for PIN for Anti-Passback Communication RS232 / RS422 (Max. 32ch), Ethernet (Internal Module or External Converter Required/Optional) Communication Speed Serial Default: 9,600bps Selectable: 19,200bps / 38,400bps / 57,600bps / 115,200bps Ethernet 10/100Mbps Input Port 4 EA: Exit Button, Door Sensor, Aux#1, Aux#2 Output Port 2 EA: 2 FORM-C Relay Output (COM, NO, NC) / DC 12V~18V, Rating Max. 2A 2 EA: TTL Output/DC5V, Rating Max. 20mA (Can be used in 26 Bit Wiegand, using the 2 TTL Outputs) LED Indicators 7 LED Indicators Beeper Piezo Buzzer LCD Character LCD (2 Lines x 16 Char), 65.6 x 13.8 mm (2.62" x 0.55") Screen, Keypad 16 Numeric Keypad with Back Lightings / Membrane Operating Temperature Fingerprint Module -15°C to +40°C LCD 0°C to +50°C Controller -15°C to +70°C, RF Reader -35°C to +65°C, Operating Humidity 10% to 90% relative humidity non-condensing Color Dark Pearl Gary, Material Polycarbonate, Dimension (W x H x T) 161.5mm x 134mm x 48.5mm, Weight 525g, Certification FCC, CE, KCC, RoHS, Resolution 500 dpi, Capture Image Size 640 x 480 pixels, Extraction Image Size 260 x 300 pixels, Sensing Area 15mm X 18.5mm, Scanner High Quality Optical Sensor, FAR: False Acceptance Ratio 0.001%, FRR: False Reject Ratio 0.1%, EDS: Electro Static □ Discharge ± KV / latest specification available in the market OR Equivalent.
26		Boroscope	As reqd	Ea	Camera 1 Pixels 712 x 486 (NTSC) 2 Transmission Frequency 2.4 GHz 3 Transmission Range 32ft (10m) unobstructed view 4 Viewing direction Viewing Angel 45° 5 Focus, distance from object, 5.9" to 9.8" (15 to 25cm), 6 Shaft diameter 9mm 7 Working length 36" (0.9m) 8 Minimum bend radius 2.36" (60mm) 9, Handle Dimensions 7.3 x 5.7 x 1.6" (186 x 145 x 41mm), 10 Weight 18.7 oz (530g) Monitor 11 LCD Screen Type 3.5" TFT 12 Pixels 320 x 240, 13 Video Output Level 0.9 to 1.3V @ 75 Ω 14 Frame Rate 10, 15, 20, 25, 30FPS, 15 Video Resolution 960 x 240 (avi format), 16 Image Resolution 640 x 480 (jpeg format), 17 Monitor Dimensions 3.9 x 2.7 x 1" (100 x 70 x 25mm), 18 Operating / charge time 1.5 hours / 3 hours, 19 Weight 4.9 oz (140g) / latest specification available in the market OR Equivalent.



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GENERAL POINTS RELATED TO WALKIE TALKIE EQUIPMENT

1. Installation and commissioning of the equipment would be the responsibility of the vendor. Therefore, vendor is to highlight any requirement which is not already covered in the given specifications.
2. All necessary accessories required to keep the equipment workable / operational are to be provided, including connectors and cables. The routing of cables including clamping and cleating would be the responsibility of the vendor.
3. All necessary software / licenses should be provided along with details of up gradation/ expansions / versions.
4. The vendor is to give briefing on their proposal and arrange demonstration of equipment, if required, before finalization of technical proposals.
5. Model of Power Supplies of Base Station and Repeater stations should be clearly mentioned. Preferably, Hytera like PS22002.
6. The details of training regarding operations as well as maintenance should be provided.
7. The demonstration of encryption should be carried out with the Hytera sets held with PAF.
8. List of critical items should be provided.
9. The details of other features like dispatch software, programmer etc to be provided.
10. The vendor is to provide authorized dealership certificate of OEM.

