

**DIRECTOR GENERAL BORDER SECURITY FORCE**  
**(PROVISIONING DIRECTORATE (MOD CELL))**

**Expression of Interest**

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The Sub-group of Technical Experts on Surveillance Equipment's constituted by MHA vide their letter No. IV-1017/18/2001-Prov-I dated 05 Jul 2002 held its meeting at BSF Headquarters on 28<sup>th</sup> Dec 2016, 11<sup>th</sup> May 2017, 07<sup>th</sup> June 2017 and 10<sup>th</sup> July 2017 to formulate the QRs of '**Vehicle Mounted GPR**'.

After detailed deliberations the referred Sub-group has formulated the QRs of '**Vehicle Mounted GPR**' which are as under:-

**QUALITATIVE REQUIREMENT OF 'VEHICLE MOUNTED GPR'**

| S No. | PARAMETER                     | SPECIFICATION  |
|-------|-------------------------------|--|
| 1     | Features                      |  |
|       | i)                            | The GPR system be capable to detect metallic and non-metallic threats like IEDs, Pressure plates and mines (Anti-Personnel & Anti-Vehicle) etc.  |
|       | ii)                           | The system should provide GPR data in real time to the operator to detect investigate and mark IEDs or suspicious objects.   |
| 2.    | ATR & Alarm                   | Must contain automatic target recognition feature which will provide audio and visual clue to the operator.  |
| 3.    | Self-test                     | The system should have self-test feature to ensure the system operating properly.  |
| 4.    | Physical                      | The system <b>should be Vehicle mounted system</b> as per the operational requirement of the user as mentioned at the time of indent.  |
| 5.    | Physical & Technical features | The detailed physical & technical features of the hand held unit & Vehicle mounted system are:   |
|       | i)                            | It should have control & display unit to monitor & control the system.   |
|       | ii)                           | Ruggedized display of 15 inches (minimum) should be provided.  |
|       | iii)                          | Its detection swath width should be 1.8 meter (minimum) and detection range 100 cms (minimum) underground.   |
|       | iv)                           | The sensor head assembly should be mountable on vehicle (vehicle type such as TATA-407 etc, to be specified by the user) and should be able to carry out uniform and continuous detection. |
|       | v)                            | There must be gap upto 10 feet between the front edge of the vehicle and sensor head assembly.   |

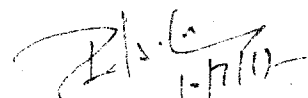


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|----|--|--|
|    | vi)                                    | The height and length of the sensor head assembly should be adjustable to operate it in all type of terrain.   |
|    | vii)                                   | The system should have software designed to detect and analyze the objects and display about the object being metallic or non-metallic and also its size, shape and orientation. |
|    | viii)                                  | It should have inbuilt GPS to get the positional data of the detected threat in terms of co-ordinates in Indian GR system (Grid reference).                                      |
|    | ix)                                    | It must be able to function at a maximum operational speed of 10 Kmph.   |
|    | x)                                     | It must have the integrated capability to mark suspected IEDs physically on ground without direct contact so that Bomb Disposal Squad (BDS) can clear the suspected point.       |
|    | xi)                                    | It should have integrated automatic target recognition (ATR) algorithm.  |
|    | xii)                                   | It should be modular in construction and have suitable arrangements/ accessories to control, deploy and retract sensor head panel with damage resistant features.                |
|    | xiii)                                  | It should have Anti-jamming facility.  |
|    | xiv)                                   | A suitable power source should be provided to operate the GPR and its attachments.   |
| 6  | Transportation                         | A ruggedized transportation box with water proof canvas carrying case should be provided which accommodates the system with all accessories comfortably.                         |
| 7  | EMI & EMC                              | The system must confirm to lay down EMI and EMC specifications.  |
| 8  | Environmental Specification:           | Operational/Storage temp: -20°C to 55°C  |
| 9  | System Ruggedness                      | The system and its sub-systems/accessories must conform to the latest Mil STD.   |
| 10 | Spare Batteries                        | For one additional cycle of operation, required batteries be provided.   |
| 11 | User Manual and Operation Instructions | Detailed instructions technical literature with schematic diagram, maintenance manual and Inspection standards be provided with the equipment.                                   |
| 12 | Vehicle Modification                   | Suitable modification kit to mount the system on available vehicle platform with the CAPFs for successfully integrating the GPR by the manufacture/ suppliers.                   |

The Sub-group has decided to upload the QRs on MHA and BSF website for 15 days to invite the views/ comments/ suggestions of prospective bidders to make the QRs more broad based.

**Note-** All firms are requested to provide the following.

1. Original Brochure of product by OEM.
2. Detail literature about the product.
3. Comprehensive comments for incorporation in the specifications.



( RISHIPAL SINGH )  
Second-In-Command (Mod)