

**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, 10<sup>th</sup> July 2017 and 22<sup>nd</sup> Aug 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</b> be <b>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.



	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 S.D.
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.

  
**(VIKAS SINGH)**  
 Deputy Commandant (Mod)