

**DIRECTORATE GENERAL BORDER SECURITY FORCE**  
**(COMN AND IT) DIRECTORATE (EQPT CELL)**

**Draft QR's & TD**

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Technical Board of Officers constituted by FHQ BSF held its meeting at SIW BSF to formulate the Qualitative requirements & trial directives of PAN & TILT Base for EO Sensor.

**Draft QRs and Trial Directives for PAN & TILT BASE FOR EO SENSOR**

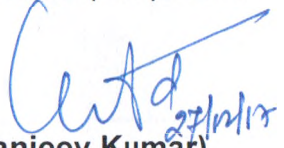
<b>Srl</b>	<b>General Specification</b>	<b>Trial Directive</b>
1.	a) Ruggedized Pan & Tilt base for installation functioning and Pan & Tilt movement of EO Sensor	To be physically checked by the BOO.
	b) Should be able to be fixed on pole, tower and mast.	System be physically checked by the BOO for mounting on standalone pole, tower and mast.
	c) Ruggedized as per JSS 55555/ Mil Std 810/F or IP 65, in respect of temperature (high & low), dust, humidity, rain impact, bump and vibration.	Firm has to submit national/ international accredited lab certificate/ report in respect of the same.
	d) Should be made of corrosion resistant material	To be physically checked by the BOO. Firm should also submit OEM certificate in this regard.

2.	<b>Pan &amp; Tilt Mechanism :</b> High precision motorized Pan and Tilt unit with variable speed facility	
	a) Azimuth (Pan) range of motion : 0 to 360° .	Physically check the Pan range of motion through third party EO Sensor Console & C2.
	b) Elevation (Tilt) range of motion : +25° to -60° .	Physically check the Tilt range of motion through third party EO Sensor Console & C2.
	c) Pan & Tilt speed : 1° to 60° / sec or better	Physically check the Pan & Tilt mechanism for various speed precisely through third party EO Sensor Console & C2.
	d) Pan & Tilt Resolution : 0.28° or better	Physically check the Pan & Tilt mechanism for resolution . Firm should also submit OEM certificate in this regard.
3	<b>Integration with third party EO Sensor :</b> Pan & Tilt base should be suitably designed for integration with third party EO Sensor to give required elevation and azimuth.	To be physically checked by the BOO.
4	<b>Load bearing capacity :</b> 10 Kg or better	To be physically checked by the BOO.
5	System should be so design that EO Sensor after installation should work in 'Slew to Cue mode' with sensors like Radar etc through third party C2.	To be physically checked by the BOO.
6	<b>Integration with third party C2:</b> Pan & Tilt system should be integrated with third party C2. Firm should also be able to provide SDK / API	System will be physically checked for integration with third party C2.

	and interface protocol for integration with third party C2.	
7	All functions of the system including system ON & OFF should be operable through C2 as well as EO Sensor console unit.	To be physically checked by the BOO.
8	Connectivity port : RS 232 & Ethernet.	To be physically checked by the BOO.
9	<b>AC Power source:-</b> It should Function on 110 volt to 270 v, 50 Hz AC mains and generator through AC/DC Adopter.	Operate the EO Sensor on a variable single phase 50 Hz AC mains supply and generator through AC/DC Adopter and vary the input voltage from 110 v to 270 v.
10	<b>Miscellaneous</b>	
	a) User Manual	To be physically checked by the BOO.
	b) Operation Manuel/technical Manual	To be physically checked by the BOO.
	c) Spare parts list	To be physically checked by the BOO.
	d) Tools for minor repair and maintenance	To be physically checked by the BOO.
	e) If any special tools required for installation / fixing must be provided.	To be physically checked by the BOO.

**Note: All Firms are requested to comment upon the above mentioned QRs and Trial directives and furnish original OEM Brouchers/catalogues by 05<sup>th</sup> Jan 2018.**

BOO has decided to upload QRS on BSF Website for 07 days to invite the views/comments/suggestions of prospective bidders to make the QRS more broad based .

  
 (Sanjeev Kumar)  
 Commandant(C-Eqpt)