

DIRECTOR GENERAL BORDER SECURITY FORCE
(PROVISIONING DIRECTORATE (ORD SECTION))

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-24011/12/2011-Prov-I dated 13 June 2012, No. IV-24011/12/2011-Prov-I dated 28 Dec 2012 & UO No. IV-24011/12/2011-Prov-I-350 dated 27 June 2013 held its meeting at BSF Headquarter on 18 Dec 2013, 14 March 2014 , 17 Nov 2014 , 19th Feb 2015, 21st April 2015, 24th July 2015 , 30 Sep 2015, 10th June 2016, 08th Feb 2017, 15th March 2017 and 25th July 2017 to formulate the Qualitative Requirement of 'PTZ (35x140 MM) D/N All Weather Camera System With Wireless Transmission System'.

DRAFT QR'S FOR PTZ (35 X 140 MM) D/N ALL WEATHER CAMERA SYSTEM WITH WIRELESS TRANSMISSION SYSTEM

S/N O	SPECIFICATION												
1.	<p><u>General Description</u> A battery powered, versatile portable PTZ Camera System housed in a rugged corrosion proof IP 65 enclosure with an inbuilt high performance Day/Night Camera with ability to recognize facial feature at a distance of 250m even in darkness and poor weather conditions. It should have following capabilities:-</p> <ul style="list-style-type: none">(a) Enable looking through glass in the dark(b) Facial Identification in dark using active mode till 250 m range(c) Detection of hostile sights (weapons with sights)(d) Ability to focus in the dark on targets located at a particular Range												
2.	<p><u>Physical Characteristics</u></p> <ul style="list-style-type: none">(a) Weight should be less than 5 Kg(b) Ruggedisation : Mil Std 810E or JSS55555(c) It should be comply to IP 65 or better												
3.	<p><u>Operational Characteristics PTZ Camera with Wireless Transmitter/Receiver System</u></p> <table border="1"><thead><tr><th style="text-align: center;">(a)</th><th style="text-align: center;"><u>Hand Held Camera</u></th><th></th></tr></thead><tbody><tr><td style="text-align: center;">(i)</td><td>Sensor</td><td>SCMOS sensor with full HD image quality both for day and night vision respectively.</td></tr><tr><td style="text-align: center;">(ii)</td><td>Video/Photo Format</td><td>H.264/JPEG</td></tr><tr><td style="text-align: center;">(iii)</td><td>Field of view</td><td>1.8° x 1°</td></tr></tbody></table>	(a)	<u>Hand Held Camera</u>		(i)	Sensor	SCMOS sensor with full HD image quality both for day and night vision respectively.	(ii)	Video/Photo Format	H.264/JPEG	(iii)	Field of view	1.8° x 1°
(a)	<u>Hand Held Camera</u>												
(i)	Sensor	SCMOS sensor with full HD image quality both for day and night vision respectively.											
(ii)	Video/Photo Format	H.264/JPEG											
(iii)	Field of view	1.8° x 1°											



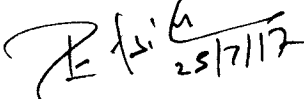
	(iv)	Human Target DRI Range	Day Vision Detection: 2400m minimum Recognition: 1200m minimum Identification: 600m minimum Night Vision Detection: 1400m minimum Recognition: 700m minimum Identification: 350m minimum Dark Night Vision Detection: 1,000m minimum Recognition: 500m minimum Identification: 250m minimum
	(v)	Digital Zoom	2x or better
	(vi)	Modes	Ability to focus in the dark on targets located at a particular range and provide target range using active eye safe laser.
	(vii)	Eye Safety Laser Emission	Class 4 or lower
	(viii)	Image Quality	Autofocus and manual
	(ix)	Recording Time	Min 4 hrs
	(x)	Display OLED HD Technology	Monochrome
	(xi)	Power	
	(a)	Battery	Li-ion / Li Polymer
	(b)	Endurance	5 hours
	(c)	Charger	AC 110/220VAC 50-60Hz
	(d)	Current camera should be operable both in AC/DC (one spare Battery kit)	
	(xii)	Ports and connectors : Composite video/ HDMI port and connectors used to extend video over transmitter	
(b)	<u>PTU Platform (Battery Powered) & Remote Controller</u>		
	(i)	Pan	+/- 180° (360°)
	(ii)	Tilt	±40°
	(iii)	Speed	10°/sec or better
	(iv)	Accuracy	2 mrad
	(v)	Range of controller	Remotely controlled both through software/ RF remote for 200 mtr or better
	(vi)	Endurance	4 Hrs
(c)	<u>Transmitter</u>		
	(i)	Modulation	COFDM, QPSK
	(ii)	Bandwidth	6/7/8 Mhz
	(iii)	RF Output Power	100mW/ 500mW/1W
	(iv)	Frequency Band	300 Mhz ~ 2.4 Ghz (Unlicensed Band)
	(v)	Encryption	AES-128
	(vi)	Latency	1 Sec or lower

(vii)	Range	(a) NLOS Urban >500m (b) LOS Urban >1,500m
(viii)	Antenna	Omni directional Antenna
(ix)	Video Rate	500 kbps, 10 Mbps (max)
(x)	Video	(a) Encoding: MPEG-4 (b) Frame Rate: 30fps to 2 fps (self selecting) (c) Video Quality: User Selectable
(xi)	Ports	(a) Ethernet IPV4 (b) RS232 (c) Video I/O (d) HDMI I/P
(xii)	Resolution	Full HD (1920 x 1080)
(xiii)	Mil STD	810E or better
(xiv)	Operating Temp	-20°C to +55°C
<u>Power</u>		
(i)	Battery	Li-ion / Li Polymer
(ii)	Endurance	5 hours
(iii)	Charger	AC 110/220VAC 50-60Hz
(iv)	Current time work on DC/ AC (two spare lithium bty)	
<u>Carrying Case</u>		
(i)	Rugged, sectionized and water proof case to store camera with all accessories. The case should be provided with roller wheels with 360° rotation capability.	
<u>Receiver</u>		
(i)	Bandwidth	6/7/8 Mhz
(ii)	Frequency Band	300 Mhz ~ 2.4 Ghz
(iii)	Decryption	AES - 128 or better
(iv)	Range	(a) NLOS Urban > 500m (b) LOS Urban > 1.5 km
(v)	Antenna	Dual Antenna (Switch RX/Tx and Rx only) Omni Directional Antenna
(vi)	Receiver Type	Diversified
(vii)	Video	(a) Decoding: MPEG-4 (b) Frame Rate: 30fps to 2 fps (self selecting) (c) Video Quality: User Selectable
(viii)	Ports	(a) Ethernet IPV4 (b) RS232 (c) Video I/O (d) HDMI I/O
(ix)	Resolution	Full HD (1920 x 1080)
(x)	Display	15 inch (min) sunlight readable OLED display or better
(xi)	Video Feed	Ability to see video feed from four PTZ cameras ie software based four channel viewer

	(xii)	Recording & Storage	Recording of up to four simultaneous video feeds on 3 TB internal storage
	(xiii)	Connectivity	(a) Composite Video/ HDMI port for external TV connectivity (b) Ethernet and USB port for streaming video feed over high-speed commercial wireless network like 3G/4G GSM/CDMA
	(xiv)	Mil STD	810E or better
	(xv)	Power	
		(a) Battery	Li-ion / Li Polymer
		(b) Endurance	5 hours
		(c) Charger	AC 110/220VAC 50-60Hz
		(d)	Current time work on DC/ AC (two spare lithium bty)
	(xvi)	Carrying case	
		Rugged, sectionized and water proof case to store camera with all accessories. The case should be provided with roller wheels with 360° rotation capability.	
4.	Literature Operating and Technical literature for each discrete components of system should be in English language		
5.	Training In situ training of users for three day on operation, maintenance, faultfinding and user level repairs.		

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

Note - All the firms are requested to comment upon the above mentioned QRs and furnish Brochure/catalogue of their products from the OEMs.



(Rishipal Singh)
Deputy Commandant (Mod)