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EAST BLOCK-7, SECTOR-1, R.K PURAM, NEW DELHI-66
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No. B.V-7-C/2025-26-C (FPV)-QR CELL Dated, the 05 Nov'2026

Subject: - REQUEST FOR COMMENTS OF STAKEHOLDERS /OEM/FIRMS ON DRAFT QRs & TDs OF "OFC+RF BASED FPV KAMIKAZE DRONES" REGARDING.

The Draft QRs/TDs of "OFC+RF based FPV Kamikaze Drones" are attached as **Appendix 'A'**. The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their product against each parameter. Only complied or not complied remarks will not be accepted. The firms are also requested to furnish the following details: -

- Whether you are OEM/Vendor?
- If vendor, details of OEM required.
- Authorization certificate from OEM.

2. The required information/details may please be forwarded at the following addresses by 25 **Nov'2026**.

Communication Directorate, CRPF
East Block-7, Sec-1, R.K. Puram, New Delhi-110066
Email: comncell@crpf.gov.in

3. An early response is requested.

05/11/26

{Ujjwal Kumar Singh, AC(QR)}
For DIG (Equipment)
Communication & IT Branch
Directorate General, CRPF

Draft QRs/TDs of OFC+RF based FPV Kamikaze Drones

S.N.	Parameter	Specifications	Trial Directives
1.0	**OFC+RF based FPV Kamikaze AV as a system should consists the following sub-systems: -**		
1.1	01 No day AV with OFC Spool and battery each		Board will check Physically
1.2	01 No Night AV with OFC Spool and battery each		
1.3	01 Ground Control Station with battery, one FPV google & one handheld controller each.		
1.4	02 HE Anti-Personnel Warhead (WH) with 10m Killing radius		
1.5	All accessories required to Operationalize the system with charger and cables		
1.6	Additional AVs and its accessories (WH +Spools etc) can be included as per user requirement.		
2	**OFC based FPV Kamikaze AV characteristics: -**		
2.1	Role	To carry out one-way missions against designated objectives using a remotely operated AV.	Board will check practically
2.2	Launch and Recovery mode	Vertical Take-Off and Landing (VTOL) within an area of 5 × 5 meters.	Board will check practically.
2.3	Aural Signature (in dB)	<40 dB @ 300 meters AGL (Above Ground Level).	The firm will submit certificate of Govt. Lab./ NABL / ILAC accredited laboratory.
2.4	Mission Range	15 Kms or more (OFC min 7.5 Kms +RF)	BOO will check practically
2.5	Endurance (In minutes)	a) Min. 30 min at 1000 mtr AMSL without WH & Spool (Reduction in 10 % of endurance of every 1000 meter.) b) Min 20 minutes at 1000 mtr AMSL With WH & Spool (Reduction in 10 % of endurance of every 1000 meter.)	BOO will check practically
2.6	Minimum Operating altitude above ground level (AGL) (In meter)	1000m AGL or more on RF mode	BOO will check practically
2.7	Maximum Launch altitude above mean sea level (AMSL) (in meter)	5000m AMSL or more in (OFC and RF)	Firm will submit OEM certificate
2.8	Operating wind conditions (in km/h)	(a) Take off: 35 km/h or more (b) Landing: 35 km/h or more (c) Operate: 35 km/h or more	Firm will submit OEM certificate.
2.9	Operating Speed (in km/h)	Minimum 150 Kmph or more with full pay load	Firm will submit OEM certificate and BOO will check practically.
2.10	Flight modes	Manual FPV Mode - Angling mode - Acrobatic mode	BOO will check practically.

2.11	Failsafe features	a) Pilot configurable Automatic Return to Home/Land on battery low/imbalance/sudden voltage drop	BOO will check practically and firm will also submit OEM certificate
		b) In RF mode when subject to RF/GNSS jamming the AV should have EW Resilient Transit Mode	
3.0	**ISR Payload characteristics**		
3.1	Payloads Required	(a) Electro Optic (EO) for day (b) IR for night payload	To be physically checked and verified by BOO.
3.2	Electro optic (EO) daylight payload	Resolution: 1200 TVL or 1080 X 720 pixels or better	Firm will submit OEM certificate.
3.3	IR night payload	Resolution: 640X480 pixels or better	Firm will submit OEM certificate.
4	**Warhead Characteristics**		
4.1	Weight of warhead	Min 1.5 kgs	Board will check practically
4.2	Type of war head	HE Anti-Personnel	Board will check practically
4.3	Killing Radius	Min 10 Meter	Board will check practically explosion of the AV and firm will submit OEM certificate
4.4	Safety Mechanism	i.) Mechanical Switch safety for arming & disarming ii.) Arming and Disarming Safety through GCS iii.) Dual Switch detonation safety iv.) Time Delay Safety after Mechanical Arming	Board will check practically
4.5	Abort Mission	Capability to abort the mission and land safely	Board will check practically
		The warhead is detachable for storage & transportation	Board will check practically
5	**Ground Control Station**		
5.1	The system is portable with Min Screen size of 10" with 1080P Resolution & a FPV Goggle along with a Hand-Held controller with GCS		Board will check physically and practically.
5.2	Fully Ruggedized MIL-STD-810G or better and IP65 or better certified GCS		Firm shall produce valid OEM/test certificates
5.3	Transmit control commands to AV, receive AV parameters and receive and display real time video from AV		Board will check practically
5.4	Capability to record video anytime during flight/surveillance mode		Board will check practically
5.5	It is able to operate for minimum 150 Minutes with single battery charge for multiple missions in one charge cycle.		Board will check practically
5.6	Ability to transfer record video/images from GCS		Board will check practically
5.7	The live feed can be transmitted to the command Control Centre either through HDMI cable or through mirroring.		Board will check practically
5.8	The AV is compatible with other similar MPGCS to cater for redundancy.		Board will check practically
5.9	The AV is able to operate in EW contested environment		Board will check practically

6	**Communication Link**		
6.1	Operating Frequency	At least one C2 link in S/C band FHSS (Auto)	Firm will submit OEM Certificate
6.2	Control Commands	Transmit control commands from GCS to AV	To be physically checked and verified by BOO.
6.3	Parameters	Transmit parameter of AV and Payloads to GCS	To be physically checked and verified by BOO.
6.4	Video feed	Transmit day and night video from AV to GCS.	To be physically checked and verified by BOO.
7	**Video: Should have following functionality**		
7.1	Video	(a) Video should be recorded in any commonly portable video formats (AVI/MPEG/MP4 etc)	To be physically checked and verified by BOO.
		(b) Video of the full flight should be recorded	To be physically checked and verified by BOO.
8.0	**Electronic Counter Measure**		
8.1	EW features	**a**) Should be able to receive AV location from any GNSS (b) Should be able to fly in GNSS contested environment (c) In RF mode when subject to RF jamming the AV should have EW Resilient Transit Mode (d) C2 link communication to be dual type (OFC and RF) (e) While flying on OFC, all communication between AV and GCS should be on OFC (Command-Control, Telemetry and Video). (f) While on RF mode, should be a dual radio setup for Command-Control and Telemetry. (g) Wide-band FHSS radio (h) Additional Inbuilt Electronic Counter Measures (ECM) to include Anti Jamming and while being Operated without OFC Spool	Board will check practically and firm will also submit OEM certificate.
9	**Additional Parameters**		
9.1	Weight of AV	Not more than 7 kg (inclusive of OFC spool, battery and warhead)	BOO will check practically.
9.2	Assembly/ Disassembly time	Up to 20 minutes with 2 personnel	BOO will check practically
9.3	Environmental conditions for operation and storage	The AV and associated systems should operate and stored at following environment conditions. (a) Damp heat: 40°± 2°C at RH not less than 90% as per JSS 55555 or equivalent standard	Firm will submit certificate of Govt. lab/ NABL/ ILAC accredited lab
		(b)Operating temperature & Storage temperature -20°C to +55°C with ±2°.	Firm will submit certificate of Govt. lab/ NABL/ ILAC accredited lab

		(c) Ability to withstand dust, drizzle and humid conditions	Firm will submit certificate of Govt. lab/ NABL/ ILAC accredited lab
9.4	IP (Ingress Protection) of the AV	IP 55 or better	Firm will submit certificate of Govt. lab/ NABL/ ILAC accredited lab
9.5	Battery of AV	a) Life of Battery minimum 300 charging cycles or 2 year whichever is earlier. (b) Battery life cycle should not be programmed in BMS	Firm will submit OEM Certificate.
9.6	Battery charger and charging time of AV battery	Suitable universal battery charger to charge the batteries within 2 hours	BOO will check practically and firm will submit OEM certificate.
10	**Accessories**		
10.1	Accessories	Field repair kit:1 Nos	BOO will check practically
		Spare battery packs (as per user requirement)	BOO will check practically
		Spare propeller set: 1 Complete set	BOO will check practically
		User, technical & maintenance manual:1 set	BOO will check practically
		Water resistance (IP 66) back packs to carry AV along with accessories	Firm will submit OEM Certificate
		Separate Rugged, Compact and light weight transportation box for AV and WH	BOO will check practically
11	**Miscellaneous requirement**		
11.1	Total technical life	Minimum 500 landings for Training purpose	Firm will submit OEM Certificate.
11.2	Total product support	06 years or more as per user requirement.	Firm will submit OEM Certificate.
11.3	Manufacture recommended list of spares (MRLS) with cost	Should be provided.	BOO will check practically and firm will also submit OEM certificate
11.4	Warranty	02 years or more (as per use requirement)	Firm will submit OEM Certificate.
11.5	Training simulator (Optional as per user requirement)	Suitable simulation software module to be provided for operator training.	BOO will check practically