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No. B.V-7-C/2025-26-C(SAT)-QR Cell

Dated, the 07 Nov'2025

Subject: - REQUEST FOR COMMENTS OF STAKEHOLDERS /OEM/FIRMS ON DRAFT QRs/TDs OF SATELLITE TERMINALS ("MAN PORTABLE SATELLITE TERMINAL", "LEO BASED STATIC/PORTABLE SATELLITE TERMINAL", "GEO BASED PORTABLE/STATIC SATELLITE TERMINAL") REGARDING.

1. The Draft QRs/TDs of Satellite Terminals ("Man portable Satellite terminal", "Leo Based Static/Portable Satellite Terminal", "Geo Based Portable/Static Satellite Terminal") is 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 system 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.
- Authorization certificate from OEM.

2. The required information/details may please be forwarded at the following address by 27 **November'2025**.

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.

(Megh Raj)

DIG (Equipment)
Communication & IT Branch
Directorate General, CRPF

Draft QRs /TDs of Man portable Satellite terminal

SL No	Parameter	Specification	Trial Directives
01	Terminal Type	<u>(I) For LEO based Satellite Terminal:</u> - Terminal is foldable/ Flat/Patch <u>(II) For GEO Based Satellite Terminal:</u> -Parabolic reflector/ Flat Terminal/ Patch (as per user requirement)	Board will check practically
02	Configuration	Man-portable	Board will check practically
03	Antenna Type	Full duplex Electronically steered antenna (ESA)/ Phased Array Antenna /Parabolic reflector/Patch antenna	Board will check practically
04	System Latency	For LEO based terminal - typically <100 ms For GEO based terminal- typically <700 ms	Firm will submit OEM Certificate
05	Download speed	Min 100 Mbps for LEO Terminal Min 10 Mbps for GEO Terminal	Board will check practically
06	Upload Speed	Min 20 Mbps for LEO Terminal Min 3 Mbps for GEO Terminal	Board will check practically
07	Pointing /Acquisition	Fully Automatic (Auto-Pointing)/Manual pointing as per user requirement	Board will check practically
08	Operating Temperature	-20°C to +55°C	Firm will submit certificate of any Govt lab/ NABL/STQC/ ILAC accredited lab.
09	Weight	Less than 12 kg (Excluding AC/DC cables, tripod, batteries etc.)	Board will check practically
10	Ingress Protection	IP 65 or better	Firm will submit certificate of any Govt lab/NABL/STQC/ ILAC accredited lab
11	Security	AES 256 Bit or better	BOO will check practically and Firm will submit certificate of Govt Lab/NABL/STQC/ ILAC Accredited Lab

12	EMI/EMC	Compliant to MIL-STD 461 or equivalent standard	Firm will submit certificate of Govt Lab/NABL/STQC/ ILAC Accredited Lab
13	Power consumption	190 W or less (Operate on AC/DC, external battery)	Firm will submit OEM Certificate
14	Maximum Transmit EIRP (effective isotropic radiated power)	37 dBW or better for LEO based terminal and ≥ 44 dBW (for a 1.2m terminal in clear sky)	Firm will submit OEM Certificate
15	Pointing Acquisition Time (from stow)	< 3 minutes for LEO Terminal < 5 minutes for GEO Terminal	Board will check practically
16	Interface supported	USB/Wi-Fi/RJ-45 etc.	Board will check practically
17	Connectivity	All traffic should be routed through Indian Gateway	Firm will submit OEM Certificate
18	Service and support	Minimum 8 years	Firm will submit OEM Certificate

DRAFT QRs/TDs OF LEO BASED STATIC/PORTABLE SATELLITE TERMINAL

SlNo	Parameter	Specification	Trial Directives
01	Terminal Type	Terminal is foldable/Flat self-aligning	Board will check practically
02	Configuration	Static/Portable	Board will check practically
03	Antenna Type	Full duplex Electronically steered antenna (ESA)/ Phased Array Antenna /Patch	Board will check practically
04	System Latency	low latency, typically, <100 ms	Firm will submit OEM Certificate
05	Download speed	Min 100 Mbps	Board will check practically
06	Upload Speed	Min 20 Mbps	Board will check practically
07	Pointing /Acquisition	Fully Automatic (Auto-Pointing)/Manual pointing as per user requirement	Board will check practically
08	Operating Temperature	-20°C to +55°C	Firm will submit certificate of any Govt lab/ NABL/ STQC/ILAC accredited lab.
09	Wind Load Resistance	Structure shall withstand wind speeds up to 100 km/h.	Firm will submit OEM Certificate
10	Weight	Less than 25 kg (including indoor unit.)	Board will check practically
11	Ingress Protection	IP 65 or better	Firm will submit certificate of any Govt lab/ NABL/ STQC/ ILAC accredited lab
12	Security	AES 256 Bit or better	Firm will submit certificate of any Govt lab/ NABL/ STQC/ ILAC accredited lab
13	EMI/EMC	Compliant to MIL-STD 461 or equivalent standard	Firm will submit certificate of any Govt lab/ NABL/ STQC/ ILAC accredited lab
14	Power consumption	Maximum 300W	Firm will submit OEM Certificate
15	Power supply	100V to 240V AC	Board will check practically
16	Maximum Transmit EIRP (effective isotropic radiated power)	36 dBW or better	Firm will submit OEM Certificate
17	Pointing Acquisition Time (from stow)	< 3 minutes	Board will check practically
18	Interface supported	USB/Wi-Fi/RJ-45 etc.	Board will check practically
19	Gig E (Gigabit Ethernet) Ports	1 x GbE port	Board will check practically
20	Connectivity	All traffic should be routed through Indian Gateway	Firm will submit OEM Certificate
21	Service and support	Minimum 8 years	Firm will submit OEM Certificate

DRAFT QRs/TDs of GEO BASED PORTABLE/STATIC SATELLITE TERMINAL

S1 no	Parameter	Specification	Trial Directives
01	Terminal Type	Terminal is foldable/ Flat/ Parabolic portable terminal	Board will check practically
02	Configuration	Static/Portable	Board will check practically
03	Antenna Type	Full duplex Electronically steered antenna (ESA)/ Phased Array Antenna/ Parabolic 1.2M	Board will check practically
04	System Latency	low latency, typically, ≤ 700 ms	Firm will submit OEM Certificate
05	Download speed	Min 2 Mbps	Board will check practically
06	Upload Speed	Min 512 kbps	Board will check practically
7	Out Door unit		
i	TX/RX isolation	85 dB	Firm will submit OEM Certificate
ii	Pointing /Acquisition	Fully Automatic (Auto-Pointing)/Manual pointing as per user requirement	Board will check practically
iii	Operating Temperature	-20°C to +55°C	Firm will submit certificate of any Govt lab/NABL /STQC/ ILAC accredited lab.
iv	Wind Load Resistance	Structure shall withstand wind speeds up to 70 km/h.	Firm will submit OEM Certificate
v	Weight	Less than 35 kg (including indoor unit.) for manual pointing and less 50 kg for auto pointing	Board will check practically
8 (i)	BUC Type	Min 2W or more as per user requirement	Firm will submit OEM Certificate
ii	Gain	55dB	Firm will submit OEM Certificate
iii	Operational voltage range:	+13V to +26V	Board will check practically and firm will submit OEM Certificate
iv	Power consumptions	Max 14W or as per BUC Power consumption	Firm will submit OEM Certificate
9(i)	Outdoor unit LNB		
ii	Linear Gain	55dB	Firm will submit OEM Certificate
iii	Operational Voltage	+10 to +24V DC	Board will check practically and firm will submit OEM Certificate
10	Modem		
i	Standard Forward Channel	DVB-S2 with ACM	Firm will submit OEM Certificate
ii	Modulation	QPSK,8PSK,16APSK,32APSK	Firm will submit OEM Certificate
	Return Channel		
iii	Access Scheme	MF-TDMA, Dynamic channels	Firm will submit OEM Certificate

iv	Modulation	BPSK, QPSK, 8PSK, 16QAM	Firm will submit OEM Certificate
	Interface		
v	Data Interfaces	Single Ethernet 10/100/1000BaseT	Firm will submit OEM Certificate
vi	IP Features	Modem shall support IPv4/IPv6, TCP, UDP, ICMP, DHCP, VLANs, RIPv2, Static Routes as per user requirement	Firm will submit OEM Certificate
vii	Operating Voltage	24V Dc	Board will check practically
10	Indoor Unit-8 Port Un-Managed Switch		
i	Device Interface	8x10/100/1000 Gigabit Lan ports	Board will check practically and firm will submit OEM Certificate
ii	LED indicators	Per port: Link /Activity/Speed	Board will check practically
iii	Power	5V / 1 A Power Adapter type	Board will check practically
iv	Data transfer rate	Fast Ethernet: 100 Mbps (Half Duplex), 200 Mbps (full duplex)	Board will check practically and firm will submit OEM Certificate
11	IFL Cables	Suitable cables of length 30 mtr each operating on L-band to be used in uplink and downlink chain.	Board will check practically
12	Ingress Protection	IP 65 or better	Firm will submit certificate of any Govt lab/NABL /STQX/ILAC accredited lab
13	Security	AES 256 bit or better	Firm will submit certificate of Govt Lab/NABL/STQC/ ILAC Accredited Lab
14	EMI/EMC	Compliant to MIL-STD 461 or equivalent standard	Firm will submit certificate of Govt Lab/NABL/STQC /ILAC Accredited Lab
15	Power consumption	Maximum 300W	Firm will submit OEM Certificate
17	Maximum Transmit EIRP (effective isotropic radiated power)	36 dBW or better	Firm will submit OEM Certificate
18	Pointing Acquisition Time (from stow)	< 15 minutes	Board will check practically
19	Interface supported	USB/Wi-Fi/RJ-45 etc.	Board will check practically
20	Gig E Ports	2x GbE port	Board will check practically
21	Connectivity	All traffic should be routed through Indian Gateway	Firm will submit OEM Certificate
22	Service and support	Minimum 8 years	Firm will submit OEM Certificate