GOVERNMENT OF INDIA
(Ministry of Home Affairs)
Communication & IT Directorate
CENTRAL RESERVE POLICE FORCE
EAST BLOCK-7, SEC-1, R.K. PURAM, NEW DELHI-110066
(Tele/Fax No-011-26109038, Email-Id: comncell@crpf.gov.in)

No. B.V-7-C/2025-26-C(ICS)-QR CELL Dated, the 12 June'2025

Subject: - REQUEST FOR COMMENTS OF STAKEHOLDERS /OEM/FIRMS ON DRAFT QRs & TDs OF "INTEGRATED COMMNUNICATION SYSTEM" REGARDING.

The Draft QRs/TDs of "Integrated Communication System" 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 an OEM or a Vendor?
- If vendor, details of OEM.
- Authorization certificate from OEM.

2. The required information/details may please be forwarded at the following addresses by 12 **July'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 and TDs of Integrated Communication System (ICS)

S.No	Parameters	Trial Directives
1.	**General**	
(i)	The system should be an IP based server gateway architecture with one central command center and should be fully supported across IP network by simple addition of gateways. The interfaced radios should be able to make calls across the IP network through the gateway devices.	BOOs will check the function practically.
(ii)	The radio line interoperability system should interface with any combination of 2 way radio (HF, VHF and UHF) cellular/ landline/ SATCOM telephone while allowing multiple simultaneous two-way conversation or conference calls between the above. The system should include built in voice prompts to guide users in the operation of the interconnecting system.	The BOOs will carry out physical check as well as the functional test.
(iii)	Should be capable of integrating at least 6 different radio nets with cellular/ landline/ SATCOM using operator console with GUI features, 04 or more FXO/ FXS ports for interoperability with radio sets, E1 on optical and Ethernet ports.	The BOOs will carry out physical check as well as the functional test of all the parameters one by one. In case of any discrepancies/ problem, the rep of firm will demonstrate the features to the BOOs.
(iv)	The console operator system should be equipped with active noise cancellation head phone system.	The BOOs will carry out physical check as well as the functional test of the all the parameters one by one. In case of any discrepancies/ problem the rep of firm will demonstrate the features to the BOOs.
2.	**Operational Requirement**	
	The interoperability system should be capable of the following:-	
(i)	Interfacing the various 2-way radio sets in HF, VHF and UHF band in use.	BOOs will carry out physical check as well as the functional test of the mentioned parameter. In case of any discrepancies/ problem, the representative of firm will demonstrate the features to the BOO.
(ii)	The interoperability solution should be capable of interfacing with almost any type of radio set through a multitude of specifically designed interface cable/ connectors.	
(iii)	The interoperability solution should also be capable of cross connecting any or all of the interfaced radios interfacing with any type of radio to a public telephone network (PSTN), to private access to branch exchanges (PABX), to SATCOM terminals and to cellular (GSM) circuits.	
(iv)	It should cross-connect an encrypted radio network together seamlessly.	
(v)	Interoperability solution should be capable of interconnecting multiple communication systems on single chassis.	
(vi)	Should have PRI/E1 or PRI/T1 interface for interconnecting gateway devices.	
(vii)	The inbuilt CPU should have hot standby and swapping for both central and remote gateways.	
3	**Performance requirement**	
(i)	The system should not add any type of noise in voice communication over radios. This should be done by mandatory noise filtering circuits.	BOOs will carry out physical check as well as the functional test of the mentioned parameter. In case of any
(ii)	Audio level should be field adjustable. User should be able to increase or	

	decrease audio gain to his satisfaction.	discrepancies/ problem, the representative of firm will demonstrate the features to the BOOs.
(iii)	Voice should switch instantaneously across radios.	
(iv)	VOX and VMR features must also include an adjustable audio sampling so that the audio input received during the time required for making a valid signal is not clipped off.	
(v)	The system should support necessary interface for instant switching between radio nets and other gateways.	
(vi)	The system should include a configurable noise reduction system. The voice spectrum detector should be capable of filtering out fixed/ variable frequency sirens, whistles and horns without falsely activating cross-connected radio networks.	
4.	**Interfacing with Phone lines**	
(i)	It should be capable to support local telephone interface capability to add as an extension phone for the interconnect system. The local phone circuit shall produce ring voltage, loop current, busy signal and dial tone. It should be capable to interconnect between telephones connected to system along with other possible interfaces connected with the system.	BOOs will carry out physical check with all available media
(ii)	Dedicated Operator console for interconnecting call between various interfaces.	
5.	**System operation and management**	
(i)	The system should perform either as an unmanned gateway or as a manned gateway while providing interoperability over multiple radios.	BOOs will carry out physical check and functional test of the component and parameters shown in 5 (i) to (v) and ensure their proper functioning. The representative of firm will also demonstrate the features to the BOOs.
(ii)	The interoperability system should have local key pad control, handset/ headphone speaker output for operator and should be able to monitor operating status of port and system on the display.	
(iii)	The system terminal should be user friendly GUI (Graphical User Interface) depicting system operation and allowing programming features.	
(iv)	The interoperability system should also include an Ethernet remote control interface allowing required computer-controlled software to operator from multiple dispatch locations simultaneously.	
(v)	It should permit programming of all interface features.	
(vi)	Maintainability: - System should have built in test equipment facility. System should also be modular in nature with module status indication diagnostic tests. System should be remotely configurable for maintenance and troubleshooting purpose. It should have ruggedized workstation for programing during Ops.	BOOs will check practically and firm will submit OEM certificate.
6.	**Power Supply**	
(i)	The equipment should operate with built in chargeable batteries with minimum 4 hours of power backup with single charge cycle. The charging system should charge batteries with AC and DC power source.	BOOs will check physically.
(ii)	Unit power supply must include the ability to charge batteries	
(iii)	Must be protected against reverse voltage	
7.	**EMI/ EMC Compliance**	
(i)	The equipment should be able to work with various radio equipments in HF, VHF and UHF bands co-located and transmitting at higher power without any problems. The EMI/EMC compliance should be as per JSS-55555:2000 for EMC & JSG 0261 (part ½)-1999 for EMC or equivalent national or international standard.	The firm will submit certificate issued by any Govt Lab or NABL accredited laboratory /ILAC.

8.	**Environmental Condition**		
(i)	The equipment should be fully ruggedized and should meet environment condition, as laid down in table L2B of JSS 55555, Revision 2		The firm will submit certificate issued by any Govt Lab or NABL accredited laboratory /ILAC.
9.	**Temperature**		
(i)	The equipment should be capable of being used in any terrain / climate in Indian sub-continent. It should be capable of satisfactory performance under the following temperature conditions. Operation : -20^{0}C to 50^{0}C Storage : -20^{0}C to 50^{0}C or Operation : -25^{0}C to 60^{0}C Storage : -35^{0}C to 65^{0}C (tolerance +-2 degree) (As per user requirement)		The firm will submit certificate issued by any Govt Lab or NABL accredited laboratory /ILAC.
10.	**Safety**		
(i)	Should have built in safety devices		The firm will submit certificate issued by any Govt Lab or NABL accredited laboratory /ILAC.
(ii)	Protection against surge voltage from exchange/ line side on the PSTN interfaces. It should have protection against high voltage from field side		
11.	**Physical Characteristics**		
(i)	Net Weight with all accessories of the eqpt should be less than 30 Kg and Equipment should be portable		BOOs will check physically
12.	**Other parameters**		
(i)	Warranty	3 years	The firm will submit OEM certificate
(ii)	Support life	7 years after warranty	The firm will submit OEM certificate