REQUEST FOR QUOTATIONS (RFQ) DOCUMENT

FOR

Supply of UE Simulator for 5G Radio Access Network Product

India Open Source for Mobile Communication Network (IOS MCN) Project

Foundation for Science Innovation and Development IISc, Bengaluru

Notice Inviting RFQ

RFP No. FSID/IOSMCN/05-06 Dated: 03rd June 2024

Foundation for Science Innovation and Development (FSID)

TENDER

NOTICE NO. FSID/IOSMCN/05-06 **Dated:** 03rd June 2024

BID SCHEDULE			
Sl. No.	**Bid Activity**	**Date**	**Time**
1	Notification	03/06/24	10:00 AM
2	Bid Query	10/06/24	5:00 PM
3	Answers to Bid Queries	12/06/24	10:00 AM
4	Submission of Bid	22/06/24	5:00 PM
5	Opening of Technical Bid	22/06/24	10:00 AM
6	Completion of Technical interaction and Demonstration of bidder's Technical Solution to the Technical Evaluation Committee	06/07/24	5:00 PM
7	Completion of Technical Evaluation	07/07/24	5:00 PM
8	Opening of financial Bid	09/07/24	10:00 AM

Pre-bid queries should be addressed to email: smohammed@fsid-iisc.in and Cc: Vinay Kulkarni vinay@fsid-iisc.in

Mode of Bid Submission: Please refer to Para 5 for instructions.

Technical Bid: Can be submitted by email. In addition, a hard copy must be sent to the address.

Financial Bid: Quotes for the product must be enclosed in a password-protected PDF file emailed to **Puja Srivastava at puja.srivastava@datakaveri.org, cc: Chethan at chethan@fsid-iisc.in** or sent a hard copy in a sealed envelope @ **Address: 5G Lab, Dept. of Electrical Communication Engineering, Indian Institute of Science, Bangalore – 560 012.**

ChandraRMurthy

Date: **Chief Project Investigator**

Address: 5G Lab, Dept. of Electrical Communication Engineering, Indian Institute of Science, Bangalore – 560 012

Tel. 080-2293-2464

Chandra R. Murthy, Ph.D.
Professor, ECE Department
Indian Institute of Science
Bangalore 560 012, India

REQUEST FOR QUOTATIONS.

1. INTRODUCTION

As part of the MeitY-funded India Open Source for Mobile Communication Networks project the procurement is being done for setting up the lab infrastructure. We seek quotations from qualified vendors for the procurement of 5G NR UE simulator to support the development and testing of 5G infrastructure. The selected devices will be utilized for performance, load, and capacity testing over the radio interface for various validation needs including massive connectivity, high throughput, and complex signalling procedures, using 5G real-life scenarios and realistic traffic mixes.

2. SCOPE OF WORK:

Provide the 5G NR UE simulator configured to meet the specifications outlined below, including all necessary hardware, software, and peripherals required.

Deliver 5G NR UE simulator, that offers scalability, reliability, and performance to accommodate future expansion and evolving project requirements. Include warranty, technical support, and maintenance services to ensure the continued operation and reliability of the device.

3. TECHNICAL REQUIREMENTS

Mentioned below are the specifications that are a must for the quote to be sent.

Please refer to the table below ANNEXURE-1 **Specifications**

Please refer to the table below ANNEXURE-2 **PoC (Proof of Compliance)**

Please refer to the table below ANNEXURE-5 **BoQ (Bill of Quantity)**

4. QUANTITY OF REQUIREMENTS

The hardware specified in the mentioned specifications, along with all contingency requirements, is required in the quantity of **1 (One)** unit. Vendors are requested to provide quotations that include the following:

Per Unit Price: Please specify the price per unit of the hardware, inclusive of all specified components and features, as well as any additional contingency provisions.

Total Quantity Price: Calculate the total price for the specified quantity of units, incorporating all contingency requirements.

5. SUBMISSION REQUIREMENTS

The quotation should be submitted in the form of 2 separate documents as specified below:

1. TECHNICAL EVALUATION DOCUMENT: This should contain the following:

a. A checklist indicating compliance with or deviation from the above technical. requirements.

b. technical datasheet of the equipment/software which includes all or a subset of the requirements specified in the technical requirements.

c. Certifications and compliance documentation if any should be included with the quotation.

2. COMMERCIAL BID DOCUMENT:

a. Quotations should include detailed pricing, including unit prices, taxes, shipping costs, and any additional fees.

b. Provide information on warranty terms, technical support services, and maintenance agreements.

c. Include company profile, relevant experience, and references from past projects.

d. Quotes for the product must be enclosed in a password-protected PDF file emailed to **Puja Srivastava at puja.srivastava@datakaveri.org, cc: Chethan at chethan@fsid-iisc.in or** sent a hard copy in a sealed envelope @ **Address: 5G Lab, Dept. of Electrical Communication Engineering, Indian Institute of Science, Bangalore – 560 012.**

Tel. 080-2293-2464

e. Quotations must be addressed to

Director,

Foundation for Science Innovation and Development

Innovation Centre, IISc Campus Near Maramma Circle gate

Bengaluru 560012 GSTIN: 29AAECF1802E1Z1

IMPORTANT: Vendors must submit their quotations no later than the specified deadline.

6. EVALUATION CRITERIA

The evaluation criteria include considering the quote and awarding with the purchase. order include,

- Compliance with RFQ requirements and specifications.
- Price competitiveness.
- Vendor experience, and track record.
- Warranty and support offerings.
- Technical capabilities and compatibility with existing infrastructure.

7. IMPORTANT NOTES

- The lowest-priced quotation may not necessarily be selected. Quality, reliability, and vendor reputation will also be considered.
- IOS MCN reserves the right to reject any or all quotations and to award the purchase order on its own evaluation criteria.
- Any clarifications or questions regarding this RFQ should be directed to the contact person listed above.

8. Delivery & Penalty notes:

- 4 to 6 weeks from the date PO
- After 6 weeks, a penalty @1% per week for delivery delays will be applied. The maximum limit of penalty would be 10%.

ANNEXURE-1

UE Simulator Specifications for Bidder Compliance

Mentioned below are the specifications that are required/must for the quote to be sent

General Requirements
Validation of gNodeB functionality as per 3GPP Rel. 16
Support of Rel 17 features like RedCap
Capacity of 64 UEs per system
Support for SA (option 2)
• MN terminated bearer
• SN terminated bearer
Support for Split bearer
Service quality validation with subscriber modeling, and multi-play voice, video, and data traffic generation: VoNR/VoLTE, ViNR/ViLTE
FR1 band (FDD/TDD) up to 100 MHz bandwidth per carrier component as per 3GPP Rel.15
Software Defined Radio to configure any of the bands in FR1 and the ability to define custom bands
Support for use cases for eMBB
Support for DLSISO, UL SISO, 2x2 MIMO (uplink), 4x4 MIMO(Downlink), 4 Layer support per CC (Carrier component),
Inter-Cell advanced mobility scenarios/Inter-Cell handover scenarios support (in SISO, 2X2 MIMO, 4X4 MIMO)
Fading and interference simulation and 3GPP channel models:
• AWGN/slow fading
• TDL (A, B, C)
Bandwidth Part Support as per 3GPP, at least 1+2 BWP
Up to 16 UEs per TTI
Support for SIM card module (At least one real UE SIM card support)
Support for Slot configuration (SFI) as per 3GPP
Support for SS/PBCH block
DRX support
SUL support
Dynamic spectrum sharing (DSS) support
Resource allocation in time domain (K0, K1 & K2) and frequency domain (Type0 and Type1)
Support for Link Adaptation

Support for Power Control, PHR, TPC
Mobility supports up to 500kmph
Support for Asymmetric Bandwidth for FDD
Detailed Logging: All protocol layers (L1, L2 and L3)
IPv4 and IPv6 Support
Support for Ciphering and Authentication
Support of Parameter Overriding (e.g CQI value can be overridden)
Support for Rel.16 ASN.1
Shall support Offline Log Analysis
Interface, Key User Features and Loggings:
Support Graphical User Interface (GUI) for configuration and usage of the equipment.
Support for Remote management of equipment.
Support for Scripting facility for automation of testing.
Support for detailed logging of all the layers
Physical layer L1
Frequency Range: 410 MHz – 7125 MHz
Subcarrier spacing (SCS in KHz): 15, 30
PRACH Subcarrier spacing (SCS in KHz): 1.25, 5, 15, 30.
Cyclic prefix: Normal for (SCS in KHz): 15, 30.
Frame duration: 10ms
Subframe duration: 1ms, 0.5ms
Slot length: 14 OFDM symbols
Mini slot length: 2, 4, 7 OFDM symbols.
Transmission Bandwidth: Up to 100MHz per carrier component
Resource Blocks: Up to 273
Carrier aggregation 5G 2Component Carriers
Support for mixed numerology in carrier aggregation
Duplex scheme: FDD and TDD
Waveforms:
• DL: CP-OFDM
• UL: CP-OFDM, DFT-s-OFDM
Physical channels:
• DL: PBCH, PDCCH, PDSCH
• UL: PUCCH, PUSCH, PRACH
Support for Control information:

• DCI Formats
• UCI Formats
PUSCH codebook and non-codebook transmission
Support for long and short PRACH preamble formats
Physical signals:
• DL: DM-RS, PT-RS, CSI-RS, PSS, SSS
• UL: DM-RS, PT-RS, SRS
Modulation scheme:
• DL: QPSK, 16QAM, 64QAM, 256QAM
• UL: QPSK, 16QAM, 64QAM, 256QAM
Channel coding:
• DL: LDPC, Polar code
• UL: LDPC, Polar code, Block code
Physical layer procedures for control and data:
Synchronization procedures
Uplink power control
Uplink timing control
Random access procedure
UE procedure for reporting control information
UE procedure for receiving control information
Cell search
Link adaptation
HARQ
Physical layer measurements:
Control of UE measurements
UE measurement capabilities (RSRP, RSRQ, SINR)
Media Access Control (MAC) protocol:
Random Access procedure
error correction through HARQ
Discontinuous Reception
Power Headroom Reporting
Data transfer services
Multiplexing and de-multiplexing
MAC CE
Radio Link Control (RLC) protocol:

TM, UM and AM data transfer
Segmentation and reassembly of RLC SDUs
ARQ procedures
Packet Data Convergence Protocol (PDCP):
Header compression and decompression using the ROHC protocol
Ciphering and deciphering: Shall support SNOW 3G, AES, ZUC and NULL.
Integrity protection and integrity verification
Reordering and in-order delivery
Duplicate discarding
Service Data Adaptation Protocol (SDAP): Marking QoS flow ID in packets
Radio Resource Control (RRC):
System information:
MIB
System information acquisition (SIB1-8)
ETWS (Earthquake and Tsunami Warning System)
CMAS (Commercial Mobile Alert Service)
Emergency Calls
Connection control:
AS Security
Paging
RRC connection establishment
RRC reconfiguration
RRC connection release
Radio link failure related actions
RRC connection resume
RRC states
RRC connection reestablishment
Inter-RAT mobility
Measurements
UE capabilities
Support for signaling Radio Bearers such as SRB0, SBR1, SRB2 and SRB3
Non-Access-Stratum (NAS) protocol
NAS procedures:
Registration, De-registration
Authentication, security, Identification

Service request, paging
Session management:
PDU session establishment, release, authentication
Security
Network slicing
Functional tests:
Attach and detach
Registration and deregistration
Inter-RAT Mobility
Multi UE Attach, Detach and Data Transfer
Performance tests:
Downlink peak throughput
Uplink peak throughput
Simultaneous Downlink/Uplink throughput
KPIs as per 3GPP
Services:
Data Services: Web Browsing, File upload/download
Voice Services: Voice over LTE, Voice over NR
Video Service: Video over LTE, Video over NR
CS Voice Fall back
Load Tests
Traffic Generator with Traffic models for load testing
Regression testing (e.g. 1000 times Attach)
Stability test: Up to 48 Hours
RedCap
Support for Frequency Range 1 (sub 6 GHz)
Max BW on UL/DL = 20 MHz
Max DL/UL Layers: 2
Max MIMO configuration: 2x2
Half-Duplex (HD) Mode: Enable/Disable
QAM: up to 256 QAM in UL and DL
Up to 16 DRBs in one PDU Session
18 Bits SN for RLC-AM and PDCP
Handing of cellBarredRedCap1Rx-r17 and cellBarredRedCap2Rx-r17
Co-existence of RedCap and NR UEs

Handover and Cell Reselection
Inter-RAT Handover
Nb-IoT
Deployment modes of Standalone, In-band, Guard-band
UE Category: NB-1 and NB-2
UE Power Class 3 and UE Power Class 5
5G Anchor Carrier
NPUSCH SCS - 15 KHz, 3.75 KHz
NPRACH SCS - 3.75 KHz, 1.25 KHz
NPDCCH Format 1
DRX Idle mode DRX Connected mode DRX Idle mode eDRX Connected mode eDRX
Power Saving Mode
Control plane optimization
Multi-Tone: Number of Tones = 3 Number of Tones = 6 Number of Tones = 12
Non-IP Data Delivery (NIDD)
SMS Data

Mentioned below are the specifications that are preferred/optional for the quote to be sent.

5G Core emulator	
Network elements	Access and Mobility Management Function (AMF), Authentication Server Function (AUSF), Session Management Function (SMF), User plane Function (UPF), UDM (Unified Data Management) 5G-EIR (5G Equipment Identity Register) all integrated within the same software component
3GPP release	Release 16

NAS encryption and integrity protection	AES, SNOW3G, ZUC
USIM authentication	XOR, Milenage, TUAK 5G-AKA
IP version	IPv4, IPv4v6, IPv6 and unstructured PDUs support
QoS	Configurable QoS flows
PDU	Multi-PDU sessions support
Network interfaces	NG interface (NGAP and GTP-U protocols) to several gNodeBs, ng-eNodeBs or N3IWFs Rx to external IMS server, N12 to external AUSF N8 to external UDM, N17 to external 5G-EIR, N50 to external CBC
RAT	NR, LTE, NB-IoT, and non-3GPP RAT
Handover	intra-AMF and 5GS EPS IRAT support

Mentioned below are the specifications that are preferred/optional for the quote to be sent.

IMS specifications	
Network Elements	Proxy-CSCF (P-CSCF), Interrogating-CSCF (I-CSCF), Serving-CSCF (S-CSCF), and Home Subscriber Server (HSS) are all integrated within the same software. Component
ISIM authentication	XOR, Milenage, TUAK
Security features	MD5, AKAv1, and AKAv2 for authentication and IPSec at the transport level
Network interfaces	Rx interface for support of precondition and dedicated bearer Cx interface for external authentication
IP versions	IPv4 and IPv6
Services	Voice call, Video call, Voice echo test, Call hold, SMS over SIP and SMS over SG

ANNEXURE-2

Proof of Compliance.

Seq. No.	Specification	COMPLIANCE/ Observation/Remarks
	UE Emulator	
	General Requirements	
1	Validation of gNodeB functionality as per 3GPP Rel. 16	
2	Support of Rel 17 features like RedCap	
3	Capacity of 64 UEs per system	
4	Support for SA (option 2)	
5	MN terminated bearer	
6	SN terminated bearer	
7	Support for Split bearer	
8	Service quality validation with subscriber modeling, and multi-play voice, video, and data traffic generation: VoNR/VoLTE, ViNR/ViLTE	
9	FR1 band (FDD/TDD) up to 100 MHz bandwidth per carrier component as per 3GPP Rel.15	
10	Software Defined Radio to configure any of the bands in FR1 and the ability to define custom bands	
11	Support for use cases for eMBB	
12	Support for DLSISO, UL SISO, 2x2 MIMO (uplink), 4x4 MIMO(Downlink), 4 Layer support per CC (Carrier component),	
13	Inter-Cell advanced mobility scenarios/Inter-Cell handover scenarios support (in SISO, 2X2 MIMO, 4X4 MIMO)	
14	Fading and interference simulation and 3GPP channel models:	
15	AWGN/slow fading	
16	TDL (A, B, C)	

17	Bandwidth Part Support as per 3GPP, at least 1+2 BWP	
18	Up to 16 UEs per TTI	
19	Support for SIM card module (At least one real UE SIM card support)	
20	Support for Slot configuration (SFI) as per 3GPP	
21	Support for SS/PBCH block	
22	DRX support	
23	SUL support	
24	Dynamic spectrum sharing (DSS) support	
25	Resource allocation in time domain (K0, K1 & K2) and frequency domain (Type0 and Type1)	
26	Support for Link Adaptation	
27	Support for Power Control, PHR, TPC	
28	Mobility supports up to 500kmph	
29	Support for Asymmetric Bandwidth for FDD	
30	Detailed Logging: All protocol layers (L1, L2 and L3)	
31	IPv4 and IPv6 Support	
32	Support for Ciphering and Authentication	
33	Support of Parameter Overriding (e.g CQI value can be overridden)	
34	Support for Rel.16 ASN.1	
35	Shall support Offline Log Analysis	
36	Interface, Key User Features and Loggings:	
37	Support Graphical User Interface (GUI) for configuration and usage of the equipment.	
38	Support for Remote management of equipment.	
39	Support for Scripting facility for automation of testing.	
40	Support for detailed logging of all the layers	
	Physical layer L1	

41	Frequency Range: 410 MHz – 7125 MHz	
42	Subcarrier spacing (SCS in KHz): 15, 30	
43	PRACH Subcarrier spacing (SCS in KHz): 1.25, 5, 15, 30.	
44	Cyclic prefix: Normal for (SCS in KHz): 15, 30.	
45	Frame duration: 10ms	
46	Subframe duration: 1ms, 0.5ms	
47	Slot length: 14 OFDM symbols	
48	Mini slot length: 2, 4, 7 OFDM symbols.	
49	Transmission Bandwidth: Up to 100MHz per carrier component	
50	Resource Blocks: Up to 273	
51	Carrier aggregation 5G 2Component Carriers	
52	Support for mixed numerology in carrier aggregation	
53	Duplex scheme: FDD and TDD	
54	Waveforms:	
55	DL: CP-OFDM	
56	UL: CP-OFDM, DFT-s-OFDM	
57	Physical channels:	
58	DL: PBCH, PDCCH, PDSCH	
59	UL: PUCCH, PUSCH, PRACH	
60	Support for Control information:	
61	DCI Formats	
62	UCI Formats	
63	PUSCH codebook and non-codebook transmission	
64	Support for long and short PRACH preamble formats	
65	Physical signals:	
66	DL: DM-RS, PT-RS, CSI-RS, PSS, SSS	
67	UL: DM-RS, PT-RS, SRS	

68	Modulation scheme:	
69	DL: QPSK, 16QAM, 64QAM, 256QAM	
70	UL: QPSK, 16QAM, 64QAM, 256QAM	
71	Channel coding:	
72	DL: LDPC, Polar code	
73	UL: LDPC, Polar code, Block code	
74	Physical layer procedures for control and data:	
75	Synchronization procedures	
76	Uplink power control	
77	Uplink timing control	
78	Random access procedure	
79	UE procedure for reporting control information	
80	UE procedure for receiving control information	
81	Cell search	
82	Link adaptation	
83	HARQ	
84	Physical layer measurements:	
85	Control of UE measurements	
86	UE measurement capabilities (RSRP, RSRQ, SINR)	
	Media Access Control (MAC) protocol:	
87	Random Access procedure	
88	error correction through HARQ	
89	Discontinuous Reception	
90	Power Headroom Reporting	
91	Data transfer services	
92	Multiplexing and de-multiplexing	
93	MAC CE	
	Radio Link Control (RLC) protocol:	

94	TM, UM and AM data transfer	
95	Segmentation and reassembly of RLC SDUs	
96	ARQ procedures	
	Packet Data Convergence Protocol (PDCP):	
97	Header compression and decompression using the ROHC protocol	
98	Ciphering and deciphering: Shall support SNOW 3G, AES, ZUC and NULL.	
99	Integrity protection and integrity verification	
100	Reordering and in-order delivery	
101	Duplicate discarding	
102	Service Data Adaptation Protocol (SDAP): Marking QoS flow ID in packets	
	System information:	
103	MIB	
104	System information acquisition (SIB1-8)	
105	ETWS (Earthquake and Tsunami Warning System)	
106	CMAS (Commercial Mobile Alert Service)	
107	Emergency Calls	
108	Connection control:	
109	AS Security	
110	Paging	
111	RRC connection establishment	
112	RRC reconfiguration	
113	RRC connection release	
114	Radio link failure related actions	
115	RRC connection resume	
116	RRC states	

117	RRC connection reestablishment	
118	Inter-RAT mobility	
119	Measurements	
120	UE capabilities	
121	Support for signaling Radio Bearers such as SRB0, SBR1, SRB2 and SRB3	
122	Non-Access-Stratum (NAS) protocol	
	NAS procedures:	
123	Registration, De-registration	
124	Authentication, security, Identification	
125	Service request, paging	
	Session management:	
126	PDU session establishment, release, authentication	
127	Security	
128	Network slicing	
	Functional tests:	
129	Attach and detach	
130	Registration and deregistration	
131	Inter-RAT Mobility	
132	Multi UE Attach, Detach and Data Transfer	
	Performance tests:	
133	Downlink peak throughput	
134	Uplink peak throughput	
135	Simultaneous Downlink/Uplink throughput	
136	KPIs as per 3GPP	
	Services:	
137	Data Services: Web Browsing, File upload/download	
138	Voice Services: Voice over LTE, Voice over NR	

139	Video Service: Video over LTE, Video over NR	
140	CS Voice Fall back	
	Load Tests	
141	Traffic Generator with Traffic models for load testing	
142	Regression testing (e.g. 1000 times Attach)	
143	Stability test: Up to 48 Hours	
	RedCap	
144	Support for Frequency Range 1 (sub 6 GHz)	
145	Max BW on UL/DL = 20 MHz	
146	Max DL/UL Layers: 2	
147	Max MIMO configuration: 2x2	
148	Half-Duplex (HD) Mode: Enable/Disable	
149	QAM: up to 256 QAM in UL and DL	
150	Up to 16 DRBs in one PDU Session	
151	18 Bits SN for RLC-AM and PDCP	
152	Handing of cellBarredRedCap1Rx-r17 and cellBarredRedCap2Rx-r17	
153	Co-existence of RedCap and NR UEs	
154	Handover and Cell Reselection	
155	Inter-RAT Handover	
	Nb-IoT	
156	Deployment modes of Standalone, In-band, Guard-band	
157	UE Category: NB-1 and NB-2	
158	UE Power Class 3 and UE Power Class 5	
159	5G Anchor Carrier	
160	NPUSCH SCS - 15 KHz, 3.75 KHz	
161	NPRACH SCS - 3.75 KHz, 1.25 KHz	
162	NPDCCH Format 1	

163	DRX Idle mode DRX Connected mode DRX Idle mode eDRX Connected mode eDRX		
164	Power Saving Mode		
165	Control plane optimization		
166	Multi-Tone: Number of Tones = 3 Number of Tones = 6 Number of Tones = 12		
167	Non-IP Data Delivery (NIDD)		
168	SMS Data		
	5G Core emulator		
169	Network elements	Access and Mobility Management Function (AMF), Authentication Server Function (AUSF), Session Management Function (SMF), User plane Function (UPF), UDM (Unified Data Management) 5G-EIR (5G Equipment Identity Register) all integrated within the same software component	
170	3GPP release	Release 16	
171	NAS encryption and integrity protection	AES, SNOW3G, ZUC	
172	USIM authentication	XOR, Milenage, TUAK 5G-AKA	
173	IP version	IPv4, IPv4v6, IPv6 and unstructured PDUs support	
174	QoS	Configurable QoS flows	
175	PDU	Multi-PDU sessions support	
176	Network interfaces	NG interface (NGAP and GTP-U protocols) to several gNodeBs, ng-eNodeBs or N3IWFs Rx to external IMS server, N12 to external AUSF N8 to external UDM, N17 to external 5G-EIR, N50 to external CBC	
177	RAT	NR, LTE, NB-IoT, and non-3GPP RAT	

178	Handover	intra-AMF and 5GS EPS IRAT support	
	IMS specifications		
179	Network Elements	Proxy-CSCF (P-CSCF), Interrogating-CSCF (I-CSCF), Serving-CSCF (S-CSCF), and Home Subscriber Server (HSS) are all integrated within the same software. Component	
180	ISIM authentication	XOR, Milenage, TUAK	
181	Security features	MD5, AKAv1, and AKAv2 for authentication and IPSec at the transport level	
182	Network interfaces	Rx interface for support of precondition and dedicated bearer Cx interface for external authentication	
183	IP versions	IPv4 and IPv6	
184	Services	Voice call, Video call, Voice echo test, Call hold, SMS over SIP and SMS over SG	

ANNEXURE-3

Self-declaration is to be given by the bidder.

RFQ Reference No. Date:

Bidder's Name &Address:

Person to be contacted: Designation:

Telephone No: Fax No: Email:

To,

Director,

FSID, IISc Bangalore-560012

We, the undersigned Bidder, having carefully read and examined in detail the Terms and Conditions, specifications, and all bidding documents regarding the supply of the RAN server at FSID accept the same.

We also hereby declare that.

1. We have not been blacklisted/debarred by any Government/Undertaking.
2. The rates quoted are not higher than the rates quoted for the same item for any Government/Undertaking.
3. The bid submitted by us is properly sealed and prepared to prevent any subsequent alteration and replacement.

For and on behalf of the firm

(Firms Name & Address)

(Signature of Authorized Signatory)

Name:

Date: --------

Designation: Place: ------ Seal

Phone No:

ANNEXURE – 4

Bidder Organisation Details Format for RFQ No. FSID/IOSMCN/05- 06 Dated 03/06/24		
To, Director, FSID, IISc Bangalore-560012		
1	Bidder Name	
2	Website Address	
3	Email Address	
4	Address for Communication	
5	Telephone Number	
6	Fax/Telefax Number	
7	Authorised Person Name	
8	Designation:	
9	Mobile No.	
10	Email ID	
11	Alternate Person Name	
12	Designation:	
13	Mobile No.	
14	Email ID	
15	PAN Number	
16	GST Regn. No. with Address	
17	Beneficiary's complete Bank Details.	
18	Bank Account No.	
19	IFSC / NEFT Code	
20	Name of the Bank	
21	Turnover of the Bidder in last 3 years	
22	2023	
23	2022	
24	2021	
25	Are you a MSME Unit. If yes, please furnish. Registration Details, Name of the DIC/State.	
26	If you are MSME, is it owned by SC/ST Entrepreneurs or Women Entrepreneurs? If yes, please specify the Name of the Owner who is SC or ST or Women Entrepreneur (as applicable)	
27	Following Documents are to be submitted	
28	Certificate of Incorporation	
29	PAN No	
30	GST Registration No.	
31	DECLARATION **S)** We have read and understood the terms & conditions of the above-mentioned tender and comply to all Terms & Conditions of the Tender. (In case of any deviation, the Bidder must attach a separate sheet clearly mentioning the Clause No. of the Tender and Deviation thereto)	Signature of Authorised Signatory with Seal (Name)

	2) We certify that the information mentioned above are true and correct to best of our knowledge.	
32	Place	

ANNEXURE-5

BoQ

RFQ No: FSID/IOSMCN/05- 06 Dt 03/06/24 for Supply of UE Simulator				
Sl. No	**Equipment/Devices**	**HSN Code**	**Qty**	**Compliance (Yes/No)**
1.	**UE simulator**		1	

ANNEXURE-6

Format: Letter of undertaking

(Company letterhead)

To,

Director,
FSID, IISc Bangalore-560012

Sir,

Sub: Undertaking on non-disclosure of contract documents

I/We do hereby undertake that we shall not disclose the contract or any provision, specification, plan, design, pattern, sample, or information to any third party for a period of three years from the termination of the contract.

I/We do hereby undertake that except with the written consent of the Buyer/Seller, the other party shall not disclose the contract or any provision, specification, plan, design, pattern, sample or
information to any third party.

I/We do hereby undertake not to copy the AS-IS documentation captured in this tender document in any form Xerox, electronic, or via DMS or any other physical/electronic means. For any purpose but for the bidding process.

For and on behalf of the
Bidder

(Signature)
(Name of the Authorized Signatory)

Date:

ANNEXURE-7

Financial Bid Format

RFQ No: FSID/IOSMCN/05- 06 Dt 03/06/24 for Supply of UE Simulator					
Sl. No	**Equipment/Devices**	**Qty**	**Unit Rate in INR**	**GST in INR**	**Total with GST in INR**

- **Delivery charges**
- **Installation charges**
- **AMC charges for 3 years**

END THE DOCUMENT