

अनिवार्य आवश्यकताएँ

संख्या : TEC40092111

Essential Requirements

ER No. : TEC40092111

MSC/MSC-S/GMSC/GMSC-S including VLR

© टीईसी, २०२१
© TEC, 2021

MTCTE के तहत जारी:

Issued under MTCTE by:

दूरसंचार अभियांत्रिकी केंद्र

भारत सरकार

खुर्शीद लाल भवन, जनपथ, नई दिल्ली - 110001, भारत

Telecommunication Engineering Centre

Government of India

Khurshid Lal Bhawan, Janpath, New Delhi-110001, INDIA

Essential Requirements for:

MSC/MSC-S/GMSC/GMSC-S including VLR

Certification Scheme: **GCS**

Product Fee Group: **C**

This document lays down the Essential Requirements under MTCTE notified by GoI vide Gazette Notification No. G.S.R. 113 (E) dated 05-09-2017 for MSC/MSC-S/ GMSC/GMSC-S to be used in Indian Telecom Network.

Note: Annexures referred to in this ER are Annexures as mentioned in "Annexures to ERs" No. TEC/SD/DD/TCP-222/02/June19 as updated from time to time and available on MTCTE portal.

This product has the following variants:

1. MSC-S or GMSC-S
2. MSC or GMSC including VLR for GSM
3. MSC or GMSC including VLR for WCDMA

1. Variant 1 : MSC-S or GMSC-S

1.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
1.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
1.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
1.1.3	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
1.1.4	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
1.1.5	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B

1.1.6	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
1.1.7	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
1.1.8	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
1.1.9	Numbering Addressing and identification	3GPP TS 23.003
1.1.10	Support for priority for emergency calls	3GPP TS 23.067. Annexures To ER - Appendix II Test No. 40

1.2 Interface 1 : CAP based interface towards IN-SCP

S.No.	Parameter Name	Standard Name
1.2.1	Interface Management Procedures (CAP based interface towards IN-SCP)	3GPP TS 23.078 3GPP TS 29.078
1.2.2	Subscriber Charging Procedures for Call	3GPP TS 29.078

1.3 Interface 2 : IuCS

S.No.	Parameter Name	Standard Name
1.3.1	Call Control Management Procedures(IuCS interface)	3GPP TS 25.413 24.008 24.010
1.3.2	IuCS interface management procedures(IuCS interface)	3GPP TS 25.413 24.008 24.010
1.3.3	Mobility Management Procedures(IuCS interface)	3GPP TS 25.413 24.008 24.010
1.3.4	Supplementary Services Related Procedures(IuCS interface)	3GPP TS 25.413 24.008 24.010

1.4 Interface 3 : Lawful Interception

S.No.	Parameter Name	Standard Name
1.4.1	Interception Procedures	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108
1.4.2	Interface Management Procedures (Lawful Interception)	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108

1.5 Interface 4 : Lg (GMLC-MSC)

S.No.	Parameter Name	Standard Name
1.5.1	Interface Management Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002
1.5.2	Location Services Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002

1.6 Interface 5 : MAP based interface towards SMSC

S.No.	Parameter Name	Standard Name
1.6.1	Interface Management Procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.6.2	SMS related procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

1.7 Interface 6 : MAP based interfaces to HLR or AuC

S.No.	Parameter Name	Standard Name
1.7.1	Call Control (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.7.2	Interface Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.7.3	SMS Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.7.4	Subscriber authentication procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.7.5	Subscriber Information Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
1.7.6	Supplementary Services Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

1.8 Interface 7 : MAP based interfaces towards EIR

S.No.	Parameter Name	Standard Name
1.8.1	Equipment Authentication Procedures (MAP	3GPP TS 29.002 Mobile Application Part

	based interfaces towards EIR)	(MAP) specification
1.8.2	Interface Management Procedures (MAP based interfaces towards EIR)	3GPP TS 29.002 Mobile Application Part (MAP) specification

1.9 Interface 8 : MSC-MGW

S.No.	Parameter Name	Standard Name
1.9.1	Contexts and Terminations(MSC-MGW)	H.248 Clause 6.1 6.2

1.10 Interface 9 : MSC-Server to MSC-Server BICC based interface

S.No.	Parameter Name	Standard Name
1.10.1	Call Control Management Procedures(MSC-Server to MSC-Server BICC based interface)	BICC - 3GPP TS 23.205
1.10.2	Interface management procedures(MSC-Server to MSC-Server BICC based interface)	BICC - 3GPP TS 23.205

1.11 Interface 10 : MSC-Server to MSC-Server SIP based interface

S.No.	Parameter Name	Standard Name
1.11.1	Call Control Management Procedures(MSC-Server to MSC-Server SIP based)	3GPP TS 23.231
1.11.2	Interface management procedures(MSC-Server to MSC-Server SIP based)	3GPP TS 23.231

2. Variant 2 : MSC or GMSC including VLR for GSM

2.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
2.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
2.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
2.1.3	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
2.1.4	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B

2.1.5	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
2.1.6	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
2.1.7	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
2.1.8	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
2.1.9	Numbering Addressing and identification	3GPP TS 23.003
2.1.10	Support for priority for emergency calls	3GPP TS 23.067. Annexures To ER - Appendix II Test No. 40

2.2 Interface 1 : A

S.No.	Parameter Name	Standard Name
2.2.1	A interface management procedures	3GPP TS 48.008 24.008 23.040 24.010
2.2.2	Call Control Management Procedures(A interface)	3GPP TS 48.008 24.008 23.040 24.010
2.2.3	Mobility Management Procedures(A interface)	3GPP TS 48.008 24.008 23.040 24.010
2.2.4	SMS Related Procedure(A interface)	3GPP TS 48.008 24.008 23.040 24.010
2.2.5	Supplementary Services Related Procedures(A interface)	3GPP TS 48.008 24.008 23.040 24.010

2.3 Interface 2 : CAP based interface towards IN-SCP

S.No.	Parameter Name	Standard Name
2.3.1	Interface Management Procedures (CAP based interface towards IN-SCP)	3GPP TS 23.078 3GPP TS 29.078
2.3.2	Subscriber Charging Procedures for Call	3GPP TS 29.078

2.4 Interface 3 : ISUP Based interface towards GMSC or MSC

S.No.	Parameter Name	Standard Name
2.4.1	Call control related procedures	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and

		ISUP. 3GPP TS 29.002
2.4.2	Interface Management Procedures (ISUP Based interface towards GMSC or MSC)	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and ISUP. 3GPP TS 29.002

2.5 Interface 4 : Lawful Interception

S.No.	Parameter Name	Standard Name
2.5.1	Interception Procedures	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108
2.5.2	Interface Management Procedures (Lawful Interception)	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108

2.6 Interface 5 : Lg (GMLC-MSC)

S.No.	Parameter Name	Standard Name
2.6.1	Interface Management Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002
2.6.2	Location Services Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002

2.7 Interface 6 : MAP based interface towards GMSC or MSC

S.No.	Parameter Name	Standard Name
2.7.1	Handover Management Procedures	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and ISUP. 3GPP TS 29.002

2.8 Interface 7 : MAP based interface towards SMSC

S.No.	Parameter Name	Standard Name
2.8.1	Interface Management Procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.8.2	SMS related procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

2.9 Interface 8 : MAP based interfaces to HLR or AuC

S.No.	Parameter Name	Standard Name
2.9.1	Call Control (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.9.2	Interface Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.9.3	SMS Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.9.4	Subscriber authentication procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.9.5	Subscriber Information Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.9.6	Supplementary Services Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

2.10 Interface 9 : MAP based interfaces towards EIR

S.No.	Parameter Name	Standard Name
2.10.1	Equipment Authentication Procedures (MAP based interfaces towards EIR)	3GPP TS 29.002 Mobile Application Part (MAP) specification
2.10.2	Interface Management Procedures (MAP based interfaces towards EIR)	3GPP TS 29.002 Mobile Application Part (MAP) specification

3. Variant 3 : MSC or GMSC including VLR for WCDMA

3.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
3.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
3.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
3.1.3	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
3.1.4	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4.

		Annex-B
3.1.5	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
3.1.6	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
3.1.7	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
3.1.8	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
3.1.9	Numbering Addressing and identification	3GPP TS 23.003
3.1.10	Support for priority for emergency calls	3GPP TS 23.067. Annexures To ER - Appendix II Test No. 40

3.2 Interface 1 : CAP based interface towards IN-SCP

S.No.	Parameter Name	Standard Name
3.2.1	Interface Management Procedures (CAP based interface towards IN-SCP)	3GPP TS 23.078 3GPP TS 29.078
3.2.2	Subscriber Charging Procedures for Call	3GPP TS 29.078

3.3 Interface 2 : ISUP Based interface towards GMSC or MSC

S.No.	Parameter Name	Standard Name
3.3.1	Call control related procedures	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and ISUP. 3GPP TS 29.002
3.3.2	Interface Management Procedures (ISUP Based interface towards GMSC or MSC)	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and ISUP. 3GPP TS 29.002

3.4 Interface 3 : IuCS

S.No.	Parameter Name	Standard Name
3.4.1	Call Control Management Procedures(IuCS interface)	3GPP TS 25.413 24.008 24.010

3.4.2	luCS interface management procedures(luCS interface)	3GPP TS 25.413 24.008 24.010
3.4.3	Mobility Management Procedures(luCS interface)	3GPP TS 25.413 24.008 24.010
3.4.4	Supplementary Services Related Procedures(luCS interface)	3GPP TS 25.413 24.008 24.010

3.5 Interface 4 : Lawful Interception

S.No.	Parameter Name	Standard Name
3.5.1	Interception Procedures	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108
3.5.2	Interface Management Procedures (Lawful Interception)	3GPP TS 33.106 3GPP TS 33.107 3GPP TS 33.108

3.6 Interface 5 : Lg (GMLC-MSC)

S.No.	Parameter Name	Standard Name
3.6.1	Interface Management Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002
3.6.2	Location Services Procedures(Lg (GMLC-MSC) interface)	3GPP 23.271 3GPP TS 29.002

3.7 Interface 6 : MAP based interface towards GMSC or MSC

S.No.	Parameter Name	Standard Name
3.7.1	Handover Management Procedures	ITU-T Q.764 & Indian ISUP TEC Recommendation CCS-02/03 (Jan2000): National CCS7 Standards for MTP and ISUP. 3GPP TS 29.002

3.8 Interface 7 : MAP based interface towards SMSC

S.No.	Parameter Name	Standard Name
3.8.1	Interface Management Procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.8.2	SMS related procedures (MAP based interface towards SMSC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

3.9 Interface 8 : MAP based interfaces to HLR or AuC

S.No.	Parameter Name	Standard Name
3.9.1	Call Control (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.9.2	Interface Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.9.3	SMS Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.9.4	Subscriber authentication procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.9.5	Subscriber Information Management Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.9.6	Supplementary Services Related Procedures (MAP based interfaces to HLR or AuC)	3GPP TS 29.002 Mobile Application Part (MAP) specification

3.10 Interface 9 : MAP based interfaces towards EIR

S.No.	Parameter Name	Standard Name
3.10.1	Equipment Authentication Procedures (MAP based interfaces towards EIR)	3GPP TS 29.002 Mobile Application Part (MAP) specification
3.10.2	Interface Management Procedures (MAP based interfaces towards EIR)	3GPP TS 29.002 Mobile Application Part (MAP) specification