



RAEX IR.21 Document

Organisation Name	Hutchison Telecommunications Hong Kong Holdings Limited
Creation Date	2025-01-2110:42:55+01:00
Sender TADIG Code	HKGH3
Publish Comment	Add new MSISDN number range



History of Changes

Date	TADIG Code	Section	Description
2025-01-20	HKGH3	17 GRX/IPX Routing for Data Roaming	Update inter-PMN IP backbone information
2025-01-20	HKGH3	21 Contacts	Contact Information
2025-01-17	HKGH3	4 Routing	Add new MSISDN number range of 471 & 705
2024-09-19	HKGH3	4 Routing	Add new MSISDN number range of 475 & 704
2024-09-09	HKGH3	13 Network Elements	Add MSC addresses
2024-08-12	HKGH3	20 LTE Roaming	Added IPX Provider
2024-08-12	HKGH3	20 LTE Roaming	Added IPX Provider
2024-08-12	HKGH3	20 LTE Roaming	Added IPX Provider
2024-08-06	HKGH3	17 GRX/IPX Routing for Data Roaming	Added IPX Provider
2024-07-23	HKGH3	4 Routing	Add new MSISDN number range of 449 & 843
2024-07-10	HKGH3	13 Network Elements	Add SMSC GT & HLR GT
2024-06-21	HKGH3	4 Routing	Add new MSISDN number range of 470 & 703
2024-05-21	HKGH3	13 Network Elements	Add new HLR GT 85263349030 & 85263349031
2024-01-15	HKGH3	4 Routing	Add new MSISDN number range of 4441, 4442, 7077, 7078, 442 & 841
2023-12-29	HKGH3	4 Routing	Add new MSISDN number range of 448 and 702
2023-11-23	HKGH3	4 Routing	Added MSISDN number ranges
2023-10-16	HKGH3	4 Routing	2023-10-16
2023-07-28	HKGH3	17 GRX/IPX Routing for Data Roaming	update IPX carriers
2023-07-27	HKGH3	16 Packet Data Services	APN information updated
2023-07-27	HKGH3	16 Packet Data Services	APN information updated
2023-07-27	HKGH3	17 GRX/IPX Routing for Data Roaming	DNS IP correction
2023-07-27	HKGH3	20 LTE Roaming	DESS phase not support
2023-07-20	HKGH3	17 GRX/IPX Routing for Data Roaming	Update MCC MNC
2023-03-29	HKGH3	5 International SCCP Gateway	Removed HGC; Added BICS
2023-03-21	HKGH3	5 International SCCP Gateway	Removed HGC; Added BICS
2023-03-21	HKGH3	17 GRX/IPX Routing for Data Roaming	Removed HGC; Added BICS
2023-03-21	HKGH3	20 LTE Roaming	Removed HGC; Added BICS
2023-01-20	HKGH3	13 Network Elements	Added SMSC GT Address
2023-01-20	HKGH3	15 CAMEL	Added SCP GT Address



Date	TADIG Code	Section	Description
2022-11-15	HKGH3	17 GRX/IPX Routing for Data Roaming	Removed inter-PMN IP backbone address ranges: 131.166.134.0/24; 131.166.136.0/24;131.166.130.0/24;131.166.132.0/24;131.166.163.32/29;131.166.165.32/29 ; Removed ASN 22870 and 3321; Updated GRX provider list
2022-11-07	HKGH3	13 Network Elements	Added new SMSC GT
2022-11-07	HKGH3	20 LTE Roaming	Added IPX Provider
2021-11-24	HKGH3	5 International SCCP Gateway	removed REACH
2021-08-03	HKGH3	4 Routing	2G roaming service will be shutdown in Sep 2021.
2020-10-06	HKGH3	17 GRX/IPX Routing for Data Roaming	Add inter-PMN IP backbone address ranges: 131.166.134.0/24; 131.166.136.0/24; 131.166.130.0/24;131.166.132.0/24;131.166.163.32/29;131.166.165.32/29; Add ASN 22870 and 3321
2020-05-20	HKGH3	4 Routing	Additional Information Updated - MGT translation: 45404->852 949; 45403->852 633
2019-04-01	HKGH3	4 Routing	Remove duplicate NDC - 941 & 963; add missing NDCs - 519 & 627
2019-03-20	HKGH3	21 Contacts	Delete duplicate contact information
2019-03-12	HKGH3	17 GRX/IPX Routing for Data Roaming	Update GRX provider list
2019-03-05	HKGH3	13 Network Elements	Add MSC addresses
2019-03-05	HKGH3	15 CAMEL	Add SCP GT addresses
2019-01-09	HKGH3	4 Routing	Delete NDCs 5234, 5718, 5719, 5768, 5769, 5908, 5909
2019-01-09	HKGH3	13 Network Elements	Add HLR GT 85263347864 & SMSC GT 85263347867
2018-10-30	HKGH3	13 Network Elements	Correct SGSN address from 85263347332 to 85263347732; Update Node Type from MME to SGSN; Update UTC offset time
2018-10-30	HKGH3	13 Network Elements	-
2018-10-26	HKGH3	4 Routing	Remove MSRN 852 519 & 852 627
2018-10-26	HKGH3	13 Network Elements	Updated SGSN IP address
2018-10-23	HKGH3	13 Network Elements	SGSN IP information updated
2018-09-03	HKGH3	4 Routing	Delete MSRN ranges: 852519; 852627; 852633; 852634 ; 852640; 852650; 852679; 852690; 852904; 852928; 852949 & 852950
2018-09-03	HKGH3	13 Network Elements	Add MSC GT 85263347958; Update HLR GT 85294986804 & 85294986824 to MSC GT; Delete HLR & MSC GTs
2018-09-03	HKGH3	13 Network Elements	Add IP information to SGSN GT
2018-09-03	HKGH3	16 Packet Data Services	Updated APN type



Date	TADIG Code	Section	Description
2018-05-11	HKGH3	13 Network Elements	New SMSC GT added 85294984713
2018-02-09	HKGH3	4 Routing	Additional routing information added
2018-02-09	HKGH3	13 Network Elements	initial document
2018-02-09	HKGH3	16 Packet Data Services	initial document
2018-02-09	HKGH3	17 GRX/IPX Routing for Data Roaming	minor change
2018-02-09	HKGH3	20 LTE Roaming	minor change
2018-02-07	HKGH3	4 Routing	NDC 6260 added; Delete NDCs 5283, 5700, 5701, 5704 , 5705, 5745-5748
2018-02-07	HKGH3	10 Mobile Application Part	MAP version updated
2018-02-07	HKGH3	16 Packet Data Services	Delete ISP DNS IP address
2018-02-07	HKGH3	16 Packet Data Services	no change
2018-02-07	HKGH3	17 GRX/IPX Routing for Data Roaming	APN list is updated; GRX provider changed
2018-02-06	HKGH3	4 Routing	initial document
2018-02-06	HKGH3	14 USSD	USSD
2018-02-06	HKGH3	20 LTE Roaming	initial document
2018-02-01	HKGH3	16 Packet Data Services	initial document
2018-01-31	HKGH3	5 International SCCP Gateway	SCCP Info
2018-01-31	HKGH3	8 Subscriber Identity Authentication	Initial document
2018-01-31	HKGH3	10 Mobile Application Part	MAP
2018-01-31	HKGH3	15 CAMEL	CAMEL information added
2018-01-31	HKGH3	16 Packet Data Services	Packet Data Services Info
2018-01-31	HKGH3	17 GRX/IPX Routing for Data Roaming	IP interworking information
2018-01-31	HKGH3	20 LTE Roaming	LTE roaming information
2018-01-31	HKGH3	21 Contacts	Contact info
2018-01-31	HKGH3	21 Contacts	Contact Information



1 Organisation

Organisation Name	Hutchison Telecommunications Hong Kong Holdings Limited
Country Initials	HKG

TADIG Summary

TADIG Code	MCC	MNC	VPMN / HPMN	Network type
HKGH3	454	03	VPMN, HPMN	Terrestrial
HKGH3	454	04	HPMN	Terrestrial
HKGH3	454	05	HPMN	Terrestrial
HKGH3	454	14	HPMN	Terrestrial



2 Network

This section is applicable for **HKGH3**

TADIG Code	HKGH3
Network Name	Hutchison Telephone Company Limited

Service Status – Planned Closure and Availability (Radio Network)

Roaming Service Supported as VPMN	Status	Planned Closure	Planned Availability
2G	Unsupported		
3G	Unsupported		
4G	Unsupported		
MIoT-LTE-M	Unsupported		
MIoT-NB-IoT	Unsupported		
5G NR	Unsupported		

Service Status – Planned Closure and Availability (Core Network)

Roaming Service Supported as VPMN	Status	Planned Closure	Planned Availability
CS	Unsupported		
PS	Unsupported		
EPC	Unsupported		
VoIMS	Unsupported		
5G SA	Unsupported		

Technologies and Frequencies

Technology	Frequencies	Coverage
2G-GSM	Unsupported	
3G-UTRA/FDD	8 - 900 MHz, 1 - IMT 2.1 GHz	
3G-UTRA/TDD	Unsupported	
4G-E-UTRA	1 - IMT 2.1 GHz, 3 - DCS 1800, 7 - 2.6 GHz, 8 - 900 MHz, 40 - TDD 2.3 GHz	
4G-E-UTRA-MIoT-LTE-M	Unsupported	
4G-E-UTRA-MIoT-NB-IoT	3 - DCS 1800, 8 - 900 MHz	
4G-MIoT-NB-IoT Deployment Mode	2 - Guardband	
5G-NR	Unsupported	



4 Routing

This section is applicable for **HKGH3**

MSISDN Number Ranges

CC	NDC	SN Range Start	SN Range Stop	Prim. Intl. DPC	Sec. Intl. DPC	Network Owner	Location
852	6040					MNO	
852	6041					MNO	
852	6042					MNO	
852	6043					MNO	
852	6044					MNO	
852	607					MNO	
852	608					MNO	
852	610					MNO	
852	619					MNO	
852	620					MNO	
852	640					MNO	
852	647					MNO	
852	650					MNO	
852	679					MNO	
852	904					MNO	
852	912					MNO	
852	928					MNO	
852	932					MNO	
852	935					MNO	
852	936					MNO	
852	937					MNO	
852	941					MNO	
852	942					MNO	
852	947					MNO	
852	948					MNO	
852	949					MNO	
852	950					MNO	



CC	NDC	SN Range Start	SN Range Stop	Prim. Intl. DPC	Sec. Intl. DPC	Network Owner	Location
852	957					MNO	
852	963					MNO	
852	967					MNO	
852	974					MNO	
852	975					MNO	
852	981					MNO	
852	983					MNO	
852	5289					MNO	
852	533					MNO	
852	546					MNO	
852	556					MNO	
852	563					MNO	
852	566					MNO	
852	569					MNO	
852	596					MNO	
852	597					MNO	
852	6045					MNO	
852	6046					MNO	
852	6047					MNO	
852	6048					MNO	
852	6049					MNO	
852	631					MNO	
852	633					MNO	
852	634					MNO	
852	668					MNO	
852	690					MNO	
852	519					MNO	
852	627					MNO	
852	970					MNO	
852	982					MNO	
852	6260					MNO	



CC	NDC	SN Range Start	SN Range Stop	Prim. Intl. DPC	Sec. Intl. DPC	Network Owner	Location
852	445					MNO	
852	905					MNO	
852	446					MNO	
852	709					MNO	
852	448					MNO	
852	702					MNO	
852	4441					MNO	
852	4442					MNO	
852	7077					MNO	
852	7078					MNO	
852	442					MNO	
852	841					MNO	
852	470					MNO	
852	703					MNO	
852	449					MNO	
852	843					MNO	
852	475					MNO	
852	704					MNO	
852	471					MNO	
852	705					MNO	

Network Nodes Global Title Number Ranges

CC	NDC	SN Range Start	SN Range Stop	Prim. Intl. DPC	Sec. Intl. DPC	Network Owner	Leas. Details
852	633					MNO	
852	949					MNO	

MSRN Number Ranges

CC	NDC	SN Range Start	SN Range Stop	Location
852	912			
852	974			
852	975			



E.212 Number Series

Mobile Country Code (MCC)	Mobile Network Code (MNC)
454	03

E.214 Mobile Global Title (MGT)

Country Code of MGT (CC)	Network Code of MGT (NC)
852	633

Does Number Portability Apply?	Yes
15-Digit MSISDN	Supported

Additional Information

2G service will be shutdown in Sep 2021. 2G network code: 454 04 (HKGHT) MGT translation: 45404 -> 852 949; 45403 -> 852 633

History of Changes

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2025-01-17	Add new MSISDN number range of 471 & 705
2024-09-19	Add new MSISDN number range of 475 & 704
2024-07-23	Add new MSISDN number range of 449 & 843
2024-06-21	Add new MSISDN number range of 470 & 703
2024-01-15	Add new MSISDN number range of 4441, 4442, 7077, 7078, 442 & 841
2023-12-29	Add new MSISDN number range of 448 and 702
2023-11-23	Added MSISDN number ranges
2023-10-16	2023-10-16
2021-08-03	2G roaming service will be shutdown in Sep 2021.
2020-05-20	Additional Information Updated - MGT translation: 45404->852 949; 45403->852 633
2019-04-01	Remove duplicate NDC - 941 & 963; add missing NDCs - 519 & 627
2019-01-09	Delete NDCs 5234, 5718, 5719, 5768, 5769, 5908, 5909
2018-10-26	Remove MSRN 852 519 & 852 627
2018-09-03	Delete MSRN ranges: 852519; 852627; 852633; 852634; 852640; 852650; 852679; 852690; 852904; 852928; 852949 & 852950
2018-02-09	Additional routing information added
2018-02-07	NDC 6260 added; Delete NDCs 5283, 5700, 5701, 5704, 5705, 5745-5748
2018-02-06	initial document



5 International SCCP Gateway

This section is applicable for **HKGH3**

SCCP Carrier: CITIC

SCCP Connectivity Primary

Destination Point Codes

Signature	Type	DPC	Comments
CITIC	ISC	4.178.3	
CITIC	ISC	4.177.1	
CITIC	ISC	4.176.4	
CITIC	ISC	4.179.0	

SCCP Carrier: BICS

SCCP Connectivity Primary

Destination Point Codes

Signature	Type	DPC	Comments
HGKSPTS01	STP/SCCP	5.145.1	Primary 'HGKSPTS01 is reachable via MTP routing through Geneva/GB9 (2-056-6) and Zurich/ZB9 (2-056-7) or BRU/I (2-013-1) and BRU/H (2-14-7)'
SGPSPTS01	STP/SCCP	5.145.0	Primary 'SGPSPTS01 is reachable via MTP routing through Geneva/GB9 (2-056-6) and Zurich/ZB9 (2-056-7) or BRU/I (2-013-1) and BRU/H (2-14-7)'

SCCP Carrier: BICS for ANSI Conversion

SCCP Connectivity Primary

Destination Point Codes

Signature	Type	DPC	Comments
BICS USA	SCCP	2.181.111	For ANSI networks only

History of Changes



Date	Description
2023-03-29	Removed HGC; Added BICS
2023-03-21	Removed HGC; Added BICS
2021-11-24	removed REACH
2018-01-31	SCCP Info



8 Subscriber Identity Authentication

This section is applicable for **HKGH3**

Authentication	Performed
Authentication Performed for Roaming Subscribers at the Commencement of GSM Service	Yes
Authentication Performed for Roaming Subscribers in Case of GPRS	Yes

A5 Cipher Algorithm Version in Use	A5-1; A5-3
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History of Changes

Date	Description
2018-01-31	Initial document



10 Mobile Application Part

This section is applicable for **HKGH3**

Supported MAP Versions in Roaming

Application Context	Inbound (MSC/VLR)	Inbound (SGSN)	Outbound	Comments
networkLocUp	MAPv3	N/A	MAPv3	
roamingNumberEnquiry	MAPv3	N/A	MAPv3	
infoRetrieval	MAPv3	-	MAPv3	
subscriberDataMngt	MAPv3	-	MAPv3	
networkFunctionalSs	MAPv2	N/A	MAPv2	
mwdMngt	MAPv3	-	MAPv3	
shortMsgMT-Relay	MAPv3	-	-	
shortMsgMO-Relay	MAPv3	-	-	
ss-InvocationNotification	MAPv3	N/A	-	
subscriberInfoEnquiry	MAPv3	-	MAPv3	
gprsLocationUpdate	N/A	MAPv3	MAPv3	
locationCancellation	MAPv3	-	MAPv3	
msPurging	MAPv3	-	MAPv3	
reset	MAPv2	-	MAPv2	
networkUnstructuredSs	MAPv2	N/A	MAPv2	
reporting	MAPv3	N/A	MAPv3	
callCompletion	MAPv3	N/A	MAPv3	
istAlerting	MAPv3	N/A	MAPv3	
serviceTermination	-	N/A	MAPv3	
locationSvcGateway	N/A	N/A	MAPv3	
mm-EventReporting	MAPv3	N/A	-	
authenticationFailureReport	MAPv3	-	MAPv3	
imsiRetrieval	MAPv2	N/A	MAPv2	
gprsNotifyContext	N/A	-	-	
gprsLocationInfoRetrieval	N/A	-	MAPv3	
failureReport	N/A	-	MAPv3	
secureTransportHandling	-	-	-	



History of Changes

Date	Description
2018-02-07	MAP version updated
2018-01-31	MAP



13 Network Elements

This section is applicable for **HKGH3**

Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
HLR	852 949 80891–80891				+08:00
HLR	852 949 81704–81704				+08:00
HLR	852 949 81876–81876				+08:00
HLR	852 949 81971–81971				+08:00
HLR	852 949 83201–83201				+08:00
HLR	852 949 83211–83212				+08:00
HLR	852 949 84401–84401				+08:00
HLR	852 949 84430–84430				+08:00
HLR	852 949 85442–85442				+08:00
HLR	852 949 85489–85489				+08:00
MSC	852 949 86804–86804				+08:00
MSC	852 949 86824–86824				+08:00
HLR	852 949 87642–87642				+08:00
HLR	852 949 84173–84173				+08:00
HLR	852 949 8181500–8181599				+08:00
HLR	852 949 8186100–8186199				+08:00
HLR	852 633 49001–49001				+08:00
HLR	852 633 49021–49021				+08:00
HLR	852 633 49034–49034				+08:00
HLR	852 633 49048–49048				+08:00
HLR	852 633 49071–49071				+08:00
HLR	852 633 47846–47846				+08:00
HLR	852 633 47876–47876				+08:00
HLR	852 633 47880–47880				+08:00
HLR	852 633 47885–47885				+08:00
HLR	852 633 47899–47899				+08:00
HLR	852 633 47741–47741				+08:00
HLR	852 633 47750–47752				+08:00
HLR	852 633 47761–47761				+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
HLR	852 633 47747–47747				+08:00
HLR	852 633 477471–477471				+08:00
HLR	852 633 47777–47778				+08:00
HLR	852 633 47757–47757				+08:00
HLR	852 633 47701–47702				+08:00
HLR	852 633 47769–47769				+08:00
HLR	852 633 47739–47739				+08:00
HLR	852 633 49056–49056				+08:00
MSC	852 949 80476–80476				+08:00
MSC	852 949 81740–81740				+08:00
MSC	852 949 81972–81972				+08:00
MSC	852 949 82014–82014				+08:00
MSC	852 949 82024–82024				+08:00
MSC	852 949 82409–82409				+08:00
MSC	852 949 82436–82436				+08:00
MSC	852 949 82492–82492				+08:00
MSC	852 949 84143–84143				+08:00
MSC	852 949 84145–84145				+08:00
MSC	852 949 84431–84431				+08:00
MSC	852 949 85495–85495				+08:00
MSC	852 949 86579–86579				+08:00
MSC	852 949 86814–86814				+08:00
MSC	852 949 86854–86854				+08:00
MSC	852 949 87642–87642				+08:00
MSC	852 949 87695–87695				+08:00
MSC	852 633 47877–47877				+08:00
MSC	852 633 47881–47881				+08:00
MSC	852 633 47886–47886				+08:00
MSC	852 633 49017–49017				+08:00
MSC	852 633 49058–49058				+08:00
MSC	852 633 49070–49070				+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
MSC	852 633 47766–47766				+08:00
MSC	852 633 47753–47753				+08:00
MSC	852 633 47798–47798				+08:00
MSC	852 633 47775–47775				+08:00
MSC	852 633 47701–47702				+08:00
MSC	852 633 47905–47908				+08:00
SGSN	852 633 47732–47732	202.45.89.1/32			+08:00
SGSN	852 633 47735–47735	203.145.68.8/32			+08:00
SGSN	852 633 47787–47787	202.45.89.122/32			+08:00
SGSN	852 949 88013–88013	203.145.68.1/32			+08:00
SGSN	852 949 88070–88070	203.145.68.8/32			+08:00
SGSN	852 949 88082–88082	202.45.89.122/32			+08:00
SMSC	852 949 81046–81046				+08:00
SMSC	852 949 81564–81564				+08:00
SMSC	852 949 81717–81717				+08:00
SMSC	852 949 81947–81947				+08:00
SMSC	852 949 82169–82169				+08:00
SMSC	852 949 82276–82276				+08:00
SMSC	852 949 82405–82405				+08:00
SMSC	852 949 82485–82485				+08:00
SMSC	852 949 82562–82562				+08:00
SMSC	852 949 82568–82568				+08:00
SMSC	852 949 82614–82614				+08:00
SMSC	852 949 82694–82694				+08:00
SMSC	852 949 83153–83153				+08:00
SMSC	852 949 83335–83335				+08:00
SMSC	852 949 83442–83442				+08:00
SMSC	852 949 83513–83513				+08:00
SMSC	852 949 83533–83533				+08:00
SMSC	852 949 83644–83644				+08:00
SMSC	852 949 83653–83653				+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
SMSC	852 949 83716–83716				+08:00
SMSC	852 949 84143–84143				+08:00
SMSC	852 949 84149–84149				+08:00
SMSC	852 949 84439–84439				+08:00
SMSC	852 949 84779–84779				+08:00
SMSC	852 949 84794–84794				+08:00
SMSC	852 949 84974–84974				+08:00
SMSC	852 949 85464–85464				+08:00
SMSC	852 949 85795–85795				+08:00
SMSC	852 949 85954–85954				+08:00
SMSC	852 949 86139–86139				+08:00
SMSC	852 949 86237–86237				+08:00
SMSC	852 949 86259–86259				+08:00
SMSC	852 949 87047–87047				+08:00
SMSC	852 949 87631–87631				+08:00
SMSC	852 949 87642–87642				+08:00
SMSC	852 633 47811–47815				+08:00
SMSC	852 633 47818–47819				+08:00
SMSC	852 633 47821–47822				+08:00
SMSC	852 633 47859–47859				+08:00
SMSC	852 633 49006–49006				+08:00
SMSC	852 633 49024–49024				+08:00
SMSC	852 633 49028–49028				+08:00
SMSC	852 633 49032–49032				+08:00
SMSC	852 633 49042–49042				+08:00
SMSC	852 633 49051–49051				+08:00
SMSC	852 633 49061–49061				+08:00
SMSC	852 633 49064–49064				+08:00
SMSC	852 633 49068–49068				+08:00
SMSC	852 633 49086–49086				+08:00
SMSC	852 633 49096–49097				+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
SMSC	852 633 53535–53535				+08:00
SMSC	852 633 47896–47896				+08:00
SMSC	852 633 47898–47898				+08:00
SMSC	852 633 47771–47771				+08:00
SMSC	852 633 47833–47833				+08:00
SMSC	852 633 47781–47781				+08:00
SMSC	852 633 47791–47791				+08:00
SMSC	852 633 47760–47760				+08:00
SMSC	852 633 47776–47776				+08:00
SMSC	852 633 47779–47779				+08:00
SMSC	852 633 477472–477473				+08:00
SMSC	852 633 47756–47756				+08:00
SMSC	852 633 47816–47817				+08:00
SMSC	852 633 49072–49072				+08:00
SMSC	852 633 49082–49082				+08:00
SMSC	852 633 47717–47718				+08:00
SMSC	852 633 47701–47702				+08:00
SMSC	852 633 47731–47731				+08:00
SMSC	852 633 47729–47729				+08:00
SMSC	852 633 49076–49076				+08:00
SMSC	852 633 47942–47942				+08:00
SMSC	852 949 84713–84713				+08:00
MSC	852 633 47958–47958				+08:00
SGSN	852 633 47913–47913	203.145.68.90/32			+08:00
SGSN	852 633 47919–47919	203.145.68.98/32			+08:00
SGSN	852 633 47732–47732	202.45.89.2/32			+08:00
SGSN	852 633 47732–47732	203.145.68.17/32			+08:00
SGSN	852 633 47732–47732	203.145.68.18/32			+08:00
SGSN	852 633 47733–47733	202.45.89.64/32			+08:00
SGSN	852 633 47733–47733	202.45.89.65/32			+08:00
SGSN	852 633 47733–47733	203.145.68.25/32			+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
SGSN	852 633 47733–47733	203.145.68.26/32			+08:00
SGSN	852 633 47735–47735	203.145.68.9/32			+08:00
SGSN	852 633 47735–47735	203.145.68.29/32			+08:00
SGSN	852 633 47735–47735	203.145.68.30/32			+08:00
SGSN	852 633 47736–47736	203.145.68.1/32			+08:00
SGSN	852 633 47736–47736	203.145.68.2/32			+08:00
SGSN	852 633 47736–47736	203.145.68.21/32			+08:00
SGSN	852 633 47736–47736	203.145.68.22/32			+08:00
SGSN	852 633 47787–47787	202.45.89.123/32			+08:00
SGSN	852 633 47913–47913	203.145.68.91/32			+08:00
SGSN	852 633 47914–47914	203.145.68.90/32			+08:00
SGSN	852 633 47914–47914	203.145.68.91/32			+08:00
SGSN	852 949 88013–88013	203.145.68.2/32			+08:00
SGSN	852 949 88013–88013	203.145.68.21/32			+08:00
SGSN	852 949 88013–88013	203.145.68.22/32			+08:00
SGSN	852 949 88070–88070	203.145.68.9/32			+08:00
SGSN	852 949 88070–88070	203.145.68.29/32			+08:00
SGSN	852 949 88070–88070	203.145.68.30/32			+08:00
SGSN	852 949 88082–88082	202.45.89.123/32			+08:00
HLR	852 633 47864–47864				+08:00
SMSC	852 633 47867–47867				+08:00
MSC	852 633 47884–47884				+08:00
MSC	852 633 47889–47889				+08:00
MSC	852 633 49045–49046				+08:00
SMSC	852 633 47915–47917				+08:00
SMSC	852 633 47936–47936				+08:00
SMSC	852 633 47912–47912				+08:00
SMSC	852 633 47921–47921				+08:00
SMSC	852 633 47940–47940				+08:00
SMSC	852 633 47965–47965				+08:00
SMSC	852 633 47975–47975				+08:00



Node Type	GT Address (Range)	IPv4 Address (Range)	IPv6 Address (Range)	Vendor	UTC Offset
HLR	852 633 49030–49031				+08:00
SMSC	852 633 47980–47982				+00:00
SMSC	852 633 47936–47936				+00:00
SMSC	852 633 47956–47956				+00:00
SMSC	852 633 47977–47977				+00:00
SMSC	852 633 47911–47911				+00:00
SMSC	852 633 47962–47962				+00:00
HLR	852 633 47972–47972				+00:00
MSC	852 633 47990–47990				+08:00
MSC	852 633 47991–47991				+08:00

History of Changes

Date	Description
2024-09-09	Add MSC addresses
2024-07-10	Add SMSC GT & HLR GT
2024-05-21	Add new HLR GT 85263349030 & 85263349031
2023-01-20	Added SMSC GT Address
2022-11-07	Added new SMSC GT
2019-03-05	Add MSC addresses
2019-01-09	Add HLR GT 85263347864 & SMSC GT 85263347867
2018-10-30	Correct SGSN address from 85263347332 to 85263347732; Update Node Type from MME to SGSN; Update UTC offset time
2018-10-30	-
2018-10-26	Updated SGSN IP address
2018-10-23	SGSN IP information updated
2018-09-03	Add MSC GT 85263347958; Update HLR GT 85294986804 & 85294986824 to MSC GT; Delete HLR & MSC GTs
2018-09-03	Add IP information to SGSN GT
2018-05-11	New SMSC GT added 85294984713
2018-02-09	initial document



14 USSD

This section is applicable for **HKGH3**

USSD Capability	Available
Supported Phase	Phase 2

History of Changes

Date	Description
2018-02-06	USSD



15 CAMEL

This section is applicable for **HKGH3**

Supported CAP Versions (gsmSSF/MSC)

Inbound	Outbound
CAPv3	CAPv2 CAPv3

CAMEL Functionalities

Service Name	Service Key	CAP Version	SCP GT Addresses
Prepaid	1	CAPv3	85263349013
			85263349038
			85263349044
			85263349054
			85263349056
			85263349076
			85263347800
			85263347897
			85263347895
			85263347758
			852633477470
			85263347792
			85263347759
			85263347770
			85263347926
			85263347945
			85263347946
			85263347910
			85263347920
			85263347951
			85263347925
			85263347955

History of Changes

Date	Description
2023-01-20	Added SCP GT Address
2019-03-05	Add SCP GT addresses
2018-01-31	CAMEL information added



16 Packet Data Services

This section is applicable for **HKGH3**

APN Operator Identifiers

APN Operator Identifier	Description	Example
mnc004.mcc454.gprs		
mnc003.mcc454.gprs		
apn.epc.mnc003.mcc454.3gppnetwork.org	LTE	

WEB APNs Available for Testing and Troubleshooting

APN: mobile.three.com.hk

APN Type	H-APN
Required PDU Session Type	IPv4
Required PDN Type	IPv4
Required PDP Type	IPv4

MMS APNs Available for Testing and Troubleshooting

APN	Username	Password	WAP Gateway IP	Messaging Server URL
mobile.three.com.hk			172.20.97.116	http://mms.um.three.com.hk:10021/mmsc

IPv6 Connectivity

	IPv6 PDP	IPv4v6 PDP
SGSN	Unsupported	Unsupported
GGSN	Unsupported	Unsupported

GTP Versions

SGSN	GTPv1
GGSN	GTPv1



Supported Data Services

2G Data Service	Multislot Class Capability
GPRS	
EDGE	

3G Data Service	UE 3G Category
3GPP	
HSDPA	
HSUPA	

Multiple PDP Context Support

Number of Primary PDP Contexts	2
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History of Changes

Date	Description
2023-07-27	APN information updated
2023-07-27	APN information updated
2018-09-03	Updated APN type
2018-02-09	initial document
2018-02-07	Delete ISP DNS IP address
2018-02-07	no change
2018-02-01	initial document
2018-01-31	Packet Data Services Info



17 GRX/IPX Routing for Data Roaming

This section is applicable for **HKGH3**

Connection to Inter-PMN IPv4 Backbone

IP Address (Range)	IPX VLAN	Network Owner
202.45.89.0/24	Control-Roaming	MNO
203.145.67.0/24	Control-Roaming	MNO
203.145.70.0/24	Control-Roaming	MNO
203.145.68.0/24	Control-Roaming	MNO
203.145.65.0/25	Control-Roaming	MNO
202.45.89.0/24	Data-Roaming	MNO
203.145.67.0/24	Data-Roaming	MNO
203.145.70.0/24	Data-Roaming	MNO
203.145.68.0/24	Data-Roaming	MNO
203.145.65.0/25	Data-Roaming	MNO

Additional User Location Information (ULI)

MCC	MNC	Network Owner
454	03	MNO
454	04	MNO
454	05	MNO
454	14	MNO

Autonomous System Numbers (ASN)

ASN	Network Owner
64575	MNO
64678	MNO



Authoritative DNS Servers

IPv4 Address	IPv6 Address	DNS Name	Priority	Network Owner
203.145.67.39		dns01.mnc003.mcc454.gprs		MNO
203.145.67.72		dns02.mnc003.mcc454.gprs		MNO
202.45.89.57		hdns01.epc.mnc003.mcc454.3gppnetwork.org		MNO
202.45.89.61		hdns02.epc.mnc003.mcc454.3gppnetwork.org		MNO
203.145.67.39		dns01.mnc004.mcc454.gprs		MNO
203.145.67.72		dns02.mnc004.mcc454.gprs		MNO

GRX/IPX Providers

Provider	ASN	Network Owner
Syniverse	22870	MNO
BICS	6774	MNO
CITIC	17554	MNO
CUG	132101	MNO
CMI	58453	MNO
iBASIS	64553	MNO

History of Changes

Date	Description
2025-01-20	Update inter-PMN IP backbone information
2024-08-06	Added IPX Provider
2023-07-28	update IPX carriers
2023-07-27	DNS IP correction
2023-07-20	Update MCC MNC
2023-03-21	Removed HGC; Added BICS
2022-11-15	Removed inter-PMN IP backbone address ranges: 131.166.134.0/24; 131.166.136.0/24;131.166.130.0/24;131.166.132.0/24;131.166.163.32/29;131.166.165.32/29; Removed ASN 22870 and 3321; Updated GRX provider list
2020-10-06	Add inter-PMN IP backbone address ranges: 131.166.134.0/24; 131.166.136.0/24; 131.166.130.0/24;131.166.132.0/24;131.166.163.32/29;131.166.165.32/29; Add ASN 22870 and 3321
2019-03-12	Update GRX provider list
2018-02-09	minor change
2018-02-07	APN list is updated; GRX provider changed



Date	Description
2018-01-31	IP interworking information



20 LTE Roaming

This section is applicable for **HKGH3**

IPX Interconnection

IPX Provider: BICS

IPX Provider: Syniverse

IPX Provider: CITIC

IPX Provider: iBASIS

Roaming EPC Realms

epc.mnc003.mcc454.3gppnetwork.org

FQDN Diameter Edge Agents

FQDN	Primary IP Addresses	Secondary IP Addresses
epc.mnc003.mcc454.3gppnetwork.org	202.45.89.5	202.45.89.53
epc.mnc003.mcc454.3gppnetwork.org	202.45.89.69	202.45.89.117

Interface Information

S6a Without Interworking Function (IWF)	Unsupported
S6a MAP IWF to HSS	Unsupported
S6a MAP IWF supported to MME	Unsupported
S6d Used for Legacy SGSN	No
S9 Used for PCC	No

Voice Interworking and Roaming CS Fallback

Voice Interworking	CSFB
Roaming CS Fallback	Roaming Retry (MTRR)



Agreement Information

Agreement	HPMN	VPMN
LTE-Only Roaming	Supported	Supported
2G/3G-Only Roaming Scenario 2	Unsupported	Supported
2G/3G-Only Roaming Scenario 3	Unsupported	Supported
2G/3G and LTE Scenario 1	Supported	Supported
2G/3G and LTE Scenario 2	Supported	Supported
2G/3G and LTE Scenario 3	Supported	Unsupported
2G/3G and LTE Scenario 4	Supported	Unsupported
2G/3G and LTE Scenario 5	Unsupported	Unsupported
2G/3G and LTE Scenario 6	Unsupported	Unsupported

IPv6 Connectivity

	IPv6 PDP	IPv4v6 PDP
MME	Unsupported	Unsupported
SGW	Unsupported	Unsupported
PG	Unsupported	Unsupported

Diameter End-to-End Security Support

Supported DESS Phase	No support
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5G Early Drop Support

	As HPMN (Outbound)	As VPMN (Inbound)
5G NSA (non-standalone access) supported	No	No
DNS PGW NAPTR includes +nc-nr	No	No
NSA Options for EN-DC		
ARD Set to Support of NR as Secondary RAT	No	
Restrict NR Access if HSS Is Not Set to Support NR as Secondary RAT		No

History of Changes

Date	Description
2024-08-12	Added IPX Provider
2024-08-12	Added IPX Provider



Date	Description
2024-08-12	Added IPX Provider
2023-07-27	DESS phase not support
2023-03-21	Removed HGC; Added BICS
2022-11-07	Added IPX Provider
2018-02-09	minor change
2018-02-06	initial document
2018-01-31	LTE roaming information



21 Contacts

This section is applicable for **HKGH3**

Roaming Troubleshooting Contacts

Location: Hong Kong

Office Time Zone in UTC	+08:00
Office Hours	All weekdays 00:00:00 – 23:59:00

Main Contact for Troubleshooting (Office Hours)

Team Name	Phone	Mobile	Email
NOC	85221282904 85221282940		IREG@hthk.com, noc@hthk.com

Escalation Contact for Troubleshooting

Name	Phone	Mobile	Email
Mr. WK Kwong CNCC Manager	85221282001		wk.kwong@htms.huawei.com

24/7 Troubleshooting Contact (Out of Office Hours)

Team Name	Phone	Mobile	Email
NOC	85221282904 85221282940		IREG@hthk.com, noc@hthk.com

Escalation Contact for 24/7 Troubleshooting (Out of Office Hours)

Team Name	Phone	Mobile	Email
NOC	85221282904 85221282940		IREG@hthk.com, noc@hthk.com

Additional Contacts

SCCP Inquiries and Ordering of SS7 Routes

Name	Phone	Mobile	Email
NOC Network Operation Center	85221282904 85221282940		IREG@hthk.com, noc@hthk.com

Roaming Coordinator

Name	Phone	Mobile	Email
Mr. Adrian Yiu Assistant International Services Manager	85221285823		roamhk@hthk.com

**IREG Tests**

Name	Phone	Mobile	Email
Mr. Mickey Wong Senior Engineer (Packet Switch)	85231568587		ireg.ps-support@htms.huawei.com
Mr. Albert Lee Engineer (Circuit Switching)	85221285774		ireg.cs-support@htms.huawei.com

TADIG Tests

Name	Phone	Mobile	Email
Mr. Adrian Yiu Assistant International Services Manager	85221285823		roamhk@hthk.com

CAMEL Tests

Name	Phone	Mobile	Email
Mr. Albert Lee Engineer (Circuit Switching)	85221285774		ireg.cs-support@htms.huawei.com

GPRS Tests

Name	Phone	Mobile	Email
Mr. Mickey Wong Senior Engineer (Packet Switch)	85231568587		ireg.ps-support@htms.huawei.com

GRX Connectivity at PMN

Name	Phone	Mobile	Email
Mr. Ringo Chan Senior Manager - Core Network Engineering	85221285401		ringo.chan@hthk.com

GRX Provider Authority Verification at PMN

Name	Phone	Mobile	Email
Mr. Ringo Chan Senior Manager - Core Network Engineering	85221285401		ringo.chan@hthk.com

Certificates and Key Management

Name	Phone	Mobile	Email
Mr. Ringo Chan Senior Manager - Core Network Engineering	85221285401		ringo.chan@hthk.com

IR.21 Distribution Emails

roam@hthk.com



History of Changes

Date	Description
2025-01-20	Contact Information
2019-03-20	Delete duplicate contact information
2018-01-31	Contact info
2018-01-31	Contact Information



29 SMS Roaming

This section is applicable for **HKGH3**

SMS Interworking

SMS Delivery Mechanism	As HPLMN	As VPLMN
SMS over IP	Unsupported	Unsupported
SMS over NAS via SS7	Unsupported	Unsupported
SMS over NAS via Diameter	Unsupported	Unsupported
SMS over NAS via HTTPS	Unsupported	Unsupported



Sections Not in Use

TADIG Code	Section
HKGH3	6 Domestic SCCP Gateway
HKGH3	7 SCCP Protocol Available at PMN
HKGH3	9 Test Numbers
HKGH3	12 MAP Inter-Operator SMS Enhancement
HKGH3	18 MMS Interworking
HKGH3	19 WLAN
HKGH3	22 Hosted Networks
HKGH3	23 M2M Roaming
HKGH3	26 VoIMS Roaming
HKGH3	27 LPWA Roaming
HKGH3	28 5G SA Roaming