



GSMA Roaming Database IR.21 Data

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ORGANISATION INFORMATION

Organisation name:	AIRTEL MADAGASCAR
Country initials:	MDG

History of changes

Date of change	Effective date	Changes made
17-Jan-22		Add ASN 64913
25-May-2020		Add New MME and EPG IP

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12-Sept-18	12-Sept-18	LTE Roaming Information



NETWORK

Network name:	AIRTEL MADAGASCAR
Network type:	Terrestrial
Technology:	Frequency list:
2G-GSM frequencies:	900 MHz – DCS 1800 MHz
3G-UTRA/FDD frequencies:	900 MHz , IMT 2.1 GHz
3G-UTRA/TDD frequencies:	Unsupported
4G-E-UTRAN frequencies:	DCS 1800
4G-E-UTRAN-MIoT-LTE-M frequencies:	Unsupported
4G-E-UTRAN-MIoT-NB-IOT frequencies:	Unsupported
Presentation of country initials and MNN:	MDG

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ROUTING INFORMATION



CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number
MSISDN number ranges (s)							
	261	33	0000000	9999999			
Network Nodes Global Title Number Range(s)							
	261	33					
MSRN Number Range(s)							
	261	33999xxxx					

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E. 212 Number series	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	646	01

E. 214 Mobile Global Title (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	261	33

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Does portability Number Apply	NO
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International SCCP carrier list

INTERNATIONAL SCCP GATEWAY: BICS			
STP Node/SPID	STP Location	SPC/Split	SPC/Decimal
GNV63TIH	Genève, Switzerland	2 – 056 - 6	4550
ZRC64TIH	Zurich,Switzerland	2 – 056 - 7	4551
Date for the ability to transmit and handle XUDT/XUDTS:			

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SCCP Protocol available at PLMN for connection for International SS7 Roaming Signalling	
ETSI (ITU-T)	X
ANSI	X
ANSI Networks SCCP GATEWAY	
Signature	Syniverse
Type	ISC



International DPC	235-250-000
Date for the Ability to Transmit and Handle XUDT/XUDTS: NA	

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SIGNALLING SYSTEM NO. 7 ACCESS SOLUTION		
Initial solution:	Initial solution valid until (date):	Subsequent solution:
B		

SUBSCRIBER IDENTITY AUTHENTICATION	
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 – A5-0

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AUTOMATIC ROAMING TESTING

Entity	Subscriber-Number	Location



Automatic Answering CirCuit (AAC)	(MSISDN)	
1. AAC 2. AAC 3. AAC ...		
Automatic Answering Circuit (Accessible only from the Network- Network Interconnection Interface) 1. AAC 2. AAC 3. AAC		
Data Automatic Answering Circuit (DAAC) 1. Calls for Data 1. DAAC 2. DAAC 3. DAAC ... 2. Fax Gr.3 1. Fax DAAC 2. Fax DAAC 3. Fax DAAC ...	(MSISDN/ISDN)	

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MOBILE APPLICATION PART (MAP)

Interworking specifically for roaming				
Application context name	Current version in			Comments
	Inbound roaming		Outbound roaming	
	MSC/MLR	SGSN	Outbound roaming	
networkLocUp	Map v2+	N/A	MAP v3	
roamingNumberEnquiry	Map v2+	N/A	MAP v3	
InfoRetrieval	Map v2+	Map v2+	MAP v3	
subscribeDataMngt	Map v2+	Map v2+	MAP v3	
networkFunctionalSs	Map v2+	N/A	MAP v3	
mwdMngt	Map v2+	Map v2+	MAP v3	
shortMsgMT-Relay (called shortMsgRelay in v1)	Map v2+	Map v2+	MAP v3	
shortMsgMO-Relay (called shortMsgRelay in v1)	Map v2+	Map v2+	MAP v3	
ss-InvocationNotification	Map v2+	N/A	MAP v3	
subscriberInfoEnquiry	Map v2+	-	MAP v3	
gprsLocationUpdate	N/A	Map v2+	MAP v3	
locationCancellation	Map v2+	Map v2+	MAP v3	
msPurging	Map v2+	Map v2+	MAP v3	
reset	Map v2+	Map v2+	MAP v3	
networksUnstructuredSs	Map v2+	N/A	MAP v3	
reporting	-	N/A	MAP v3	

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callCompletion	-	N/A	MAP v3	
istAlerting	Map v2+	N/A	MAP v3	
service Termination	Map v2+	N/A	MAP v3	
locationSvcGateway	N/A	N/A	MAP v3	
mm-EventReporting	Map v2+	N/A	MAP v3	
authenticationFailureReport	Map v2+	-	MAP v3	
imsiRetrieval	Map v2+	N/A	MAP v3	
gprsNotifyContext	N/A	Map v2+	MAP v3	
gprsLocationInfoRetrieval	N/A	Map v2+	MAP v3	
failureReport	N/A	Map v2+	MAP v3	
secureTransportHandling	Map v2+	Map v2+	MAP v3	

MAP Inter Operator SMS Enhancement

Inter - Operator SMS Enhancement				
Application context name	Current version in			Comments
	SMS - IWMSC	SMS - GMSC	HLR	
shortMsgGateway	N/A	MAP v2+	-	
shortMsgAlert	MAP v2+	N/A	-	

NETWORK ELEMENTS INFORMATION

Node type	Node ID	GT address / Address range	IP address / Address range	Vendor info	SW / HW version	Dual access	Location	UTC offset	DST start	DST end
HLR	an1hlr01			ZTE	ZXUN USSP V5.18.10			+03:00		
HLR	an1hlr02			ZTE	ZXUN USSP V5.18.10			+03:00		
MSC/VLR	An1nss01	261331110023		ZTE	ZXUN iCX (MSCS) V5.17.10			+03:00		
MSC/VLR	An1nss02	261331110024		ZTE	ZXUN iCX (MSCS) V5.17.10			+03:00		
SGSN	An1sgsn02			Ericsson	1.10			+03:00		
SGSN	FARvMME01			Ericsson	1.10			+03:00		

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GGSN	An1ggn02		41.77.16.0/23	Ericsson	1.28			+03:00		
GGSN	FARvEPG01			Ericsson	1.28			+03:00		
HSS	An1hss01			ZTE	ZXUN USSP V5.18.10			+03:00		
HSS	An1hss02			ZTE	ZXUN USSP V5.18.10			+03:00		
SMSC		261331110006		TANGO				+03:00		

USSD Information

USSD capability available	Yes
Supported phase	Phase 2

CAMEL INFO

gsmSSF/MSC			
CAP Version supported (Inbound)		CAP Version supported (Outbound)	
CAPv1 CAPv2 CAPv3		CAPv2 CAPv3	
CAMEL Functionality Information			
Service(s) Name	SK	CAP Version	SCP GT addresses



Packet Data Services Information

List of APN Operator Identifiers		
APN Operator Identifier	Description	Example
mnc001.mcc646.gprs	GPRS/ UMTS	
epc.mnc001.mcc646.3gppnetwork.org	LTE	

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List of APN's available for testing and troubleshooting

APN WEB List				
APN	APN Credential		ISP DNS IP address (primary)	ISP DNS IP address (secondary)
	Username	Password		
internet				
internet.mg.airtel.com				

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IPv6 Connectivity Information		
	IPv6 PDP Supported	IPv4v6 PDP Supported
SGSN Support	No	No



GGSN Support	No	No
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GTP Version	
SGSN	GTPv1
GGSN	GTPv1

2G Data Services	COMMENT
GPRS	
EDGE	
UMTS	
LTE	

Multiple PDP Context Support	
Number of Primary PDP Context	Not supported

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IP - Roaming and IP - Interworking Information

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List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	41.77.16.160/28
	41.77.17.49/28
	41.77.17.64/28
	41.77.16.0/23
	41.77.16.0/28
	41.77.16.16/29
	41.77.16.24/29
	41.77.16.32/29
	41.77.17.16/29
	41.77.17.24/29



List of Autonomous System Number (ASN):	ASN
	37303
	64913

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List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
41.77.16.37	NA	dns1.mnc001.mcc646.gprs; dns1.epc.mnc001.mcc646.3gppnetwork.org
41.77.16.38	NA	dns2.mnc001.mcc646.gprs; dns2.epc.mnc001.mcc646.3gppnetwork.org

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List of GRX Providers	GRX Provider
	BICS

LTE Roaming Information

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
BICS	dra.bics.3gppnetwork.org	

Primary IP address of DA		Secondary IP address of DA	
Roaming		Interconnection	
EPC Realms For Roaming			



epc.mnc001.mcc646.3gppnetwork.org

FQDN Diameter Edge Agent

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
dra01b11.dra.bics.3gppnetwork.org	94.102.167.137	94.102.167.153
dra01b22.dra.bics.3gppnetwork.org	94.102.167.169	94.102.167.185

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SMS delivery over IP	SMS delivery over SGs
false	true

		HPMN	VPMN
LTE Roaming Agreement Only	LTE Only Roaming Supported	No	No
2G/3G Roaming Agreement Only	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
2G/3G/LTE Roaming Agreement	Scenario 1 Supported	Yes	Yes
	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
	Scenario 4 Supported	Yes	Yes
	Scenario 5 Supported	Yes	Yes
	Scenario 6 Supported	Yes	Yes

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CONTACT INFORMATION

Contact persons: (specify Time Zone and day light saving zone for contact phone numbers)
For SCCP inquiries and ordering of SS7 routes Mr Lala Zo ANDRIAMANANTENA

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International and Roaming: Mr Lala Zo ANDRIAMANANTENA Tel: +261331700871, Zo.A@mg.airtel.com
IREG tests: Mr Lala Zo ANDRIAMANANTENA Tel : +261331700871, Zo.A@mg.airtel.com ; Roaming@mg.airtel.com ;
TADIG tests: Mr Lala Zo ANDRIAMANANTENA Tel : +261331700871, Zo.A@mg.airtel.com ; Roaming@mg.airtel.com ;
Network faults: Ronni.R@mg.airtel.com ; Harilova.R@mg.airtel.com ; Njiva.R@mg.airtel.com ; Harilova.R@mg.airtel.com ;
24 hours x 7 days numbers for emergency troubleshooting: Tel : +261332211700 tsg@mg.airtel.com
Escalation contact: MRThierry Botomaroza thierry.b@mg.airtel.com ; onjaniaina.rak@mg.airtel.com
Contact point (address) for distribution of updatings of the roaming database:
AIRTEL Madagascar Lot II J 1 / AA Morarano Alarobia - Antananarivo 101 Batiment S2 ANTANANARIVO MADAGASCAR Attn : Mr Lala Zo ANDRIAMANANTENA Phone number : +261331700871 Effective date of change: June 2020

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MISCELLANEOUS INFORMATION



Number Information : (8) **MSRN Structure:**

The MSRN complies with GSM 03.03 and CCITT E.164 and has a length of 14 digits. +26133999X1X2X3X4
Number Information¹: (if applicable, include additional E.164 Number Ranges due to Number Portability) X1 X2 X3 X4 may have digits from 0 to 9 MSISDN

The MSISDN complies with GSM 03.03 and CCITT E.164 and has a fixed length of 14 digits. +26133X1X2X3X4X5X6X7 X1
X2 X3 X4 X5 X6 X7 may have digits from 0 to 9 IMSI

The IMSI complies with GSM 03.03 and CCITT E.212 and has a length of 15 digits. MCC 646 NC 01 MSIN
H1H2A1A2A3A4A5A6A7A8.

H1H2 identify the HLR and A1toA8 identify the subscriber within the HLR.

Translation E212 to E214:

IMSI translation shall be made as follows:

E.212 to E.214 is 646 01 to 261 33 **Architecture:**

AIRTEL Madagascar International Gateway signaling Point (MADINT)

is a SCCP relay node with international point Code 6-092-0 AIRTEL

Madagascar has a ZTE MSC Addressing:

MSC address = 261331110023

MSC address = 261331110024

SMSC address = 261331110006

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AIRTEL MADAGASCAR ITU-T TO ANSI CONVERSION DIAGRAM

