



# RADIO SITE DESIGN DOCUMENTATION

Region : North  
MG1631

<b>ERICSSON</b> 							
CAPTION LIST		<b>Document List</b>	<b>1</b>				
Document No. 001 53-IPA 166 0345 Uen							
Date 2019-06-26	Rev. A	<b>Site Documents</b>	<b>2</b>				
<div><div><b>SITE</b></div><div><b>INSTALLATION</b></div><div><b>DOCUMENT</b></div><div></div><div><b>Telenor Myanmar</b> <b>MG1631</b> <b>Magway</b>  <b>G900+U2100</b></div><div><b>ATTENTION</b> This documentation must be updated on site. All the documents must be corrected, where changes have occurred, and signed by the Installation Supervisor.  This documentation must then be returned to Installation Engineering for hand-over to Customer.</div></div>							
				<b>Plant Specification</b>	<b>3</b>		
						<b>Cabling Diagram</b>	<b>4</b>
				<b>Check Lists</b>	<b>6</b>		
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Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. <b>001 51-IPA 166 0345 Uen</b>		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

**Project: Telenor Myanmar**  
**Site: MG1631**

	<b>Document name</b>	<b>Document number</b>	<b>Rev.</b>
	<b>SITE INSTALLATION DOCUMENT</b>	001 53-IPA 166 0345 Uen	A
<b>1</b>	<b>DOCUMENT LIST</b> Document List	001 51-IPA 166 0345 Uen	A
<b>2</b>	<b>SITE DOCUMENTS</b>		
<b>2.1</b>	Configuration Data RBS	1/127 04-IPA 166 0345 Uen	A
<b>2.2</b>	Situating Plan	153 38-IPA 166 0345 Uen	A
<b>2.3</b>	Antenna Placement Information	153 12-IPA 166 0345 Uen	A
<b>2.4</b>	Grounding Information	193 34-IPA 166 0345 Uen	A
<b>2.5</b>	Cable way Drawing	193 24-IPA 166 0345 Uen	A
<b>3</b>	<b>PLANT SPECIFICATION</b>		
<b>3.1</b>	Plant Specification (RBS)	1/127 11-IPA 166 0345 Uen	A
<b>4</b>	<b>CABLING DIAGRAM</b>		
<b>4.1</b>	Cabling Diagram (power and earth)	1/193 18-IPA 1/356 07 Uen	A
<b>4.2</b>	Cabling Diagram (signal and antenna)	2/193 18-IPA 1/356 08 Uen	A
<b>4.3</b>	Allocation Drawing (Cabinet)	193 26-IPA 1/356 09 Uen	A
<b>5</b>	<b>EXTERNAL ALARM</b> Allocation Table	193 19-IPA 166 0345 Uen	A
<b>6</b>	<b>CHECK LISTS</b>		
<b>6.1</b>	Installation Check List	153 11-IPA 166 0345 Uen	A
<b>6.2</b>	OHS Check List	176 27-IPA 166 0345 Uen	A
<b>7</b>	<b>TEST DOCUMENTS</b>		
<b>7.1</b>	RBS Test Report - G900	1/153 83-IPA 166 0345 Uen	A
<b>7.2</b>	RBS Test Report - W2100	2/153 83-IPA 166 0345 Uen	A
<b>8</b>	<b>ACCEPTANCE CERTIFICATE</b>		
	Product List	1/193 32-IPA 166 0345 Uen	A
	Site Photos	PHT-09:0001-IPA 166 0345 Uen	A
	Acceptance Certificate	179 61-IPA 166 0345 Uen	A

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. 1/127 04-IPA 166 0345 Uen		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

## 1 GENERAL SITE DATA

1.1	Geographical coordinates	N 19° 13' 55.67" - E 95° 34' 28.02"
1.2	Region	North
1.3	Address	Aunglan, Magway
1.4	Type of Site	Green Field
1.5	Equipment location	Outdoor cabinet
1.6	Floor material	Concrete

## 2 TECHNICAL DATA RBS GSM SYSTEM

2.1	System	GSM
2.2	RBS type	RBS 6601
2.3	No. of sector	3
2.4	No. of carrier	3/3/3
2.5	No. of Remote Radio Unit (RRU)	3
2.6	RRU type	RRUS 01 B8
2.7	Mechanical Dimensions RRUS (mm) WxDxH	470x190x518
2.8	Weight for one RRU (kg)	22.4
2.9	Mechanical Dimensions MU(mm) WxDxH	483x355x66
2.10	Weight for one Main Unit (fully equiped)	10 kg
2.11	Power supply	-48V DC
2.12	Power consumption (maximum)	437 W (MU) 300 W (RRUs)
2.13	Mains circuit breaker	15A + 3x 25A
2.14	Heat dissipation (maximum)	340 W (MU) 300 W (RRUs)

## 3 TECHNICAL DATA RBS WCDMA SYSTEM

3.1	System	WCDMA
3.2	RBS type	RBS 6601
3.3	No. of sector	3
3.4	No. of carrier	2/2/2
3.5	No. of Remote Radio Unit (RRU)	3
3.6	RRU type	RRUS 12 B1
3.7	Mechanical Dimensions RRUS (mm) WxDxH	470x190x518
3.8	Weight for one RRU (kg)	22.4
3.9	Mechanical Dimensions MU(mm) WxDxH	483x355x66
3.10	Weight for one Main Unit (fully equiped)	10 kg
3.11	Power supply	-48V DC
3.12	Power consumption (maximum)	437 W (MU) 300 W (RRUs)
3.13	Mains circuit breaker	15A + 3x 25A
3.14	Heat dissipation (maximum)	340 W (MU) 300 W (RRUs)

## 5 TECHNICAL DATA CABINET

5.1	Mechanical Dimensions (mm) WxDxH	0
5.2	Free space for equipment	9

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Project: Telenor Myanmar  
Site: MG1631

6 TECHNICAL DATA RBS ANTENNA SYSTEM

6.1	Antenna height (m.a.g.l.)	A= 48	B= 48	C= 48
6.2	Antenna directions	A= 120°	B= 240°	C= 310°
6.3	Mech/Elec Downtilt, deg	A= 2°/0°	B= 2°/0°	C= 2°/0°
6.4	Quantity of RRU	6 pcs		
6.5	Antenna type	ADU451807v01		
6.6	Antenna model	DXX-790-960/1710-2180-65/65-17.5i/18.5i-M/M		
6.7	Antenna dimensions (mm)	2535 x 259 x 135		
6.8	Weight of one antenna (kg)	21		
6.9	Wind load (N)	Frontal:	910	(at 150 km/h)
		Lateral:	470	(at 150 km/h)
		Rear:	1200	(at 150 km/h)
6.10	No. of Fiber Optic	6		

7 TECHNICAL DATA RBS ANTENNA SUPPORT STRUCTURE

7.1	Tower/mast/pole type	Green Field 50m
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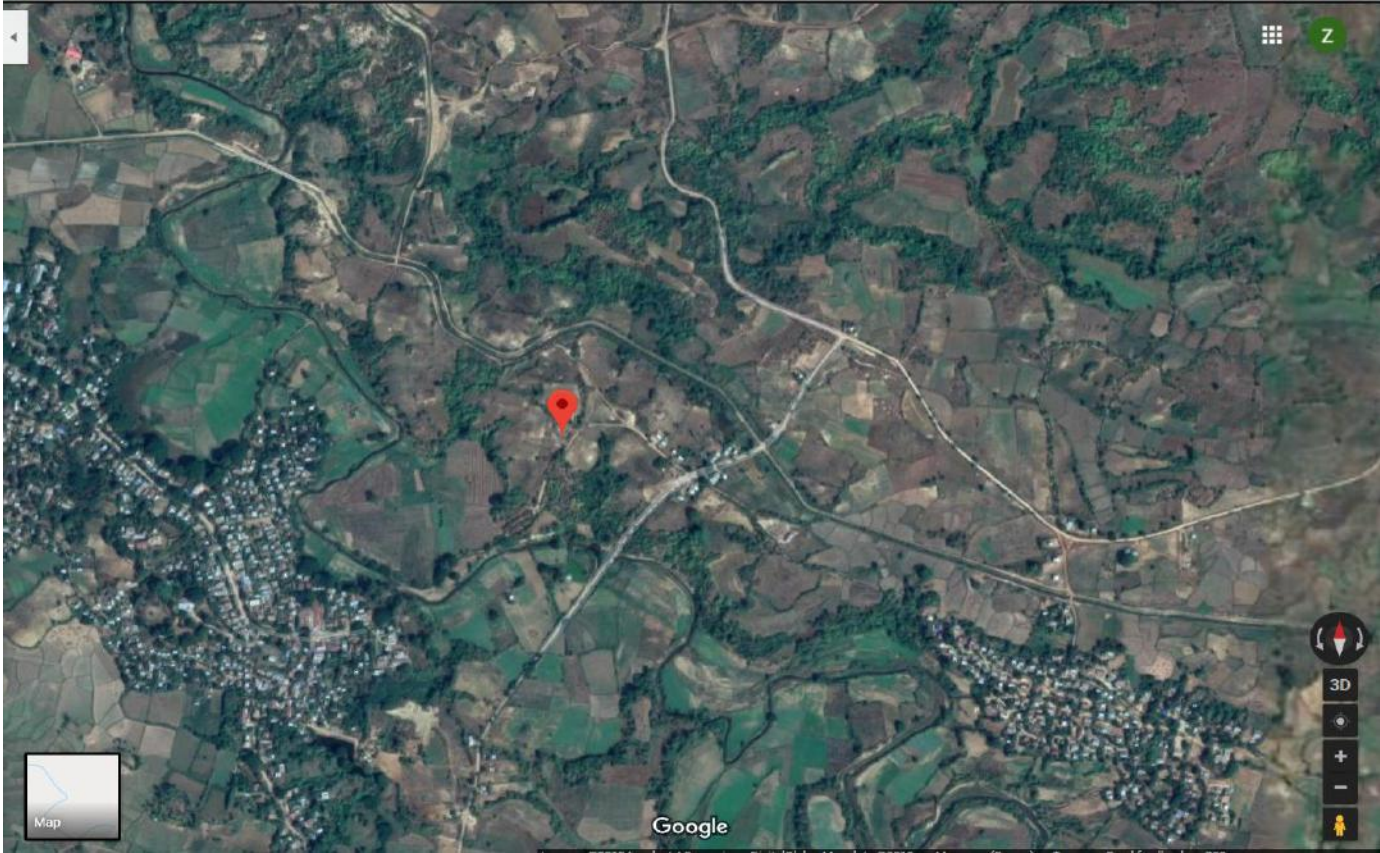
PA3 2014-07-28

Prepared (also subject responsible if other)		Document No.		
EMZ Zaw Myo Aung		153 38-IPA 166 0345 Uen		
Doc respons/Approved	Checked	Date	Rev.	File
EMZ Manoj Kumar A		2019-06-26	A	SDD_MG1631_Rev.A

Project: Telenor Myanmar  
Site: MG1631

Geographical coordinates  
Address

N 19° 13' 55.67" - E 95° 34' 28.02"  
Aunglan, Magway



PA3 2014-07-28

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. <b>153 12-IPA 166 0345 Uen</b>		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

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0

TSSR RND Info	Bearing	Antenna Mid Ht	Tower/Pole Hight (m)	Tower Type	Building High	M Tilt	E Tilt
MG1631_C01_1	120	48	50	GBT ▾		2	0
MG1631_C01_2	240	48	50	GBT ▾		2	0
MG1631_C01_3	310	48	50	GBT ▾		2	0





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**Project:** Telenor Myanmar  
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Geographical coordinates  
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Aunglan, Magway  
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**No Grounding info is available.**

Prepared (also subject responsible if other) EMZ Zaw Myo Aung		Document No. 193 24-IPA 166 0345 Uen		
Doc. respons/Approved EMZ Manoj Kumar A	Checked	Date 2019-06-26	Rev. A	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

Geographical coordinates  
Address

N 19° 13' 55.67" - E 95° 34' 28.02"  
Aunglan, Magway  
0

**Not Available.**

PA3 2014-07-28	Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. 1/127 11-IPA 166 0345 Uen		
	Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

	Product number	Description	Quantity
<b>1</b>	<b>RBS 6601 for 2G</b>		
1.1	1/BFL901009/4	EQUIPPED MAGAZINE/SUP 6601; EQUIPPED MAG	1
1.2	KDU137569/1	PROCESSOR UNIT/DUG 20 01;DIGITAL UNIT	1
1.3	KDU137739/1	PROCESSOR UNIT/TCU 02 01;TRANSPORT CONNE	1
1.4	KRC11871/2	TRANSCEIVER/RRUS 01 B8;RADIO UNIT	3
1.5	SXK1250245/1	POLE MOUNTING FIXTURE CEU	3
1.6	..EMZ-RRU-PC	Power Connector for RRU	3
<b>1</b>	<b>RBS 6601 for 3G (W21.1)</b>		
2.1	1/BFL901009/4	EQUIPPED MAGAZINE/SUP 6601; EQUIPPED MAG	1
2.2	KDU127174/3	PROCESSOR UNIT/DUW 31 01;DIGITAL UNIT	1
2.3	KRC161297/2	TRANSCEIVER/RRUS 12 B1;Radio Unit	3
2.4	SXK1250245/1	POLE MOUNTING FIXTURE CEU	3
2.6	..EMZ-RRU-PC	Power Connector for RRU	3
<b>3</b>	<b>ANTENNA SYSTEM</b>		
3.1	27010881-001	Directional Antenna,DXX-790-960/1710-2180-65/65-15i/17.5i-M/M,4*7/16 DIN Female,Downtilt kit packed separately	3
3.1	27150243	Downtilt Kit-B Type	3
<b>4</b>	<b>RET MATERIAL</b>		
4.1	4050228	AISG Cable For Outdoor Use,5m,AISG VF 8PIN,AISG 4core Cable-24AWG(2C)+18AWG(2C),AISG VM 8PIN,Black	3
4.2	04045920	Single cable,AISG cable,0.5m,RC8SM(S)-	3
4.3	27150136	Antenna Feeder Accessories,RCU136,Agisson RET Antenna RCU,Antenna,10~30V	6

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## 5 CABINET

5.4	ESOA300FBG10	OUTD-6602-RF SERIES RBS 6601 2.0M	1
5.6	50V500AH_CABINET	BATTERY CABINET DC FAN 50V	1

## 6 INSTALLATION MATERIALS

6.1	TFL492324/500M	POWER CABLE/2X6 MM2;UL;LSOH;ALU+CU-SCREE	5 M
6.3	TSR95170/3	JUMPER CABLE/COMMScope 1/2" JUMPER CABLE	12
6.4	NTM2013727/1	SET OF MATERIALS/TUBE KIT 8,5M	2
6.5	LTRFSEAL300	Silicon box	1
6.6	EAB-LTACCTIECV4830	Plastic tie Strap, 100 pcs/package,	2
6.7	EAB-LTPWACCLUGM825	ACC -25MM2 GROUNDING CABLE 16X CABL	4
6.8	EAB-LTACBOLTM6ZERC	10X NUTS,SCREWS, WASHERS- MOUNTING	2
6.9	TFL492324/500M	POWER CABLE/2X6 MM2;UL;LSOH;ALU+CU-SCREE	410
6.10	EMZ-AC 4x16mm2	AC power cable	10

## 7 OTICAL CABLE

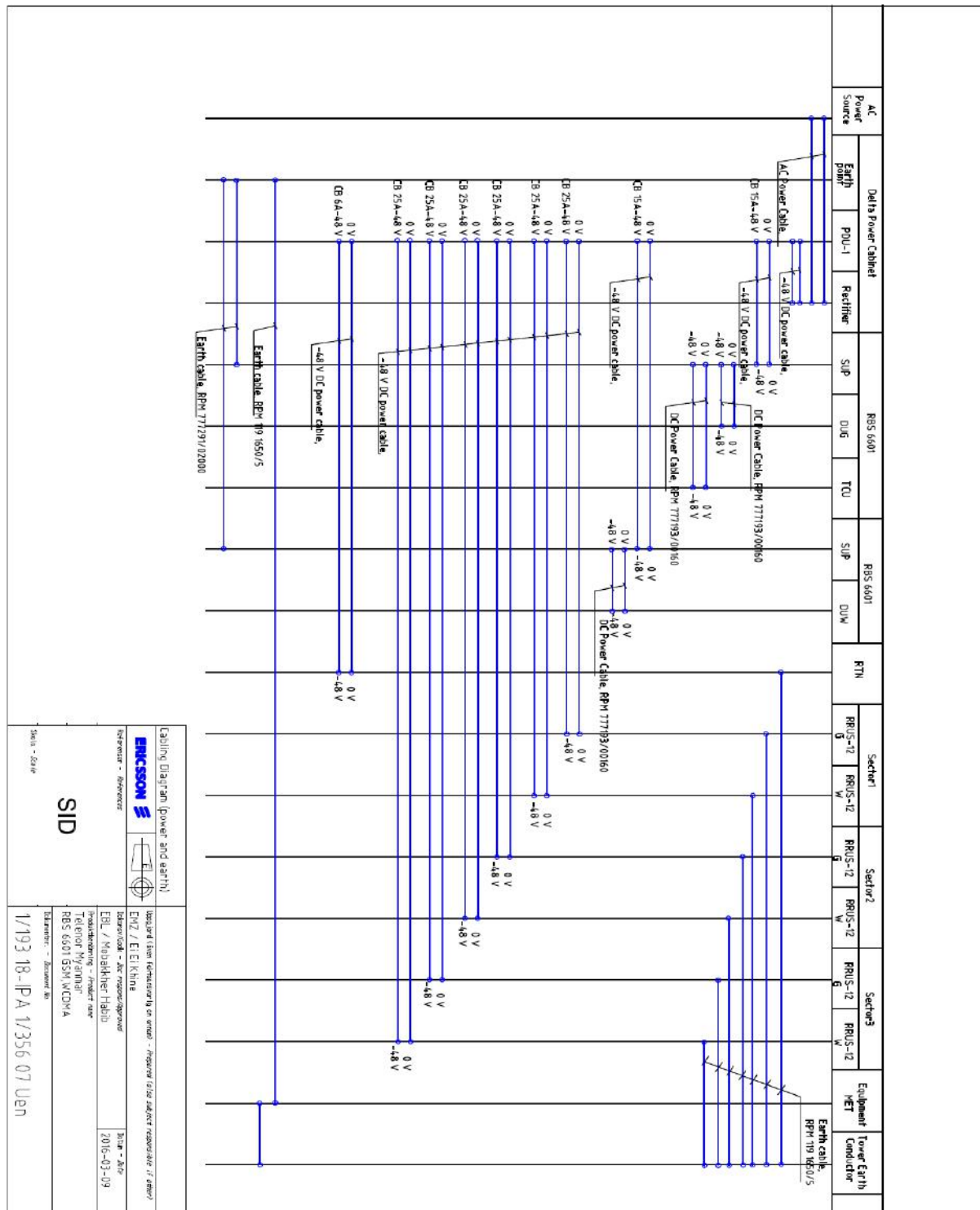
7.1	RPM2531610/70M	CABLE WITH CONNECTOR/2F LC(FullAXS)-LC S	6
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Doc respons/Approved EMZ Manoj Kumar A	Checked	Date 2019-06-26	Rev. A	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

Geographical coordinates  
Address

N 19° 13' 55.67" - E 95° 34' 28.02"  
Aunglan, Magway  
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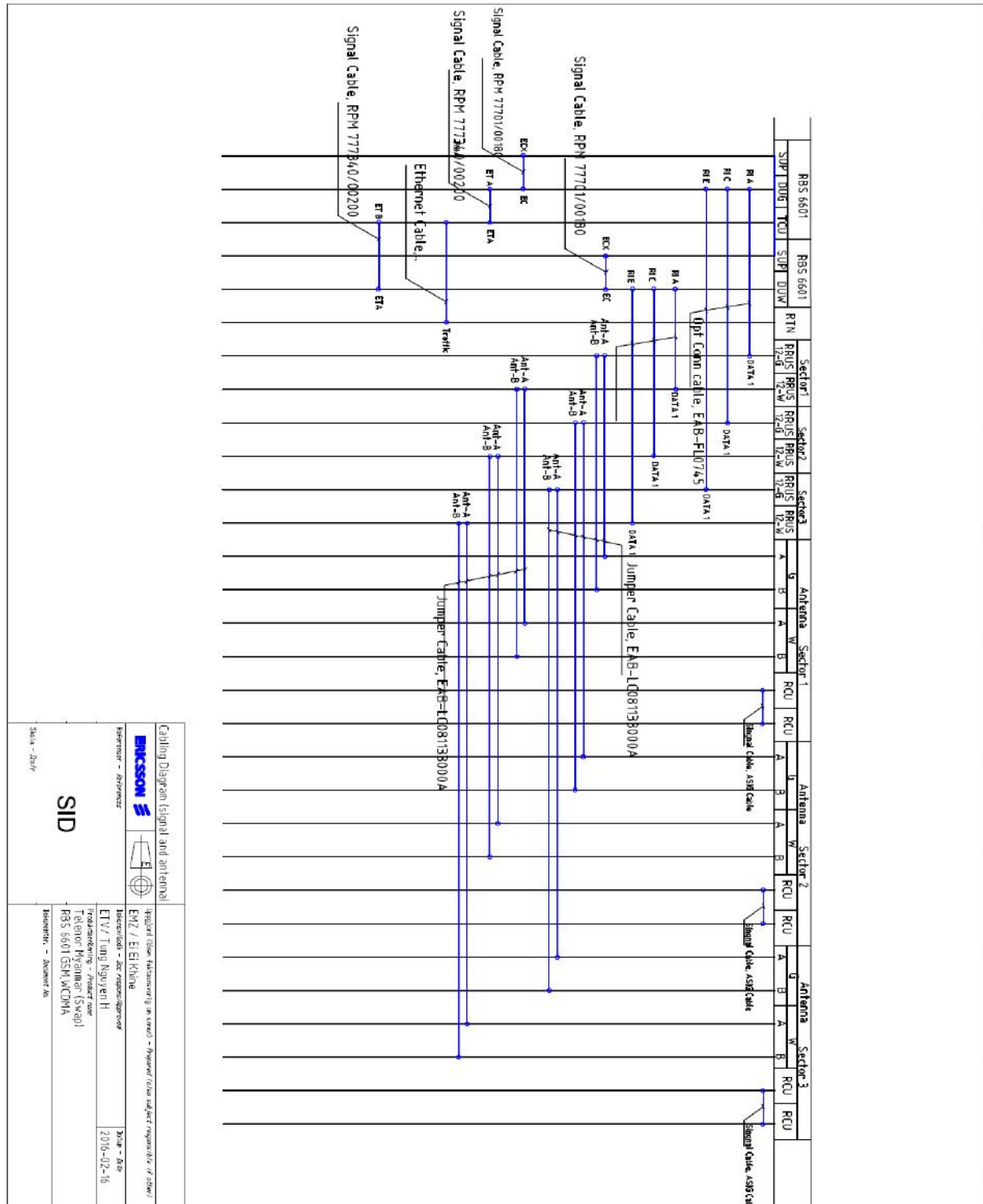
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Doc respons/Approved EMZ Manoj Kumar A	Checked	Date 2019-06-26	Rev. A	File SDD_MG1631_Rev.A

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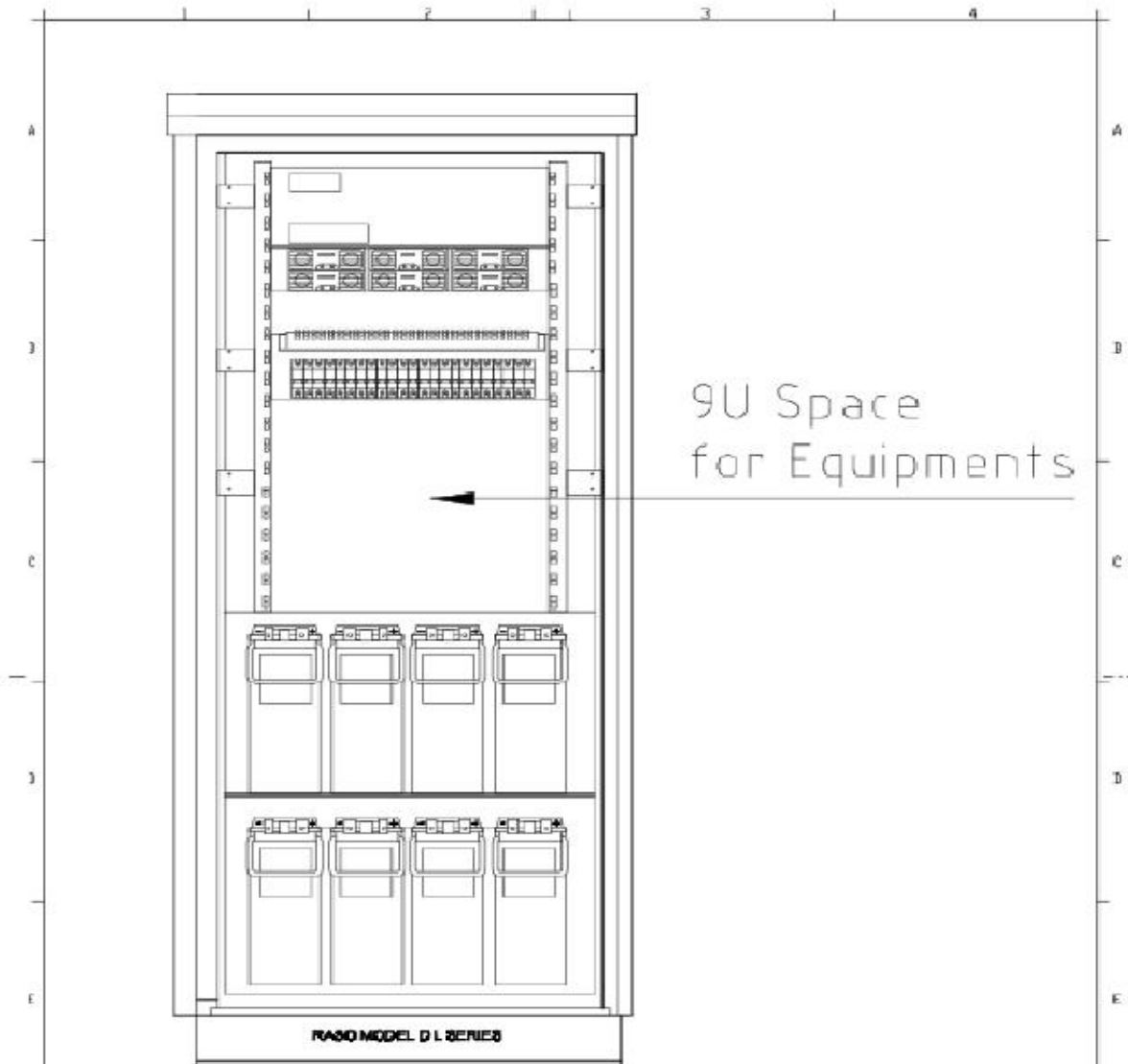
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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

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Aunglan, Magway  
0



ALLOCATION DRAWING				
ERICSSON 				
Reference - References RASO MODEL DL SERIES		Prepared (also subject responsible if other) ETV/EMZ Toan Trung		
		Date - Date 2014-11-10		Rev. A
		Product/Version - Product name PROJECT : TELENOR		
Scale - Scale NTS		Document - Document No.		Sheet - Sheet 1(1)

\*\*\*Please update on site configuration. How many RTN and RBS did we use.



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**Project:** Telenor Myanmar  
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## ALLOCATION TABLE: ALARMS

## 1 RBS 6601 for 2G (G900)

Sl.	Alarm	Type	Physical port
1	AC MAIN POWER FAILURE	Breaking	
2	Rectifier Module Failure	Breaking	
3	LOW BATTERY	Breaking	
4	Door Open-2	Breaking	
5	HIGH TEMP (TAH)	Breaking	
6	DOOR ALARM	Breaking	
7	DC SPD FAULT	Breaking	
8			

*Closing: the alarm cable is open when no alarms are present*

*Breaking: the alarm cable is closed when no alarms are present*

**\*\* Need to mark from site after alarm configuration**

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**Project:** Telenor Myanmar  
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## INSTALLATION CHECK LIST

OK = Correctly installed, NOK = Not Correctly installed, N/A = Not applicable

### INSTALLATION CHECK LIST

OK = Correctly installed, NOK = Not Correctly installed, N/A = Not applicable

A. CABINET	OK	NOK	N/A	COMMENTS
1. Cabinet clean and undamaged	OK			
2. Cabinet installed according to SID	OK			
3. Cable lead-in (cable gland)	OK			
4. PDUs connected to correct fuse	OK			
5. DC cable for RRUs and MU properly connected	OK			
6. Grounded, washers in place and bolts tightened	OK			torque of 15 Nm
7. Grounding cable insulation undamaged	OK			

B. MAIN UNIT (MU)	OK	NOK	N/A	COMMENTS
1. Equipment clean and undamaged	OK			
2. Installed according to allocation drawing	OK			
3. Minimum 50mm between MU & cabinet door	OK			
4. Minimum 50 mm at the rear of MU	OK			
5. Power cable connected to correct fuse	OK			
6. All cables in the front properly connected	OK			
7. All screws tightened to correct torque	OK			
8. No cables damaged	OK			
9. Equipment labeled according to SID	OK			
10. Grounded, washers in place and bolts tightened	OK			
11. Grounding cable insulation undamaged	OK			
12. All cables have enough extra length to enable the removal of the main unit without damaging or	OK			

C. REMOTE RADIO UNIT (RRU)	OK	NOK	N/A	COMMENTS
1. RRUS clean and undamaged	OK			
2. RRU installed as specified in SID	OK			
3. RRU properly aligned horizontally & vertically	OK			
4. RRU mounting bracket tightened properly	OK			torque of 41 Nm
5. RRU Grounding installed and connected to MET	OK			
6. Connector jumper tightened and sealed	OK			torque of 25 Nm
7. Installation cover for optical cable tightened	OK			torque of 1.7 Nm
8. RET cables routed correctly and tightened	OK			
9. Power socket securely & correctly attached	OK			
10. Protective covers installed on unused ports	OK			
11. Optical cable undamaged	OK			
12. Equipment labeled according to SID	OK			
13. Protective covers, dust caps, and terminations plugs are installed on unused ports?	OK			
14. RET cable is correctly connected to ALD ctrl connector and tightened	OK			

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D. ANTENNA SYSTEM - RADIO	OK	NOK	N/A	COMMENTS
1. Antenna system installed as specified in SID	OK			
2. Height, Azimuth and Tilt checked	OK			
3. No cables or connectors damaged	OK			
4. RF cables properly labeled	OK			
5. Connectors properly connected	OK			
6. Minimum bending of the RF cables correct	OK			radius of 50mm
7. Correct cable connected to correct antenna port	OK			
8. RET cable correctly connected & tightened	OK			
9. Optical cables properly connected and strapped	OK			
10. Minimum bending of the optical cables correct	OK			radius of 40mm
11. Antenna support bonded to tower	OK			
12. Tower legs earthed (minimum 2 legs)	OK			

E. CONCLUDING ROUTINES	OK	NOK	N/A	COMMENTS
1. SID marked for as-built	OK			
2. Labeling of the external cables	OK			
3. Painting of cabinet scratching	OK			
4. Site area cleaned	OK			
5.				

All installation activities have been completed [ **NO** ] [ **YES** ] (if no, specify below)

YES

Problems/Comments (Refer to applicable activity numbers)

**Responsible Engineer (Ericsson)**

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**Accepted by (Telenor)**

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date 2019-06-26	Rev. A	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

MANPOWER	NOS.
1 Site Supervisor	1
2 Team Leader	2
3 Technician	3
4 Laborers	2
5 Others	1

EQUIPMENT USED	NOS.
1	
2	
3	
4	
5	
6	

EQUIPMENT USED	NOS.
7	
8	
9	
10	
11	
12	

**WORK ACTIVITIES:**


Health & Safety Observation/Check list	OK	NOK	N/A	Comments
1 Safety Shoe	OK			
2 Safety Gloves	OK			
3 Safety Helmets	OK			
4 Safety Belts	OK			
5 Arrangement for Emergency Evacuation	OK			
6 Arrangement for Emergency Communication	OK			
7 Arrangement for First Aid	OK			
8 Arrangement for Toilets / Washing	OK			
9 Site Safety Protection	OK			
10 Security Guard at site	OK			

**OTHER MATTERS / ISSUES:**


OHS confirmed by (ASP): _____  Signature: _____ Print Name: _____ Date: _____	Checked and Verified by: <u>Ericson Myanmar Co. Ltd.</u>  Signature: _____ Print Name: _____ Date: _____
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**Project:** Telenor Myanmar  
**Site:** MG1631

### Test Record for Site Installation Verification

Date:	Site Name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>G900 RBS 6601</b>
RBS Type: <b>RBS 6601</b>	Testers Name:

#### NE Standalone test

	Pass	Fail	N/A	Remark
Incoming voltage verified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Circuit breaker with correct rating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cable connection inspected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cables properly labeled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IDB parameter set	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fault Status Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal alarm tested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
External alarm tested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Antenna system test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### Notes:

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#### Responsible Engineer (Ericsson)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

#### Accepted by (Telenor)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

## Test Record for Antenna System Tests

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>GSM900 RBS 6601</b>
Testers Name:	
RBS Type: <b>RBS 6601</b>	Serial Number (Site Master):

### Installation check



#### Cell A

Jumper Marking :  
 Jumper Length :  
 Optical Cable Length :  
 VSWR :  
 Cable Attenuation :

DX1	DX2
3	3

m  
 m  
 < 1.4  
 db

#### Cell B

Jumper Marking :  
 Jumper Length :  
 Optical Cable Length :  
 VSWR :  
 Cable Attenuation :

DX1	DX2
3	3

m  
 m  
 < 1.4  
 db

#### Cell C

Jumper Marking :  
 Jumper Length :  
 Optical Cable Length :  
 VSWR :  
 Cable Attenuation :

DX1	DX2
3	3

m  
 m  
 < 1.4  
 db

	Sector A	Sector B	Sector C
Direction			
Mechanical Tilt			
Electrical Tilt-GSM			
Mounting Height			

### Responsible Engineer (Ericsson)

Name	Signature	Date
------	-----------	------

### Accepted by (Telenor)

Name	Signature	Date
------	-----------	------

## Test Record for Site Integration

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>GSM900    RBS 6601</b>
RBS Type: <b>RBS 6601</b>	Testers Name:

	IP	VLAN
Abis over IP		
OAM		

### VOICE, SMS, MMS, SPEED TEST

	MO/MT Voice Call	SMS	MMS	THROUGHPUT/SPEED TEST	
Cell				Downlaod	Upload
Cell 1					
Cell 2					
Cell 3					
Cell 4					
Cell 5					
Cell 6					

### HANDOVER TEST

A to B	A to C	B to A	B to C	C to A	C to B	Remark

### EXTERNAL ALARM TEST

Alm#	Designation	Type	Pass	Fail	Remarks
01 0		Closing			
02 0		Breaking			
03 0					
04 0					
05 0					
06 0					
07 0					
08					

Remarks: \_\_\_\_\_

### Responsible Engineer (Ericsson)

\_\_\_\_\_  
*Name* *Signature* *Date*

### Accepted by (Telenor)

\_\_\_\_\_  
*Name* *Signature* *Date*

## Test Record for Site Hardware Status

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>GSM900</b>
RBS Type: <b>##</b>	Testers Name:

### Power System

Unit	Product number	Serial
DC power		
Rectifier Module #1		
Rectifier Module #2		
Rectifier Module #3		
Rectifier Module #4		
Battery		

### Antenna

Unit	Product number	Serial
Sector A	ADU451807v01	
Sector B	ADU451807v01	
Sector C	ADU451807v01	

### RBS Cabinet

Unit	Product number	Serial
RBS 6601	1/BFL901009/4	
DUG 20 01	KDU137569/1	
TCU-02 01	KDU137739/1	
RRU 01 B8,sector A	KRC11871/2	
RRU 01 B8,sector B	KRC11871/2	
RRU 01 B8,sector C	KRC11871/2	

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Responsible Engineer (Ericsson)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

### Accepted by (Telenor)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. <b>2/153 83-IPA 166 0345 Uen</b>		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

**Project:** Telenor Myanmar  
**Site:** MG1631

### Test Record for Site Installation Verification

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>W2100 2/2/2</b>
RBS Type: <b>RBS 6601</b>	Testers Name:

NE Standalone test	Pass	Fail	N/A	Remark
Incoming voltage verified	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Circuit breaker with correct rating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cable connection inspected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cables properly labeled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fault Status Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal alarm tested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
External alarm tested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Antenna system test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### Notes:

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#### Responsible Engineer (Ericsson)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

#### Accepted by (Telenor)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. <b>2/153 83-IPA 166 0345 Uen</b>	
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. File <b>A SDD_MG1631_Rev.A</b>

**Project:** Telenor Myanmar  
**Site:** MG1631

### Test Record for Antenna System Tests

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>W2100 2/2/2</b>
Testers Name:	
RBS Type: <b>RBS 6601</b>	Serial Number (Site Master):

**Installation check**



#### Sector 1

Jumper Marking :	A	B	
Jumper Length :	3	3	m
VSWR :			< 1.4
DTF :			< 1.05
Cable Attenuation :			db

#### Sector 2

Jumper Marking :	A	B	
Jumper Length :	3	3	m
VSWR :			< 1.4
DTF :			< 1.05
Cable Attenuation :			db

#### Sector 3

Jumper Marking :	A	B	
Jumper Length :	3	3	m
VSWR :			< 1.4
DTF :			< 1.05
Cable Attenuation :			db

**Responsible Engineer (Ericsson)**

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**Accepted by (Telenor)**

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. <b>2/153 83-IPA 166 0345 Uen</b>		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

**Project:** Telenor Myanmar  
**Site:** MG1631

### Test Record for Site Integration

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>W2100 2/2/2</b>
RBS Type: <b>RBS 6601</b>	Testers Name:

	IP	Checked
NODE B		
OAM Link		
RNC Name		

### VOICE, VIDEO, SMS, MMS, SPEED TEST

Sector	Carrier	MOBILE ORIGINATING/MOBILE TERMINATING				THROUGHPUT/SPEED	
		Voice call	Video call	SMS	MMS	Download	Upload
Sector 1	1						
	2						
Sector 2	1						
	2						
Sector 3	1						
	2						
Sector 4	1						
	2						
Sector 5	1						
	2						
Sector 6	1						
	2						

### HANDOVER TEST

1 to 2	1 to 3	2 to 1	2 to 3	3 to 1	3 to 2	Remark

### EXTERNAL ALARM TEST

Alm#	Designation	Type	Pass	Fail	Remarks
01		Closing			
02		Breaking			
03					
04					
05					
06					
07					
08					

Remarks: \_\_\_\_\_

**Responsible Engineer (Ericsson)**

\_\_\_\_\_  
 Name Signature Date

**Accepted by (Telenor)**

\_\_\_\_\_  
 Name Signature Date



Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. 2/153 83-IPA 166 0345 Uen		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date 2019-06-26	Rev. A	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631

### Test Record for Site Hardware Status

Date:	Site name:
Site No.: <b>MG1631</b>	Cell Configuration: <b>W2100 2/2/2</b>
RBS Type: <b>RBS 6601</b>	Testers Name:

### Power System

Unit	Product number	Serial
DC power		
Rectifier Module #1		
Rectifier Module #2		
Rectifier Module #3		
Rectifier Module #4		
Battery		

### Antenna

Unit	Product number	Serial
DXX-790-960/1710-2180-65/65-17.5i/18.5i-IV ADU451807v01		
DXX-790-960/1710-2180-65/65-17.5i/18.5i-IV ADU451807v01		
DXX-790-960/1710-2180-65/65-17.5i/18.5i-IV ADU451807v01		

### RBS Cabinet

Unit	Product number	Serial
RBS 6601	1/BFL901009/4	
DUW31	KDU127174/3	
RRU 12 B1,sector A	KRC161297/2	
RRU 12 B1,sector B	KRC161297/2	
RRU 12 B1,sector C	KRC161297/2	

Remarks: \_\_\_\_\_

\_\_\_\_\_

### Responsible Engineer (Ericsson)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

### Accepted by (Telenor)

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Prepared (also subject responsible if other) <b>EMZ Zaw Myo Aung</b>		Document No. 1/193 32-IPA 166 0345 Uen		
Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File SDD_MG1631_Rev.A

**Project:** Telenor Myanmar  
**Site:** MG1631 MG1631 -

**UNIT** **PRODUCT CODE** **REV** **SERIAL No.** **MFG.DATE**

<b>GSM 900</b>				
RBS 6601	1/BFL901009/4		C970006724	
DUG 20 01;Digital Unit	KDU137569/1		CD39743284	
TCU 02 01;Transport Con. Unit	KDU137739/1		TU8XS01420	
RRU 01 B8, sector A	KRC161297/2		D820110810	
RRU 01 B8, sector B	KRC161297/2		D820200809	
RRU 01 B8, sector C	KRC161297/2		CB4V110672	
<b>WCDMA 2100</b>				
RBS 6601	1/BFL901009/4		C970002046	
'DUW31	KDU127174/3		TU8XJ47939	
RRUS 12 B1,sector A	KRC161297/2		CN30862893	
RRUS 12 B1,sector B	KRC161297/2		D822242550	
RRUS 12 B1,sector C	KRC161297/2		D822075870	

<b>ANTENNA</b>				
Sec1- DXX-790-960/1710-2180-65/65-1' ADU451807v01			N/A	
Sec2- DXX-790-960/1710-2180-65/65-1' ADU451807v01			N/A	
Sec3- DXX-790-960/1710-2180-65/65-1' ADU451807v01			N/A	

<b>RET</b>				
RCU136 Cell A GSM	27150136		HWB9777097911542YAC	
RCU136 Cell B GSM	27150136		HWB0485634111592T97	
RCU136 Cell C GSM	27150136		HWB231110891146366A	
RCU136 Cell A UMTS	27150136		HWB952517131146380D	
RCU136 Cell B UMTS	27150136		HWB7369714971542YL8	
RCU136 Cell C UMTS	27150136		HWB94618878514737V8	
<b>CABINET</b>				
ESOA300FBG10	ESOA300FBG10		HY5152600148W0	
Potevio	50V500AH_CABIN		4810019C180349	
Potevio	50V500AH_CABIN		4810019C180347	
Potevio	50V500AH_CABIN		4810019C180344	
Potevio	50V500AH_CABIN		4810019C180350	
Potevio	50V500AH_CABIN		4810019C180345	
Rectifier	ESR-48/56B A		VI152205672W0	
Rectifier	ESR-48/56B A		VI143210172W0	
Rectifier	ESR-48/56B A		VI152205710W0	

PA3 2014-07-28

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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**

**Site Location**



**Tower View**



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Doc. respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**





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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**

Site: **MG1631**

**Vertical Cable Ladder**



**Horizontal Cable Ladder**



**Antenna Cell A**



**Antenna Cell B**





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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**

**Antenna Cell C**



**RCU Cell A**



**RCU Cell B**



**RCU Cell C**



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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**

**RRUS 12 B1 Cell A**



**RRUS 12 B1 Cell B**



**RRUS 12 B1 Cell C**



**Earth Bar for RRU**





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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**

Site: **MG1631**

**RRU01 B8 Cell A**



**RRU01 B8 Cell B**



**RRU01 B8 Cell C**



**Earth Bar for RRU**



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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**

**Cabinet (Close)**



**Cabinet (Open)**



**DUG+DUW**



**DCDU**





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Document No.

PHT-09:0001-IPA 166 0345 Uen

Doc respons/Approved

EMZ Manoj Kumar A

Checked

Date

2019-06-26

Rev.

A

File

SDD\_MG1631\_Rev.A

Project: Telenor Myanmar

Site: MG1631

External Alarm connection (with clear Label)



External Alarm connection (with clear Label)



Cable inlet outdoor



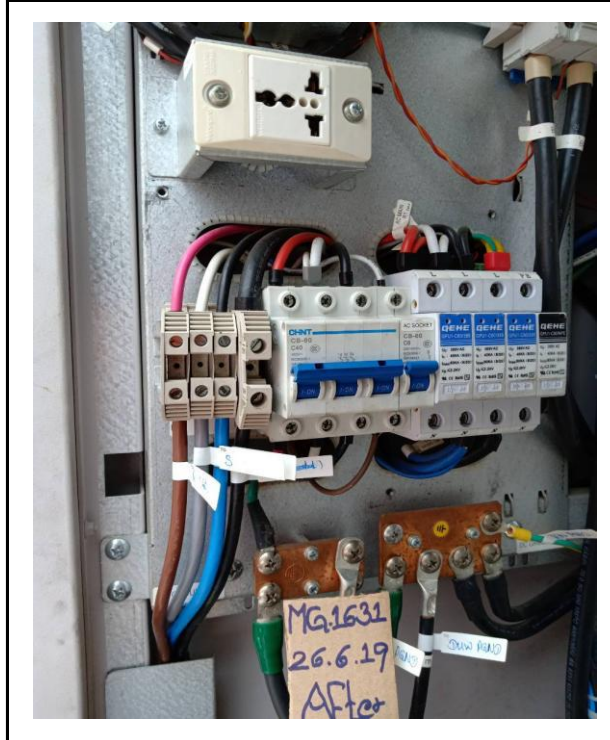
Cable inlet outdoor



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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

Project: **Telenor Myanmar**  
Site: **MG1631**

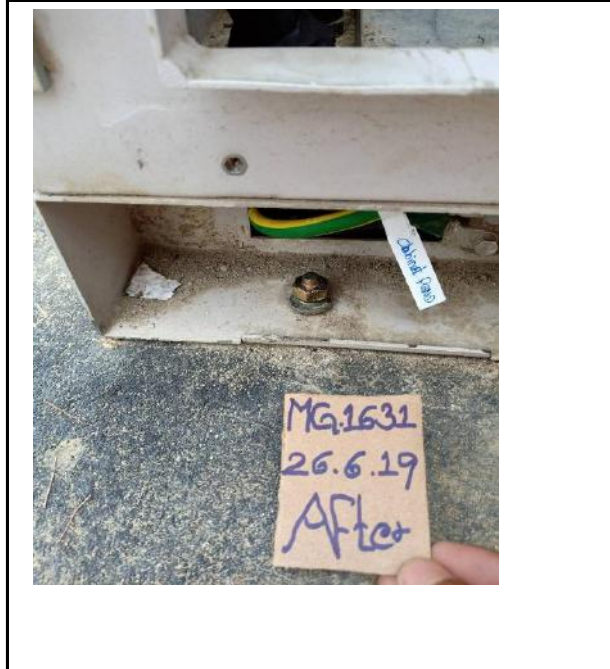
**AC Power cable at Telecom Cabinet**



**AC Power cable at AC Box**



**Main Earth Bar for Cabinet**



**Earth Bar Cabinet**





PA3 2014-07-28

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Project: **Telenor Myanmar**

Site: **MG1631**

**Site Cleaned Photos**



**Site Cleaned Photo**



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Doc respons/Approved <b>EMZ Manoj Kumar A</b>	Checked	Date <b>2019-06-26</b>	Rev. <b>A</b>	File <b>SDD_MG1631_Rev.A</b>

**Project:** **Telenor Myanmar**  
**Site:** **MG1631**

### NETWORK ELEMENT ACCEPTANCE CERTIFICATE

This is to certify that Ericsson Radio Systems AB has delivered, installed and tested the Network Elements on site **MG1631** as defined in PO\_NS\_000017 and PO\_NS\_000018

PO RBS: PO\_NS\_000017  
PO TRM: PO\_NS\_000018  
PO Antenna:

The Network element acceptance has been performed in accordance with the procedures described in above mentioned contract. Further reference should be made to the acceptance documents. The Network element passed the acceptance with remarks per attached test report.

TEST DOCUMENTS  
RBS 6601 Test Report - G900  
RBS 6601 Test Report - W2100  
Test Report (TRM Functional)

Documents Number  
##  
2/153 83-IPA 166 0345 Uen rev A  
##

Date: .....

for

**Telenor**  
(The Buyer)

Name: .....

Title: .....

for

**Ericsson Myanmar**  
(The Vendor)

Name: .....

Title: .....