


RADIO SITE DESIGN

DOCUMENTATION

Region: South
Site ID: MO1416

Rev. TT26 2016-08-16

| | |
|---|-----------|
| ERICSSON  | |
| CAPTION LIST | |
| Document No. 001 53-IPA 166 2013/MO1416 Uen | |
| Date 2019-01-11 | Rev. A |

SITE DESIGN DOCUMENTATION



MO1416
GSM900 & WCDMA2100
Huawei DBS3900

| | |
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| | | | | |
|---|---------|--|------------------|-----------------------------|
| Prepared (also subject responsible if other) EMZ/ EI EI KHINE | | Document No. 001 51-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar**Site: MO1416**

| <u>Document name</u> | <u>Document number</u> | <u>Rev.</u> |
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| SITE DESIGN DOCUMENTATION | 001 53-IPA 166 2013/MO1416 Uen | A |
| 1 DOCUMENT LIST Document List | 001 51-IPA 166 2013/MO1416 Uen | A |
| 2 SITE DOCUMENTS Configuration Data RBS | 001 51-IPA 166 2013/MO1416 Uen | A |
| Situating Plan | 153 38-IPA 166 2013/MO1416 Uen | A |
| Antenna Placement Information | 153 12-IPA 166 2013/MO1416 Uen | A |
| Cable way Drawing | 193 24-IPA 166 2013/MO1416 Uen | A |
| 3 PLANT SPECIFICATION Plant Specification (RBS) | 1/127 11-IPA 166 2013/MO1416 Uen | A |
| 4 CABLING DIAGRAM Cabling Diagram (power and earth) | 1/193 18-IPA 166 2013/MO1416 Uen | A |
| Cabling Diagram (signal and antenna) | 2/193 18-IPA 166 2013/MO1416 Uen | A |
| Allocation Drawing (Cabinet) | 193 26-IPA 166 2013/MO1416 Uen | A |
| 5 EXTERNAL ALARM Allocation Table | 193 19-IPA 166 2013/MO1416 Uen | A |
| 6 CHECK LISTS Installation Check List | 153 11-IPA 166 2013/MO1416 Uen | A |
| OHS Check List | 176 27-IPA 166 2013/MO1416 Uen | A |
| 7 TEST DOCUMENTS RBS Test Report - G900 | 1/153 83-IPA 166 2013/MO1416 Uen | A |
| RBS Test Report - W2100 | 2/153 83-IPA 166 2013/MO1416 Uen | A |
| 8 ACCEPTANCE CERTIFICATE Acceptance Certificate | 179 61-IPA 166 2013/MO1416 Uen | A |
| Product List | 1/193 32-IPA 166 2013/MO1416 Uen | A |
| Site Photos | PHT-09:0001-IPA 166 2013/MO1416 Ue A | |
| 9 OTHERS Label Sheets | | |

| | | | |
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| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A |

Project: Telenor Myanmar**Site: MO1416****1 GENERAL SITE DATA**

| | | |
|-----|--------------------------|---|
| 1.1 | Geographical coordinates | Long: 97.78759 Lat: 15.2237 South |
| 1.2 | Region | |
| 1.3 | Address | Aung Zaya street,Asin Village, Ye Township |
| 1.4 | Type of Site | Green Field |
| 1.5 | Equipment location | Outdoor cabinet |
| 1.6 | Floor material | Concrete |

2 TECHNICAL DATA RBS SYSTEM**GSM900**

| | | |
|-----|--------------------------------------|--------------------------|
| 2.1 | System | GSM900 |
| 2.2 | RBS type | Huawie DBS3900 |
| 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 | RRU3936 |
| 2.7 | Mechanical Dimensions RRU (mm) WxDxH | 300x120x400 |
| 2.8 | Weight for one RRU | 14kg / 15kg (with cover) |

WCDMA2100

| | | |
|------|--------------------------------------|------------------------------------|
| 2.9 | System | WCDMA2100 |
| 2.10 | No. of sector | 3 |
| 2.11 | No. of carrier | 2/2/2 |
| 2.12 | No. of Remote Radio Unit (RRU) | 3 |
| 2.13 | RRU type | RRU3959 |
| 2.14 | Mechanical Dimensions RRU (mm) WxDxH | 300x120x400 |
| 2.15 | Weight for one RRU | 14kg / 15kg (with cover) |
| 2.16 | Mechanical Dimensions DBS(mm) WxDxH | 442x310x86 |
| 2.17 | Weight for one DBS (fully equiped) | 12kg |
| 2.18 | Power supply | -48V DC |
| 2.19 | Power consumption (maximum) | 300W (DBS) + 350W (RRU) |
| 2.20 | Mains circuit breaker | 30A + 6x30A |
| 2.21 | Heat dissipation of DBS (maximum) | 300W (with FAN) / 650W (with FANc) |

3 TECHNICAL DATA CABINET

| | | |
|-----|----------------------------------|----------------------|
| 3.1 | Type of cabinet | ODC148301A06HEX (DPC |
| 3.2 | Mechanical Dimensions (mm) WxDxH | 800Wx800Dx2250H |
| 3.3 | Free space for equipment | 10U |

4 TECHNICAL DATA RBS ANTENNA SYSTEM

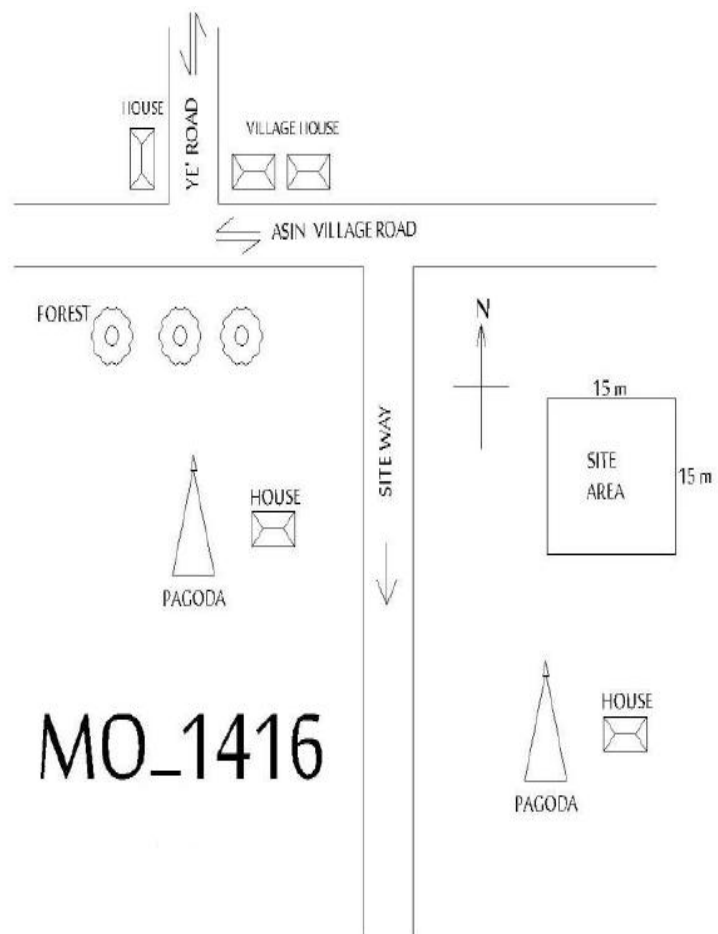
| | | | | |
|------|-------------------------------|---|----------|---------------|
| 4.1 | Antenna height (m.a.g.l.) | A= 43 | B= 43 | 43 |
| 4.2 | Antenna directions | A= 40° | B= 110° | 170° |
| 4.3 | Mech/Elec Downtilt, deg | A= 2°/0° | B= 2°/0° | 2°/0° |
| 4.4 | Quantity of Antenna | 3 pcs | | |
| 4.5 | Antenna model | ADU451503 | | |
| 4.6 | Antenna type | DXX-790-960/1710-2180-65/65-15i/17.5i-M/M | | |
| 4.7 | Antenna dimensions LxWxD (mm) | 1360 x 259 x 135 | | |
| 4.8 | Weight of one antenna (kg) | 13.7 | | |
| 4.9 | Wind load (N) | Frontal: | 440 | (at 150 km/h) |
| | | Lateral: | 230 | (at 150 km/h) |
| | | Rear: | 585 | (at 150 km/h) |
| 4.10 | No. of Fiber Optic | 6 pcs | | |
| 4.11 | Length of Fiber Optic | 70m | | |

5 TECHNICAL DATA RBS ANTENNA SUPPORT STRUCTURE

| | | |
|-----|----------------------|---------|
| 5.1 | Tower/mast/pole type | GBT 45m |
|-----|----------------------|---------|

Project: Telenor Myanmar
Site ID: MO1416
Drawing: Situating Plan Drawing
153 38-IPA 166 2013/MO1416 Uen

Geographical coordinates
Long (E): 97 ° 47 ' 15.32 "
Lat (N): 15 ° 13 ' 25.32 "



Project: Telenor Myanmar

Site ID: MO1416

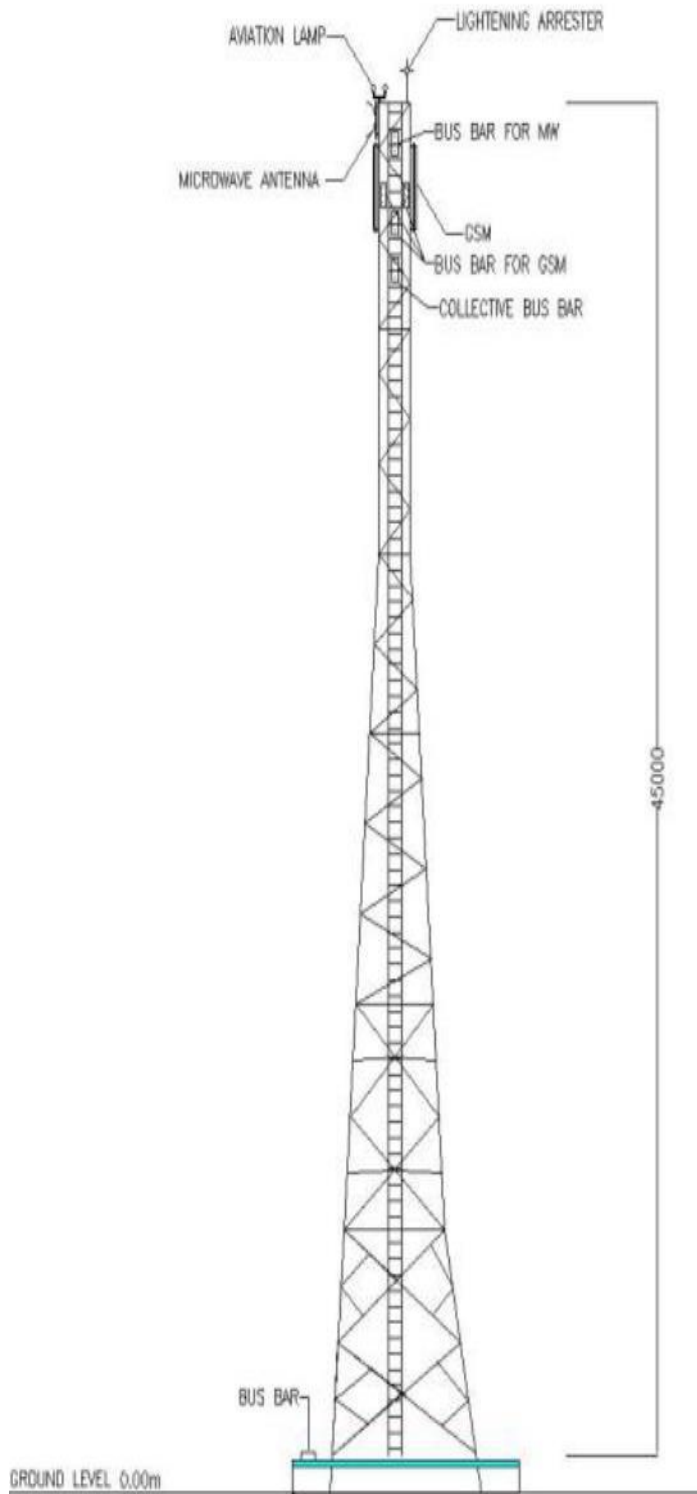
Drawing: Antennas Placement Drawing

153 12-IPA 166 2013/MO1416 Uen

Geographical coordinates

Long (E): 97 ° 47 ' 15.32 "

Lat (N): 15 ° 13 ' 25.32 "



Project: Telenor Myanmar

Site ID: MO1416

Drawing: Cable Way Drawing

193 24-IPA 166 2013/MO1416 Uen

Geographical coordinates

Long (E): 97 ° 47 ' 15.32 "

Lat (N): 15 ° 13 ' 25.32 "



| | | | | |
|--|---------|--|-----------|----------------------|
| Prepared (also subject responsible if other) EMZ/ EI EI KHINE | | Document No. 1/127 11-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project Telenor Myanmar

Site: MO1416

| No. | WH No. | DESCRIPTION | QTY/ UNIT |
|-----|--------|-------------|-----------|
|-----|--------|-------------|-----------|

1. DBS3900 EQUIPMENT**1.1 DBS3900 (GSM S3/3/3+WCDMA S2/2/2), DC -48V**

| | | |
|------------|---|--------|
| 29080025 | MBTS DBS Cable Suite Label | 1 PCS |
| 02319940 | BBU Box | 1 PCS |
| 02315639 | Universal Environment Interface control Unit | 1 PCS |
| 03054887 | Universal Main Processing & Transmission Unit (4 E1&1 Electrical FE/GE&1 | 1 PCS |
| ..03054885 | -- Universal Main Processing & Transmission unit with 4E1 and 2FE/GE inte | 1 PCS |
| ..04050386 | -- IT Equipment Cable,For BBU local maintenance adapter,0.38m,USB3.0 s | 1 PCS |
| 34060365 | Optical Transceiver,eSFP,850nm,4.25G multi-rate,-9dBm--1.5dBm,-15dBm, | 6 PCS |
| 02310MNN | RRU3936, Multi-mode Multi-carriers Remote Radio Unit | 3 pcs |
| 02239349 | 3900 Series DBS,Site Auxiliary Material Kit(G/U/L) | 1 PCS |
| 29040907 | DKBA8.807.0202,Outdoor label,cBTS3612,55*20*0.5,GE 8B35,T0.5 | 4 PCS |
| 29080032 | Feeder Engineering label(Multi-Feeder System) | 4 PCS |
| 29080025 | MBTS DBS Cable Suite Label | 1 PCS |
| 29040907 | DKBA8.807.0202,Outdoor label,cBTS3612,55*20*0.5,GE 8B35,T0.5 | 4 PCS |
| 29080032 | Feeder Engineering label(Multi-Feeder System) | 4 PCS |
| 34060365 | Optical Transceiver,eSFP,850nm,4.25G multi-rate,-9dBm--1.5dBm,-15dBm, | 6 PCS |
| 02311GYV | RRU3959 for Multi-mode 2100MHz (2*60W) | 3 PCS |
| 03021VHD | Baseband Processing Unit (6Cell,CE:UL384/DL512) | 1 PCS |
| 03022HEM | Universal Baseband Processing Unit d6 | 1 PCS |
| 02237428 | DBS Antenna Feeder Installation Auxiliary Kit Per Sector,General Area | 6 PCS |
| 04130065 | RF Cable,2m,DIN50SM-II,COAX50-8.7/3.55,DIN50SM-II,1/2 Inch Superflexi | 12 PCS |
| 04070012 | Signal Cable,Shielded Straight Through Cable,10m,MP8-II,CC4P0.5GY(S),A | 1 PCS |
| 25030191 | Wire,450/750V,60227 IEC 02(RV) 6mm^2, Yellow/Green,44A(Unit: meter) | 2 M |

1.2 Installation cable

| | | |
|----------|--|--------|
| 14130622 | Optical Cable Assembly,DLC/PC,DLC/PC,Multi-mode,GYFJH 2A1a(LSZH), | 6 PCS |
| 25030429 | Wire,450/750V,60227 IEC 02(RV)16mm^2,yellow green,85A,With a package | 18 M |
| 25030671 | Power Cable,300V,UL2464,3.31mm^2,2x12AWG,Black Jacket(2Cores:Blue, | 348 M |
| 27150086 | Fixing clip, locked 3pcs optical cables and 3pcs power cables,1 board 6,Stai | 58 PCS |

2. ANTENNA SYSTEM

| | | |
|--------------|---|-------|
| 27010829-001 | Directional Antenna,DXX-790-960/1710-2180-65/65-15i/17.5i-M/M,4*7/16 Di | 3 PCS |
| 27150243 | Downtilt Kit-C Type | 3 PCS |

3. RET MATERIAL

| | | |
|----------|--|-------|
| 04070097 | Signal Cable,AISG Communication cable,5m,D9M+D9(PS)(W),CC4P0.5PB(| 6 PCS |
| 27150136 | Antenna Feeder Accessories,RCU136,Agisson RET Antenna RCU,Antenna, | 6 PCS |

4. CABINET

| | | |
|-----------------|--|-------|
| ODC148301A06HE | TLM BDPC Outdoor Cabinet(Large) - TL 05 | 1 PCS |
| SP1148/3000HE | SP II Solar Converter 48/3000HE, | 4 PCS |
| 'UIFP48V100AH-1 | Lithium Ion Battery 48V,100Ah | 5 PCS |

Prepared (also subject responsible if other)

Document No.

EMZ/ EI EI KHINE

193 19-IPA 166 2013/MO1416 Uen

Doc respons/Approved

Checked

Date

Rev.

File

EMZ/Manoj Kumar

2019-01-11

A

SDD_MO1416_A

Project: Telenor Myanmar

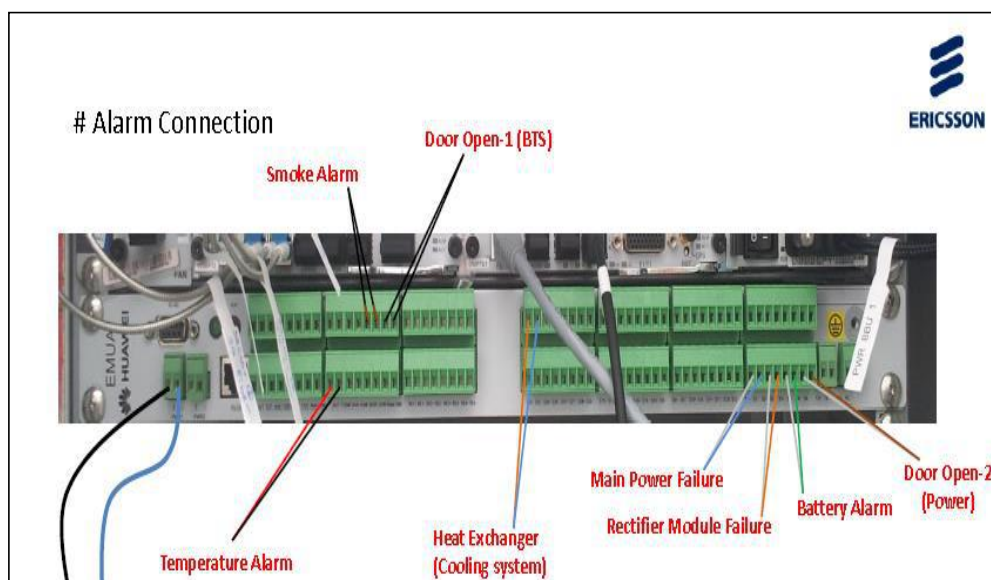
Site: MO1416

ALLOCATION TABLE: ALARMS

1. DBS3900

Temperature

| No. | Alarm | Type | Physical port |
|-----|--------------------------|----------|---------------|
| 1 | Main Power Failure | Breaking | |
| 2 | Rectifier Module Failure | Breaking | |
| 3 | Battery Alarm | Breaking | |
| 4 | Door Open-1 (BTS) | Breaking | |
| 5 | Door Open-2 (Power) | Breaking | |
| 6 | Temperature Alarm | Breaking | |
| 7 | Smoke Alarm | Breaking | |
| 8 | Heat Exchange | Breaking | |



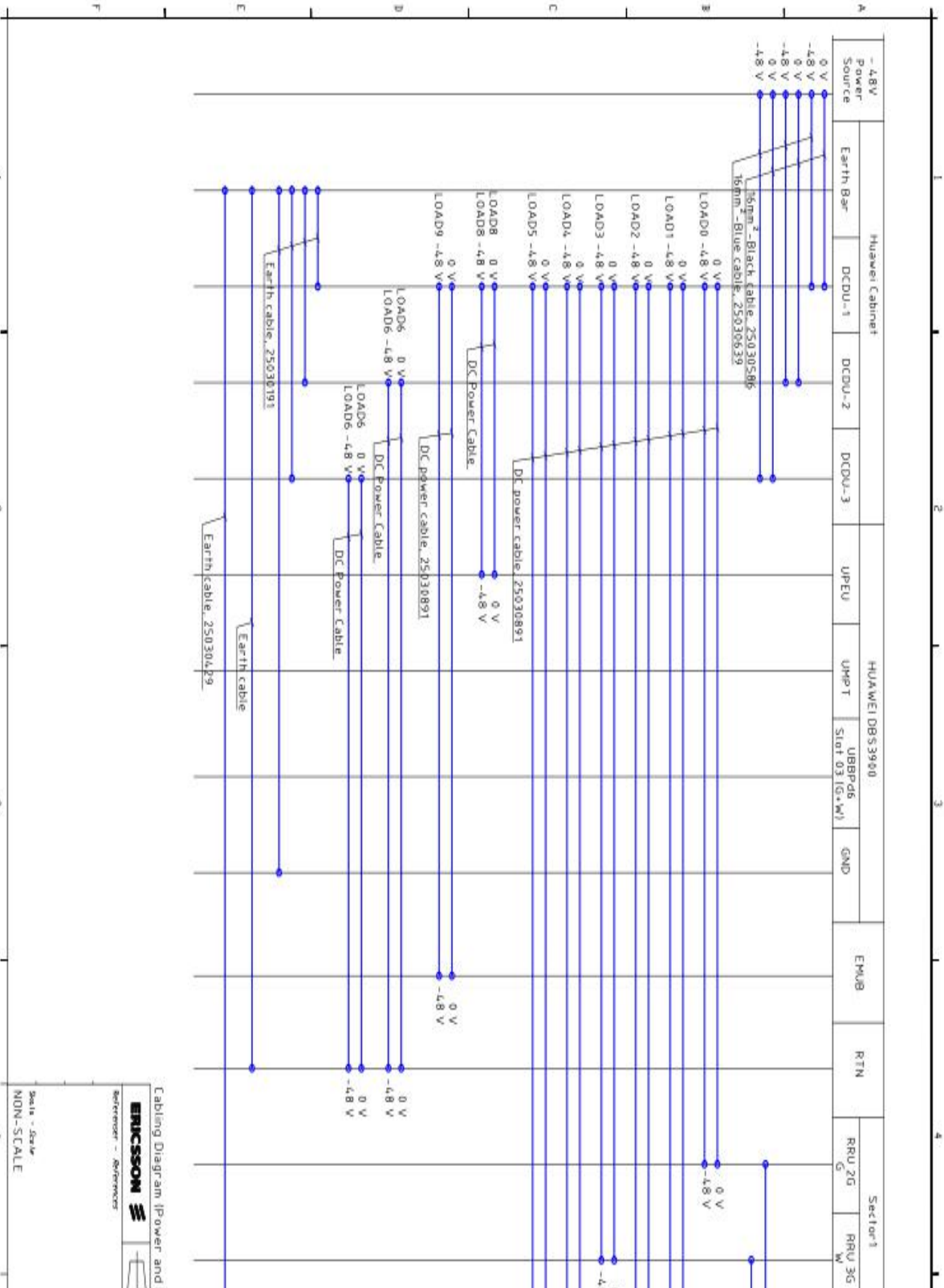
Closing: the alarm cable is open when no alarms are present

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

** Need to mark from site after alarm configuration

Project: Telenor Myanmar
Site ID: MO1416
Drawing: Cabling Diagram (Power and Earth)
1/193 18-IPA 166 2013/MO1416 Uen

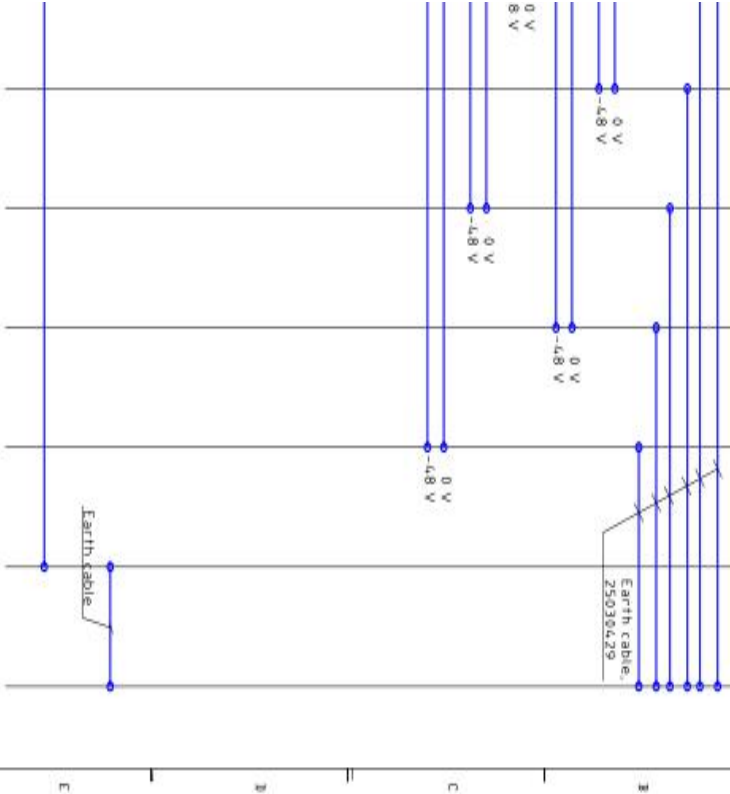
Geographical coordinates
Long (E): 97 ° 47 ' 15.32 "
Lat (N): 15 ° 13 ' 25.32 "



5

6

| Sector 2 | | Sector 3 | | Equipment | Tower Earth |
|-------------|-------------|-------------|-------------|-----------|-------------|
| RRU 2G G | RRU 3G W | RRU 2G G | RRU 3G W | MET | Conductor |



Earth)

| | |
|---|--------------------|
| UNIQUE (Name, Fingerprint, or serial) - Required (also subject responsibility if other) | ENZ/IE TOAN TRUONG |
|---|--------------------|

| | |
|--------------------------------------|----------------|
| Business/Case - Job request/Approved | Business - Job |
|--------------------------------------|----------------|

| | |
|-----------------------|--------------------|
| Customer/Project name | ETV/OJA (Hung Ngo) |
|-----------------------|--------------------|

| | |
|-----------------------|-----------------|
| Customer/Project name | Telenor Myanmar |
|-----------------------|-----------------|

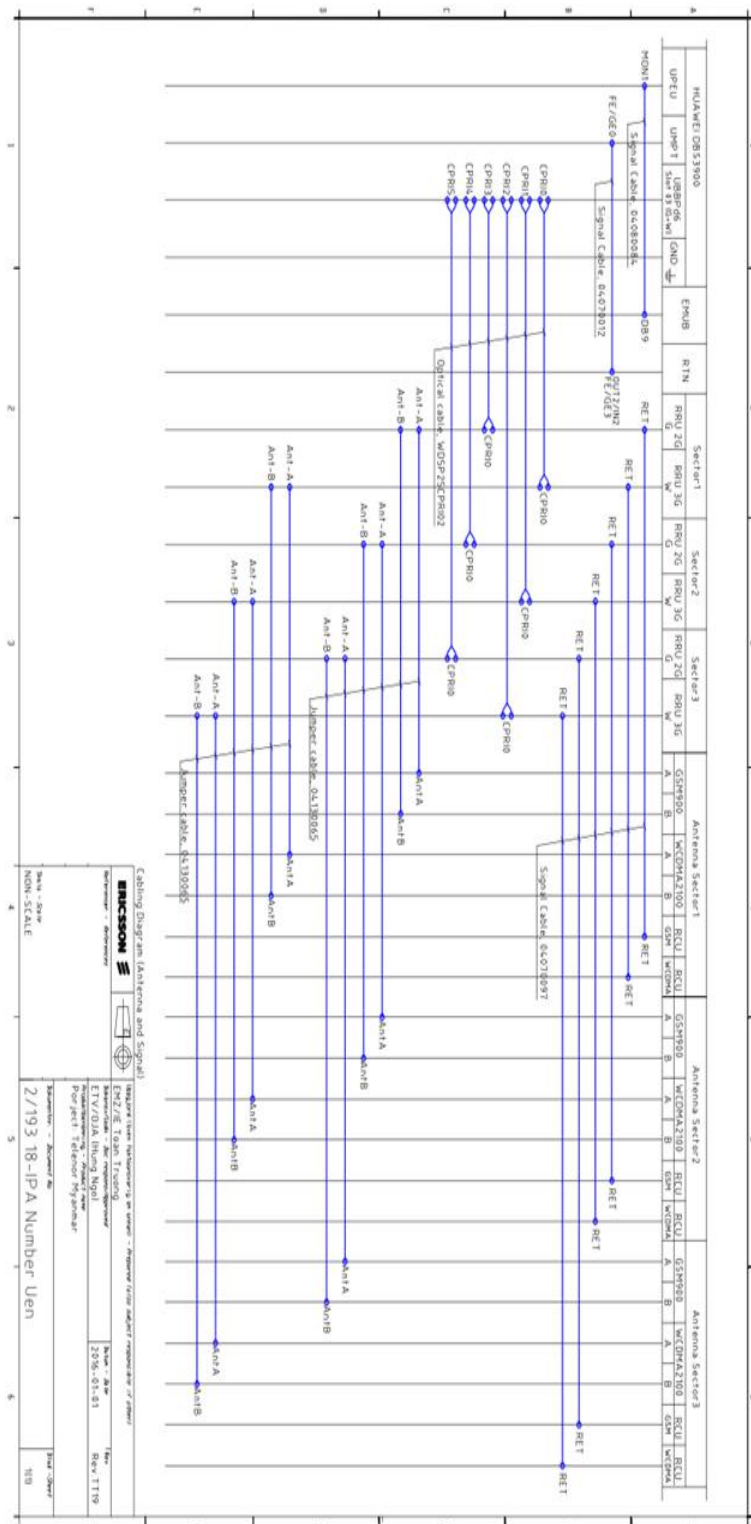
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| Document - Document No. | 1/193 18-IPA Number Uen |
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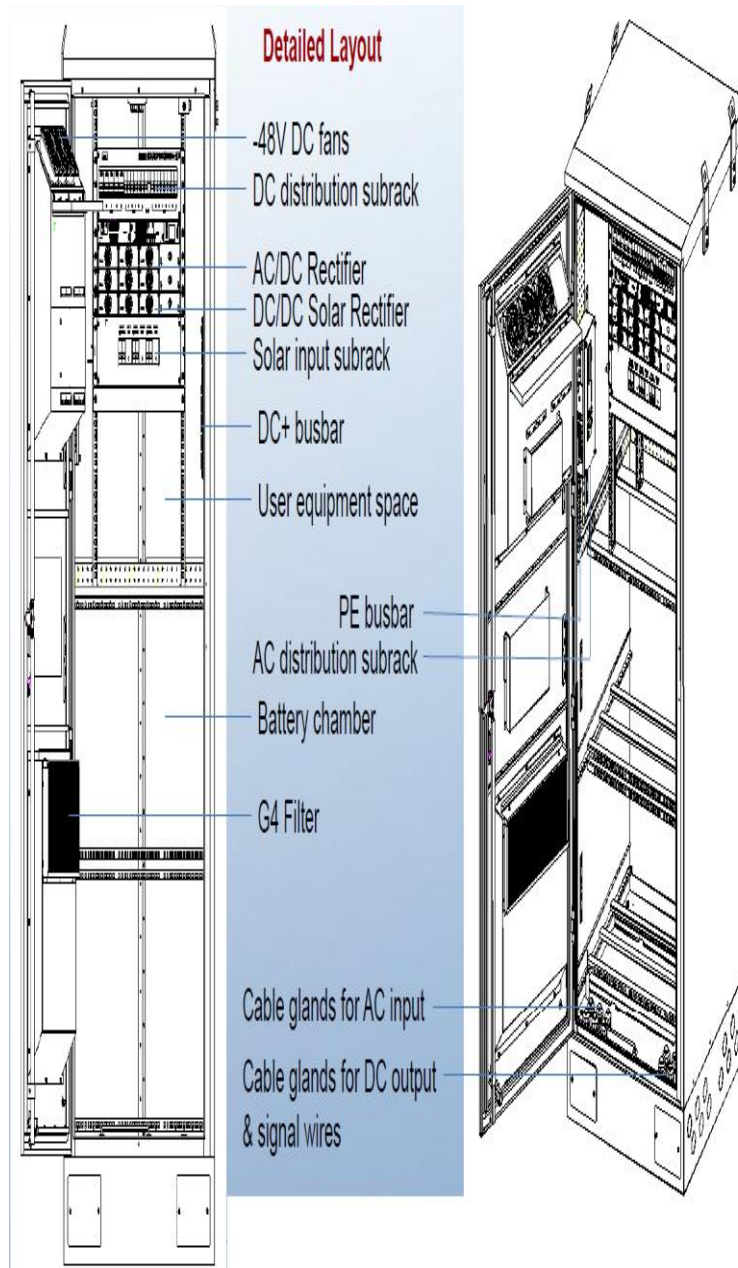
101

Geographical coordinates
Long (E): 97 ° 47 ' 15.32 "
Lat (N): 15 ° 13 ' 25.32 "



Project: Telenor Myanmar
Site ID: MO1416
Drawing: Allocation Drawing Cabinet
193 26-IPA 166 2013/MO1416 Uen

Geographical coordinates
Long (E): 97 ° 47 ' 15.32 "
Lat (N): 15 ° 13 ' 25.32 "



| | | | | |
|--|---------|--|-----------|----------------------|
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Project: Telenor Myanmar
Site: MO1416

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. | DCPU connected to correct fuse | OK | | | |
| 5. | DC cable for RRU and BBU properly connected | OK | | | |
| 6. | Grounded, washers in place and bolts tightened | OK | | | |
| 7. | Grounding cable insulation undamaged | OK | | | |

| B. BBU Box | | OK | NOK | N/A | COMMENTS |
|------------|--|----|-----|-----|----------|
| 1. | Equipment clean and undamaged | OK | | | |
| 2. | Installed according to allocation drawing | OK | | | |
| 3. | BBU securely fixed to rack or cabinet | OK | | | |
| 4. | Boards are firmly fixed in slot; screws are fastened | 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 BBU without damaging or disconnecting the cables? | OK | | | |

| C. RRU (REMOTE RADIO UNIT) | | OK | NOK | N/A | COMMENTS |
|----------------------------|---|----|-----|-----|----------|
| 1. | RRU 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 | | | |
| 5. | RRU Grounding installed and connected to MET | OK | | | |
| 6. | Connector jumper tightened and sealed | OK | | | |
| 7. | Installation cover for optical cable tightened | OK | | | |
| 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 connector and tightened | OK | | | |

| | | | | |
|--|---------|--|-----------|----------------------|
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| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

| 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. | OK | | | |

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

Problems/Comments (Refer to applicable activity numbers)

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

Prepared (also subject responsible if other)

EMZ/ EI EI KHINE

Document No.

176 27-IPA 166 2013/MO1416 Uen

Doc respons/Approved

EMZ/Manoj Kumar

Checked

Date

2019-01-11

Rev.

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SDD_MO1416_A

Project: Telenor Myanmar

Site: MO1416

| MANPOWER | NOS. |
|-------------------|------|
| 1 Site Supervisor | |
| 2 Team Leader | |
| 3 Technician | |
| 4 Laborers | |
| 5 Others | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |

| EQUIPMENT USED | NOS. |
|----------------|------|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 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 | | NOK | | |
| 9 Site Safety Protection | OK | | | |
| 10 Security Guard at site | | NOK | | |

OTHER MATTERS / ISSUES:

| | |
|---|---|
| OHS confirmed by (ASP): _____ Signature: _____ Print Name: _____ Date: _____ | Checked and Verified by: Ericson Myanmar Co. Ltd. Signature: _____ Print Name: _____ Date: _____ |
|---|---|

| | | | | |
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| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

Test Record for Site Installation Verification

| | |
|------------------------------------|---|
| Tester Name: xxx | Date: xxx |
| Site ID: MO1416 | Site Name: xxx |
| RBS Type: Huawei DBS3900 | Cell Configuration: G900 - S3/3/3 |

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:

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

| | | | |
|--|---------|--|--------------------------------|
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Project: Telenor Myanmar
Site: MO1416

Test Record for Site Integration

| | |
|-----------------------------|--------------------------------------|
| Tester Name: XXX | Date: XXX |
| Site ID: MO1416 | Site Name: XXX |
| RBS Type: Huawei DBS3900 | Cell Configuration: G900 - S3/3/3 |

| | IP | VLAN |
|--------------|----|------|
| Abis over IP | | |
| OAM | | |

VOICE, SMS, MMS, SPEED TEST

| | | | | THROUGHPUT/SPEED TEST | |
|--------|------------------|-----|-----|-----------------------|--------|
| Cell | MO/MT Voice Call | SMS | MMS | Download | 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 | | Closing | | | |
| 02 | | Breaking | | | |
| 03 | | | | | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
| 07 | | | | | |
| 08 | | | | | |

Remarks: _____

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

| | | | | |
|--|---------|--|-----------|----------------------|
| Prepared (also subject responsible if other) EMZ/ EI EI KHINE | | Document No. 1/153 83-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

Test Record for Site Hardware Status

| | |
|-----------------------------|--------------------------------------|
| Tester Name: xxx | Date: xxx |
| Site ID: MO1416 | Site Name: xxx |
| RBS Type: Huawei DBS3900 | Cell Configuration: G900 - S3/3/3 |

Power System

| Unit | Product number | Serial |
|---------------------|----------------|----------------|
| DC power | | |
| Rectifier Module #1 | SP1148/3000HE | 18120 16600 26 |
| Rectifier Module #2 | SP1148/3000HE | 186 400220 128 |
| Rectifier Module #3 | SP1148/3000HE | 186 400220 205 |
| Rectifier Module #4 | SP1148/3000HE | 186 400220 199 |
| Battery | | |

Antenna

| Unit | Product number | Serial |
|--|----------------|----------------------|
| DXX-790-960/1710-2180-65/65-15/17.5i-M/M | ADU451503 | 101 460 025 486 |
| DXX-790-960/1710-2180-65/65-15/17.5i-M/M | ADU451503 | Can't Read Serial No |
| DXX-790-960/1710-2180-65/65-15/17.5i-M/M | ADU451503 | Can't Read Serial No |

RBS Cabinet

| Unit | Product number | Serial |
|------------------|----------------|----------------------|
| DBS3900 | 2319940 | 2102310VTE6THB906895 |
| RRU3936 sector A | 02310MNN | Can't Read Serial No |
| RRU3936 sector B | 02310MNN | 2102310MNN6TF2400837 |
| RRU3936 sector C | 02310MNN | 2102310MNN6TE8401204 |
| | | |
| | | |
| | | |

Remarks: _____

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

| | | | | |
|--|---------|--|-----------|----------------------|
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Project: Telenor Myanmar
Site: MO1416

Test Record for Site Installation Verification

| | |
|------------------------------------|--|
| Tester Name: xxx | Date: xxx |
| Site ID: MO1416 | Site Name: |
| RBS Type: Huawei DBS3900 | Cell Configuration: W2100 - S2/2/2 |

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:

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

| | | | | |
|--|---------|--|-----------|----------------------|
| Prepared (also subject responsible if other) EMZ/ EI EI KHINE | | Document No. 2/153 83-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

Test Record for Site Integration

| | |
|------------------------------------|--|
| Tester Name: xxx | Date: xxx |
| Site ID: MO1416 | Site Name: |
| RBS Type: Huawei DBS3900 | Cell Configuration: W2100 - S2/2/2 |

| | IP | Checked |
|----------|----|---------|
| NODE B | | |
| OAM Link | | |
| RNC Name | | |

VOICE, VIDEO, SMS, MMS, SPEED TEST

| | | MOBILE ORIGINATING/MOBILE TERMINATING | | | | THROUGHPUT/SPEED | |
|----------|---------|---------------------------------------|------------|-----|-----|------------------|--------|
| Sector | Carrier | 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: _____

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

Prepared (also subject responsible if other)

EMZ/ EI EI KHINE

Document No.

2/153 83-IPA 166 2013/MO1416 Uen

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EMZ/Manoj Kumar

Checked

Date

2019-01-11

Rev.

A

File

SDD_MO1416_A

Project: Telenor Myanmar

Site: MO1416

Test Record for Site Integration

| | |
|----------------|---------------------|
| Tester Name: | Date: |
| xxx | xxx |
| Site ID: | Site Name: |
| MO1416 | |
| RBS Type: | Cell Configuration: |
| Huawei DBS3900 | W2100 - S2/2/2 |

Power System

| Unit | Product number | Serial |
|---------------------|----------------|----------------|
| DC power | | |
| Rectifier Module #1 | SPII48/3000HE | 18120 16600 26 |
| Rectifier Module #2 | SPII48/3000HE | 186 400220 128 |
| Rectifier Module #3 | SPII48/3000HE | 186 400220 205 |
| Rectifier Module #4 | SPII48/3000HE | 186 400220 199 |
| Battery | | |

Antenna

| Unit | Product number | Serial |
|--|----------------|----------------------|
| DXX-790-960/1710-2180-65/65-15/17.5I-M/M | ADU451503 | 101 460 025 486 |
| DXX-790-960/1710-2180-65/65-15/17.5I-M/M | ADU451503 | Can't Read Serial No |
| DXX-790-960/1710-2180-65/65-15/17.5I-M/M | ADU451503 | Can't Read Serial No |

RBS Cabinet

| Unit | Product number | Serial |
|------------------|----------------|----------------------|
| DBS3900 | 2319940 | 2102310VTE6THB906895 |
| RRU3959 sector A | 02311GYV | 2102311GYV6TJ1403074 |
| RRU3959 sector B | 02311GYV | 2102311GYV6TJ1402472 |
| RRU3959 sector C | 02311GYV | 2102311GYV6TJ1402159 |
| | | |
| | | |
| | | |

Remarks:

| Accepted by (Telenor) | Responsible Engineer (Ericsson) |
|-----------------------|---------------------------------|
| Signature: _____ | Signature: _____ |
| Print Name: _____ | Print Name: _____ |
| Date: _____ | Date: _____ |

| | | | | |
|--|---------|----------------------------------|------|--------------|
| Prepared (also subject responsible if other) | | Document No. | | |
| EMZ/ EI EI KHINE | | 1/193 32-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved | Checked | Date | Rev. | File |
| EMZ/Manoj Kumar | | 2019-01-11 | A | SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

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

| DBS3900 GSM900 & WCDMA2100 | | | | |
|----------------------------|---------------------|--|-----------------------|--|
| BBU 3900 / BBU 3910 | 02319940 / 02310VTE | | 2102310VTE6THB906895 | |
| FANC / FANE | 2120577 / 02311CHK | | 2102311CHK6THA933593 | |
| UEIU | 02315639 | | 2102315639LUHB003214 | |
| UPEUC / UPEUD2 | 2319897 / 02310SFM | | 2102310SFM LUHA030621 | |
| UMPTb1 | ..03054885 | | 210305488510HC000915 | |
| UBBPd6 | 03022HEM | | 022HEM10HB004538 | |
| EMUB | 02231GJH | | 2102310UWTCNH1001569 | |
| RRU3936 | 02310MNN | | Can't Read Serial No | |
| RRU3936 | 02310MNN | | 2102310MNN6TF2400837 | |
| RRU3936 | 02310MNN | | 2102310MNN6TE8401204 | |
| RRU3959 | 02311GYV | | 2102311GYV6TJ1403074 | |
| RRU3959 | 02311GYV | | 2102311GYV6TJ1402472 | |
| RRU3959 | 02311GYV | | 2102311GYV6TJ1402159 | |

| ANTENNA | | | | |
|---|-----------|--|----------------------|--|
| DXX-790-960/1710-2180-65/65-15i/17.5i-M/M | ADU451503 | | 101 460 025 486 | |
| DXX-790-960/1710-2180-65/65-15i/17.5i-M/M | ADU451503 | | Can't Read Serial No | |
| DXX-790-960/1710-2180-65/65-15i/17.5i-M/M | ADU451503 | | Can't Read Serial No | |

| RET | | | | |
|--------------------|----------|--|----------------------|--|
| RCU136,Agisson RET | 27150136 | | Can't Read Serial No | |
| RCU136,Agisson RET | 27150136 | | Can't Read Serial No | |
| RCU136,Agisson RET | 27150136 | | Can't Read Serial No | |
| RCU136,Agisson RET | 27150136 | | Can't Read Serial No | |
| RCU136,Agisson RET | 27150136 | | HWB2115226361542YQ8 | |
| RCU136,Agisson RET | 27150136 | | Can't Read Serial No | |

| CABINET | | | | |
|--|-----------------|--|---------------------|--|
| TLM BDPC Outdoor Cabinet(Large) - TL 05 | ODC148301A06HEX | | 181 201660010 068 | |
| Rectifier | SPII48/3000HE | | 18120 16600 26 | |
| Rectifier | SPII48/3000HE | | 186 400220 128 | |
| Rectifier | SPII48/3000HE | | 186 400220 205 | |
| Rectifier | SPII48/3000HE | | 186 400220 199 | |
| Battery | UIFP48V100AH-1 | | P48100XA32180728618 | |
| Battery | UIFP48V100AH-1 | | P48100XA32180728650 | |
| Battery | UIFP48V100AH-1 | | P48100XA32180728665 | |
| Battery | UIFP48V100AH-1 | | P48100XA32180728669 | |
| Battery | UIFP48V100AH-1 | | P48100XA32180728655 | |

Project: Telenor Myanmar

Site: MO1416

Site Location



Tower View



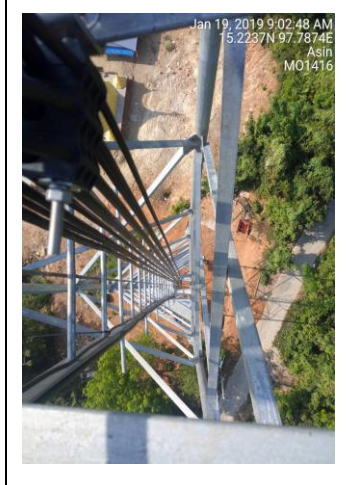
Top of Tower View



Project: Telenor Myanmar

Site: MO1416

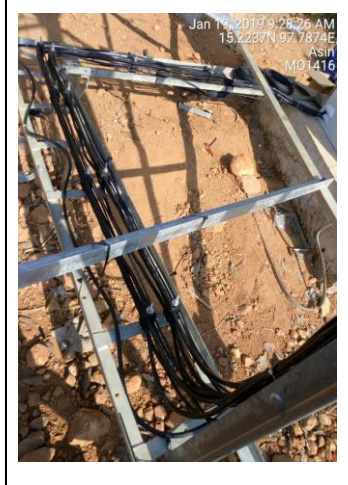
Vertical Cable Ladder (From Top of Tower)



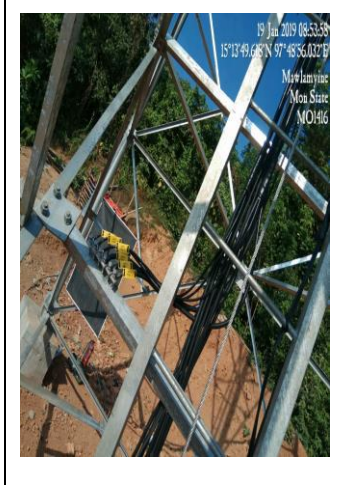
Vertical Cable Ladder (From Bottom of Tower)



Horizontal Cable Ladder



Grounding RRU Power Cable (At Bottom)

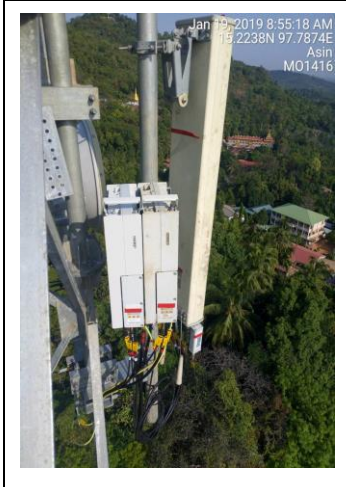


| | | | | |
|--|---------|-------------------------------------|------|--------------|
| Prepared (also subject responsible if other) | | Document No. | | |
| EMZ/ EI EI KHINE | | PHT-09:0001-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved | Checked | Date | Rev. | File |
| EMZ/Manoj Kumar | | 2019-01-11 | A | SDD_MO1416_A |

Project: Telenor Myanmar

Site: MO1416

Antenna Cell A



Antenna Cell B



Antenna Cell C



RCU Cell A



| | | | | |
|--|---------|-------------------------------------|------|--------------|
| Prepared (also subject responsible if other) | | Document No. | | |
| EMZ/ EI EI KHINE | | PHT-09:0001-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved | Checked | Date | Rev. | File |
| EMZ/Manoj Kumar | | 2019-01-11 | A | SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

RCU Cell B



RCU Cell C



RRU 2G Cell A



RRU 2G Cell B



Project: Telenor Myanmar

Site: MO1416

RRU 2G Cell C



Earth Bar for RRU 2G



RRU 3G Cell A



RRU 3G Cell B



Rev:TT26/2016/06-16

| | | | | |
|--|---------|-------------------------------------|------|--------------|
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| EMZ/ EI EI KHINE | | PHT-09:0001-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved | Checked | Date | Rev. | File |
| EMZ/Manoj Kumar | | 2019-01-11 | A | SDD_MO1416_A |

Project: Telenor Myanmar

Site: MO1416

RRU 3G Cell C



Earth Bar for RRU 3G



Cabinet (Close)



Cabinet (Open)



| | | | | |
|--|---------|-------------------------------------|------|--------------|
| Prepared (also subject responsible if other) | | Document No. | | |
| EMZ/ EI EI KHINE | | PHT-09:0001-IPA 166 2013/MO1416 Uen | | |
| Doc respons/Approved | Checked | Date | Rev. | File |
| EMZ/Manoj Kumar | | 2019-01-11 | A | SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

BBU 3900



External Alarm Connection (With Clear Label)



DCDU



Cable Inlet Indoor



Prepared (also subject responsible if other)

Document No.

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PHT-09:0001-IPA 166 2013/MO1416 Uen

Doc respons/Approved

Checked

Date

Rev.

File

EMZ/Manoj Kumar

2019-01-11

A

SDD_MO1416_A

Project: Telenor Myanmar

Site: MO1416

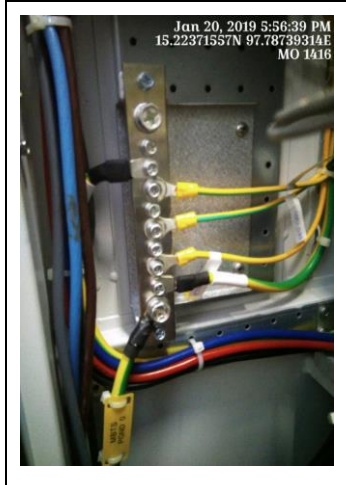
AC Power Cable At Telecom Cabinet



AC Power Cable At AC Box



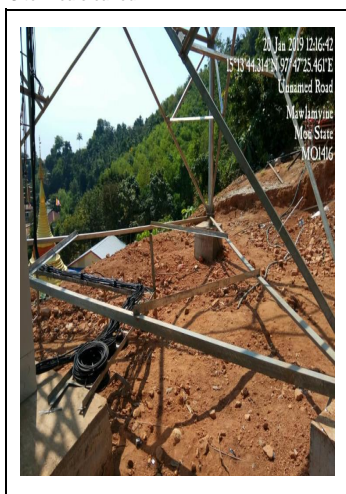
Main Earth Bar In Cabinet



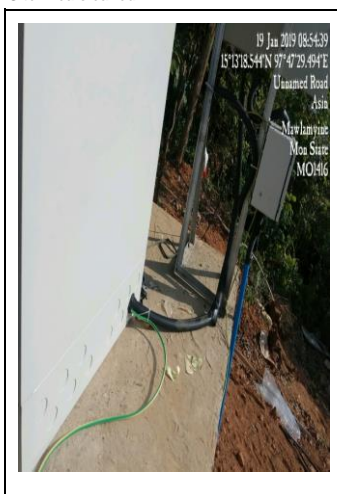
Main Earth Bar For Cabinet



Site Area cleaned



Site Area cleaned



MO1416

MO1416

Cell A

MO1416

Cell B

MO1416

Cell C

PHOTOS LIST

- 1 Site Location
- 2 Tower View
- 3 Vertical Cable Ladder
- 4 Horizontal Cable Ladder
- 5 Antenna Cell A
- 6 Antenna Cell B
- 7 Antenna Cell C
- 8 RCU Cell A
- 9 RCU Cell B
- 10 RCU Cell C
- 11 RRU 3936 Cell A
- 12 RRU 3936 Cell B
- 13 RRU 3936 Cell C
- 14 RRU 3826 Cell A
- 15 RRU 3826 Cell B
- 16 RRU 3826 Cell C
- 17 Earth Bar for RRU
- 18 Cabinet (Close)
- 19 Cabinet (Open)
- 20 BBU 3900
- 21 DCDU
- 22 Main Earth Bar for Cabinet
- 23 Earth Bar Cabinet
- 24 DG Set (Close)
- 25 DG Set (Open)

| | | | | |
|---|---------|---|------------------|-----------------------------|
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| Doc respons/Approved EMZ/Manoj Kumar | Checked | Date 2019-01-11 | Rev. A | File SDD_MO1416_A |

Project: Telenor Myanmar
Site: MO1416

NETWORK ELEMENT ACCEPTANCE CERTIFICATE

This is to certify that Ericsson Radio Systems AB has delivered, installed and tested the Network Elements on site **MO1416** as defined in PO_NS_000020 and PO_NS_000021

PO RBS: PO_NS_000039

PO HW Cabinet: PO_NS_000030

PO Antenna: PO_NS_000038

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

DBS3900 Test Report - G900

DBS3900 Test Report - W2100

Documents Number

1/153 83-IPA 166 2013/MO1416 Uen rev A

2/153 83-IPA 166 2013/MO1416 Uen rev A

For Telenor
(The Buyer)

For Ericsson
(The Vendor)

Signature:

Signature:

Name:

Name:

Date:

Date: