

PATH BUDGET

| Station A | Station B |
|-------------------------------------|-------------------------------------|
| WiMAX4 | adr159 |
| 35.00 meters (DTM altitude+clutter) | 63.00 meters (DTM altitude+clutter) |
| 2.18052 48.51240 35 4DMS | 2.18421 48.51216 39 4DMS |
| H-angle 95.70 degrees | H-angle 275.70 degrees |

distance between stations: 0.76 km

Bit rate: 256.00 Kbps

Ident:

| Station A | microwave: | Units |
|----------------------|------------|-------|
| Microwave equipment | | |
| Power | 30.97 | dBm |
| Height of antenna | 25.00 | meter |
| Diameter | 0.00 | meter |
| Gain | 15.00 | dB |
| Boot cable - MW | 0.00 | meter |
| Feeder | 0.00 | meter |
| Boot cable - Antenna | 0.00 | meter |
| Tx losses | 2.00 | dB |

| Station B | microwave: | Units |
|----------------------|------------|-------|
| Microwave equipment | | |
| Power | 1.00 | dBm |
| Height of antenna | 2.00 | meter |
| Diameter | 0.00 | meter |
| Gain | 14.00 | dB |
| Boot cable - MW | 0.00 | meter |
| Feeder | 0.00 | meter |
| Boot cable - Antenna | 0.00 | meter |
| Tx losses | 0.00 | dB |
| Rx losses | 0.00 | dB |
| Threshold 10-3 | -88.00 | dBm |
| Threshold 10-6 | -83.00 | dBm |
| TD | 0 | dB |

| Calculation | Units |
|-------------------------------|----------------|
| Radiated power | 24.94078 W |
| Frequency | 3300.00000 MHz |
| Polarization | V |
| Gaz attenuation (7.50 g/m3) | 0.00 dB |
| Rain attenuation (25.33 mm/h) | 0.01 dB |
| Earth radius (land) | 8500 km |
| Earth radius (sea) | 8500 km |
| Free space attenuation | 100.38 dB |
| Model attenuation | 0.00 dB |
| Ducting gain | 0.00 dB |
| Diffraction attenuation | 0.00 dB |
| Clutter attenuation | 0.0 dB |
| Reflection attenuation | 0.0 dB |
| V-angle | 0.38 degree |

| Path budget | Units |
|----------------------------------|---------------|
| Total gains | 59.97 dB |
| Total losses | 102.39 dB |
| Power received (rain) | -55.34 dBm |
| Power received (no rain) | -55.34 dBm |
| Margin 10-3 (no rain) | 32.66 dB |
| Margin 10-6 (no rain) | 27.66 dB |
| Reliability 10-6 multi-path (WM) | 100.00000 % |
| Reliability 10-6 rain (WM) | 99.99999 % |
| Reliability 10-6 (WM) | 99.99999 % |
| Reliability 10-3 multi-path (WM) | 100.00000 % |
| Reliability 10-3 rain (WM) | 99.99999 % |
| Reliability 10-3 (WM) | 99.99999 % |
| Reliability 10-6 multi-path (A) | 99.99999 % |
| Outage time 10-6 mp (A) | 0.05256 min/y |
| Reliability 10-3 multi-path (A) | 99.99999 % |
| Outage time 10-3 mp (A) | 0.05256 min/y |
| Reliability 10-6 rain (A) | 100.00000 % |
| Outage time 10-6 rain (A) | 0.00392 min/y |
| Reliability 10-3 rain (A) | 100.00000 % |
| Outage time 10-3 rain (A) | 0.00392 min/y |
| Reliability 10-6 (A) | 99.99999 % |
| Reliability 10-3 (A) | 99.99999 % |