

Company: Comotech Corporation

Test of: Airlight

To: FCC CFR 47 Part 101

Report No.: COMO01-U2 MPE Rev A

## MPE TEST REPORT



# MPE TEST REPORT



Test of: Comotech Corporation - Airlight

to

To: FCC CFR 47 Part 101

Test Report Serial No.: COMO01-U2 MPE Rev A

This report supersedes: NONE

Applicant: Comotech Corporation  
908-6, UKIC, 812-1, Hyomun-Dong  
Buk-Gu, Ulsan-City  
South Korea 683-360

Product Function: Point to Point Radio Link for network  
backhaul

Issue Date: 11<sup>th</sup> November 2015

## **This Test Report is Issued Under the Authority of:**

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## 1. MAXIMUM PERMISSABLE EXPOSURE

Maximum Permissible Exposure  
FCC, Part 101

Calculations for Maximum Permissible Exposure Levels

Power Density =  $P_d$  (mW/cm<sup>2</sup>) =  $EIRP / (4\pi d^2)$

$EIRP = P * G$

$P$  = Peak output power (mW)

$G$  = Antenna numeric gain (numeric)

$d$  = Separation distance (cm)

Numeric Gain =  $10^{(G \text{ (dBi)}/10)}$

The Comotech Airlight Microwave Fixed Link calculations are based on a worst case scenario. The Airlight device is professionally installed.

Maximum Antenna Gain = 51.0 dBi (Numeric 125,892.5)

Maximum Conducted Power Measured (Channel 73,375 MHz) = +9.6 dBm

The EUT belongs to the Controlled Exposure the limit of power density is 5.0 mW/cm<sup>2</sup>

Freq. Band (MHz)	Antenna Gain (dBi)	Effective Numeric Gain (numeric)	Max Peak Output Power (dBm)	Max Peak Output Power (mW)	Peak Output Power (mW/EIRP)	Distance (cm)	
						Calculated Safe Distance @ 5mW/cm <sup>2</sup> Limit(cm)	Minimum Separation Distance (cm)
75,375.0	45.0	31622.8	9.6	9.12	288,399.9	67.7	67.7
75,375.0	51.0	125892.5	9.6	9.12	1,148,139.6	135.2	135.2

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

### Specification

Maximum Permissible Exposure Limits

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency levels in excess of the Commission's guidelines. See §1.1310 of this chapter.

Limit = 5 mW / cm<sup>2</sup> from 1.310 Table 1, (A) Limits for Occupational/Controlled Exposure

### Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33dB
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