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United Kingdom

9<sup>th</sup> September 2015

Telecommunication Certification Body  
UL VS Ltd  
Offices 18-26  
Grove House  
Lutyens Close  
Chineham Court  
Basingstoke  
Hampshire  
RG24 8AG  
United Kingdom

Subject: Attestation of Compliance to FCC Rules

Application for FCC ID: QWP-50450I

Applicant: Cambium Networks Ltd

Dear Examiner,

**Attestations:**

Cambium Networks Ltd confirms that: -

The PMP 450i / PTP 450i products comply with the requirements of Section 15.407(a)(1)(i) including "The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)" and KDB 789033 D02 General UNII Test Procedures New Rules v01 Clause H 1. a).

KDB 662911 D01 Multiple Transmitter Output v02r01 and KDB 662911 D02 MIMO with Cross-Polarized Antennas v01 have been applied in the product test program.

The antenna types supported in this band are listed in pmp-0956\_001v004 Theory of Operation of the PMP 450i - PTP 450i.

**Evidence of Compliance:**

Calculations and polar plots upon which the calculations have been made are attached in: -

Annex A – EIRP above 30° Elevation

Annex B – KPPA-OMNI-DP-5 Polar Elevation at 5.2GHz

Annex C – Laird 17dBi Sectorized Antenna - Horizontal Envelope

Annex D – Laird 17dBi Sectorized Antenna - Vertical Envelope

If you have any questions regarding this application, please feel free to contact me.

Sincerely yours,



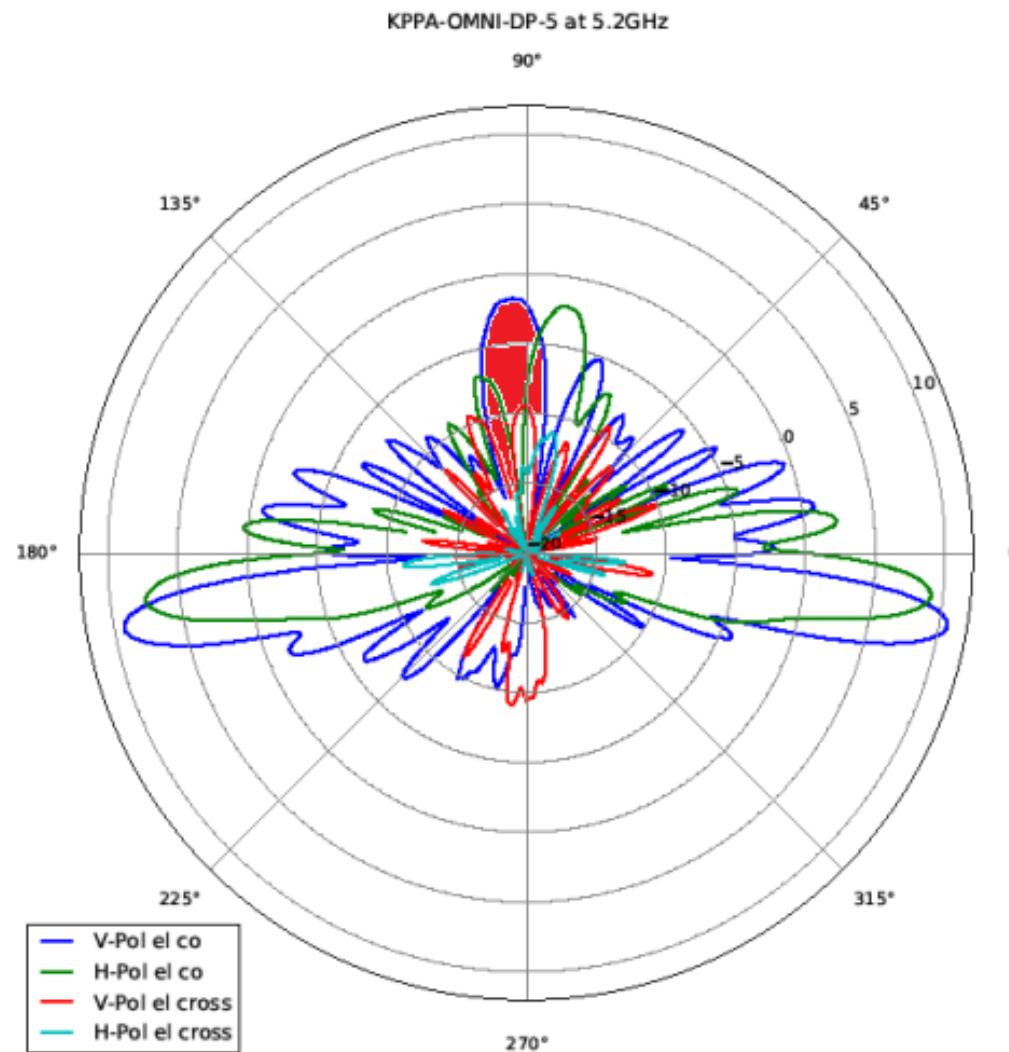
Donald W Reid  
CEng MIET, MInstLM  
Principal Regulatory Engineer  
Cambium Networks Ltd

**Annex A – EIRP above 30° Elevation**

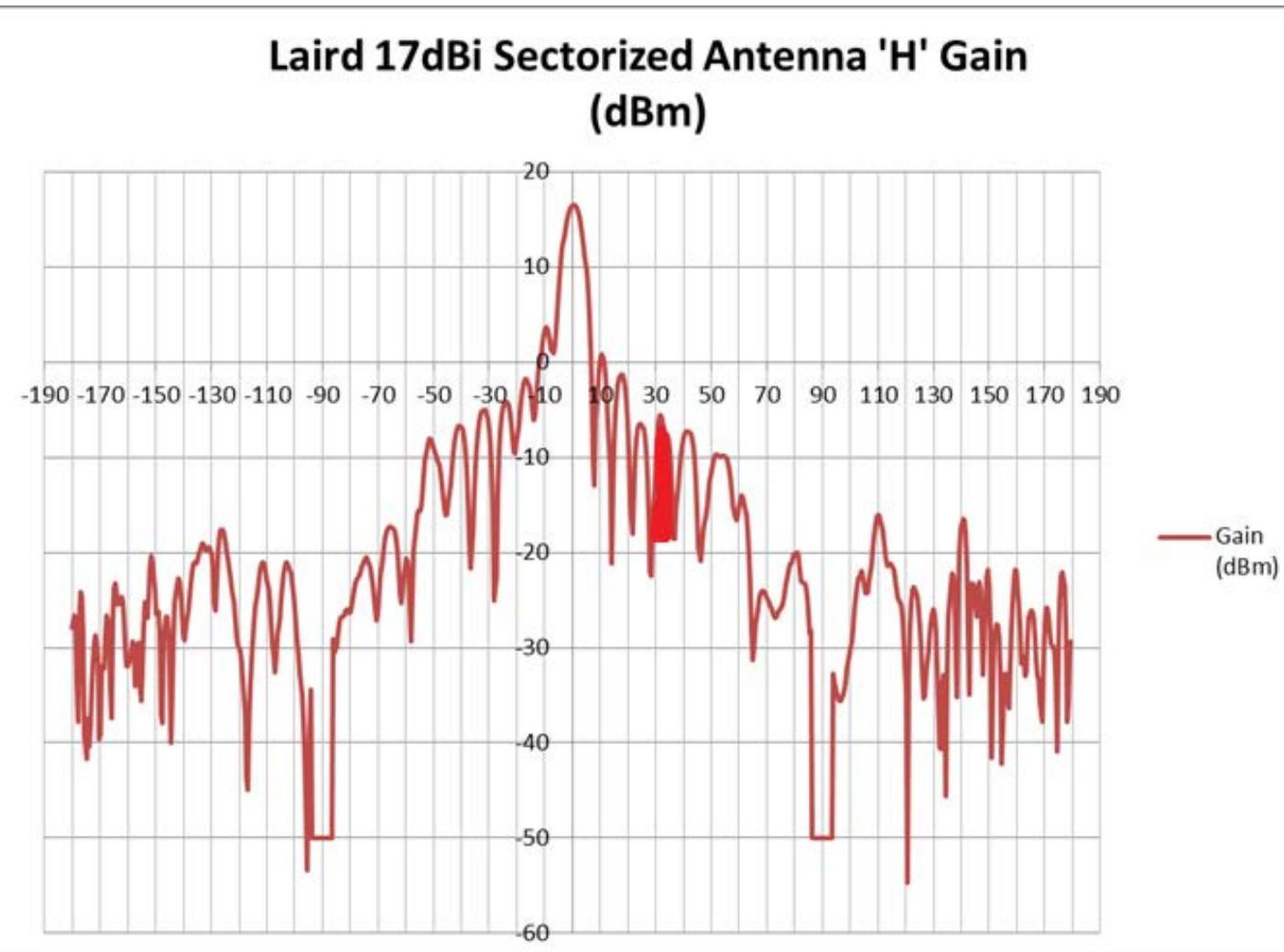
Antenna Plot	Nominal angle of antenna lobe with highest gain at elevations above 30° Elevation (Degrees)	Antenna Gain (dBi)	Max Transmit Power (dB)*	EIRP of Highest Antenna Lobe above 30° Elevation (dBm)	EIRP Limit (dBm)	EIRP Pass Margin (dBm)
KPPA-OMNI-DP-5_5 2_Elevation_polar	95	-2	22.2	20.2	21	0.8
Laird 17dBi Sectorized Antenna - Horizontal Envelope	32	-5.7	15.5	9.8	21	11.2
Laird 17dBi Sectorized Antenna - Vertical Envelope	39	-4.72	15.5	10.78	21	10.22

\* The Maximum transmit power applied is taken from UL VS Ltd test report UL-RPT-RP10655468JD03C which is filed with this submission

Annex B – KPPA-OMNI-DP-5 Polar Elevation at 5.2GHz, emission used for calculation in red



Annex C – Laird 17dBi Sectorized Antenna - Horizontal Envelope, emission used for calculation in red



Annex D – Laird 17dBi Sectorized Antenna - Vertical Envelope, emission used for calculation in red

