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**Subject - Professional Installation Requirement for PMP 450i / PTP 450i products
FCC ID: QWP-50450i**

I have provided below the justification for considering the PMP 450i / PTP 450i products as requiring professional installation, and therefore the use of standard antenna connectors is acceptable under FCC Regulations.

Background

The PMP/PTP 450i product range is available in two versions; the most common is fitted with integral antennas suitable for the vast majority of deployments. In addition, Cambium Networks markets a 'connectorized' unit without an integral antenna, where the installer fits an external antenna chosen from the list of antenna types and gains approved by the FCC for use with the product. These products are intended for more demanding radio links where higher gain antennas are needed to optimise the link performance. The external antennas allowed are all physically larger than the integral version and require their own mounting hardware.

- **Justification**

- **Marketing**

The PMP 450i / PTP 450i product range is sold exclusively via a network of distributors chosen by and under contract to Cambium Networks Solutions. The distributors sell the product only to Value Added Resellers (VARs) who would perform the installation process.

Cambium Networks does not sell the products through any retail chain to the general public, nor does it offer the product for sale by mail order.

In the event that the radio link under consideration did require the use of external higher gain antennas, the VAR would procure these antennas from the distributor. The list of antenna types and gains acceptable to the FCC is contained in the product User Manual.

- **Requiring Professional Installation**

Cambium Networks states in the User Manual that only suitably qualified people should undertake the installation of the products. As detailed above the product is only sold to Distributors/VAR chains who would hire professional installers.

This would be essential for the connectorised version which would only be used for more demanding radio links and where a professional and detailed radio survey is essential to ensure that the system will operate as required.

- **Application**

The PMP 450i / PTP 450i products are not intended for installation by the general public; typical examples of use would be to provide WLAN access to multiple remote sites or inter-site linking of company computer networks by point to point radio.

Yours sincerely



Donald W Reid
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Principal Regulatory Engineer