

# 金屬機殼上之雙頻薄型天線設計

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## 摘要

本篇論文主要探討將天線置於金屬機殼上之高阻抗平面(High Impedance Surface, HIS), 使能應用於無線區域網路(Wireless Local Area Network, WLAN)。一般將天線放置於金屬機殼附近, 其效能會消失, 可藉由高阻抗平面來改善此缺點。本論文先設計出用於雙WLAN頻段的高阻抗平面和一個蜿蜒型天線, 再以高阻抗平面放於天線的下方。過程中, 使用電磁分析軟體模擬其反射損耗及天線場型, 最後將模擬結果的尺寸進行實作, 證實高阻抗平面及蜿蜒型天線可符合雙頻WLAN之應用。

關鍵詞: 高阻抗平面、無線區域網路、蜿蜒型天線

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