

14. Omni-antenna v. antenna signal splitter?

When doing Multi-point application, we will need to cover the range as wide as possible, and best that we can cover all aspect (all directional: 360 degree) area. There are two ways to achieve such:

- 1> Install 4 antennas, each for a sector (90 degree), and using an antenna signal splitter (4-way) to accommodate the antennas simultaneously; the benefit is that we can use higher gain antenna for this scenario while the disadvantage is that the splitter will reduce the antenna gain (insertion loss);
- 2> Use an omni-directional antenna; the advantage is that there is no gain loss while the omni-antenna gain is usually relatively lower;

We have conducted many tests within these long years, and we have come to the conclusion that using an higher gain omni-antenna (15dbi above) maybe better than Scenario 1 (higher gain directional antennas with 4-way splitter).