**Ground Station Antenna Selection**

The ground station antenna requires to have a high gain to support a higher data throughput. High directivity antennas such as parabolic or yagi-uda are more suitable for the design. Antenna will need to steer towards the CubeSat during transmission. With the CubeSat in ISS orbit 408Km from earth, the minimum required beam width is 2.6. The only given restriction for ground antenna selection is its physical size, it is required to be smaller than 2m.

The selected antenna is the P-24LA120GN-S parabolic antenna manufactured by mWAVE Industry. The parabolic grid antenna is more weather resistant because the grid allows rain and snow to pass through the antenna rather than covering up the dish. The antenna has a diameter of 1.8m and a beam width of 4.5 degrees. The antenna can provide a gain of 30 dBi.



