

Ground Station Emission Specifications

The MHX2420 modem used with the ground station as proposed operates in the full range of 2400-2483.5 MHz with a GFSK modulation. While this is a large portion of the spectrum, the modem uses small portions of this range for transmission through the use of frequency hopping. Frequency hopping of this modem allows for large data transfer rates without occupying the entire bandwidth range at a given instance. Specifically, the modem operates along the entire range as specified occupying a small section at each instance of transmission. For example: any instance will require 115.2 KHz, which is equal to the baud rate for the modem as specified in the manual for the MHX2420.

Although each frequency hop will be small (115.2 KHz), the full operation of the modem will require the full frequency range proposed. Therefore if continuous bandwidth calculations are required, or maximum bandwidth calculations are required two values will be shown. That is, the full frequency range is needed which yields a bandwidth of **83.5 MHz**; however, each transmission instance will contain **115.2 KHz** of required bandwidth in this range.