Data Rate

Based on the antenna selected, the theoretical data rate can go up to 55Mbps.

However, with the selected transceiver, the maximum data rate we can achieve is 512kbps which is in ideal conditions. The actual data rate that we will be able to use will be much less since we won’t be operating in ideal conditions.

With this data rate, and the given specification of a picture being 27Mb, it would take approximately 53 seconds to send one picture. Since the transmitting window is about 558 seconds or just over 9 minutes, we would be able to send 10 pictures every orbit.