

## **ABSTRACT**

With the development of communication systems at this time, students are required to understand, learn and explore the digital modulation and demodulation techniques. Because in their daily lives, especially in the field of communication systems modulation and demodulation process will always be used. Because of the lack of theory and practicum for QAM modulation and demodulation process, then made a modulation and demodulation process simulator 16 QAM and 64 QAM.

At the end of this project will be made a digital signal Simulator 16-QAM and 64-QAM. This simulator where the students can learn easily and more clearly because there is a description of the work process of modulation and demodulation signal 16-QAM and 64-QAM. Manufacture Simulator uses LabVIEW application so that no graphic display signal modulation and demodulation process results signal 16-QAM and 64-QAM.

From the results of the simulator can be tested , the test includes the output signal in the form of time domain , frequency domain , and constellations . For the results can be said to be true if the results are in accordance with the theory . The results obtained in this simulator is output in the form of the constellation because it is consistent with the theory , while output in the form of time domain and the domain frekuesi still not true because not in accordance with the theory .

Keywords: LABVIEW, 16-QAM, 64-QAM