

ABSTRACT

FM radio is a radio communication system that uses Frequency Modulation (FM). FM radio has advantages such as better sound quality, clarity, and free of broadcast interference compared to AM radio. This final project intends to create an FM radio transmitter system, the creation of this FM radio transmitter system is expected to be used for broadcasting in the environment of Telkom University Faculty of Applied Sciences, because later this FM transmitter system will be set up to broadcast information at frequencies that have been set up for community radio.

The FM transmitter is a digital FM transmitter system, this FM transmitter system has several advantages compared to analog FM transmitter systems. This digital FM transmitter system will be built using Intel's FPGA DE-10 Lite board.

From the design process, FM transmitter digital made is in accordance with the expected, namely using FPGA with type board DE-10 Lite output intel with design using verilog language. This FM transmitter can already work on frequencies set for community radios of 107.7MHz-107.9MHz, and its audio data delivery uses a 230400bit/second baudrate with 8 bits of data, 2 stop bits and does not use parity bits..

Keywords: FPGA, FM Digital transmitter system, Community Radio