

**Birla Institute of Technology and Science, Pilani**  
**Rajasthan**  
**Practice School Division**

**Station:** Military College of Electronics and Mechanical Engineering, Secundrabad

**Duration:** Seven Weeks

**Date of Start:** May 31, 2021

**Date of Submission:** July 10, 2021

**Title:** Design of SDR for HD Video communication

**Students:**

Sashank Krishna S

2019A8PS0184P

B.E. Electronics and Instrumentation

Aditya Soni

2019A8PS1282H

B.E. Electronics and Instrumentation

**Mentors:**

AEE Naveen Reddy

Military college of Electronics and Mechanical Engineering

Dr. Rahul Singhal

Assistant professor,

BITS Pilani, Pilani Campus

**Keywords:**

MIMO-OFDM, Polar codes, USRP, HD Video communication, DVB, H.264, H.265

**Project Areas:**

Wireless communications, Digital communications, Software defined Radio, Video codecs

**Abstract:**

The project aims to model a MIMO-OFDM + Polar/LDPC coding system using MATLAB. The system is for HD video communication, and the target hardware is the USRP B210. The video is processed using the H.264 / H.265 codecs, and the system supports both transfer of files, and streaming of the video.

Student Signature

Mentor Signature