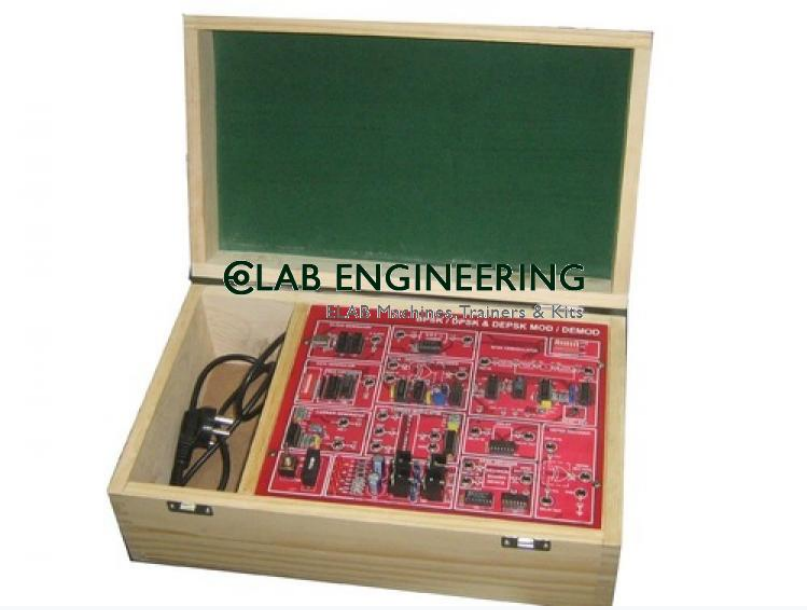
PRODUCT NAME

QAM DQAM Modulation Demodulation Kit

PRODUCT CODE
ELABELB-ADCM0001



DESCRIPTION

QAM DQAM Modulation Demodulation Kit

TECHNICAL SPECIFICATION

- **Longer functional life**
- **Trouble-free learning**
- **Maintenance free**

- **On-board Sine-wave generator On-board Four Carrier Sine waves of 500Khz On board three nos. of 8-bit NRZ-L. Data Simulator. Clock frequency of 250 Hz. Data Format (Coding) is NRZ-L, Tribit encoded and Differential Encoded I & Q bits Receiver Clock generated by PLL method Demodulation is done using PLL and Envelop Detector Method Switch faults are provided to study its effects on circuits Block Description screen printed on PCB In-Built Power Supply**

Technical Specifications:

- **Carrier Sine Wave Generator: 1. Four carrier sine waves Generated onboard. 2. Provides synchronized Sine waveform output of 500 KHz (0 deg.),500 KHz (90 deg.), 500 KHz (180 deg.), 500 KHz (270 deg.)**
- **Clock And Data Generator: 1. 24 bit variable NRZ-L pattern generated depending on the position of the three nos. of 8- Bit Data Switch provided 2. Clock Frequency is of 250 KHz**
- **Data Format (Coding): 1. Non Return to Zero-Level (NRZ-L). 2. Tribit encoded data (I ,Q & C). 3. Differential Encoded I & Q Bits**

- Carrier Modulation Techniques: 1. Quadrature Amplitude Modulation. 2. Differentially Quadrature Amplitude Modulation
- Carrier Demodulation Techniques: 1. Quadrature Amplitude Demodulation. 2. Differentially Quadrature Amplitude Demodulation
- On-board Features: 1. On board Three Nos. of 8 bit variable NRZ-L pattern Data Simulator 2. Switch Faults are provided on board to study different effects on circuit 3. QAM/DQAM Demodulation using PLL and Envelop detectors 4. Switch Faults are provided on board to study different effects on circuit Interconnections : 4 mm sockets
- Test Points: 32 Aprrox
- Power: 230V 10% 50 Hz, 1 AC
- Accessories: a. Detailed Instruction Manual. b. Set of Patch cords

Experiments:

- To Study the Elements of 8-QAM / DQAM System
- Tribit Coding & Decoding Technique of NRZ-L Data Format
- Differential Encoding & Decoding of Data
- 8-QAM Modulation & Demodulation Technique
- DQAM Modulation & Demodulation Technique
- To Study of Constellation Diagram of QAM
- To Study Bandwidth Efficiency in QAM & 8-QAM/DQAM Techniques
- Effect of Switch Faults
- Observation of constellation diagram

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Specifications are indicative and subject to continuous improvement.