

Course Digital modulation methods ASK, FSK, (Q)PSK

Includes:

- 1 Experiment card with PSK/QPSK modulator
- 1 Experiment card with PSK/QPSK demodulator
- 1 Experiment card with ASK modulator/demodulator
- 1 Experiment card with FSK modulator/demodulator
- Labsoft browser and course software

Course contents:

- Introduction to the principle of ASK modulation and demodulation for transmitting digital signals over analog lines
- Investigation of the spectrum of an ASK-modulated signal by measurement
- Investigating the relationship between data transfer rate and the required bandwidth
- Introduction to the principles of FSK modulation and demodulation for transmitting digital signals over analog lines
- Identifying advantages of FSK modulation over ASK modulation
- Investigation of the spectrum of an FSK-modulated signal by measurement
- Investigation of the relationship between data transfer rate and the required bandwidth
- Introduction to the operation of a PLL
- Demodulation of FSK signals using a PLL circuit
- Introduction to the principles of PSK (DPSK) modulation and demodulation
- Generation of 2 PSK signals at different baud rates
- Introduction to the principles of QPSK and DQPSK modulation und demodulation
- Generation of 4 PSK signals
- Introduction to generation of dibits
- Relationship between data rate and baud rate by measurement
- Measurement of signals at the output of modulators and demodulator (ASK, FSK, (Q)PSK) over time
- List of advantages and disadvantages for various modulation methods
- Course duration 2.5 h approx.

