

Vehicle Informatics

1. Vehicle bus systems. Definition, properties
2. BUS system's classification
 - List, and compare different Vehicle information systems
 - How are different systems connected?
3. Bus Access Methods
 - Explain the collision avoidance between the various fieldbus systems.
4. ISO/OSI 7 layers model
 - Introduce, and explain the 7 layers
 - Explain the information exchange from application to application.
5. Can BUS system
 - CAN history
 - CAN in automotive applications
 - CAN architectures, signal transmission methods
 - Fault tolerant CAN
6. Safety-critical BUS systems
 - What does safety critical means?
 - Which vehicle information systems can fulfill safety critical expectations?
 - Which application require safety critical systems?
7. LIN BUS system
 - LIN history
 - LIN in automotive applications
 - LIN architectures, signal transmission methods
8. MOST BUS system
 - MOST in automotive applications
 - MOST architectures, features, signal transmission methods
 - Compare fiber optic and copper wire data transmissions
9. V2X Communication solutions
 - What does V2X mean?
 - Which information channels can be used?
 - Which function can V2X bring in traffic?
 - How can it improve traffic safety?
10. OBD, OBDII
 - What is OBD?
 - What is the difference between OBDI and II?

- Which communication method is used?