

Contents

Part I Engine/Chassis/Body Electronic Control	
Battery Monitoring Technology of Micro-Hybrid System Based on Voltage	3
F2012-D01-002	
Feng Gao, Qiang Zhang and Chenshu Yan	
Research on Electro Hydraulic Composite Brake System	13
F2012-D01-003	
Qinghe Liu, Lan Zhan and Ti He	
Analysis and Design of Automotive Body Control Module	25
F2012-D01-005	
Jianhui Ma, Zhixue Wang, Yanqiang Li and Liangjie Yu	
Scalable Architecture Approach with Platform Products to Implement Advanced Car-Body E&E System in Emerging Markets	33
F2012-D01-006	
Dayu Ding	
Gasoline Fuel Injector Selection and Its Effects on Engine Performance	43
F2012-D01-009	
Shuxia Miao, Daijun Deng and Hui Zheng	
The Research of Starting Control Strategies for Common Rail Diesel Engine	53
F2012-D01-011	
Hongrong Wang, Heng Zhang and Yongfu Wang	

Study on Twin Modes Pilot Control of Turbocharger	63
F2012-D01-012	
Sicong Lin, Jian Wu, Anwei Zhang, Jujiang Liu and Jin Hu	
Braking Stability Control Algorithm for Vehicle Based on Fuzzy Logic	73
F2012-D01-013	
Hongyu Zheng, Yuchao Chen and Changfu Zong	
Lane Keeping System Based on Electric Power Steering System	83
F2012-D01-014	
Hailin Zhang, Yugong Luo, Qingyun Jiang and Keqiang Li	
Parking Brake Breaking-In Technology Based on EPB	99
F2012-D01-015	
Leon Huang, Ted Huang, Wei Xu, Dongxu Yi, Lingtao Han and Wutian Lin	
Engineering Design of TPMS	107
F2012-D01-016	
Lingtao Han, Ted Huang and Wei Xu	
An Integrated Electric Energy Management System to Improve Fuel Economy	115
F2012-D01-018	
Mingming Wang and Ted Huang	
Modeling on Torque Generation for Turbocharged Diesel Engine Based on Identification Method	123
F2012-D01-021	
Gang Li, Ying Huang, Fujun Zhang and Xiaoyan Dai	
Design of a Versatile Rapid Prototyping Engine Management System	135
F2012-D01-022	
Bernd Eichberger, Eduard Unger and Mario Oswald	
Study on State Parameters Estimation for Commercial Vehicle	143
F2012-D01-026	
Li Liu, Chaosheng Huang, Yuanfang Li and Shuming Shi	

The Research and Implementation of Engine-Timing-Control System Based on AUTOSAR Standard.	157
F2012-D01-027	
Weimin He, Guilin Lv, Tao Chen, Shizhen Liu and Hui Han	
Calibration Techniques for Modern Commercial Vehicle	167
F2012-D01-028	
Yong Deng, Zhongzhuang Yuan and Lai Wei	
Powertrain Control and System Integration Technology from OEM'S Perspective.	177
F2012-D01-029	
Jun Li, Fengjun Li, Peng Zhang, Yongjun Li and Weimin He	
 Part II Electrical and Electronic System	
Virtual Development of Engine ECU by Modeling Technology	189
F2012-D02-004	
Haifeng Xu, Yukihide Niimi and Takayuki Ono	
The Research of a Novel High Energy Density Ultracapacitor System Applied in the Full Hybrid Vehicle.	199
F2012-D02-008	
Jianxin Zhu, Qiu Xiao, Lin Yang and Xiance Ai	
Starting System for Stop/Start with Change of Mind	209
F2012-D02-010	
Koichi Osawa and Hideya Notani	
Distributed Diagnostic Monitoring and Fault Tolerant Control of Vehicle Electrical and Electronic Devices.	221
F2012-D02-012	
Shanshan Fan, Diange Yang, Tao Zhang and Xiaomin Lian	
Synthesis and No_x Gas Sensing Properties of In_{1.82} ni_{0.18}O₃ Electrospun Nanofibers	231
F2012-D02-016	
Jinxing Wang, Kejin Zhang, Dan Wang, Dechao Xu, Bin Zhang and Zhongling Zhao	

A Novel Concept of High Voltage Auxiliaries and its Feasibility Study on Blower Motors	241
F2012-D02-018	
Satoshi Shiraki, Hiroyasu Kudo, Masakazu Tago, Akira Yamada, Shigeki Takahashi and Atsuyuki Hiruma	
Small Lights Power Distribution System Improvement of a Heavy-Duty Truck	251
F2012-D02-022	
Leigang Ma and Fadong Yan	
Development Trend Analysis of Automobile Electronic System	261
F2012-D02-024	
Zhirong Fan, Ying Xie, Cheng Yang, Yipeng Zhang and Jian Chen	
Automotive ECUs Fault Diagnosis Modeling Based on the Fault Database	271
F2012-D02-026	
Yanqiang Li, Yang Li, Zhixue Wang, Ruke Zhuang and Jianxin Li	
Secure Microprocessor Architectures: Solutions from the Semi-Conductor Industry	283
F2012-D02-029	
Klaus Scheibert and Björn Steurich	
Research on CAN BUS-Based Electronic and Electric Platform of Automobile	297
F2012-D02-031	
Gouqing Tong, Lei Chen, Anzhi Yang, Fangwu Ma and Fuquan Zhao	
On the Application Development of 3G Technology in Automobiles	311
F2012-D02-032	
Ying Lu, Wenqiang Chen, Xingmin Wei and Fuquan Zhao	
A Typical Application of FlexRay Bus in the Vehicle	327
F2012-D02-033	
Yandong Dong and Wanrong Wang	
Development of Controller Diagnostic System Based on ODX	341
F2012-D02-036	
Li Li and Shanzheng Tang	

Magnetic Circuit Design for Improving Performance of In-Wheel Type IPMSM	351
F2012-D02-041	
Byeong-Hwa Lee, Jae-Woo Jung, Kyu-Seob Kim and Jung-Pyo Hong	
 A Study on the Noise Reduction of Electrical Power Steering in Surface Permanent Magnet Synchronous Motor.	 361
F2012-D02-043	
Do-Jin Kim, Hyeon-Jin Park and Jung-Pyo Hong	
 Power Distribution Design of Passenger Vehicle	 369
F2012-D02-045	
Xianming Wang	
 Part III Software and Hardware Development	
 Study on the Performance Modeling Approach for Automotive Embedded Control Software	 385
F2012-D03-004	
Xiaofeng Yin, Jingxing Tan, Xiuting Wu and Qichang Yang	
 Knowledge Based Engineering to Support Automotive Conceptual Design and Automatic Control Software Development	 393
F2012-D03-005	
Fengnian Tian and Mark Voskuijl	
 Development of an AUTOSAR Software Component Based on the V-Model.	 407
F2012-D03-009	
Dieter Nazareth and Robert Siwy	
 MDG1: The New, Scalable, and Powerful ECU Platform from Bosch.	 417
F2012-D03-011	
Johannes-Joerg Rueger, Alexander Wernet, Hasan-Ferit Kececi and Thomas Thiel	
 Context-Aware Middleware for Vehicular Applications	 427
F2012-D03-012	
Jian Wang, Weiwen Deng and Peng Zhou	

Analysis of the Adaptation of a New Method for Four-Wheel-Hub Electric Vehicle Online-Mass Estimation	435
F2012-D03-014	
Jin Zhang, Zhuoping Yu, Lu Xiong and Yuan Feng	
Design and Implementation of Bootloader for Vehicle Control Unit Basedon Can Bus.	447
F2012-D03-016	
Tingqing Tan, Hanhan Tang and Yaling Zhou	
Automated Code Generation for Development of Electric Vehicle Controller	459
F2012-D03-019	
Peng Geng, Minggao Ouyang, Jianqiu Li and Liangfei Xu	
Research on the Development Process for the ECU Control Software of Vehicle Powertrain	469
F2012-D03-020	
Xiaoyan Dai, Changlu Zhao, Ying Huang, Huan Li and Gang Li	
MCON: Automation Tool for MATLAB Modeling Development Based on V-Model.	481
F2012-D03-021	
Mingshi Xie and Wanrong Wang	
A Model-Based Design for Electronic Control Unit of Electric Motorcycle	491
F2012-D03-022	
Sung-Suk Jnug, Jin-Ho Kim and Jea-Wook Jeon	
Model Based Nonlinear Controller Design for Fuel Rail System of GDI Engine.	503
F2012-D03-026	
Pengyuan Sun, Baiyu Xin, H. Chen and J. Li	
Research on OBD Performance of T-GDI Engine.	515
F2012-D03-027	
Song Yan, Pengyuan Sun and Tonghao Song	

Part IV Electromagnetic Compatibility (EMC)

Resonance Mechanism in Power Electronic Products for Automobiles and its Relationship to EMC Performance 525

F2012-D04-002

Masato Izumichi

Application of the MOS Tube on Power Window Switch 537

F2012-D04-004

Yihai Wang, Xia Li and Rongxia Zhang

Simulation Analysis of Electromagnetic Compatibility in Vehicle Ignition Control System. 543

F2012-D04-008

Ya'nan Li, Wenqiang Chen, Xingmin Wei and Fuquan Zhao

A Method for Improving Radiated Emission of Automotive Spark-Ignition System with Improved Micro-Genetic Algorithm. 557

F2012-D04-009

Yanming Qin, Bin Li, Qingsong Liu, Xiangling Xu and JianPeng Zhai

Simulation of Electromagnetic Characters of Vehicle Whip Antennas Based on Mom 565

F2012-D04-011

Liguo Zang, Youqun Zhao, Wei Wang, Jian Wang and Haiyan Sun

Study on Conducted Interference and Radiated Interference of Buck-Boost Converter in Electric Automobile 573

F2012-D04-012

Jian Wang, Youqun Zhao, Liguo Zang and Wei Wang

Study on Electromagnetic Interference Restraining of Motor Control System. 585

F2012-D04-013

Li Zhai, Runze Gao and Qiannan Wang

Part V Vehicle Sensor and Actuator

GPS Based Estimation of Vehicle Sideslip Angle Using Multi-Rate Kalman Filter with Prediction of Course Angle Measurement Residual 597

F2012-D05-001

B. M. Nguyen, Yafei Wang, Sehoon Oh, Hiroshi Fujimoto and Yoichi Hori

Multi-Gas Sensor by Infrared Spectrometer	611
F2012-D05-003	
Tetsuya Enomoto, Tomoki Tanemura, Shuichi Yamashita, Hiroyuki Wado, Yukihiro Takeuchi and Yutaka Hattori	
 Dynamic Characteristics Analysis and Experimental Study of Multilayered Piezoelectric Actuator for Automotive Applications	 621
F2012-D05-004	
Chuanliang Shen, Xuewei Song, Jingshi Dong and Shuming Chen	
 Intelligent Sensor Bearing for Torque Ripple Reduction	 631
F2012-D05-009	
Yi Yuan, Mathieu Hubert, Stephane Moisy, Francois Auger and Luc Loron	
 Part VI In-Vehicle Network	
 Study on Diagnostic Methods of Lin Slaves	 643
F2012-D06-001	
Jitai Li, Ted Huang, Lifang Huang and Liguang Wang	
 The Research of Vehicle Network Control System Model	 651
F2012-D06-002	
Kai Li, Juan Wan, Jie Bai, Jianxian Chen, Gan Chen, Fanwu Zhang and Jianguang Zhou	
 Research on Reformation Method of Vehicle Intelligent Electric/Electronic System	 663
F2012-D06-003	
Weiwei Kong, Diange Yang, Tao Zhang, Bing Li and Xiaomin Lian	
 Ethernet-Based Integrated Network for Active Safety Sensors	 673
F2012-D06-005	
Jin Ho Kim and Jae Wook Jeon	
 Architecture for Secure Tablet Integration in Automotive Network. . .	 683
F2012-D06-015	
James Joy, Anurag Raghu and Jestin Joy	

Applying Autosar Network Management in OSEK/VDX for Compatibility of Autosar and OSEK/VDX	693
F2012-D06-017	
Yo Han Lee, Jin Ho Kim and Jae Wook Jeon	
 Performance Analysis of Ethernet Power link Applied to Ethernet of In-Vehicle Network	 705
F2012-D06-018	
Hoe Young Chung, Jin Ho Kim and Jae Wook Jeon	
 Performance Analysis of Gateway Embedded System with Function Actively Controlling CAN Messages	 715
F2012-D06-019	
Hoe Young Chung and Jae Wook Jeon	
 Network Architecture Design for Reliability Based on ECU Power Supply and Location	 725
F2012-D06-020	
Maoyuan Cui, Dongfeng Zhao, Libo Zhang, Youen Li, Boxiang Ma and Dongyang Ma	
 Part VII Multi-Media/Infotainment System	
 Innovative Software Architecture for Next-Generation Infotainment System	 735
F2012-D07-004	
Jianming Zhou, Kerun Xu, Minjie Tian, Chendong Wang and Mingshi Xie	
 Part VIII Other	
 The Design of Invariant Wiring Harness Network in Full Electronic Automobile	 747
F2012-D08-003	
Shicen Zheng, Wenqiang Chen, Xingmin Wei and Fuquan Zhao	
 Inertia Compensation Based on Torque Signal in an Electric Power Steering System	 761
F2012-D08-006	
Xuewu Ji, Ning Sun, Jingguang Ge and Yahui Liu	

Proceedings of the FISITA 2012 World Automotive
Congress

Volume 6: Vehicle Electronics

; (Eds.)

2013, XIII, 769 p., Hardcover

ISBN: 978-3-642-33828-1