沈玼興 (Yixing Shen)

Contact

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About

Hardware and System Bring Up
Firmware Development
Software Development
FPGA Verification

Education

2008 - 2010
MSc, Power System, 中原大學電機工程研究所

2004 - 2008
BSc, Electrical Engineering, 中原大學電機工程學系

Skills & Tool

C, C# .NET, QT, RTL Verilog
Git, VS Code, Keil (MDK, PK51), Electronics Renesas CS+, Intel (Altera) Quartus

Knowledge

Embedded System,
Low Speed Serial Interfaces (I2C,SPI,UART,I2S),
USB Video/Audio/HID Class,
CMOS Sensor DVP, HD/SDTV Parallel Interface, CVBS, HDMI, MIPI CSI-2, SDI, TI FPD-Link LVDS,
Basic Image Processing,
Camera Motor Driver

Experience

2013/06 - Present 義晶科技,系統整合及設計處,資深工程師

Develop and maintain EVB firmware and GUI form using C# .NET and WIN32 API DLL
Develop embedded 8051 peripheral drivers, bootloader and application firmware
Bring up daughter boards and modules

- AVS761x/AVS715x EVB Tool
  USB-to-SPI/I2C, UART-to-SPI/I2C
  Register/DRAM/Flash Write/Read Operations
  Generate AVS761x/AVS715x Initial Register Script for Different Scenarios Use
  ISP Tuning, RAW/RGB/YUV Converter, OSD Font, RLE/RLD Converter

- Daughter Board
  LVDS SerDes, HDMI Transmitter/Receiver, USB to I2C/SPI
- Module
  Camera Module
  HDMI/SDI/CVBS Receiver with USB Video Output
  HDMI 1x4 Video Wall
- General-Purpose MCU
  Renesas Electronics: R5F1007E, R5F100GG
  STMicroelectronics: STM32F103, STM32F030
- Altera FPGA EVB Platform Data Transport
  Implement USB transport using LibUSB-win32 and QT5
- HDMI 1x4 Video Wall Layout Tool
- HDMI EDID Parser Console

2011/12 - 2013/06 華晶科技,軟體驅動部,高級工程師

Developed and maintained lens controller firmware and calibration for MQX RTOS Platform.
Lens Device Driver (Zoom/Focus/Iris/Shutter)

- Nikon Digital Camera COOLPIX S02
- Nikon Digital Camera COOLPIX L28

2008/09 - 2010/07 中原大學電機研究所

- 應用人工智慧和訊號處理於電力系統
  以機率神經網路,時頻分析及最佳化演算法建立一套特徵選取機制於電力品質干擾自動辨識[1][3]
  運用Matlab/Simulink做為演算法開發及永磁式同步風力機最大功率追蹤控制[2]
- 期刊論文
  [1] C.-Y. Lee and **Y.-X. Shen**, "Optimal Feature Selection for Power-Quality Disturbances Classification," IEEE Transactions on Power Delivery, Vol. 26, No. 4, pp. 2342-2351, Oct. 2011. (SCI; ISSN:0885-8977)
  [2] C.-Y. Lee, P.-H. Chen and **Y.-X. Shen**, "Maximum Power Point Tracking (MPPT) System of Small Wind Power Generator Using RBFNN Approach," Expert Systems with Applications, Vol. 38, No. 10, pp. 12058-12065, Sept. 2011. (SCI; ISSN:0957-4174)
  [3] C.-Y. Lee and **Y.-X. Shen**,"Feature Analysis of Power Quality Disturbance in Smart Grid Using S- transform and TT-transform,"International Review of Electrical Engineering, Vol. 7 , No. 2 , 2012. (SCI; ISSN:1827-6660)