

沈璽興 (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, Matlab, Octave, RTL Verilog

Git, Subversion, Visual Studio Code, Code::Blocks,

Keil uVision (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/SD TV 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
- EDID Parser Console
- Flash Programming 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
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)