Rapidise Camera Development Expertise

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Camera Interfacing & Imaging Algorithm Optimization

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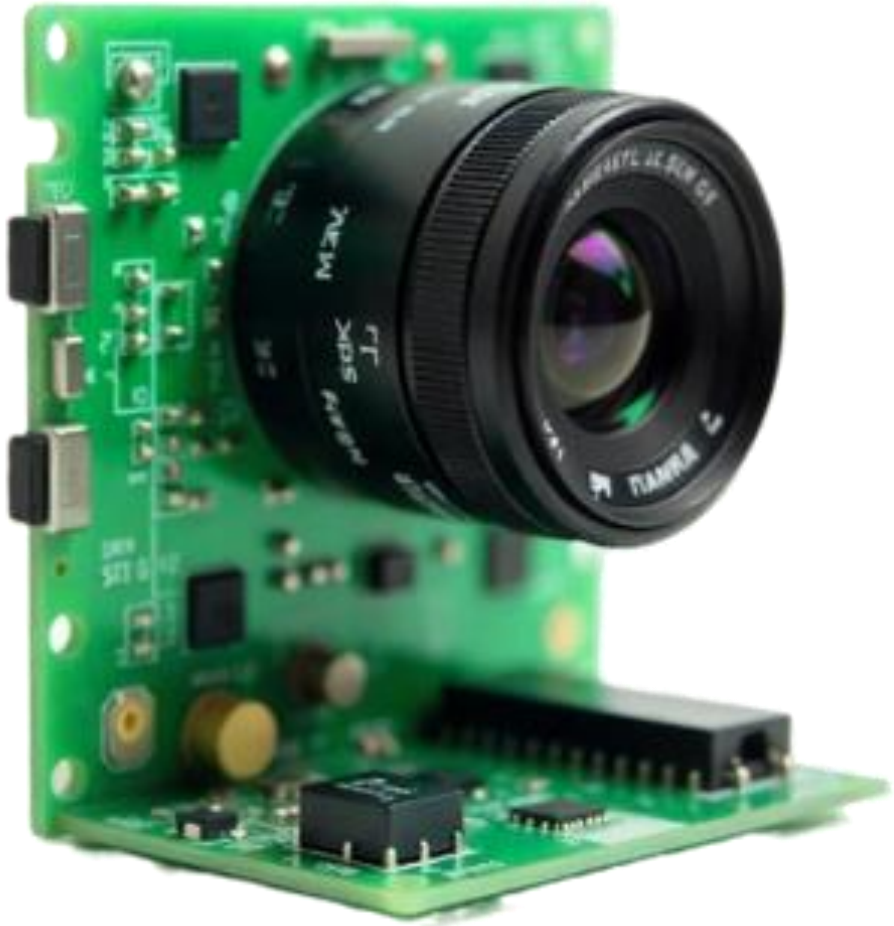
Camera driver development and hardware-level optimization are vital components of modern imaging systems, enabling the capture, processing, and output of high-quality images. At Teksun, we specialize in providing customized solutions for our Clients

Camera Driver & System Integration

- Sensor driver development and integration
- Parallel interface, CSI2-MIPI interface
- OMX / V4L2 based camera framework development
- Qualcomm Snapdragon platform's mm-camera framework customization

Imaging Algorithm Optimization

- Imaging algorithm implementation and optimization
- Custom HW Imaging co-processor/accelerator programming
- OpenCL Programming and leveraging GPU acceleration
- ISP pipeline customization



Imaging Algorithm Enabling & Image Quality Tuning

Rapidise leverages it expertise in advanced image processing an tuning technologies. Our solutions include advanced features like image enhancement, color correction, and other image processing techniques to improve image quality and extract relevant information.

Enabling Camera / Imaging Algorithms

- 3A (Auto Exposure, Auto white balance, Auto Focus)
- HDR algorithms for still images and videos
- Array camera software pipeline for bokeh and refocus applications
- Depth map generation for Time of Flight camera sensors & Stereo
- Low light enhancement algorithms

Image Quality Tuning & Benchmarking

- Imaging algorithm implementation and optimization
- Custom HW Imaging co-processor/accelerator programming
- OpenCL Programming and leveraging GPU acceleration
- ISP pipeline customization

Holistic Imaging Expertise

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Camera Driver & System Integration	Enabling Camera / Imaging Algorithms
• Sensor driver development and integration • Parallel interface, CSI2-MIPI interface • Sensor parameters / SoC ISP registers / I2C / SPI driver configuration • Camera frameworks development, customization & integration • Android camera framework and HAL customization • System & application-level performance optimization • Sony's IMX335 sensor driver integration in Qualcomm camera pipeline system	• HDR algorithms for still images and videos • Electronic image stabilization and HDR algorithm to camera pipeline • Depth map generation for Time-of-Flight camera sensors & Stereo cameras for 3D applications • Multi - frame & Single-frame based super resolution • Low light enhancement algorithms • Photometric, geometric and depth estimation algorithms for dual camera pipeline.
Imaging Algorithm Optimization	**Image Quality Tuning & Benchmarking**
• Imaging algorithm implementation and optimization • Custom HW Imaging co-processor/accelerator programming • OpenCL Programming and leveraging GPU acceleration • ISP pipeline Optimization • Image sharpening and deblurring techniques to recover original frames • HDR algorithm optimization for 1080p/30 • Regularization module porting • Algorithm module partition and effective scheduling	• High quality ISP Tuning for platforms across spectrum of design and make • 3A Tuning (Auto Exposure, Auto White Balance, Auto Focus) • LED flash tuning • HDR and low light tuning • Competitive camera product IQ analysis and report • Automotive Camera Calibration and Quality tuning for Vision-based ADAS systems