RZ Ecosystem Partner Solution
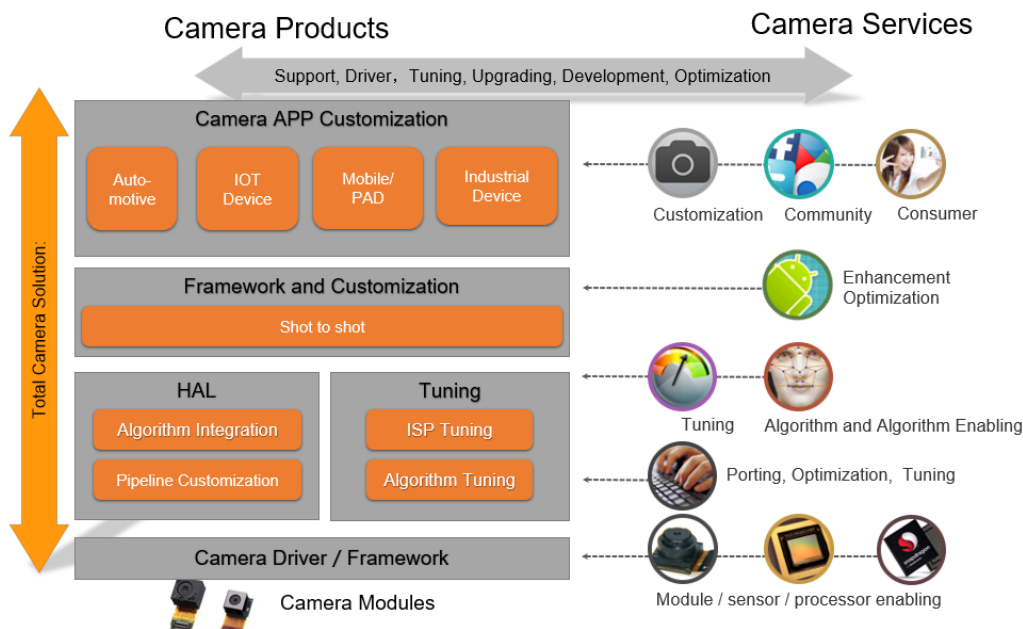# Camera ISP Tuning
MM Solutions EAD (A ThunderSoft Company)

Solution Summary

ThunderSoft provides turnkey solutions, including camera ISP tuning for the RZ/V2H group. Integrate various camera modules, develop camera drivers and frameworks based on your specific system. Our services include ISP tuning and algorithm development, all aimed at accelerating your business. Development is conducted in collaboration with MM Solutions, a subsidiary of Thundersoft.

Features/Benefits

・ISP Tuning

・Camera drivers, frameworks

・Integrate vision algorithms
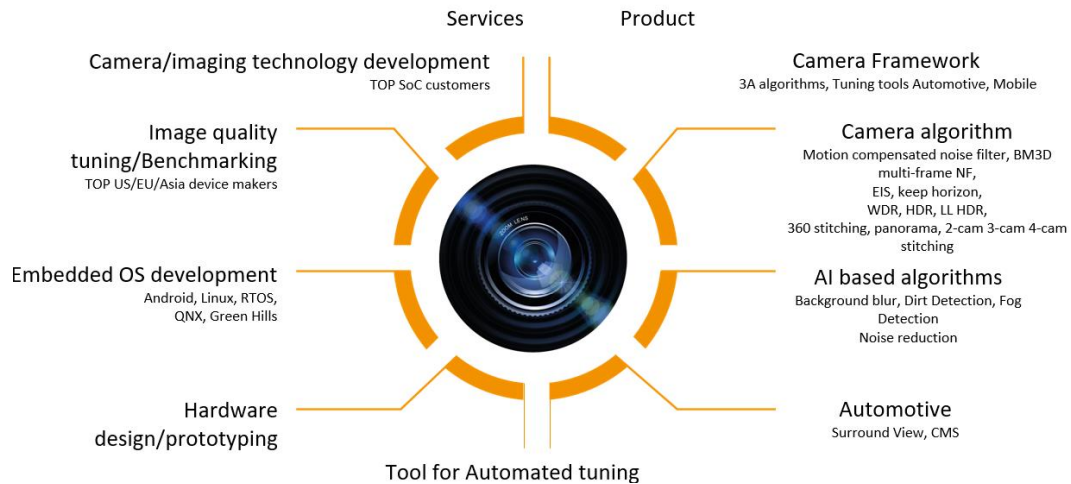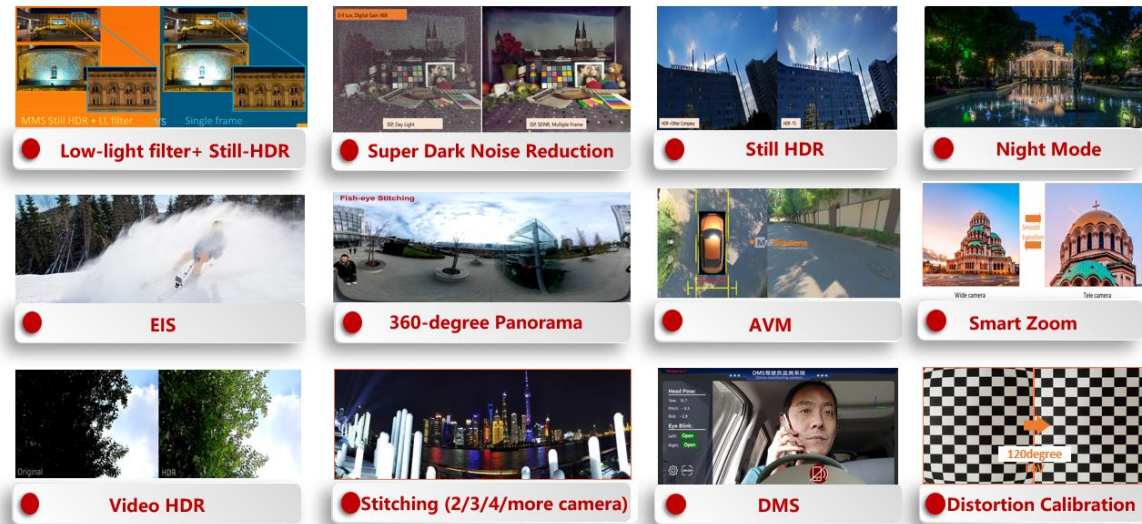
・Customize camera applications

Diagrams/Graphics

Target Markets and Applications

- Driver Monitoring System
- Industrial IoT
- Robot
- Smart City
- Smart Home Appliances
- Drone

https://www.mm-sol.com/partners/

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MMSolutions — A ThunderSoft Company / ThunderSoft

■ Intelligent Vision Services & Products for RZ/V series

Services   Product

Camera/imaging technology development
TOP SoC customers

Image quality tuning/Benchmarking
TOP US/EU/Asia device makers

Embedded OS development
Android, Linux, RTOS, QNX, Green Hills

Hardware design/prototyping

Tool for Automated tuning

Camera Framework
3A algorithms, Tuning tools Automotive, Mobile

Camera algorithm
Motion compensated noise filter, BM3D multi-frame NF,
EIS, keep horizon,
WDR, HDR, LL HDR,
360 stitching, panorama, 2-cam 3-cam 4-cam stitching

AI based algorithms
Background blur, Dirt Detection, Fog Detection
Noise reduction

Automotive
Surround View, CMS

■ Computer Vision Algorithms for RZ/V series

- Low-light filter+ Still-HDR
- Super Dark Noise Reduction
- Still HDR
- Night Mode
- EIS
- 360-degree Panorama
- AVM
- Smart Zoom
- Video HDR
- Stitching (2/3/4/more camera)
- DMS
- Distortion Calibration

※Algorithm Performance depends on HW specs.

■ Development Support Menu

No.	Menu	Work Details
1	Basic Camera integration package	a) sensor driver (no EEPROM, no AF, no LED) b) basic tuning using MMS objective criteria
2	Middle Camera integration package	a) sensor driver b) EEPROM driver c) AF driver d) LED driver e) basic tuning using MMS objective criteria
3	Multi camera package (two image sensors, no HW synchronization)	a) sensor #1 driver (no EEPROM, no AF, no LED) b) sensor #2 driver (no EEPROM, no AF, no LED) c) basic tuning using MMS objective criteria
4	Multi camera package (two image sensors, HW synchronization)	a) sensor #1 driver including (EEPROM, AF, LED) b) sensor #2 driver (EEPROM, AF, LED) c) sensor HW synchronization d) basic tuning using MMS objective criteria
5	Custom package	Develop with customer's needs（PoC～System Development）

https://en.thundersoft.com/   https://www.mm-sol.com/