

SECO-RSL10-CAM-GEVB: RSL10 Smart Shot Camera

The RSL10 Smart Shot Camera is a complete node-to-cloud platform that enables smart image capture for portable, low duty cycle IoT applications including asset monitoring and security. Based on the RSL10 SIP and ARX3A0 CMOS image sensor, the platform features multiple trigger modes including time, motion detection, and environmental sensor triggers (e.g. changes in temperature and humidity).



The RSL10 SIP serves as the processing hub of the camera, enabling Bluetooth® Low Energy connectivity of captured image and sensor data to the provided mobile app (available on [GooglePlay™](#), [iOS®](#)).

Using the app, developers can access a variety of features including cloud connectivity, remote configuration of sensors (thresholds and default settings), and change the image capture trigger modes. Connected to an Image Analytics/AI engine, located in the cloud, the app is capable of detecting and identifying objects using an AI cloud service. The mobile application returns the captured image, along with the list of identified objects and confidence levels.

The platform features the ARX3A0 Mono 65° DFOV IAS Module, a compact design form-factor used for developing compact cameras with 360 fps mono imaging based on the ARX3A0 CMOS image sensor. ARX3A0 offers high sensitivity at both visible and NIR wavelength, and has a super low power mode that consumes 3.2 mW when active. Additionally, ARX3A0 can be programmed to monitor specific zones of its field of view, automatically taking an image when the scene's contents change. Embedded on the platform hardware, the SPCV1100A from SunplusIT® provides multiple color processing features and JPEG image compression.

The impressive low-power operation of the RSL10 SIP and ARX3A0 is complemented by a dedicated NCP6925 Power Management IC (PMIC) (NCP6925) and additional smart power management modes implemented in hardware. Other devices enabling the efficient power management are the FAN54120 USB-compatible linear Li-Ion battery charger and the FAN49100 ultra-Low Iq buck-boost regulator. Thanks to these features, the RSL10 Smart Shot Camera supports an extended battery lifetime of more than one year.

Features and Applications

Features

Benefits

- Portable





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 - Continuous video-like stream with less than 1 frame/s on BLE5.0 and above on compatible mobile devices
 - Proximity detection
 - Acceleration trigger
 - Environment change trigger
- Bluetooth Low Energy connectivity (Bluetooth 5) enabled by the RSL10 SIP
 - Firmware Over The Air (FOTA) updates
- Small form Factor (55 x 65 mm)
- Advanced 360 fps imaging provided by the ARX3A0 Mono 65° DFOV IAS Module
 - High sensitivity at both visible and NIR wavelength
 - Super low power (3.2 mW)
 - 1/10" sensor for super compact module
 - Auto Exposure featured enabled during image processing
- RSL10 Smart Shot Mobile App ([GooglePlay™](#)) (iOS®)
 - Cloud connectivity to Amazon Web Services™ (Amazon Rekognition)
 - Image Analytics/AI Engine to detect and identify objects within an image
- Unprecedented ultra-low power consumption (Standby and Active Mode) for battery life >1 year
- Multiple powering options (USB or rechargeable Li-Ion batteries)

- Multiple trigger functions for various use cases

Applications

- Asset Monitoring
- Security
- Smart Agriculture
- Criteria-based Monitoring

Evaluation/Development Tool Information

Product	Status	Compliance	Short Description	Parts Used	Action



				LC709204FXE-011BG , LE25U20AQGTGXG , NCH-RSL10-101S51- ACG , NCP6925BFCCT2G	
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Technical Documents			
Type	Document Title	Document ID/Size	Rev
Software	RSL10 Software Package	RSL10 Software Package - 38878 KB	10
Video	Where to Start With Event Triggered Imaging?	WVD17491/D	
Eval Board: Manual	RSL10 Smart Shot Camera User Manual	EVBUM2782/D - 6254 KB	0
Software	RSL10 Smart Shot Camera CMSIS Pack BSP.2.1.0+1	RSL10 Smart Shot Camera CMSIS Pack - 8526 KB	2
Eval Board: BOM	SECO-RSL10-CAM-GEVB Bill of Materials (ROHS Compliant)	SECO-RSL10-CAM-GEVB_BOM_ROHS - 626 KB	0
Eval Board: Schematic	SECO-RSL10-CAM-GEVB Schematic	SECO-RSL10-CAM-GEVB_SCHEMATIC - 1809 KB	0
Eval Board: Gerber	RSL10 Smart Shot Camera Battery Protection Circuitry Manufacturing Files	SECO_BAT_FUSE_FILES - 451 KB	0
Software	RSL10 Smart Shot Camera Getting Started Guide	RSL10 Smart Shot Camera Getting Started Guide - 1272 KB	1
Eval Board: Gerber	SECO-RSL10-CAM-GEVB Manufacturing Files	SECO_RSL10_CAM_GEBV_MFG - 9620 KB	0
Video	RSL10 Smart Shot Camera Platform	WVD17754/D	
Software	RSL10 Smart Shot Camera Firmware Update Package	RSL10 Smart Shot Camera Color Firmware Update Package - 11373 KB	0
Software	onsemi IDE Installer	onsemi IDE Installer - 628972 KB	5

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