

# Datasheet

oToBrite Electronics, Inc



oToCAM237



## 1. General Description

The oToCAM237 is an automotive grade camera for the application of autonomous driving and CMS. It uses high sensitive CMOS sensor to perform good image quality for the detection purpose of the system product.

## 2. Product specification

No.	Item	Specification
1	Image sensor	CMOS (ON Semiconductor AR0233)
2	Number of pixels (default)	2M (1920 (H) × 1080 (V))(default setting)
3	View angle (H/V)	HFOV: 103.2 ° ; VFOV: 56.7 °
4	Resolution (Center)	TV Line $\geq$ 700
5	Color filter array	RGGB
6	Output Interface	FPD-Link III with POC
7	Output Formats	12-bit raw data (default setting)
8	LFM	Support
9	Lens structure	6G
10	Lens F No.	F2.0
11	Power over coaxial (POC)	DC (5V ~ 13V)
12	Startup time of power in	Within 200ms
13	Frame rate (default)	30 fps (default setting)
14	Exposure Control	No
15	Serializer	DS90UB953
16	Camera Current Consumption	Below 180mA @6V / 85°C
17	Operating Temperature	-40°C ~ +85°C
18	Storage temperature Range	-40°C ~ +95°C
19	Waterproof	IP 67
20	Dimension(mm)	44*28*28.2 mm (exclude FAKRA connector)
21	Weight	35g

### 3. Outline Drawing

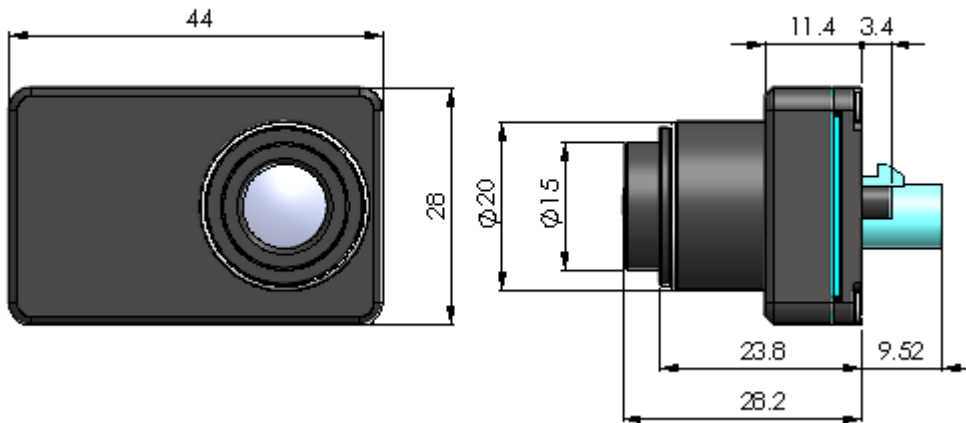


Figure 1. oToCAM237 Diagram (the bracket is optional and different for different car models)

### 4. Interface, Cables and Connectors (Male and Female)

#### 4.1 Connectors of camera

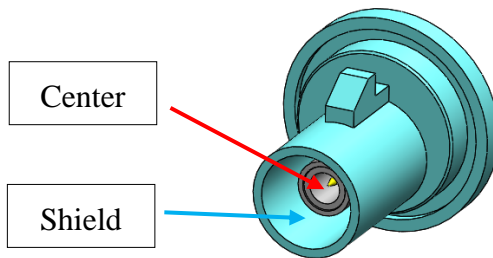


Figure 2. Amphenol FK1251ZW-034-TT5GP-50

#### 4.2 LVDS cable with FAKRA connector

Connector type: Amphenol 3FA1-NZSJ-C01W0

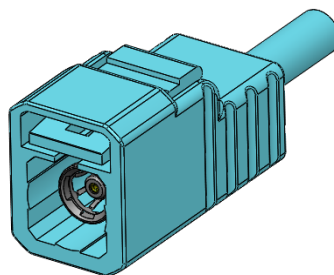


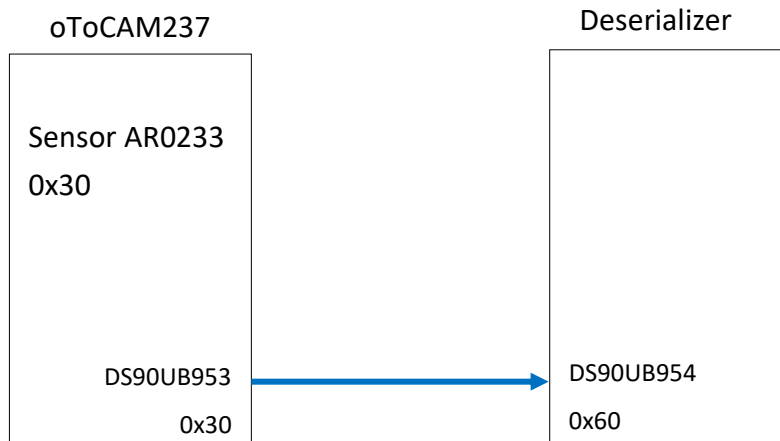
Figure 2.1 Amphenol 3FA1-NZSJ-C01W0

Pin definition:

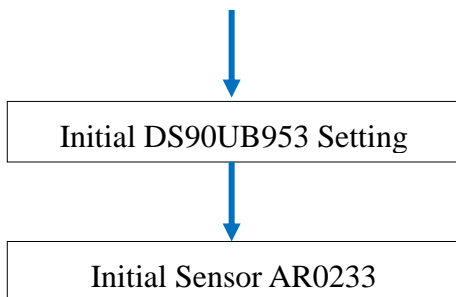
Pin No.	Signal Name	Operation Voltage and Current
Center	DOUT	Min. 0.52V, Max. 0.67V
	PWR	Typ. 140mA @6V / 25°C
Shield	Shield GND	

## 5. Applications

### 5.1. I2C ID Address



### 5.2. Initialization



### 5.3. Deserializer (DS90UB953) Settings

(The registers file will be provided under NDA and/or samples purchased)

### 5.4. Sensor (AR0233) Register Settings

(The sensor registers file will be provided under NDA and/or samples purchased)

## 6. Special Note

There is no ISP (Image Signal Processor) inside this camera. Raw image data 12bits are captured and transmitted from camera through coax cable.

Usually, Gamma curve is applied to get 8-bit image to improve dynamic range for application.

## 7. System Configuration (TBD)

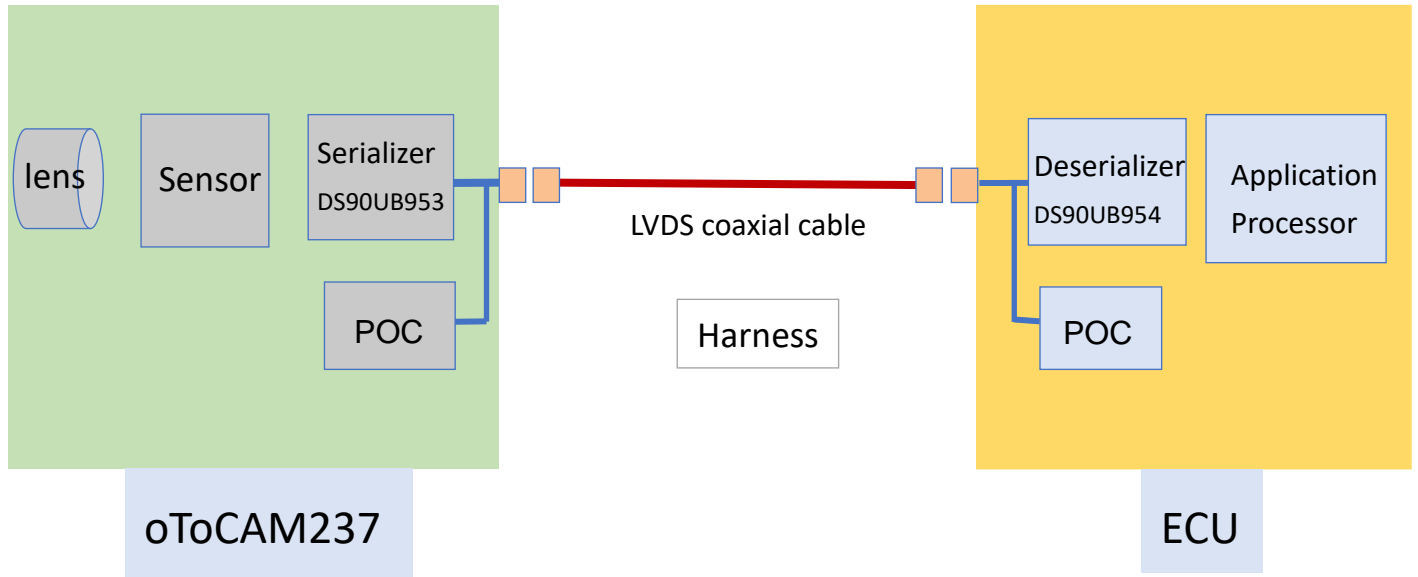


Figure 3. System Configuration

TI DS90UB954 must be used as deserializer in ECU for connecting oToCAM237.