SoooGuard INC

JPEG Compression
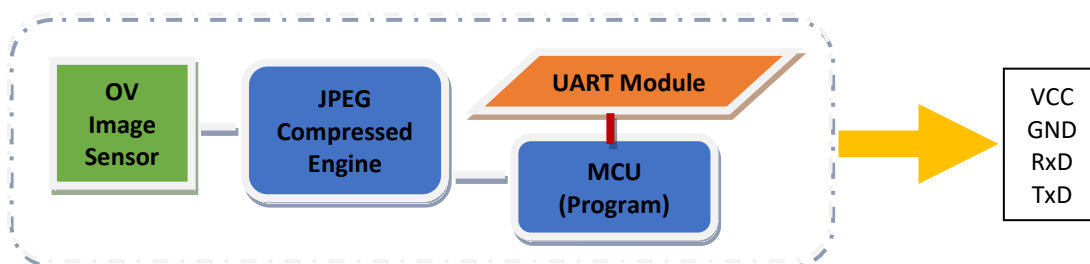UART Serial Interface
Waterproof VGA Camera

General Description

The TVWV030 is a high integrated waterproof camera that performs as a JPEG compressed still camera, which also provides a standard serial UART port for communication. Users can request a full pixel dimension single-frame still picture by sending out a snapshot command from host. The picture is then compressed by the JPEG engine and transferred to the host via UART port.

Application

It supports Standard RS-232 / RS-485 / TTL interface. Now it is widely used Vehicle GPS tracking system, Robert Vision System, Industrial Process Control, Safety Protection etc.;

Block Diagram

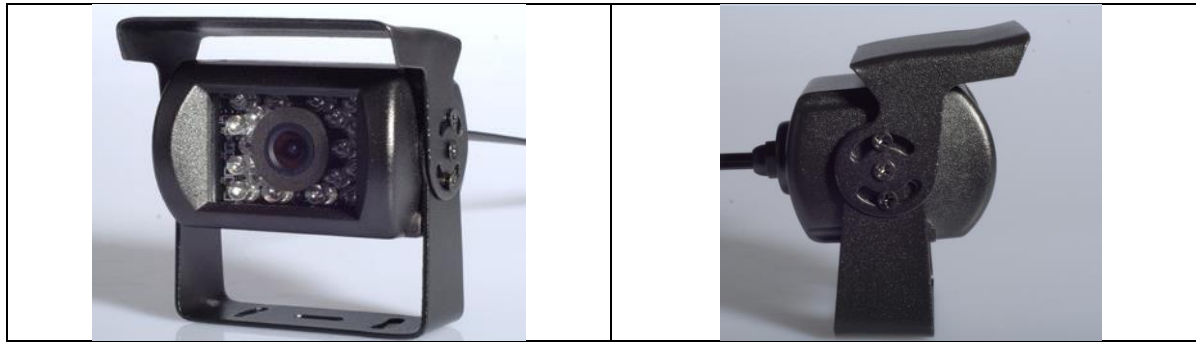

Atlas

D/ N Type-850

D/ N Type-940

Structures

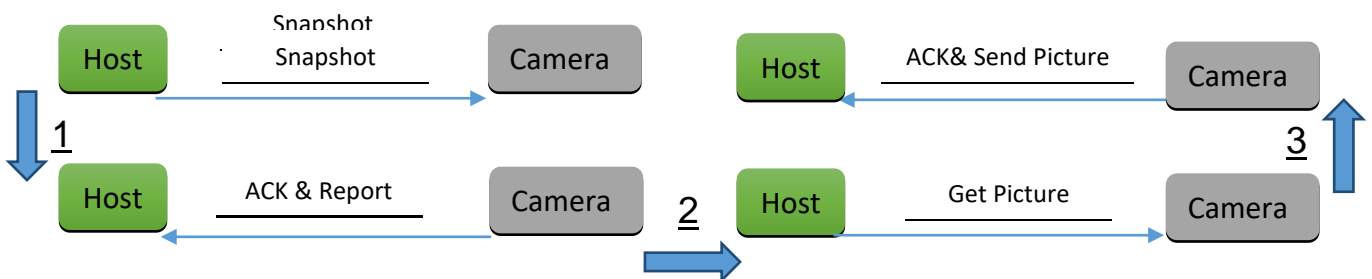| Front View	Accessories
Lateral View	

Features

- **Cost Effective:** Low-cost & low-powered solution for a image acquisition system;
- **Various Pixel Dimension:** VGA / QVGA / QQVGA for different requirements;
- **Low Image Data:** JPEG compressed with 4-compression ratio configuration;
- **Multiple UART Ports:** RS-232, RS-485, TTL for different hosts;
- **Different Baud Rate:** Support Max 115200bps;
- **Application Environment:** Daytime Mode or Day / Night Mode;
- **Waterproof Protection:** IP65/66

Packing list

- Camera   1
- Self-Drilling Screw   3
- Certificate of Approval   1
- Bracket   1

Command Summary

No.	Function	Description
1	Snapshot	Request camera to snapshot a specific size picture & divide it into packages.
2	Report	Camera report picture size & number of packages of the snapshot to host deice
3	Get Picture	Host device sends to get the specified picture data package
4	Send Picture	Camera transmits the specified data package to host device
5	Change ID No.	The host sends this command to change the camera ID NO..
6	Alter Compression Rate	Host sends this to set new picture compression rate to adjust picture quality.
7	Change Baud Rate	Setting a new Baud Rate for Camera

Datasheet

Type	D/ N Type-850	D/ N Type-940
Sensor		
Type	1/4 OV CMOS Progressive Sensor	
S/N Ratio	50dB	
Dynamic Range	60dB	
AEC	Yes	
AGC	Yes	
AWB	Yes	
Electronic Shutter	Automatic from 1/60(1/50)~1/100,000 Sec.	

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Lens		
Type	Double-peak 850-IR Lens	Double-peak 940-IR Lens
Mount	M12	
Focal Length (mm)	2.8 / 3.6	
F.O.V (D.H.V)	120°, 90°, 75° (2.8mm Lens F.O.V. for reference)	
Iris	Fixed	

Infrared Led		
IR Led	18pcs-850 IR Led	18pcs-940 IR Led
Minimum Illumination	1 Lux (IR ON)	
	5 Lux (IR OFF)	
Night Vision	5 Meter - 6 Meter	
Day/Night Switch	Auto / Light Resister	

Image		
Resolution	VGA / QVGA / QQVGA	
Pixels	0.3 Mega Pixels	
Compression	JPEG Format	
Video	None	
Day Mode	Fraction Color Cast Image	Little Color Cast Image
Night Mode	Black & White Image	
Mirror	Erect image with normal installation / flip installation	
OSD Display	None	
SD Card Storage	None	

Communication		
UART Interface	RS232 / RS485 / TTL	
ID No.	Default "0"	
Data Frame Type	8+n+1	
Baud Rate (bps)	2400 / 9600 / 14400 / 19200 / 38400 / 57600 / 115200	
Protocol	OV528/ OV529 / VC0706/ZMID etc.	
Testing Software	TouviewLite	

Power Supply	5V / 9V-36V	
Standby Current	70mA @ 5V	
Working Current	IR Off: 110-130mA @ 5V	
	IR On: 350-360mA @ 5V	

Environment		
Operate Temp.	-20°C~70℃ (-4°F~158°F)	
Operate Hum.	10%~85% Non-condensing	
Storage Temp.	-25°C~75℃ (-13°F~167°F)	
Storage Hum.	0%~90% Non-condensing	

Cable		
Cable Type	Shielded Line / Non-shielded Line	
Cable Length	0.5 Meter	
Power Converter	None / 9V-36V Power Input	
Converter Place	None / TBD	

Connector		
Connector	Wire Lead Only / DB9 Female Connector / Others	
Standard Pin Des.	PIN 1: VCC (Red Wire)	
	PIN 2: TXD (Green Wire)	
	PIN 3: RXD (Yellow Wire)	
	PIN 5: GND (Black Wire)	

Physical Index		
IP Grade	IP65 / 66	
Net Weight (kg)	0.35 (for Reference)	
Product Size (mm)	70*30*75	
Packing Method	Gift Box	