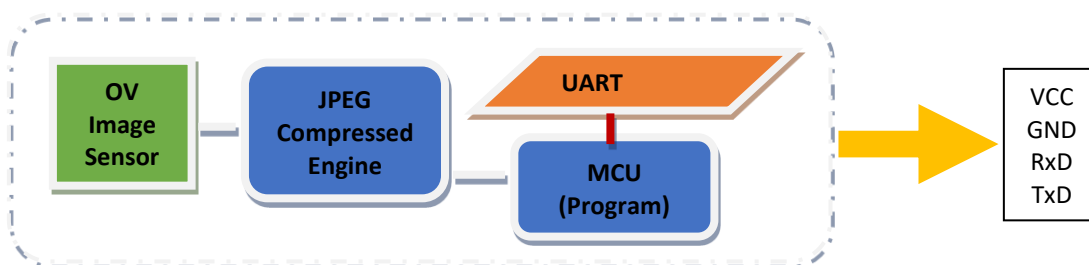## General Description

The TVPI030 is a high integrated Pinhole 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
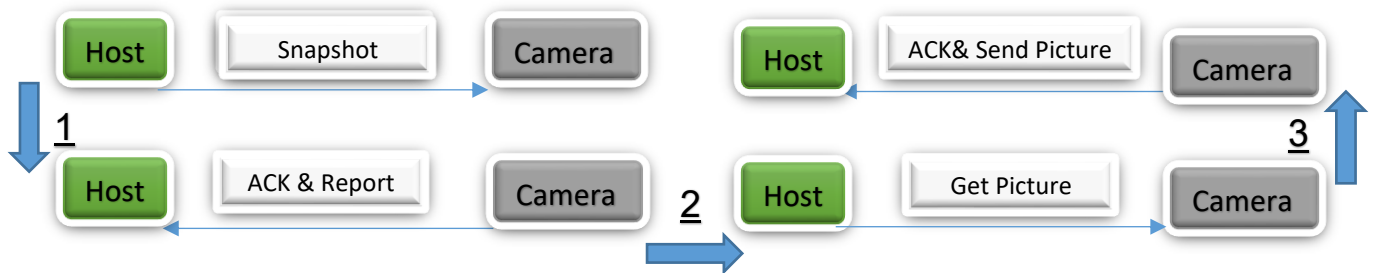

Atlas

Features

- **Cost Effective:** Low-cost & low-powered solution for an 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;
- **Various Lens Option:** 2.8mm
- **Pinhole Shape:** Pinhole Lens is suitable to some occasions that need to hide camera

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	
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.
Lens	
Type	Color Lens
Mount	M12
Focal Length (mm)	2.8
F.O.V (D.H.V)	120°, 90°, 75° (2.8mm Lens F.O.V. for reference)
Iris	Fixed
Image	
Resolution	VGA / QVGA / QQVGA
Pixels	0.3 Mega Pixels
Compression	JPEG Format
Day Mode	Color Image
Night Mode	None
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	TV Protocol / OV528 / VC0706
Testing Software	ZMCapture / ZMTOOLS
Power	
Power Supply	5V / 9V-36V

Standby Current	70mA @ 5V
Working Current	IR Off: 110-130mA @ 5V
	IR On: 200-230mA @ 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

Net Weight (kg)	0.15 (for Reference)
Product Size (mm)	38*38
Packing Method	Gift Box