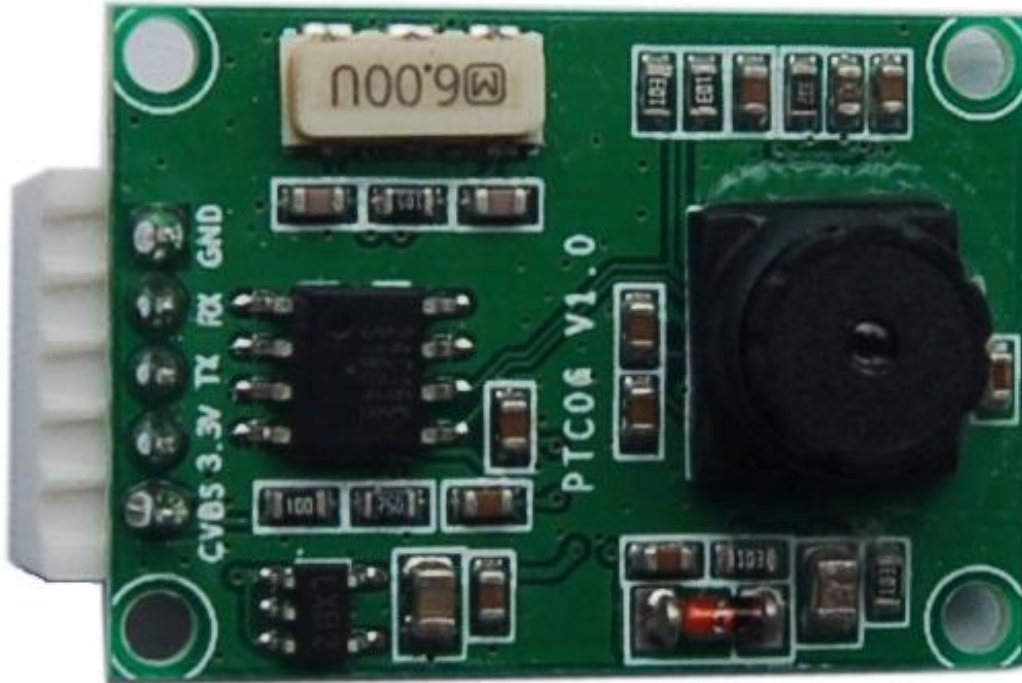# General Description

The PTC06 JPEG compression module performs as a video camera or a JPEG compressed still camera and can be attached to a wireless or PDA host. Users can send out a snapshot command from the host in order to capture a full resolution single-frame still picture. The picture is then compressed by the JPEG engine and transferred to the host.

Features

Small in size, 20x28mm

VGA resolution, down sample to QVGA (640 x 480)

Low power consumption, 5V operation

UART interface support up to 115200 bps (default 115200 bps)

Built-in JPEG CODEC

Built in lens, optional

User friendly command

Pin Description

Pin	Description
GND	Power Ground
RXD	Data Receive　(3.3V TTL Level)
TXD	Data Transmit　(3.3V TTL Level)
VCC	Power 5V DC
CVBS	Analog Video output

Command Summary

| Command	Function
INITIAL	Configure interface speed ，image size
GET PICTURE	Get image from the module
SNAPSHOT	Capture a still image
SET PACKAGE SIZE	Set the package size to transmit data from module to Host
RESET	Reset the whole system
DATA LENGTH	Provide the data length information.
SYNC	Start a synchronization sequence
ACK	Indicate the communication success
NACK	Indicate the communication fail with error code

Electrical Specification
VDD = 3.3V+10%, TA = 0 to 25℃

Parameter	Min	TVp	Max	Unit
DC supply voltage	3.3	5.0	6.0	V
Operation Current	90	100	110	mA
High level input voltage (TTL)	2.0	3.3		V
Low level input voltaoe　(TTL)		0	0.8	V
Operating temperature range	-20	20	85	℃

DSP and Lens Specification

Description	Parameter
DSP	**Vc0706**
Sensor	**0V7725**
Imager Format	1/4"
F/#	2.8 (infinity)
Focal length (mm)	4.0
Field of View Diagonal	64
Distortion	0.38%
Relative Illumination	>53%
Filter Option IR-cut filter	included

Mechanical Specification 　（unit：mm）
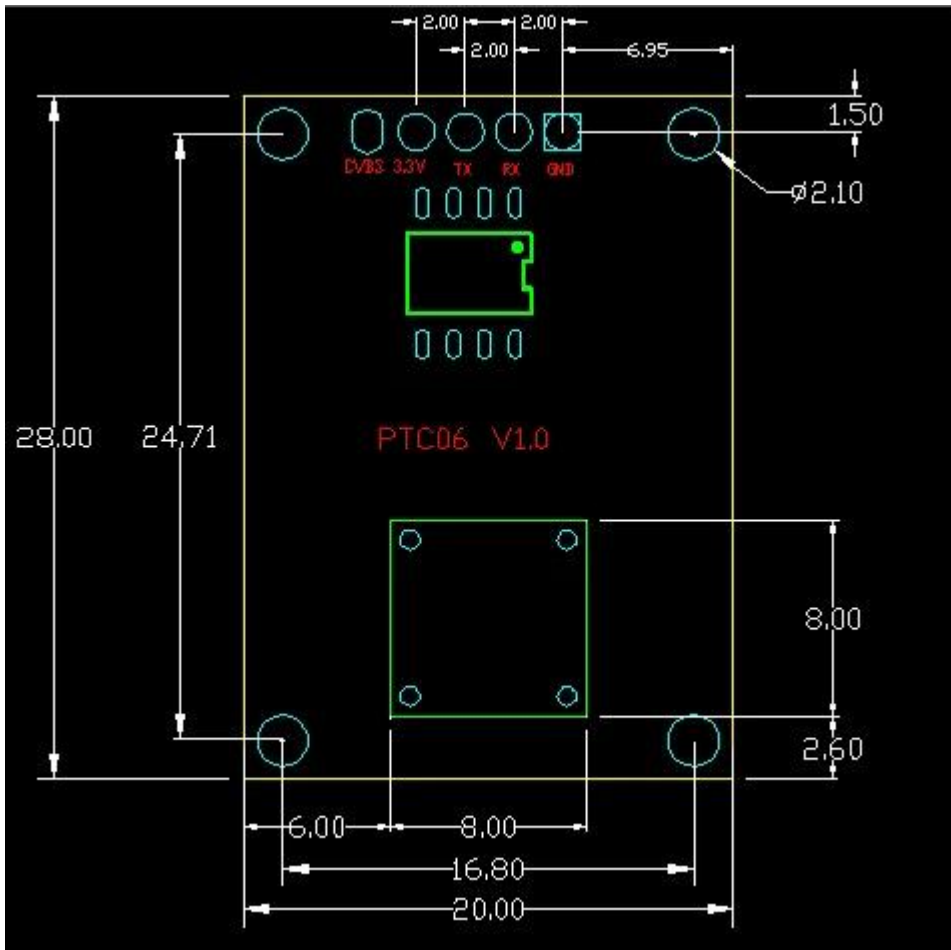
Command Protocol   （hex format data）

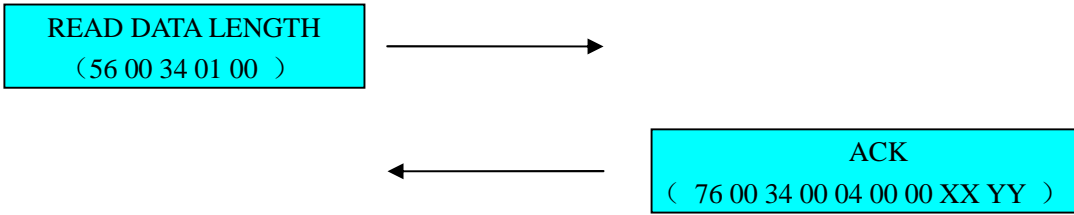**1   RESET：56 00 26 00**   **RETURN**：**76 00 26 00**

RESET
（56 00 26 00 ）

⟶

ACK
（76 00 26 00 ）

⟵
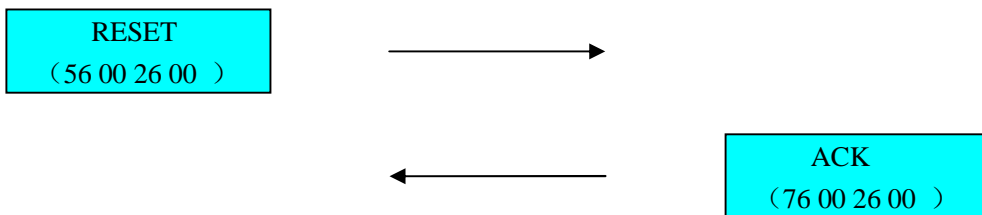
2   CAPTURE A IMAGE：56 00 36 01 00   **RETURN**：**76 00 36 00 00**

CAPTURE
（56 00 36 01 00 ）

⟶

ACK
（ 76 00 36 00 00 ）

⟵
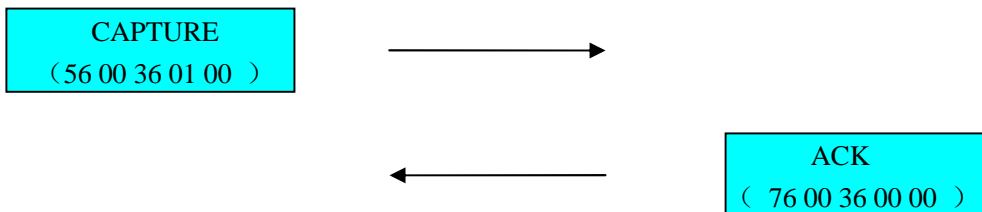
3   READ IMAGE DATA LENGTH：56 00 34 01 00

RETURN：**76 00 34 00 04 00 00   XX   YY**

```
XX  YY  -------  image length，  XX--- high byte，YY--- low byte
```

READ DATA LENGTH
（56 00 34 01 00 ）

ACK
（ 76 00 34 00 04 00 00 XX YY ）

4　READ IMAGE DATA：**56 00 32 0C 00 0D 00 00 XX XX 00 00 YY YY 00 0A**

RETURN：**76 00 32 00 00 FF D8 ○○○○○○ FF D9 76 00 32 00 00**

```
00   00   XX   XX
```

```
         ---- start address（the address must be times of 8，for example 00 00 ）
```

```
00   00   YY   YY   ----the length of image data（high byte，low byte）
```

Notice:JPEG IMAGE DATA must be FF D8 in first，and FF D9 in end.

READ DATA
（56 00 32 0C 00 0D 00 00 XX XX 00 00 YY YY 00 0A）

ACK
（76 00 32 00 00 FF D8 ○○○○○○ FF D9 76 00 32 00 00 ）
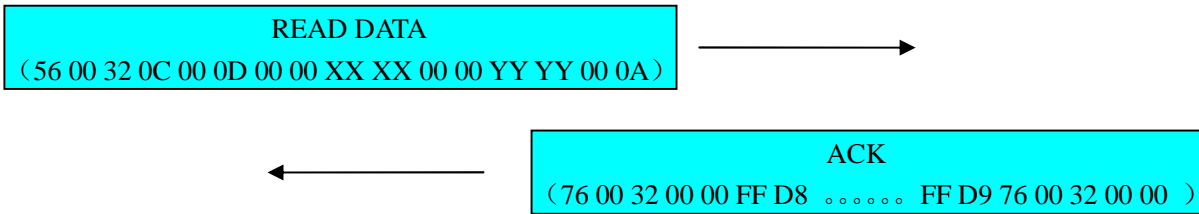
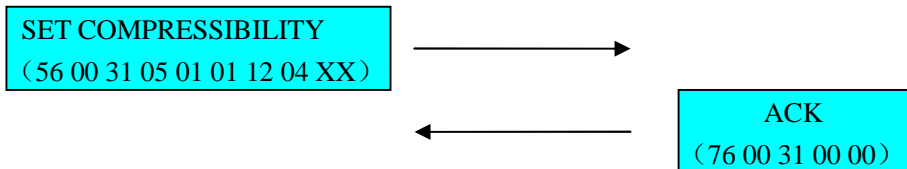**5　STOP CAPTURE**：**56 00 36 01 03　RETURN**：**76 00 36 00 00**

STOP CAPTURE
（56 00 36 01 03）

ACK
（76 00 36 00 00）
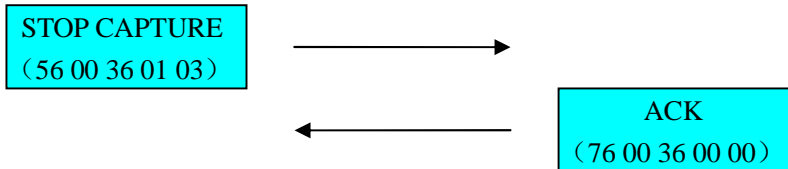
6　SETTING IMAGE COMPRESSIBILITY：**56 00 31 05 01 01 12 04 XX**
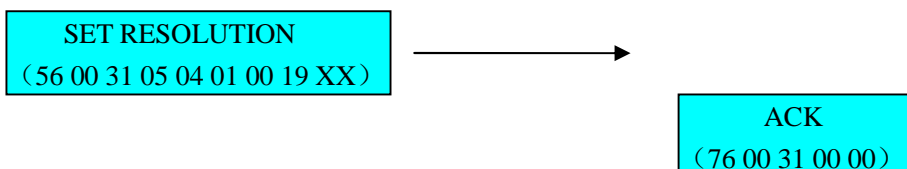
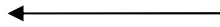　　　**RETURN**：**76 00 31 00 00**

```
XX ----default value: 36    （range：00 ----FF）
```

SET COMPRESSIBILITY
（56 00 31 05 01 01 12 04 XX）

ACK
（76 00 31 00 00）

7　SETTING IMAGE RESOLUTION：　**（default：640 * 480）**

56 00 31 05 04 01 00 19 11 （320*240） RETURN：**76 00 31 00 00**

56 00 31 05 04 01 00 19 00 （640*480）

SET RESOLUTION
（56 00 31 05 04 01 00 19 XX）

ACK
（76 00 31 00 00）

8 BAND RATE： 115200bps

9 PTC06　initial operation process

　　（1）　power on

　　（2）　delay 2.5s

　　（3）reset command

　　（4）set image resolution command

　　（5）set image compressibility　command

PTC06 get a image operation process

　　（1）capture a image command

　　（2）read image data length command

　　（3）read image data command

　　（4）stop capture command

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