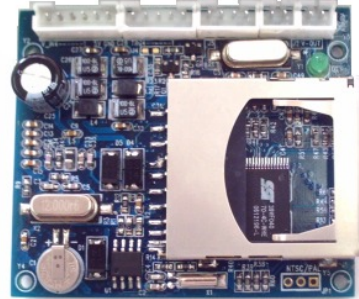


### Introduction

This module has been designed for serial communication. It allows user to control and retrieve the image data from the module remotely by using UART interface.

### Features

- Allow 4 channels AV input
- Manual capture or by Motion detect
- JPEG /AVI
- UART command control and image data transmission
- Accept external trigger input, 4 ch
- Alarm output when MD
- On board SD card socket (option)
- Detail command list provided
- 5V operation



### Functional Description

1. System setup <ol style="list-style-type: none"> <li>i. Date-Time preset</li> <li>ii. Format memory</li> <li>iii. TV system</li> <li>iv. MD on/off</li> <li>v. MD Sensitivity set</li> <li>vi. GPIO input on/off</li> <li>vii. GPIO output on/off</li> <li>viii. Preview or playback mode</li> </ol>	2. Preview <ol style="list-style-type: none"> <li>2.1 Channel select</li> <li>2.2 Manual capture</li> <li>2.3 JPEG snap shot setting               <ol style="list-style-type: none"> <li>i. Compression rate set</li> <li>ii. Intervals between triggers</li> <li>iii. No of shots per trigger 1-9</li> </ol> </li> <li>2.3 AVI capture setting               <ol style="list-style-type: none"> <li>iv. Compression rate</li> <li>v. AVI frame rate 1-15fps</li> <li>vi. AVI recording length, 1-99sec</li> </ol> </li> </ol>
3. File Operation <ol style="list-style-type: none"> <li>i. Total files info (no of files)</li> <li>ii. Current File info (no of byte)</li> <li>iii. Sent current file</li> </ol>	4. Playback on TV <ol style="list-style-type: none"> <li>i. Previous/Next file</li> <li>ii. Play AVI</li> <li>iii. Delete current file</li> <li>iv. Delete all</li> </ol>

### Module Specification

On Board SD Ram	64 Mb (8 Mbytes)
Storage	External SD card up to 4GB
Display Connector	Composite video out
Video Capture	320 × 240 (up to 15fps)
Photo Resolution	640 x 480 JPEG format
UART Baud Rate	9600 bps
Video Input	4Ch, Composite video 1V p-p
Trigger Input	4Ch, active low
Alarm Output	Active low
Board size	55 x47 mm

### Electrical Characteristics (at 5VDC)

Condition	Min.	Typ	Max.	Units
Preview	264	267	270	mA
CaptureJPG(Peak @ capturing)	268	273	282	mA
CaptureAVI(Peak@ recording)	295	298	312	mA
Playback JPG	312	270	272	mA
Playback AVI	278	280	282	mA

## File system and File Name Format

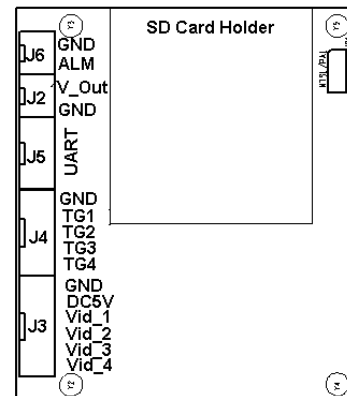
1. Max 1024 images can be saved in the SD card. It depends on the size of SD card and images/video captured.
2. The module can work without SD card, but the image on board will be lost if power off.
3. File Name: IMG0001.jpg, IMG0002.AVI

## Connectors and their description

Board Measurement: 47x55mm

### Connector Description

J2	Video Output for TV monitor
J3	DC Power and 4 ch video input
J4	4 Ch trigger input, active low
J5	UART port
J6	Alarm Out, active low



## Evaluation Kit and PC demo U/I

In order to help user to understand the control of the module using UART communication, we have developed the U/I for PC application, showing all the dialogs between PC and module.

The U/I has been divided to 3 parts, general setup, preview and playback, refer to the following screen shots.

