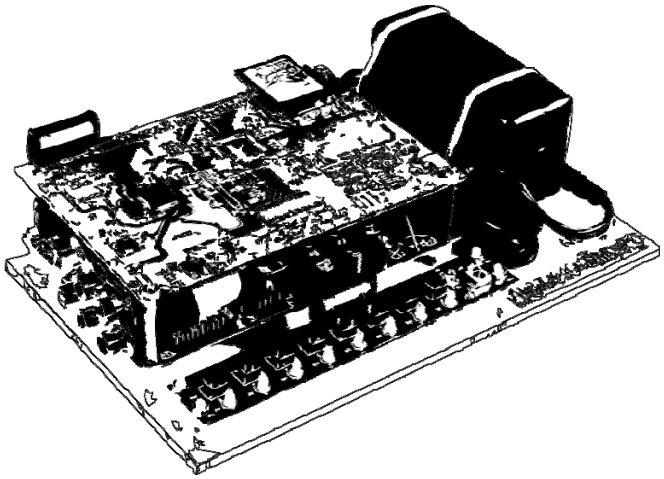
AL37204C Multi-Display Reference Design

Quick Setup Guide
Version 1.0
(AL37204C-DMB-A0)



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Version and Amendments

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2010/7/20	1.0	Formal Release Version 1.0	Ken Liu

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1 Introduction

The AL37204C-DMB product is a Video Multiplexor which can simultaneously capture video from up to four cameras and display the images onto a monitor screen real-time. This product can also record video onto an SD memory card, demonstrating a valuable component in DVR (Digital Video Recording) applications such as Automotive or Surveillance.

Video is compressed into the JPEG format with resolutions up to 640x480 at 3 frames per second. Analog video signals can be output to a standard or LCD TV. The digital video streams can be output to compression chips or LCD controllers. Engineers can also define various display output characteristics.

An IPassion compression board is attached to the top of the AL37204C-DMB; its function is to compress JPEG formatted video images onto an SD Card at 3 frames per second. Files sizes of 1/2/4/8/16/32 GB are supported using the FAT16 format. The JPEG files can be easily downloaded onto a PC from the SD Card and then viewed/edited with any 3rd party PC video playback or editing software..

This document is a quick guide that describes the procedures that will allow you to easily install and start using the product. For more detailed information, please refer to the AL37204 User Manual, Application Notes or IPassion board documents.

You will also need to provide:

- Video Camera with a CVBS connector
- Monitor with a CVBS connector

Package Content List

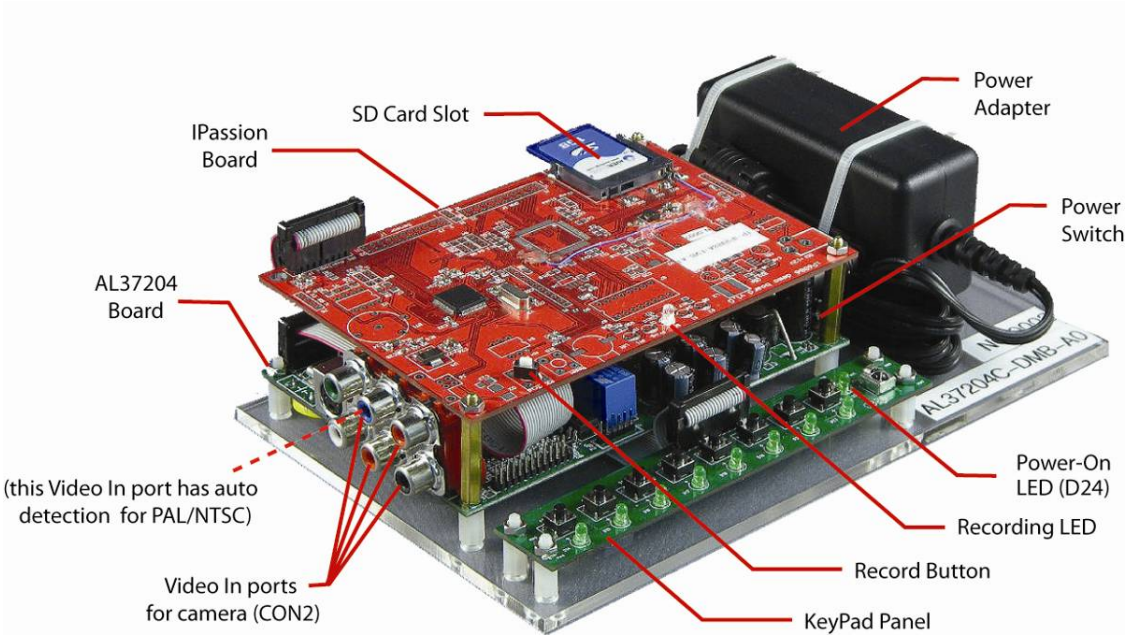
- AL37204-DMB-A0

  (includes AL37404 board, IPassion board, Keypad, 12V/1A Power Adapter all mounted on the plexiglass)
- Power Cord
- Video Cables (CVBS) x 5
- Remote Controller (battery included)
- Quick Setup Guide

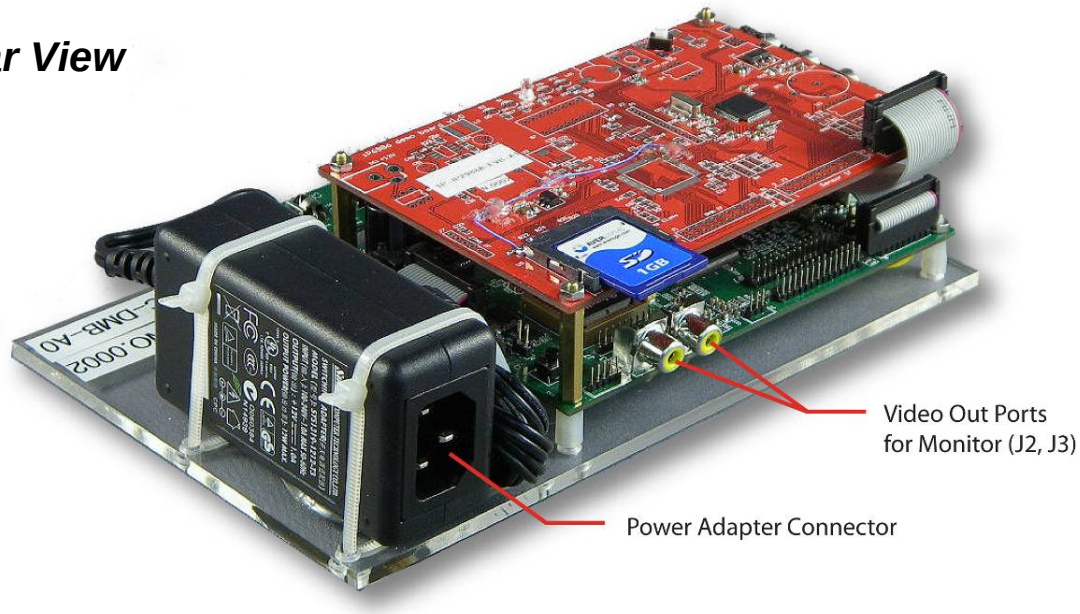
2 Product Description

This section describes the board components that are necessary to know in order to install this board. **Note**: There are other jumpers and connectors on this DMB board that are not described and may be mentioned in the User's Manual. Otherwise, they are either disabled or not for use

Front View

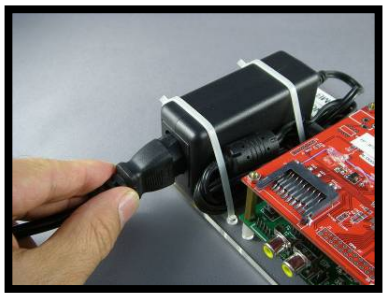


Rear View



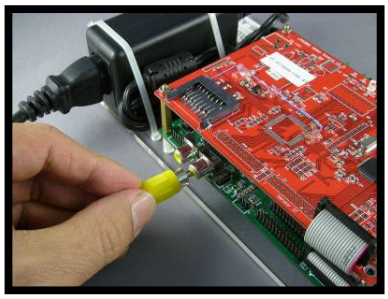
3 Quick Setup

3.1 Attach power cable



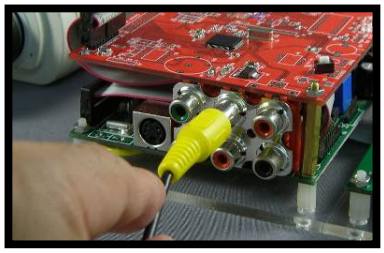
The Power Adapter unit will be attached to the plexiglas board. Attach one end of the power cable to the Power Adapter and the other end to a wall socket with the appropriate voltage.

3.2 Attach TV monitor **(requires CVBS w/ RCA connector)**



Attach your monitor to one of the Video-Output connectors (J2 or J3), located near the power adapter. Turn on your monitor.

3.3 Attach camera **(requires CVBS w/ RCA connector)**



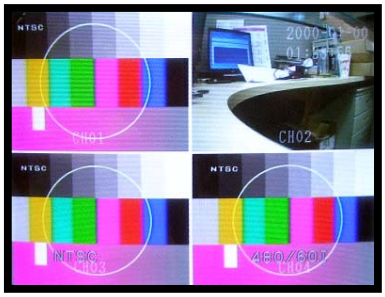
Attach your camera to a Video-In port on the side panel (CON2). You should use the middle port on the top row (as shown), since it has auto-detection for PAL/NTSC. You can actually use any of the 4 connectors on the right most side of the panel but the other 3 are defaulted to the PAL standard. Turn on the camera and begin transmitting a picture.

3.4 Turn on board power

After you turn on your camera and TV monitor, turn on the power switch (SW2), which is located on the AL37204 board near the power adapter connector. The “On” position is toward the middle of the board.

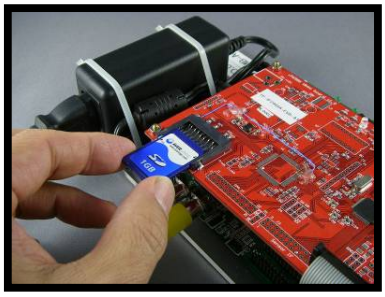
A green LED on the keypad (D24) will illuminate. If it does not, check the power supply connections.

Your monitor should begin displaying the picture that your camera is transmitting. If it is not displaying the video, your connections may not be secure. Your board may also be setup with the wrong standard (PAL or NTSC) for your camera – review the Keypad and Remote Control section and then use the "Menu" button to access the configuration menu and then go to the "System" configurations to change the PAL/NTSC option (See AL37204 User Manual for more information).

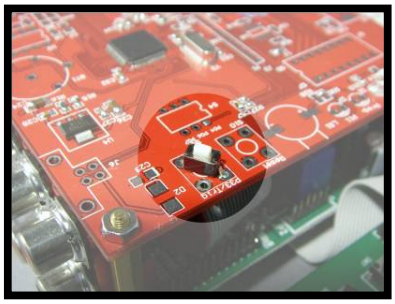


3.5 Recording your video onto the SD Card

Place an SD card into the SD card slot on the top board.

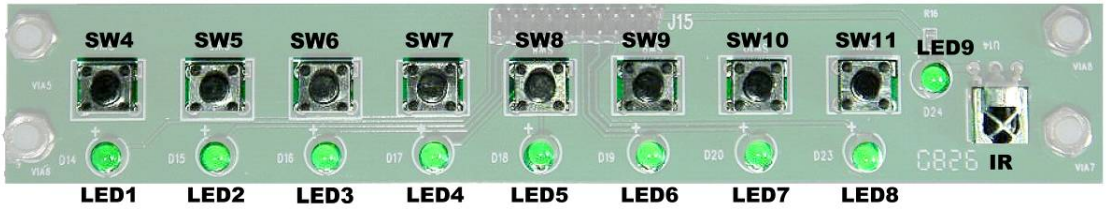


Press the white push button located on the top board (as shown). The Recording LED on the top board will illuminate indicating that recording is in progress. If you press the white push again, recording will cease. You can remove the SD Card as long as recording is not in progress.

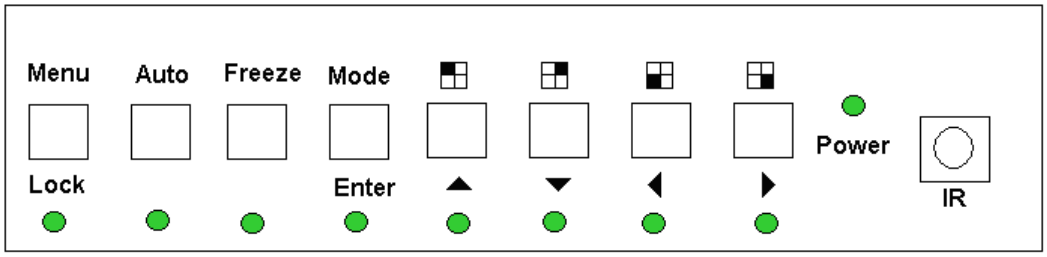


4 Keypad and Remote Control

The Keypad Panel comes connected to the Main Board with a ribbon cable. It contains 8 buttons, 9 LEDs and an IR sensor. The LED9 illuminates when power is supplied to the board. The other LEDs (1-8) illuminate when the corresponding buttons above them are depressed. The buttons are used to manipulate the screen display and configure options pertaining to information on the screen.

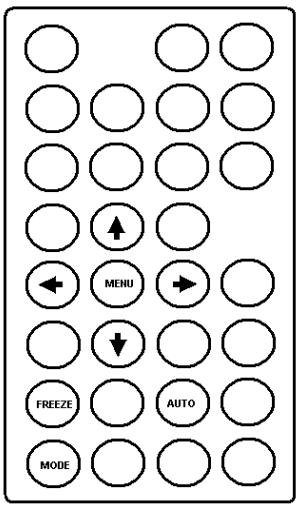


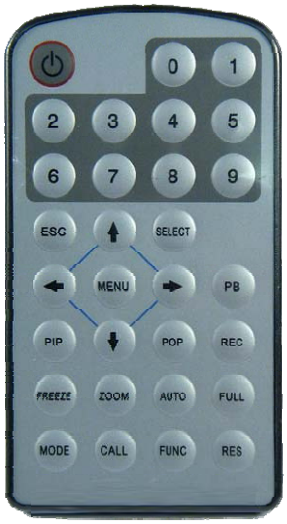
The functions of the panel buttons correspond to the diagram shown below.



Remote Control

A remote control is also supplied with the package and can be used instead of pressing buttons on the Keypad panel. The labeled remote control buttons, located on the diagram to the right, correspond to the buttons shown above and are the only functional buttons used with this board. The other buttons are disabled and non-functional.



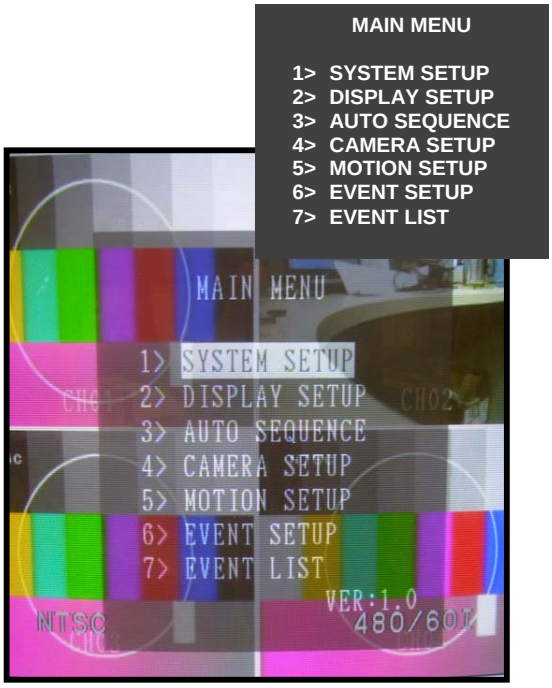


Keypad Button and Remote Control Descriptions

Keypad	Remote	Function	Description
SW4		Menu/Lock	This button displays the main configuration “Menu” on the screen. It can also be pressed to return to a previous screen. This button can also be pressed for 3 seconds to either lock the menu or to release it from lock mode.
SW5		Auto Sequence Display	This button is used to Automatically display the different display modes, one after the other, in sequence
SW6		Freeze/Debug	Freezes the video on all panels. Also can be pressed for 3 seconds to enter I2C debugging mode or to release from debugging mode.
SW7		Mode/Enter	This button is used to switch between the different display modes (1-panel, 2-panel etc.). Also is used as the”Enter” key when using the Menu to configure display options.
SW8		Right Arrow / CH-4	Arrow to the right (during menu configurations). Is also used to display CH-4 in single panel display.
SW9		Left Arrow / CH-3	Arrow to the left (during menu configurations). Is also used to display CH-3 in single panel display.
SW10		Down Arrow / CH-2	Arrow down (during menu configurations). Also can be used to decrement a value setting. Is also used to display CH-2 in single panel display.
SW11		Up Arrow / CH-1	Arrow up (during menu configurations). Also can be used to increment a value setting. Is also used to display CH-1 in single panel display.

Main Configuration Menu

Pressing the Menu button on either the Keypad or the Remote Control will bring up the Main configuration menu (shown to the right), where you can configure options on the AL37204C board. Please refer to the AL37204 User's Manual for detailed information.



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