

IDS-UNIVERSAL-01

IDS Demo System Main Board

Description

IDS have developed a simple system to enable rapid development of various display types and technologies.

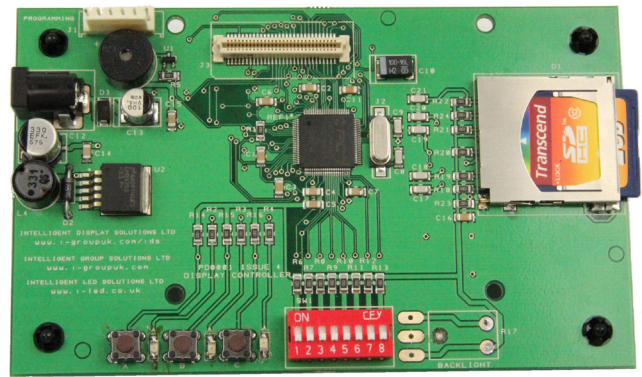
The SD card operated design allows the user to show images, change contrast and backlight brightness (where applicable) on a slide show basis.

Images are created as bitmaps and loaded onto the SD card, then the dip switches set the time between 'slides'.

The dipswitches also enable the touch feature (where applicable), which brings up a simple drawing screen to show the touch in operation.

The board shown here is the main board. To drive any display you will need to plug the personality module into this main board. Each personality module is display or display family dependant and requires the main board to be updated - this is via the built-in SD card.

Please review the document "how to change the personality module" for full details of how to swap target displays.

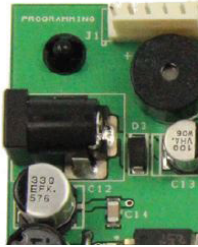


Technical Features

- Single 12V input power, all other voltages required are generated on board
- Standard SD card image storage
- Buzzer for notifications
- Touch screen mode
- 3 dedicated mode buttons, operation changes depending on target display
- Image interval from 0.1 to 6.5 seconds
- Compact form factor - 132x80mm

System Components

1 – Input Power Supply

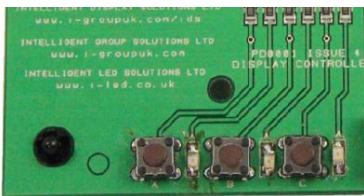


The IDS-UNIVERSAL-01 requires a 12v DC, center pin, positive, 2 amp power supply

An example part available from RS Components is 121-7157

All other voltages are generated on board.

2 – Mode Buttons



Three push buttons which can change their state of operation depending on which personality module is attached.

In general use, and in the majority of cases the buttons will do the following;

A=Play

Pressing this will start to show the images stored on the SD card, with the time interval set by the dip switches

The LED next to button A will come on to show this has been selected

B=Pause

Pressing this will pause the slide show and keep the image that is on screen when you pressed the button

The LED next to button B will flash to show it is in pause mode

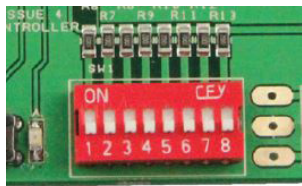
Pressing again takes it back to play mode

C=Next

Pressing this will immediately show the next image in the cycle whether you are in play or pause mode.

The slide show will then revert back to play mode

3 – Dipswitches



These 8 dipswitches are used to change target display software, set touch mode, buzzer and time delay

Selecting switch 1 to be ON will set the IDS-UNIVERSAL-01 into touch mode.

The target display will show something like this;



You can then draw on the screen, or press clear to clear the image

Setting switch 1 back to OFF will exit touch mode

Selecting switch 2 to be ON, enables the buzzer

This then beeps for each new image

Switches 3 to 8 set the time.

DIP Switch	ON	OFF
1	Touch Mode ON	Touch Mode OFF
2	Buzzer ON	Buzzer ON
3	Delay 3.2 seconds	
4	Delay 1.6 seconds	
5	Delay 0.8 seconds	
6	Delay 0.4 seconds	
7	Delay 0.2 seconds	
8	Delay 0.1 seconds	

Note: Switches 3 to 8 are the delay between slides, and are added together if more than 1 switch is ON up to a maximum of 6.5 seconds

Setting all switches to on, puts the IDS-UNIVERSAL-01 into re-program mode – please see separate document “How to re-program the IDS_UNIVERSAL-01 board”

4 – SD Card



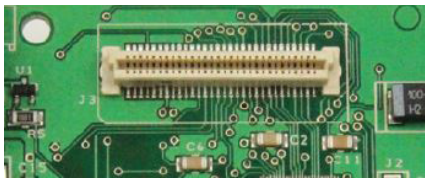
Each IDS-UNIVERSAL-01 comes with its own blank SD card

Example images are located within our downloads page: www.i-groupuk.com/downloads

If you want to use your own SD card, then there are no strange requirements. The system has been tested and developed with Transcend 2GB cards.

Other brands and sizes may also work.

5 – Personality Module Connector

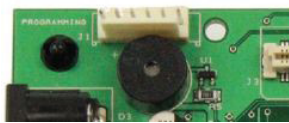


This is the main connector for attaching the target display to the IDS-UNIVERSAL-01

Each personality module will have the mating half connector on it.

The connector is polarised so can only be plugged in in one direction

6 – Buzzer



This is enabled as described above in the dipswitch section

How to show images

Please refer to the following documents for further information

“How to create a 128x64 monochrome image”

“How to re-program the IDS-UNIVERSAL-01 board”

“How to use a touch screen on the IDS-UNIVERSAL-01 board”