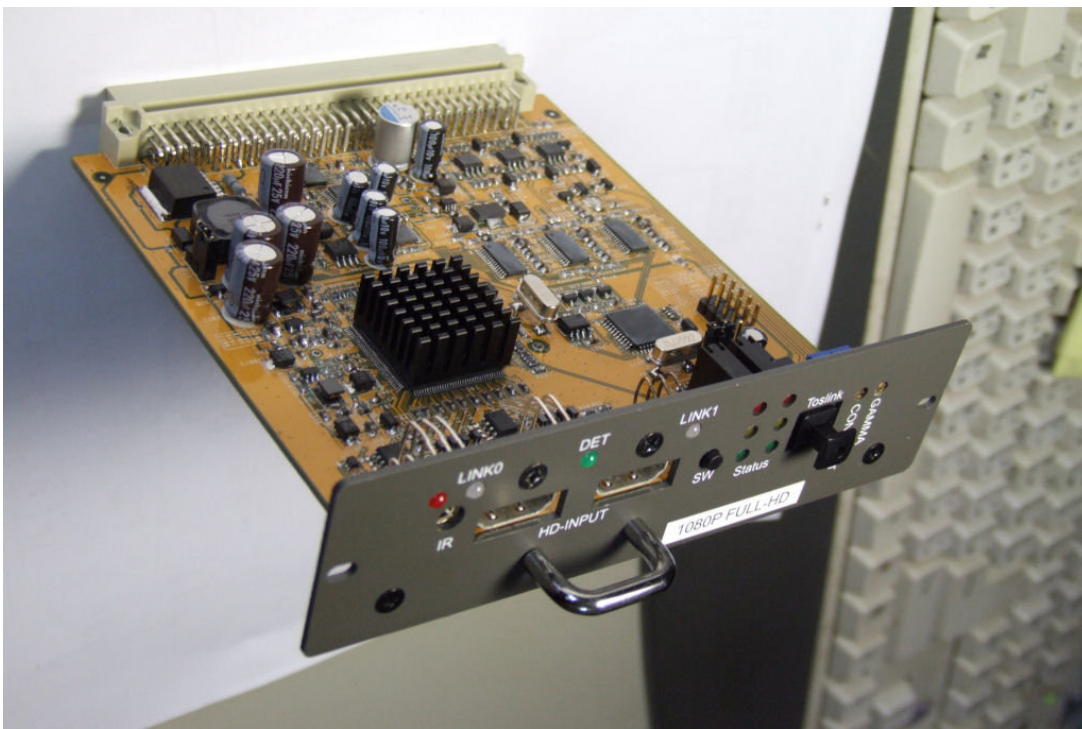# IFB-FULLHD
HDMI V1.3

Datasheet

DOC V1.00

PRELIMINARY, SUBJECT TO CHANGE WITHOUT NOTICE

IFB-FULLHD brief

IFB-FULLHD is a newly card for SONY VPH and G series CRT projector. It has two HDMI V1.3 input port with deep color support, and using three high precision 12bit video DACs convert to high precision analog RGB video signal. Build-in Gamma circuit create real nature image for your SONY projector. Gain control can adjust pure white of the image. The IFB-FULLHD is an ideal card for SONY CRT projector connect feature digital HD source, like PS3, HD-DVD and Blue-ray Disc.

FEATURES

- **HDMI input path**
  - HDMI 1.0, 1.1, 1.2, 1.3 ,HDCP 1.1, and DVI 1.0 compliant
  - DTV mode support (480P,576P,720P,1080i,1080P) for 50 and 60Hz
  - PC mode support VGA, SVGA, XGA, SXGA, UXGA .etc
  - Support 4:4:4 RGB / YCbCr input
  - Support 4:2:2 YCbCr input
  - Support both 16-235 and 0-255 color range
  - 14bit Data processing with High precision 200MHz 12bit DAC
  - Gamma correction processing and white level control
  - High speed 1.5GHz output Buffer
  - Support deep color mode for 10bit and 12bit
  - Support 120Hz for 720P and 1080i

- **Board**
  - Compatible with SONY projector IFB input slot
  - Toslink output, support up to 8ch audio
  - IR control input select and gamma level
  - Ultra Low ESR capacitor to filter noise

- **HDMI support mode table**

PC mode	640X480	60HZ 72HZ 75HZ 85HZ
	800X600	56HZ 60HZ 72HZ 75HZ 85HZ
	1024X768	43HZ 60HZ 70HZ 75HZ 85HZ
	1152X864	60HZ 70HZ 75HZ 85HZ
	1280X1024	43HZ 60HZ 75HZ 85HZ
	1600X1200	48HZ 60HZ 70HZ 72HZ 75HZ
	1440X960	43HZ 60HZ 72HZ
HDTV mode	480P	60HZ
	576P	50HZ
	720P	50HZ 59HZ 60Hz 120Hz
	1080I	29HZ 30HZ 50HZ 59HZ 60HZ 96HZ[*1] 120Hz
	1080P	50HZ 59HZ 60Hz 70HZ 72HZ 75HZ 24HZ[*2] 25HZ[*2] 29.9HZ[*2] 30HZ[*2]
	1035I	30HZ

*1 need use powerstrip to set graphic card output this mode

*2 IFB-FULLHD support these modes, and will output these signal with same refresh rate as same as input source, but most CRT projector are only support 30Hz-150Hz, using such low refresh rate may let SONY projector working with incorrect behavior.

Board overview

HDMI input ports:

Connect HDMI cable to video source

SPDIF port (Toslink):

Optical digital sound output, support 2ch PCM and 8ch compressed sound

Long cable support:

30 meter molex HDMI cable test ok 720P BOK HDMI player

IR control:

IR control can let you switch between input sources and adjust gamma level

Key function for IR :

Key name	function	note
1	input select HDMI0	
2	input select HDMI1	
gamma	gamma up/down	Total 20 step

0	Select minima gamma	
100	Select maxima gamma	
A	Active DVI-RGB 16-235 range	
B	Active DVI-RGB 0-255 range	

Manual gamma VR location:

We can see the panel, there is two little screw, one for contrast adjustment (need professional person to do this), another one use for gamma level adjustment. Below is adjustment way:

Step 1: Turn the little screw to max, un-clockwise (right to left),

Note: total 25 turns

Step 2: using remote controller gamma up/down key to set little higher gamma level you want. This is crose adjust for gamma step, you will have total 20 level to use. Please note: when you reach the maxima or minima
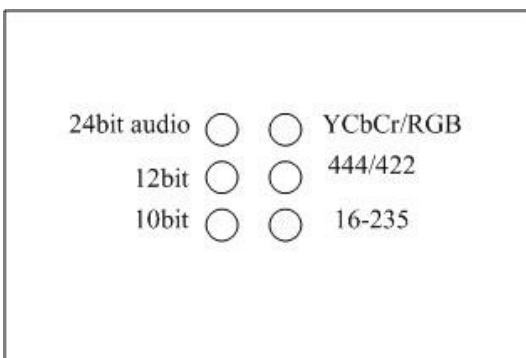
gamma, the IR LED will keep on when press the remote.

Step 3: fine tune the gamma level by turning the little screw. (You will not need this step, if 20 step gamma is enough for your system.

While adjusting the gamma level, the led will be blinking.

STATUS:

Installation on G90