

VB507A

TELEVISION INSTRUMENTS

HDMI SIGNAL PROCESSOR



General

VB507A is a HDMI signal processor that divides the digital vision and sound signals that have been input via HDMI (*1) into eight HDMI outputs. It can divide the signals from a single HDMI signal generator or a DVD player with HDMI outputs to multiple HDMI receivers. This is suitable for performance evaluation and test of multiple HDMI products for development, production and quality control, and can reduce the total cost for HDMI-related equipment in each department.

*1 HDMI: High-Definition Multimedia Interface

Features

- Can output up to 8 lines of HDMI signals in parallel
- Can switch between two lines of HDMI signal inputs
- Can use a VB507A multiple-layer connection (*2) to increase the number of divisions
- Supports the copyright protection using HDCP (*3) as well as the HDCP repeater function
- Can check an operation status with the I/O status check LED and set and confirm operation conditions with the LCD display and operation keys.

*2 The recommended number of layers is two. Up to 15 divisions in total.

*3 HDCP: High-bandwidth Digital Content Protection System

Specifications

- **HDMI Input**
 - Standards HDMI Spec. Ver.1.1
 - Input level 500 mV +/-100 mV
 - Input connector Type A, 19 pins
 - Number of input 2 lines, switching
 - Use device SiI9031
 - **HDMI Output**
 - Standards HDMI Spec. Ver.1.1
 - Input level 500 mV +/-100 mV
 - Number of output 8 lines, simultaneous output
 - Use device SiI9030
 - Format
 - Clock frequency 25 MHz to 165 MHz
 - Video format 640 x 480p@60 Hz (VIC 1) to 1920 x 1080p@29.97/30 Hz (VIC 34)
 - Pixel format RGB: 4:4:4, 8 bit
YCbCr: 4:4:4, 8 bit
YCbCr: 4:2:2, 8/10/12 bit
 - **Audio Signal**
 - Sampling frequency (*4)
 - 32 kHz~192 kHz (2 ch)
 - 32 kHz~96 kHz (8 ch)
 - Quantization (*4) 16/20/24 bit
 - Number of channel (*4) 1 ch to 8 ch
 - Audio format (*4) L-PCM, AC3, DTS and others
- *4 by HDMI input data
- **General Specifications**
 - Operating temperature 5 degrees C to 35 degrees C
 - Relative humidity 5 to 85% (non-dewing)
 - Power supply AC100 to 240 V, 50/60 Hz
 - Dimensions 426(W) x 100(H) x 350(D) mm
 - Weight Approx.7 kg
 - Accessory

Power cord	1 pc
2P-3P conversion connector	1 pc
Operating manual	1 pc



Sample Implementation

In the past, to carry out a performance comparison and drive test of multiple units for development and production of the HDMI applicable products, multiple or the same number of HDMI signal generators had to be prepared, which incurred an excess time for setting or required a significant implementation cost for the signal generators. VB507A can send up to eight divided HDMI outputs, which allows significant cost reduction for evaluation and equipment implementation compared to the past.

● Test of three HDMI applicable products

The HDMI board for TG35CX is equipped with three lines of HDMI outputs, which allows simultaneous setting and switching.

The same number of SGs as that of the HDMI applicable products must be prepared. When no remote functions are available, setting and switching must be performed for each SG, and the measurements of operation time difference during switching, etc., cannot be carried out.

TG35CX (HDMI output 3 lines)



Other companies SG (HDMI output 1 line)

HDMI corresponding Television



Discontinued

● Test of 2 to 15 HDMI applicable products

Performance comparison with the same model; Performance comparison with a different model (see the figure below).

Can switch between the still picture performance check that uses the SG and the moving picture performance check that uses the test disc.

Can perform the multiple HDMI applicable product check that uses the test disc plus the DVD player or recorder for the first time.

Two-layer connection of VB507A allows you to check up to 15 units, which reduces the HDMI equipment cost at a manufacturing site, etc.

TG35CX

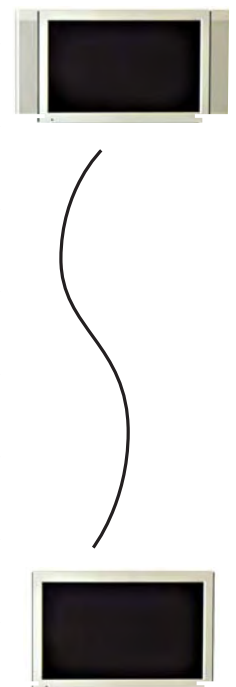


Switching



Analog output for monitor (Video and Audio)

HDMI corresponding Television 1



HDMI corresponding Television 8