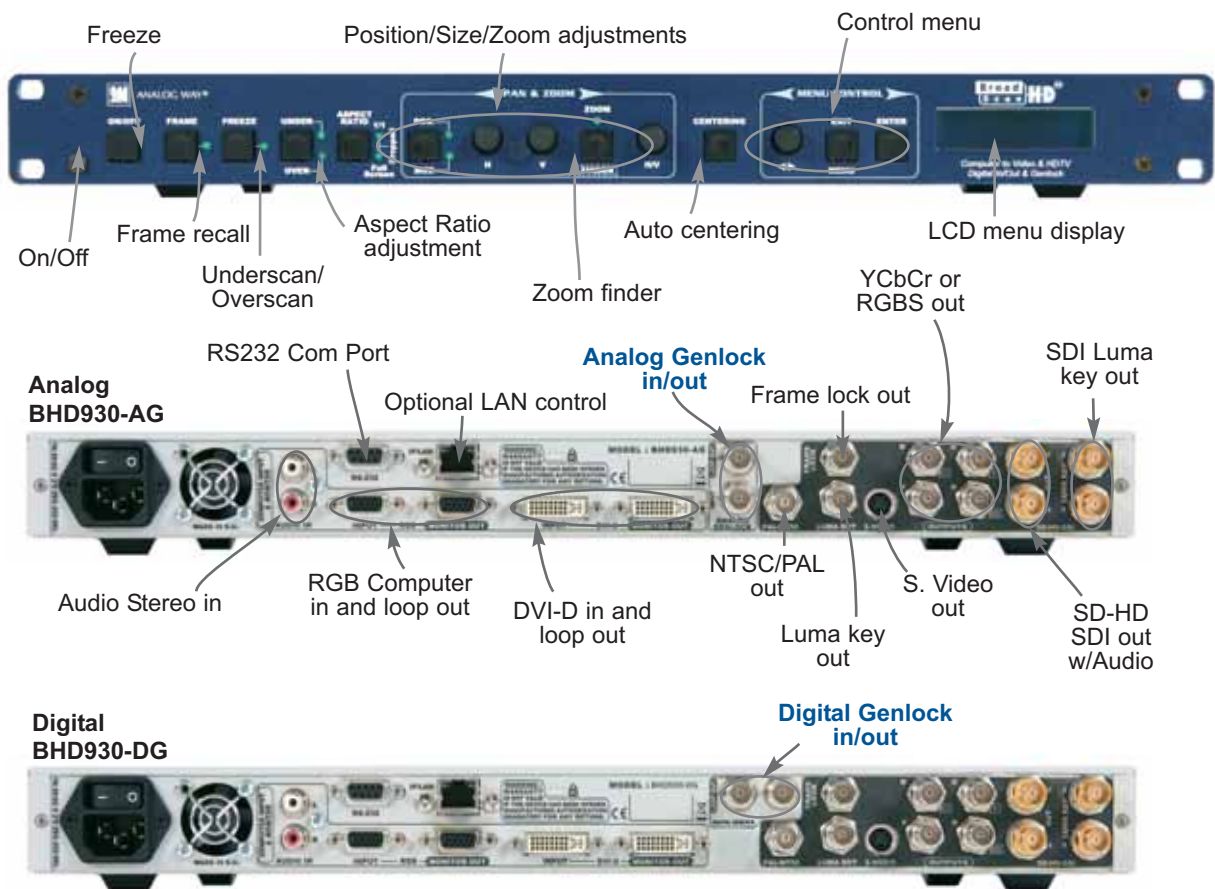
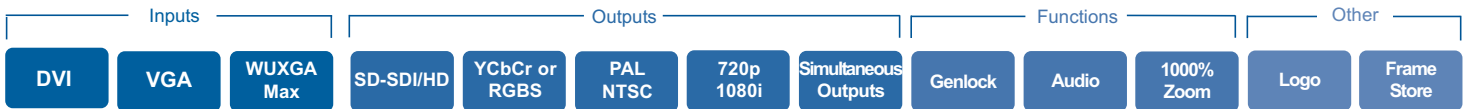


# Broad Scan HD™

Ref. BHD930-AG / Ref. BHD930-DG

Very High Resolution to Video and HDTV Scan Converter with Genlock and Embedded Audio



## Features

- Workstations, PC, Mac compatible input
- DVI and RGB Computer Input up to 1920x1200
- Digital outputs: HD/SD-SDI 10 bits
- Analog outputs: HD/SD-YUV, NTSC/PAL, RGB, S-Video
- SD/HD-SDI 4:2:2 & SD/HDTV Analog Outputs
- Embedded Stereo Audio w/Delay
- Genlock: HD/SD-SDI or Analog HD Black and Black Burst
- Multi-level anti-flicker
- Horizontal & vertical filters
- 16/9, 4/3, special sized and cropped output
- Pan & zoom resizing up to 1000%
- Zoom Finder
- Frame & logo memory
- RS232 Upgradable
- Remote control software
- Ethernet interface: Optional
- For High Definition and Standard Television Broadcast



ANALOG WAY®

www.analogway.com

P/N: BHD930/1007-VA

## Technical Specifications

### Computer Input

- For PC, Mac and Workstation
- DVI-D and RGBS, RGBS, RGBHV with Automatic synchronization detection
- Resolution up to 1600x1200/60Hz & 1920x1200RB/60Hz
- Horizontal frequency from 31.5 to 130 KHz
- Vertical frequency up to 130 Hz
- Audio Stereo: Unbalanced 44kOhms - +18dB – Adjustable level

### Outputs

- HD-SDI (x2): 4:2:2 - 10 bits – 1.5 Gbs - 75 Ohms or SDI (x2): 4:2:2 - 10 bits – 270 Mbs - 75 Ohms (fs=48KHz@20/24 bit)
- HD-YUV: HD-YCrCb - 0.7Vp/p + 3 level Sync. +/- 0.3V - 75 Ohms or YCrCb; RGsB, RGBS: 0.7Vp/p + Sync. 0.3V - 75 Ohms
- S.Video: Y/C - 0.7Vp/p + Sync. 0.3V - 75 ohms
- NTSC/PAL: Composite Video - 0.7Vp/p + Sync. 0.3V - 75 Ohms
- Luma key (x2): SDI/HDSDI – Same format as output - 75 Ohms
- Luma key: Analog SDI/HD 0.7Vp/p - Same format as output - 75 Ohms
- Frame Lock: TTL Level – Output frame rate

### DIGITAL GENLOCK (Model BHD930-DG)

- Input: HD/SD-SDI Black
- Output: Active loop through

### ANALOG GENLOCK (Model BHD930-AG)

- Input: 3 level HD Black or Black Burst
- Output: Active loop through

### User Controls and Connectors

#### FRONT PANEL

- Standby On/Off
- Frame recall
- Freeze
- Under/Over scan
- Aspect ratio: 1/1 – Cropped - Full Screen
- Zoom up to 1000%, linear pan & scan & Field
- Position and size
- LCD screen and control buttons for:
  - Input type and status
  - 8 level anti-flicker
  - RGB & Black level adjustment, sharpness
  - Output format selection
  - Genlock phase adjustment

#### REAR PANEL

##### Input Connectors:

- DVI-I Female: (Digital computer in only)
- HD15 Female (Analog computer in)
- BNC (Genlock in)
- RCA Audio Stereo

##### Output Connectors:

- DVI-I Female: Active loop through
- HD15 Female: Active loop through
- BNC (x2): HD/SD-SDI
- BNC (x4): HD/SD-YUV & RGsB/RGBS
- 4 pin Mini DIN: S. Video
- BNC: NTSC / PAL
- BNC: Genlock Active loop through

- BNC: Analog Luma key out
- BNC (x2): Digital Luma key out
- BNC: Frame lock out

##### Miscellaneous:

- DB9: RS232 for remote control
- RJ45: Optional Ethernet connection
- AC Main connector with On/Off switch

### Power Supply

- Internal, universal, automatic, 100-250 V; 50/60 Hz; 40 W (UL, CSA, GS, CE)

### Supplied with

- 1 x AC power cable
- 1 x Remote control software
- 1 x User manual

### Dimensions: 1U, 19" compatible

- D 10.4" x W 19" x H 1.74"
- D 265 mm x W 482 mm x H 44 mm

### Weight: 3.3 kg / 7.3 lbs

### Warranty

- 3 year warranty on parts and labor back to factory

### Specifications subject to change without prior notice

#### USA, Canada, South America and The Carribeans

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## Broad Scan HD™ by Analog Way

is a **Broadcast and Professional Computer to Video and High Definition TV Scan Converter**. Fitted with Digital DVI and Analog RGB input, it converts Workstation, PC or Mac graphic images up to 1600x1200@60Hz (1920x1200 RB) into Video or HDTV. Each computer input has its own monitor loop throughout for the connection of a control display. Output signal can be both analog and digital thus Broad Scan HD can provide a full Digital signal processing path from the input to the output.

**Broad Scan HD** features a powerful broadcast Genlock. Two versions of the **Broad Scan HD** offer either a Digital HD/SD-SDI Genlock (Model BHD930-DG) or an Analog HD Black or Black Burst Genlock (Model BHD930-AG). Genlock input is fitted with a loop through output allowing chaining devices. The user can adjust phase and subcarrier delay according to the specific installation requirements. HD output formats can also be genlocked with a SD TV Black Burst signal. All Genlock timings meet broadcast ITU/SMPTE standards.

**Broad Scan HD** supports many Output formats as listed below:

#### HDTV

- 720p @ 60, 59.94 & 50 Hz (SMPTE 296M),
- 1080i @ 60, 59.94 & 50 Hz (SMPTE 274M),
- 1035i @ 60 Hz & 59.94 Hz (SMPTE 260M),
- 1080sF @ 30, 29.97 & 25 Hz (RP2H/SMPTE 274M),
- 1080p @ 30, 29.97, 25, 24, 23.98 Hz (RP2H/SMPTE 274M).

#### SDTV

- NTSC – 525i @ 60 & 59.94 Hz – 15.735 kHz - ITU / RS170-A
- PAL – 625i @ 50 Hz – 15.625 kHz – CCIR

**Broad Scan HD** outputs different signals at the same time in one selected output format:

- In **HDTV**: Two HD-SDI and one HD-YUV 3 level sync signals are available simultaneously.
- In **SDTV NTSC/PAL**: Two SDI, one YUV or RGB, one S.Video and one Composite Video signals are available simultaneously.

**Broad Scan HD** also outputs a Luma Key signal in both Digital and Analog format. Luma key is at the same format as the output and is perfectly synchronized. In addition, a Frame Lock output allows synchronizing external device frame rate such as some graphic cards.

**Broad Scan HD** features real time conversion with high performance Image Processing. User adjustments offer an Anti-Flicker filter to significantly reduce flickering of the interlaced HD/SD-TV outputs, as well as 2D Sharpness, RGB level and Black level. It converts single wire computer type signal into black and white video image just by setting a menu. The state of the art high speed hardware FPGA allows aspect ratio control and a wide range linear or non linear zoom up to 1000%. In addition, a new "zoom finder" is provided to preview the actual part of the picture to be zoomed (H,V and H&V simultaneously). Broad Scan HD also offers a Frame Memory to store a full screen image that can be displayed at any time, as well as 1 animated or 4 still logos.

**Broad Scan HD** allows embedding analog audio Stereo signal into the HD/SD-SDI signal (fs=48 KHz@20/24 bits), with matched A/V delay.

**Broad Scan HD** is designed to be User Friendly thanks to many direct access functions such as Freeze, Frame, Under/Over scan, Aspect Ratio, Zoom position and size. It also provides easy to use and efficient menus on a clear bright blue LCD screen. LCD continuously displays Input and Output status during operations.

**Broad Scan HD** includes Computer input format memory: Up to 16 user presets are stored in the machine corresponding to 16 different input formats. The exact adjustments of the frequently used formats are instantly recalled, which makes the **Broad Scan HD** ideal and very useful for multi-computer applications or rental.

## References

- > **BHD930-DG**: Broad Scan HD with Digital Genlock
- > **BHD930-AG**: Broad Scan HD with Analog Genlock

## Option

- **OPT-LAN**: IP / Ethernet Control

## Cables for Broad Scan HD

- > BNC Cables from 2m/6ft to 20m/66ft
- > S.Video Cables from 2m/6ft to 20m/66ft
- > Remote Cables from 0.3m/1ft to 30m/100ft
- > SDI-HD SDI Cables from 3m/10ft to 30m/100ft M/M
- > VGA Cables from 0.3m/1ft to 2m/6ft
- > DVI Cables from 2m/6ft to **70m/230ft**

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