# Optimizer HD<sup>™</sup>

Universal Up/Down Scaler with Enhanced Scaling Technology Based on Bandlet Transform (Technology developed by Let It Wave)



• Computer<sup>(\*1)</sup>: RGB, DVI

 Embedded Audio on SDI with level and delay adjustment



## Universal output

- SDI / HD-SDI 10 bits
- DVI-D: TV, HDTV and Computer<sup>(\*1)</sup> DVI-D

www.analogway.com

# **Technical Specifications**

# A/V Input VIDEO

- HD-RGB, HD-YCrCb 0.7Vp/p + Sync. 3 level +/- 0.3V -75 Ohms or YCrCb: RGsB, RGBS: 0.7Vp/p + Svnc, 0.3V - 75 Ohms
- S.Video: YC 0.7Vp/p + Sync. 0.3V 75 Ohms • NTSC/PAL: Composite Video - 0.7Vp/p + Svnc. 0.3V - 75 Ohms
- HD-SDI 4:2:2 10 bits 1.5 Gbs 75 Ohms
- SD-SDI 4:2:2 10 bits 270 Mbs 75 Ohms
- DVI-D: TV/HDTV TMDS 100 Ohms
- COMPUTER(\*1)
- Analog: RGBHV, RGBS and RGsB (PC, Mac, Wkst) (130kHz max) · Digital: DVI-D - TMDS 100 Ohms
- AUDIO
- balanced or unbalanced stereo, 44kOhms/+18dBu max. adjustable trim level

#### Output VIDEO

- HD-SDI 4:2:2 10 bits 1.5 Gbs 75 Ohms or SD-SDI 4:2:2 -10 bits - 270 Mbs - 75 Ohms
- DVI-D: TV/HDTV TMDS 100 Ohms
- COMPUTER(\*1)
- Digital: DVI-D TMDS 100 Ohms AUDIO
- Embedded Stereo Audio on SDI (fs=48kHz@20/24 bits)

#### Genlock/Framelock<sup>(\*2)</sup>

- Black Burst Pal or NTSC: 1 Vp/p 75 Ohms
- HD Black 3 Level sync.
- · Phase adjustments · Active loop through output

#### **User Controls and Connectors**

- FRONT PANEL • Direct access to image adjustments (color, contrast, ...)
- · Intuitive menu for easy set up
- · Fluorescent VFD display for enhanced viewability

#### REAR PANEL

- Input Connectors - 1 x HD15F for PC(\*1)/TV/TVHD
- 4 x BNC for TV/HDTV
- 1 x BNC for SD/HD-SDI
- 1 x DVI-I for Digital Computer<sup>(\*1)</sup>/TV/HDTV only
- 2 x XLR-3 for stereo audio
- 1 x BNC for Genlock<sup>(\*2)</sup>
- Output Connectors: - 2 x BNC for SD/HD-SDI
- 1 x DVI-I for Digital Computer<sup>(\*1)</sup>/TV/HDTV only
- 1 x BNC for SDI input
- 1 x BNC for Genlock<sup>(\*2)</sup> output with active loopthrough
- · Other:
- 1 x DB9 for RS232 control and upgrade - RJ45 for TCP/IP: Optional
- 1 x Power Connector with On/Off switch

#### Power Supply

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

#### Supplied with

- · Brackets for rack mounting
- 1 x Power cable
- 1 x Remote control software • 1 x User manual

#### Dimensions: 19", 2U

- D 11.8" x W 18" x H 3.48"
- D 300 mm x W 450 mm x H 88 mm

#### Weight: 3,8 kg (8.4 lbs)

#### Warranty

3 year warranty on parts and labor back to factory

Specifications subject to change without prior notice

# Optimizer HD<sup>TM</sup> by Analog Way is

an Innovative High Grade Universal Up/Down Scaler with the latest Let It Wave technology. Fitted with universal Analog or Digital Input. Optimizer HD converts any TV. HDTV or PC<sup>(\*1)</sup> signal into a Digital TV, HDTV or Hi-Res PC<sup>(\*1)</sup> format.

Optimizer HD input signal can be Analog NTSC/PAL/SECAM, S.Video, RGB/YUV, HD-YUV, RGB, RGBHV(\*1), RGBS, RGsB or Digital DVI and SD/HD-SDI. Optimizer HD supports TV and HDTV formats including 1080p and 1080sF@24/25Hz and Computer<sup>(\*1)</sup> formats.

Optimizer HD outputs Digital signal with the following formats:

- HDTV 720p @ 60, 59.94 & 50 Hz
  - 1080i @ 60, 59,94 & 50 Hz
    - 1035i @ 60 Hz & 59.94 Hz,
  - 1080sF @ 24, 23.98 Hz & 25, 30 & 29.97 Hz
  - 1080p @ 24, 23.98, 25, 30 & 29.97 Hz
- 525i @ 60 & 59.94 Hz 15.735 kHz TV
  - 625i @ 50 Hz 15.625 kHz

    - 480p @ 60/59.94 Hz 31.471 kHz (Progressive NTSC)
    - 576p @ 50 Hz 31.250 kHz (Progressive PAL)

COMPUTER<sup>(\*1)</sup> Up to 2048x1080 Reduced Blanking & 1600x1200@60Hz.

Output is available in DVI-D and SDI at the same time when the selected format is compatible.

Optimizer HD provides an amazing image quality thanks to its new powerful geometric bandlet based computing technology by Let It Wave. The true 10 bits TV/HDTV processing path is preserved by state of the art over sampling 12 bits A/D converters.

It features real time Motion Adaptive de-interlacing, correction of compression artefact, noise removal, 3:2 and 2:2 Pull Down correction, scaling with special edge diagonal compensation, are taken to a an incomparable level of quality providing the best picture quality ever seen.

Optimizer HD also operates as a time base corrector and frame rate converter.

Optimizer HD upgrades TV image guality to almost true HDTV shot picture. In Computer<sup>(\*1)</sup>

- (\*1): Subject to availability for the optionnal Input/Output Computer image processing (OPT-OHD-DATA)
- (\*2): Genlock available on OHD88-AG model only

Auto clock and phase adjustments, assure a true picture up or down scaling with every original pixels of the image. The image adjustments and device setup are recorded in a non-volatile memory.

Optimizer HD is equipped with an Analog Genlock<sup>(\*2)</sup> input with an active loop through. Genlock signal can be either TV Black Burst or Black HD. It allows framelocking of HDTV output signal on an TV Black Burst. User phase adjustments are available for a perfect result.

Optimizer HD features analog balanced or unbalanced Audio Stereo input for embedding Audio into the SD/HD-SDI signal with A/V delay compensation. (Fs: 48 kHz - 20/24 bits).

**Optimizer HD** is a device that provides a Scan Converter, a Scaler, a Standard converter with TBC functions in one box. Its high flexibility combined with its processing quality makes it essential in professional Broadcast, D.Cinema and High End Pro AV environments.

Optimizer HD large front panel shows many direct access image adjustments with a bright easy to read fluorescent display and a convenient control knob. It offers many useful features such as an adjustable zoom from 25 to 400%.

The standard RS232 connection and provided software allow a full remote control of the device and also upgrade capability to maintain the high value of your equipment. Optional RJ45 is available for IP control.

Optimizer HD provides real time TV to HDTV stunning conversion.

### References

- > OHD888: Optimizer HD™
- > OHD888-AG: Optimizer HD<sup>™</sup> with Analog Genlock

## **Options**

- OPT-LAN: IP/Ethernet Control
- OPT-OHD-DATA: Computer format(\*1)

## Cables for Optimizer HD

- > BNC Cables from 1.8m/6ft to 20m/66ft
- > S.Video Cables from 1.8m/6ft to 20m/66ft
- > VGA Cables from 0.4m/1.3ft to 30m/100ft
- > Control Cables from 0.5m/1.6ft to 30m/100ft
- > BNC SDI-HD M/M Cables from 3m/10ft to 30m/100ft M/M
- > DVI Cables from 1.8m/6ft to 70m/230ft

**ANALOG WAY** Europe, Africa and Middle-East ANALOG WAY FRANCE

Tel. 331 64 47 16 03 Fax. 331 64 47 14 73 Email: saleseuro@analogway.com