PIXEL MAGIC

crystalio® II

HDSDI 1
1080i Video
16:9 Screen
1080p @ 60HZ
16/9 Image
Zoom to 1080 Lines
HDMI Output
VXP Deinterlace

crystalio® II

input   output

power

Film   2-2   passthru

VXP

PIXEL MAGIC

Video 4   S-Video 2

Pr (R)   Pb (B)   Y (G)   C-Sync
Component 4 (SDTV only)

Y (G)   Pb (B)   (C/H-Sync)   (V-Sync)
Component 2 (SD/ED/HDTV)

PIXEL MAGIC™

Introducing the World's most advanced video processor

Uncompromised video de-interlacing

Content adaptive, per-pixel processing of all HDTV and SDTV video signals

Multi-directional edge adaptive processing

Robust inverse 3:2 and 2:2 processing of film-based inputs (inverse telecine)

Bad edit correction

Dual de-interlacer architecture for SDTV material allows choice of VXP by Gennum and Crystalio VPS2300's de-interlacer.

Worldbeating image processing & scaling

True 10bit 4:4:4 broadcast-grade processing delivering the World's most advanced and flexible image processor

Content adaptive 3D noise reduction and detail enhancement

10-bit gamma correction with user-customizable gamma curve

Sub-pixel Y/C delay calibration

Chroma Upsampling Error (CUE) compensation

Tearless frame rate conversion including cadence lock to 48Hz and 72Hz for film source providing ultra-smooth playback

3D/2D 5-line (5H) adaptive comb and chroma trap filter for both PAL and NTSC signals

Video and audio circuits clocked by 1ppm low jitter TCXO*

UltraAR™ supports virtually any image aspect ratio and display aspect ratio

Non-linear stretching to display 4:3 image on 16:9 display

Support for all resolutions up to 1920x1200

Innovative integration

Internal HD media player supporting playback from external USB disks and an included 200GB internal hard disk. MPEG 1/2/4 decoding to provide unsurpassed media playback*

Ultra-Fine Audio Delay™ with 4 HDMI embedded audio, 4 digital and 3 analog inputs

Industry-leading quality & flexibility

Broadcast-grade BNC connectors used for all analog and SDI video inputs/outputs

Four HDMI inputs and two HDMI outputs support HDCP and embedded audio

Two SDI inputs with HDTV support* allowing the highest quality HD signal transport

Absolute control

Alpha-blended OSD (on screen display) offers intuitive and friendly setup and control

DynamicVP™ dynamically changes image processing settings and output format/timing/configuration to match the input format

Pixel Magic System™ now features internally generated test patterns to ensure 1:1 pixel mapping

10 user-customizable independent picture control profiles for each input

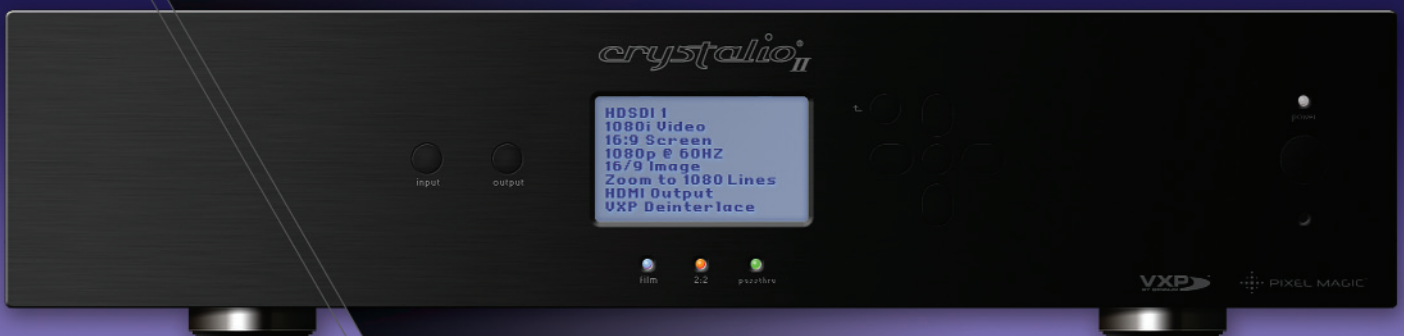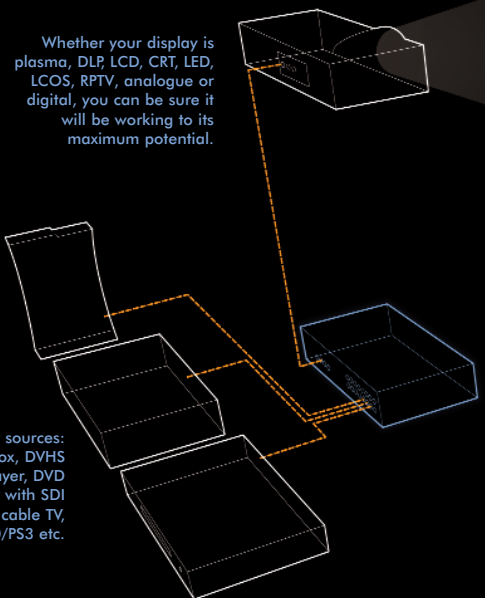24 user-customizable macros for quick access to the most frequently used features

Backlit remote, powerful OSD and front panel operation make control easy in any environment

RS232 for connecting 3rd party control systems

Infrared In/Out for multiroom remote control

CCF file of discrete IR codes is available for easy integration of 3rd party programmable remotes

* Available on VPS3800 ('Pro') model only

Whether your display is plasma, DLP, LCD, CRT, LED, LCOS, RPTV, analogue or digital, you can be sure it will be working to its maximum potential.

Connect all your sources: HDTV setup box, DVHS deck, HD DVD player, DVD player, DVD player with SDI output, LD player, cable TV, VCR, Xbox 360/PS3 etc.

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VXP   PIXEL MAGIC
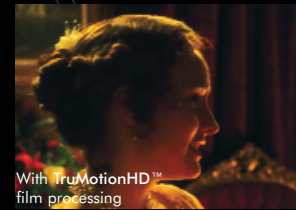
VXP™
BY GENNUM

Broadcast quality processing

Gennum's new Visual Excellence Processing™ (VXP) image processors offer revolutionary improvements over today's existing solutions by integrating fourth generation broadcast quality algorithms.

TruMotionHD™ adaptive de-interlacing for optimal image sharpness for all formats up to 1080p60.

FineEdge™ dynamic directional interpolation for eliminating jaggy artifacts found in traditional de-interlacing algorithms.

FidelityEngine™ image enhancements for removing unwanted noise and improving detail for uncompromised image quality.

RealityExpansion™ 10-bit processing for eye-catching natural imagery.

The image produced will be the most natural and artifact-free you've ever experienced - with smooth motion, true colors and stunning detail.
All controlled from the comfort of your chair.

Use Crystalio II to match your sources perfectly to your display, sync the audio, enhance the image and more!

With **TruMotionHD**™
film processing

With **FidelityEngine**™
HD directional interpolation

FineEdge™
detail enhancement set to high

With **FidelityEngine**™
noise reduction set to high
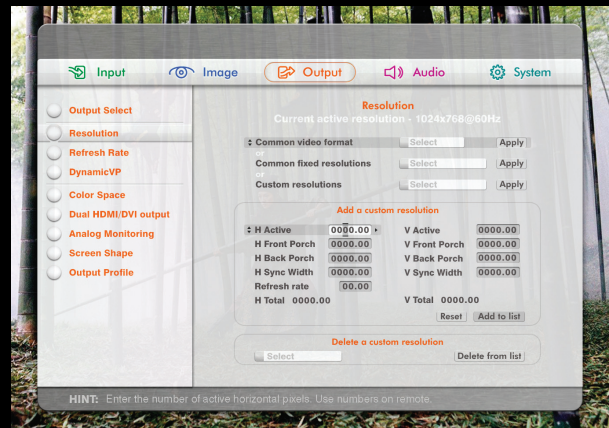
VPS3300

Specification

Features

Feature	Description	VPS3300	VPS3800 ('Pro')
Rich inputs/outputs	Extremely flexible and high quality inputs/outputs. High quality BNC connectors are used for all analog/SDI video I/O.	✓	✓
VXP™ by Gennum	Uncompromised HD motion adaptive de-interlacing with 3:2 and 2:2 inverse telecine, bad edit correction and advanced dynamic directional interpolation for eliminating jaggy artifacts; image enhancements for improving details and true 10-bit broadcast-grade processing to deliver the world's most advanced and flexible image processor.	✓	✓
2:2 and 3:3 processing	Cadence lock to 48Hz and 72Hz for film source to provide ultra-smooth playback.	✓	✓
Adaptive 3D noise reduction	Reduce unwanted video noise and produce more enjoyable motion pictures.	✓	✓
Ultra-Fine Audio Delay™	Audio can be delayed to match the onscreen actions perfectly.	✓	✓
Precise picture control	Besides the conventional brightness, contrast, hue, saturation & picture controls, Crystalio II offers advanced controls such as sub-pixel Y/C delay calibration, user-customizable gamma curve through the user-friendly graphical interface and more.	✓	✓
Friendly user interface	Crystalio II is designed as a user-friendly plug-and-play appliance. Alpha-blended OSD (on screen display) offers an intuitive graphical user interface. 10 user-customizable independent picture control profiles for each input. Input and Output configuration profiles. Access to 24 user-customizable macros from the backlit remote for quick access to the most frequently used features.	✓	✓
DynamicVP™	When enabled, the image processing settings and output format/timing/config-uration will change dynamically depending on the input formats. This is an extremely flexible feature for advanced users to apply various image processing options to a single video source with different formats, and CRT users to exploit the sweetspots of their display dynamically.	✓	✓
UltraAR™	Crystalio II supports virtually any video image aspect ratio and display devices aspect ratio including, but not limited to; video images ranging from 4:3, 16:9, 4:3 letterbox, 16:9 letterbox, to 2.35:1 anamorphic; and display device aspect ratio from 4:3, 16:10, 16:9, to 2.35:1. Non-linear stretching to display 4:3 image on 16:9 displays is also supported.	✓	✓
Pixel Magic System™	Pixel Magic System™ is a set of tools including internal test pattern generator for the user to configure the video output of Crystalio II, ensuring that it is mapped in Pixel Perfect mode to your digital display.	✓	✓
Chroma filter	Chroma filter to mask the chroma bug of MPEG decoders.	✓	✓
3D/2D 5-line comb filter	3D/2D 5-line (5H) adaptive comb and chroma trap filter for both PAL and NTSC signals delivers excellent analog to digital video conversion, especially valuable for the VCR/LD users.	✓	✓
LCD display and push buttons on front panel	Real-time status information display on LCD panel including source, video format, output resolution, deinterlacing, aspect ratio, overscan and more. Push buttons/LCD display for system configuration and control is available in the situations where the user cannot view the display devices directly.	✓	✓
Dual deinterlacer architecture	Dual de-interlacer architecture for SDTV material allows choice of VXP by Gennum and Crystalio VPS2300's deinterlacer.	✓	✓
HD-SDI	The 2 SDI inputs are HD capable. HD-SDI is the most mature and highest quality technology for HD transport.		✓
Precision clock	Video circuits and audio delay circuits are clocked by 1ppm high precision low jitter TCXOs (temperature compensated crystal oscillators) and produce the highest quality standard of video and audio output.		✓
HD media player included	MPEG1/2/4 decoding capability to provide high quality media playback. External USB disks and/or the included 200GB internal hard disk can be used to store various video clips including the MPEG2 TS video taken by the new HDV cameras.		✓

Inputs

	VPS3300	VPS3800 ('Pro')
SDI (support SDTV only) x 2	✓	
HD-SDI (support SDTV/EDTV/HDTV) x 2		✓
HDMI with HDCP and embedded digital audio x 4, support SDTV/EDTV/HDTV and PC resolutions	✓	✓
SDTV YPbPr component video inputs x 2, each can be configured as RGBS or 2 composite + 1 S-video	✓	✓
SD/ED/HDTV YPbPr component video inputs x 2, one of them can also be configured as RGBHV or RGBS	✓	✓
Analog stereo audio inputs x 3	✓	✓
Digital audio inputs x 4, 1 optical + 3 electrical	✓	✓
Firewire IEEE1394 inputs (reserved for future use) x 2		✓

Outputs

	VPS3300	VPS3800 ('Pro')
HDMI with HDCP and embedded digital audio x 2	✓	✓
BNC x 5, configured as RGBHV/RGBS or YPbPr	✓	✓
Analog stereo audio output x 1	✓	✓
Digital audio outputs x 2, 1 optical + 1 electrical	✓	✓
Output resolutions: 480p, 540p, 576p, 720p, 1080i, 640x480, 800x600, 852x480, 1024x576, 1024x768, 1024x1024 ALiS, 1280x720, 1280x768, 1280x1024, 1360x768, 1360x1024, 1366x768, 1368x768, 1400x788, 1400x1050, 1920x1080, 1920x1200, 1080p24sf	✓	✓
Customized output resolutions	✓	✓

Others

	VPS3300	VPS3800 ('Pro')
Backlit remote	✓	✓
RS232 for connecting 3rd party control systems	✓	✓
Infrared In/Out for room-to-room remote control	✓	✓
USB 2.0 for convenient firmware upgrade	✓	✓
CCF file of discrete IR codes is available for easy integration of 3rd party programmable remotes	✓	✓
MPEG1/2/4 decoding		✓
Internal 200GB 7200RPM hard disk		✓
Media player remote is included		✓
100Base-T LAN for media upload/download		✓
Two USB 2.0 ports to attach external hard drives for media storage expansion		✓

Physical

	VPS3300	VPS3800 ('Pro')
Dimensions: Without feet: 438mm W x 348mm D x 88mm H (17.2" W x 13.7" D x 3.5" H) With feet: 438mm W x 348mm D x 98mm H (17.2" W x 13.7" D x 3.9" H) Standard 19" rackmount ears included	✓	✓
Weight:	8Kg 17.6lbs	9Kg 19.8lbs
Power consumption:	<30W	<40W
Power supply: 100-240VAC 50/60Hz auto-ranging	✓	✓
Safety Approvals: CE, FCC, UL	✓	✓

VPS3800 ('Pro')

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PIXEL MAGIC™