HDMI Scaler and Videoprocessor - PULSAR VSP 1250 R

The R-series from T+A is the most complete line of High-End electronic equipment available anywhere in the world. Extending from the audiophile two-channel P 1230 R pre-amplifier to the High-End SR 1535 R surround receiver, the range offers everything the heart could desire, whether you are a demanding music lover or a home cinema fan. The unique advantage of this series of equipment is the total ability to combine the two ranges - audio and video - without any form of compromise. No other manufacturer gives you the means to convert a thoroughbred two-channel system into a 7.1 surround system without the least adverse effect. Our basic concept of no-compromise audiophile sound quality is continued in the video components of the R-series. Hardly surprising, since the very best picture quality demands exactly the same no-compromise approach as the very best audio quality.

The **VSP 1250 R** reflects our company philosophy to the full. It is the perfect device to complement any surround receiver and decoder, and creates the optimum connection route to the monitor, whether that is a classic television set or a high-resolution flat-screen panel or projector. Nobody in the High-End world disputes that it is better to separate the video signal processing circuitry from the audio signal processing section. The reasoning behind separating the pre-amplifier from the power amplifiers in audio equipment is exactly the same. And that is why the VSP 1250 R is a separate, independent machine, since we deliberately chose not to incorporate its functions into a surround receiver. As a result, any user can decide whether or not he needs sophisticated video processing in his surround system. The same principle ensures that existing systems can also be upgraded to HD video without any problem. Of course, the **VSP 1250 R** has been developed primarily for use in conjunction with T+A systems, but its design renders it suitable for use as a stand-alone device, or with systems of other makes (if you really must) - without any problems. It can even be operated without a remote control handset.

A unique feature of the R-system is its operating convenience. A complex AV system may well include a very wide range of different devices, such as a tuner, SACD / DVD / CD player, 7.1 surround processors, mono power amplifiers, loudspeakers and a sub-woofer, and all of these have to be adjusted and controlled correctly to suit the mode of operation you have selected. Even so, a single system remote control with only 33 buttons is quite sufficient for the R-system. Operating the equipment is simple and logical, because you only need to set up and store each function process once, and thereafter a single button-press on the desired function is all that's required: the system then sets itself up automatically - whether you want High-End two-channel stereo or genuine 7.1 home cinema. It all works just as you want it to!

Performance characteristics of the VSP 1250 R

Significant improvement in picture quality from all monitors and projectors

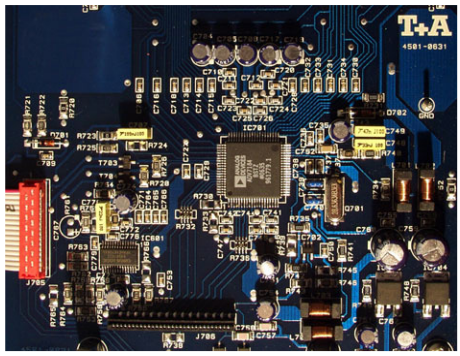
- **Analogue video sources are digitised to studio quality standards.**
  Professional ANALOG DEVICES converter with quadruple 54 MHz conversion rate, special filters and processing stages for YUV, RGB, S- Video and Composite, generating ultra-high picture quality even from analogue picture sources.
- **Active switching of the four HDMI inputs.**
  The active concept is the key to ensuring unhindered data flow at the inputs for further signal processing such as upscaling, de-interlacing, scaling or sound de-coupling. Avoids losses and improves signal transfer quality
- **Professional video processing (Processing).**
  The state-of-the-art update-capable video processor uses the latest processes and algorithms to increase picture resolution up to 1080p, whilst matching the format exactly to any monitor. Fine adjustment of picture parameters and de-interlacing (full frame generation) for digital and analogue sources alike.
- **Active HDMI + DVI outputs.**
  Once the digital data has passed through the signal processing section of the VSP 1250 R, high-performance transmitters transfer the data to the monitor via the HDMI or DVI output; this system even copes with long cable lengths without adverse effects.

Enormous improvement in convenience for complex home cinema systems!

- The entire T+A system is controlled by a single, clearly laid-out remote control handset which can manage up to ten analogue and four HDMI sources.
- All operating parameters are stored for each individual source.
- The system can also control particular video monitors.
- Only a small number of buttons required for complete control of the entire system.
- Can be integrated into Home Automation systems via the RS 232 control interface.
- An excellent method of upgrading other makes of AV receiver.
- Can be controlled completely from the front panel

Analogue to digital video conversion to studio-quality standards

The machine is capable of converting the signals from analogue video sources - such as DVD players without an HDMI output, video recorders or satellite receivers - into digital signals, and at absolutely top quality. To achieve this feat our engineers have developed a special video board which is based around superb professional video converters.

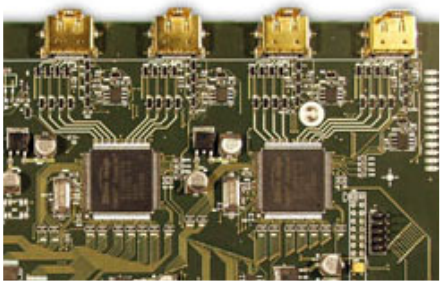


This board features four inputs for Scart, YUV, S-Video and Video, and once the conversion process is complete, the original analogue picture data is present in digital form at the very highest quality, ready for further processing. The data can now be passed to the video processing section in exactly the same way as the signal coming from the HDMI

inputs, with the picture resolution enhanced to 1080p. If the system includes an SR 1535 R surround receiver or DD 1535 R surround processor, all the analogue video sources are connected to the receiver, and the latter then assumes the role of switching and managing the various sources; it is connected to the VSP via its video inputs and SP/DIF audio output.

HDMI-Switching

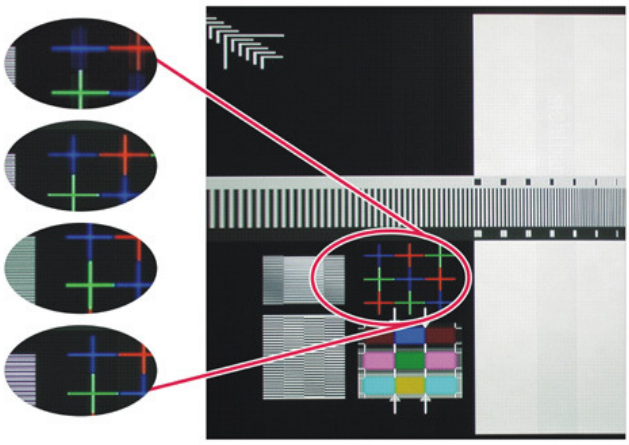
Modern picture sources also feature what are known as HDMI (High Definition Multimedia Interface) outputs, which deliver the video signal in digital form. For example, these include DVD players such as the SADV 1245 / 1250 HD, DVD 1235 / 1240 HD, and various games consoles and set-top boxes.



To cope with these source devices, the **VSP 1250 R** is fitted with four high-quality HDMI inputs. The HDMI signal is extremely complex: it contains not only HDCP copy protected video data but also digital audio signals (High-bandwidth Digital Content Protection), and these innovations hardly make the whole system simpler. The VSP 1250 R uses additional processors to decode the digital data (a simple change-over switch is incapable of this), then extracts the audio data and passes it on to the surround receiver or decoder. The video signals are then re-encoded and conditioned by an active circuit before being passed to the monitor or projector via an HDMI and DVI output (Digital Video Interface). Very few processors are capable of such sophisticated processing, and these units are very much more expensive than the **VSP 1250 R**. One result of this design is the unit's ability to drive very long connecting leads (10 - 15 m) without problem, provided that the cables themselves are capable of carrying the high frequency signals without losses.

Videoprocessing and Scaling

Today's common picture sources - DVD and TV - have a resolution of 480 / 576 lines and 720 columns. Higher-resolution formats such as Blu-Ray and HD-DVD are currently becoming available, but they will only become major players in the next few years, and nobody yet knows which system will eventually prevail.



For this reason, bearing in mind the gigantic number of DVDs now in existence, it makes obvious good sense to make every effort to improve the reproduction quality of these DVDs, and to boost them so that they approach the quality of modern HD panels. Most of the flat-screen TVs and projectors sold in the last few years have a resolution of 720p,

although the latest machines have a maximum resolution of 1080p. However, most of these display units are only fitted with standard converters and scalers. The VSP 1250 R can do much more! We use the very latest video processors used for professional studio applications; they are extremely fast, and are able to apply interpolation to the video signal and generate a higher-resolution de-interlaced signal of up to 1080p from it. Which format and resolution delivers the best results depends on the specific monitor used and has to be decided individually for each monitor model. However, in every case the VSP 1250 R can be relied upon to deliver sharp, finely-resolved pictures with perfectly smooth movement sequences.

Connection elements

Analogue video inputs	YUV, RGB (Scart), S-Video, Video
Digital video inputs	Four high quality HDMI inputs
Digital video outputs	HDMI- and DVI-monitor outputs
Audio outputs	Coax and optical
RS 232	for software-update and for EIB-Bus, AMX, Crestron, ...
	RS 232 control output for monitors. Cinemateq, Metz, ...
	R-Link and remote control in

Internal view

- High-performance HDMI + DVI output transmitter
- HDMI receiver modules for four HDMI inputs
- Update-capable control processor
- High-performance video DSP, update-capable, freely programmable
- Professional video 54 MHz A/D converter
- Update-capable control processor

Specifications

Video inputs	4 x HDMI with HDCP up to 1080p

	1 x YUV
	1 x RGB (Scart)
	1 x S-Video
	1 x Composite
Audio inputs	4 x HDMI (routed to SP/DIF Audo Out and HDMI)
	1 x SP/DIF digital audio
Video outputs	1 x HDMI incl. Audio
	1 x DVI with HDCP support
Audio outputs	5 x SP/DIF digital audio (coax)
	1 x SP/DIF digital audio (optical)
	1 x HDMI
Reselution	XGA
	WXGA
	4 x SMPTE
	maximum HDTV 1920x1080p with 50 / 60 Hz
Picture optimiser	flexible line multiplier
	adaptive motion control
	sharpness control
	TV - mode
Adjustable picture parameters / source	brightness, contrast
	color saturation
	hue
Control	T+A RLink
	Remote control F6 and FB-VSP
	RS 232 input
	RS 232 monitor-control
Dimensions	7,5 x 44 x 39 cm (H x W x D)
Weight	8 kg
Finishes	silver, black

we reserve the rights to alter technical specifications