Spec sheet
Atomix family of video boards
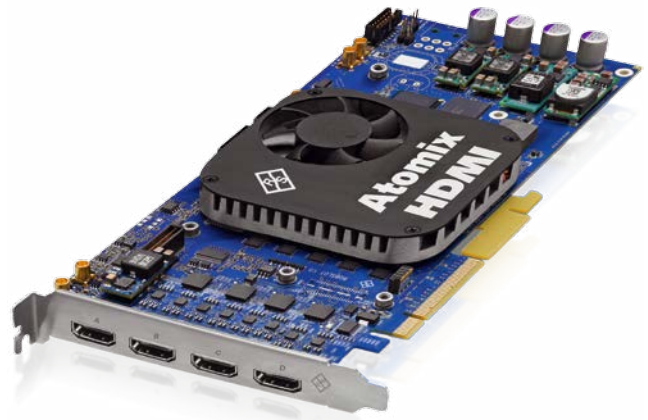
R&S®Atomix HDMI

With its Atomix family of video boards, Rohde & Schwarz DVS has significantly extended the range of possible applications. Both high-end post production of digital film and demanding presentations benefit from the unique quality of uncompressed 4K up to 60 fps and 3D/stereo processing in 2K.

Our boards offer two multi-rate SDI ports that support SD, HD and 3.0 Gbit/s modes and can be configured as independent channels or as dual-link. Up to two independent channels are available with 2K RGB 4:4:4 in 3.0 Gbit/s mode.

The integrated up-/downscaler allows you to view 4K material on a 2K display or to edit sequences with different formats in the same timeline without pre-rendering. All formats can be changed in real time during the playout. The 3D and 1D LUTs enable efficient color management and color grading without adding workload to your CPU.

The Atomix HDMI features four HDMI ports, one of which supports the HDMI standard up to 340 MHz. 4K material can be displayed via one, two or four HDMI ports (DVI ports with adapters) – this provides a cost-efficient interface to most high-resolution projectors and displays. Atomix HDMI also supports Full HD 3D and 4K via one HDMI port.

While multi-interface video boards usually need plenty of room for the connectors, Rohde & Schwarz DVS has developed a breakout box system that adds four 3.0 Gbit/s SDI I/O ports for uncompressed 4K. Atomix has its own AES/EBU audio and RS-422 connectors and the breakout box includes up to 16 channels of AES/EBU audio and four RS-422 ports.

Key features

- Video boards for high-end film, HDTV post production and high-end presentation

- Realtime playout in uncompressed 4K via quad-link SDI with breakout box, single-link HDMI 1.4a or quad-link HDMI (DVI with adapters) – last option even in 60 fps

- Realtime Full HD 3D/stereo playout via DVI, HDMI or SDI, no breakout box required

- Playout of YUV 4:2:0 data in 4K 60 fps according to HDMI 2.0

- Capture and playout via two 3.0 Gbit/s SDI ports

- Two independent video channels with independent input and output

- Programmable up-/downscaler for format adjustments

- 3D LUT for color management

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▍ 1D LUT for range and gamma changes

▍ Low latency between input and output

▍ Mixer/keyer in the processing pipeline

▍ 16 embedded audio channels and
16 AES/EBU channels

▍ 2 x RS-422 for remote control

▍ Drivers and SDK for Windows®, Linux®,
Mac OS® X and integration with Final Cut Pro®

▍ Sophisticated SDK, compatible among
R&S DVS video boards

▍ Highly skilled and qualified support, from
developers for developers

▍ Optional breakout box with

· 4 x SDI input and 4 x SDI output

· Watchdog to switch SDI input in the breakout box

· 4 x RS-422

· LTC input an output

· No additional slot space required with Atomix

R&S®Atomix LT and Atomix LT 4 BNC

Atomix LT and Atomix LT 4 BNC share most of their features with Atomix HDMI, but are designed for HDTV broadcast and film post production up to 2K. The Rohde & Schwarz DVS boards feature two video channels that can be used independently or in 3D/stereo mode up to 2K.

Moreover, they have an up-/downscaler, a 1D LUT and multi-rate SDI ports with 3 Gbit/s that can be used in various single- and dual-link configurations.

Key features Atomix LT/
Atomix LT 4 BNC

▍ Video boards for broadcast and HDTV post

▍ Two independent multi-rate SDI inputs and outputs
with up to 3.0 Gbit/s

▍ Programmable up-/downscaler for format adjustments

▍ Mixer/keyer in the processing pipeline

▍ 1D LUT for range and gamma changes

▍ Low latency between input and output

▍ 16 channels AES/EBU, 16 channels embedded
LTC input and output

▍ 2 x RS-422 for remote control

▍ Drivers and SDK for Windows®, Linux®
and Mac OS® X

▍ Sophisticated SDK, compatible among our video boards

▍ Highly skilled and qualified support, from
developers for developers

Atomix family of video boards

	Atomix HDMI	Atomix LT	Atomix LT 4 BNC
Video formats			
▮ SD/HD/2K up to 60 fps	•	•	•
▮ 4K up to 60 fps incl. 60p YCrCb 4 :2 :0	•	-	-
Video			
▮ SDI single-link 1.5 Gbit/s (input / output)	2x / 2x	2x / 2x	2x / 2x
▮ SDI dual-link 1.5 Gbit/s (input / output)	1x / 1x	1x / 1x	1x / 1x
▮ SDI single-link 3.0 Gbit/s (input / output)	2x / 2x	2x / 2x	1x 2x / 2x / 1x
▮ SDI 12 bit via dual-link (1.5 Gbit/s / 3.0 Gbit/s)	• / •	• / •	• / •
▮ DVI output	4x via adapter	-	-
▮ HDMI output, version 1.3/1.4a	3x / 1x	-	-
▮ RS-422 on extra slot panel	2x	2x	1x
▮ AES/EBU input/output on extra slot panels)	16x	16x	8x
▮ Reference input, LTC I/O, 1x RS-422, analog stereo out via breakout cable on VGA style connector	-	-	•
Processing			
▮ 3D LUT up to 2K output	•	-	-
▮ 1D LUT up to 2K output	•	•	•
▮ Up/downscaler with filtering up to 2K output	•	•	•
▮ Mixer/keyer in the processing pipeline	•	•	•
Miscellaneous			
▮ 2/3 length PCIe (elect./mech.)	8x / 8x	4x / 8x	4x / 8x
▮ Modular breakout box for easy plugging & handling	•	-	-

About Rohde & Schwarz DVS

For more than 25 years, Rohde & Schwarz DVS GmbH has been very successful in the professional film, video post production and broadcast markets. The specially developed and manufactured hardware and software are applied to the production of popular TV series, Hollywood blockbusters and in Digital Cinema. R&S®CLIPSTER was the first system in the world to make real-time 4K processing possible. The future-proof ingest and production server R&S®VENICE offers a flexible solution for modern, file-based workflows in broadcast environments.

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