

RightXpress

4K Ultra High Definition Video Server with Multi-Stream Windowing Capabilities



The **RightXpress® 4K Ultra High Definition Video Server** is specifically designed for multi-stream high speed video delivery to UHD devices on an aircraft. Server hardware is capable of processing up to 10 simultaneous video streams to a variety of output devices in formats ranging from 720p up to 2160p (4k). Provided API allow for video stream manipulation in multiple source windows to support window movement for stacking or tiling (supporting Picture in Picture), sizing, scaling, panning, and alpha blending adjustments.

Stored video up to 4k resolution or streaming 1080p video sources can be delivered at **full 60 frames per second** over six SDI cables in a variety of configurations. Two 6-G SDI cables can be synchronized to display one 4K image, or four 3G-SDI cables synchronized for one 4K image. SDI cables produce the best quality picture possible for displays running at 60Hz. Using SDI copper as a medium allows the RightXpress server to deliver noise-free quality over a much greater distance – as much as 10x longer than HDMI2. The system can also be configured to support up to 6 displays at 1080p.

RightXpress® 4K Ultra HighDef Video Server with Windowing

Platform

- Xilinx FPGA
- Linux OS and APIs

Video Support

- 2160p (4K 3840x2160), 1080p, 720p
- Video decoding H.264 (H.265 in 2015)
- Color depth: 8-bit YUV
- 60 frames per second

Video/Audio Outputs

- DVI and Display ports
- 6 SDI video ports for configurable output:
 - 4 x 3G-SDI synchronized from one 4k data stream
 - 2 x 6G-SDI synchronized from one 4k data stream
 - Each 3G-SDI supports one 1080p data stream on 6 separate displays

Video/Audio Inputs

- 4 simultaneous SDI video inputs
- Eight USB (four USB 2.0, four USB 3.0)

Other I/O

- Six 10/100/1000 Ethernet Interfaces
- ARINC 429 Input

Mass Storage

- Internal SSD 4 TB
- External USB storage device supported

Power Requirements

- 18 - 32VDC
- AC115 400Hz option available
- 35 Watts typical consumption in operation

Dimensions

ARINC 4.75" wide x 7.5" high x 12.5" deep

Weight (Preliminary)

5 lbs

Temperature (DO 160)

Operating: -15°C to +55°C

Storage: -54°C to +85°C

The **RightXpress® 4K Ultra High Definition Video Server** is designed for DO-160 and DO-178 certification, using extended temperature hardware in a ruggedized package.

Your Innovative Electronics Design and Manufacturing Partner

Why Choose RightHand Technologies as your Video Electronics Provider?

- Access complete solutions, including hardware, software, mechanical engineering and manufacturing.
- Enjoy the flexibility to purchase boards in volume for manufacturing, or in smaller quantities for prototype development.
- Benefit from our engineers' extensive experience in embedded applications and video solutions.
- Extensive experience in DO-160 and DO-178 certified designs.
- Engineering AND Manufacturing both conveniently located in Chicago Illinois.



About RightHand Technologies

RightHand Technologies provides expert engineering design services, specialized manufacturing, and sophisticated full-validation functional testing for FAA certified embedded electronic systems. We have designed inflight entertainment systems (IFE), cabin management systems (CMS) and security systems for leading aviation clients.

Founded in 2002 and headquartered in Chicago IL, RightHand Technologies is focused on aerospace and military electronics, building dozens of products that require ruggedized designs and DO-160/DO-178 certification.

RightHand Technologies proven expertise is taking complex electronic system requirements from concept through design of hardware, mechanical and software, then into qualification and specialized manufacturing in order to create released products that can pass rigorous agency approvals.

For more information, contact:

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*RightHand Technologies
Certified in*

**ISO 9001:2008
and EN/JISQ/AS9100:2009**

