



Televisa Uses Siselectron SR1 Appliance to Optimize Video Compression and Delivery with AMD Embedded Processors

Televisa's new hardware platform from Siselectron achieves substantially lower power consumption and cutting-edge performance with unprecedented density and flexibility.

PARTNER



INDUSTRY

Broadcasting and Video Distribution

CHALLENGES

Video delivery is a power-hungry application. Broadcaster, Televisa, sought to reduce its carbon footprint by reducing power consumption and improving operational efficiency using a new hardware platform for media processing. The new platform would consolidate IRD, Encoder, Mux, Transcoder, Splicing, SRT, Zixi, and more into a single architecture.

SOLUTION

The Siselectron SR1 Appliance, powered by AMD EPYC™ Embedded processors, helped achieve Televisa's efficiency goals. The SR1 solution provides holistic delivery across all digital and linear platforms, including live, time-shifted, on-demand, and OTT.

RESULTS

Televisa leveraged the Siselectron's SR1 Appliance to achieve a substantial reduction in energy consumption costs with no compromises in performance. The SR1 Appliance meets all of Televisa's expectations for a modular technology architecture optimized for various uses.

Satellite distribution has evolved in recent years, and Televisa is at the forefront of this innovation. Televisa has adapted its digital terrestrial television (DTT) distribution to enhance content delivery efficiency and ensure the best possible performance for its video encoding software, in part, by employing fast and cost-optimized hardware platforms.

The Siselectron SR1 appliance, powered by AMD EPYC™ Embedded processors, offers favorable density and power features to enable Televisa's next-generation capabilities in environmentally responsible satellite distribution and broadcast cloud platforms.

CHALLENGE

"We focused on video for broadcast early on," said H. Williams Aguirre B., general manager of satellite operations at Televisa. "We take a low-latency contribution video broadcast from the satellite and deliver it to the DTT stations and re-encode at a lower bitrate for terrestrial distribution to the final user. Every step of the way, we work to ensure that videos are compressed as much as possible to help reduce satellite delivery costs, but in a manner that preserves video quality. To achieve this, we worked with Siselectron Group to implement an end-to-end solution that lower costs and helps reduce our environmental footprint through lower power consumption, and positions Televisa at the forefront in DTT content distribution."

When Televisa planned to migrate its DTT content distribution infrastructure in 2022, it sought a capable, scalable hardware platform to achieve its ambitious efficiency goals. Siselectron Group brought Televisa a system design featuring AMD EPYC™ Embedded processors to help bring performance and power efficiency to the next level.

SOLUTION

To evaluate the new platform, Televisa didn't rely on standard tests. "We benched our specific use case," said H. Williams Aguirre B. "We needed to test our own real-time 24/24 distribution scenarios because they are very specific, and we needed to know exactly how the appliance would behave. We were all impressed by the performance profile of the Siselectron SR1 appliance powered by AMD EPYC™ Embedded processors."

"The density we achieved was something we had never seen before," he continued. "We tested across the board, including HEVC, HD, SD contribution and distribution, as well as transcoding, multiplexing, and splicing (2nd stage) in the same box. The AMD EPYC™ Embedded processors performed capably in these tests, and also shone in the UHD transcoding. We use this in live transmissions using satellite reception and IP, with decoding of more than 4 channels including multi-transport stream from 16 channels of superior video."

Televisa was particularly interested in how the Siselectron SR1 appliance,

powered by AMD EPYC™ Embedded processors, would perform when ingesting SMPTE 2110 digital video streaming over IP. The results were impressive.

RESULT

"The AMD EPYC™ Embedded processors reduced costs while improving performance," said Juan Pablo Alonso, CEO of Siselectron Group. "But the lower power budget was the most significant factor because assistance with lowering the carbon footprint is top of mind for us and our customers like Televisa. There were substantial savings in energy consumption enabled by the AMD EPYC™ Embedded processors for the same performance."

These excellent initial results would later translate into a successful implementation at Televisa. The Siselectron SR1 appliance met all of Televisa's expectations for a modular technology architecture optimized for the different scenarios of distribution (satellite, cloud, streaming).

The majority of Televisa's preconfigured IRD and system compression will be handled by Siselectron SR1 appliances powered by AMD EPYC™ Embedded processors. "We are providing the SR1 for implementation in all Televisa DTT stations," said Alonso. The reduced power consumption enabled by AMD EPYC™ Embedded processors is helping Televisa achieve its environmental goals.

"Video consumption is power hungry," said H. Williams Aguirre B. "Historically it was a toll on the environment. At the same time, people consume more and more video. We are taking this challenge extremely seriously and we're committed to the reduction of our direct carbon emissions by investing in newer, more power-efficient devices. Our software needs to be as efficient as possible, and so does our hardware. For that, AMD, over the last few years, has been a key enabler."

Televisa also found moving its workloads over to Siselectron SR1 appliances to be a smooth process. "The optimization did not represent a huge amount of work compared to moving to a new codec generation," he said.

"Our solution runs immediately with the 16 cores," added Alonso, "and it allowed us to design a modular platform in a 1RU form factor with enough slots to handle different configurations in the compression systems, such as IRD, encoder, multiplexers, and

transcoders in various combinations, achieving a great benefit in the hardware optimization."

AMD EPYC™ Embedded processor-powered Siselectron SR1 appliances are helping Televisa to deliver groundbreaking new features. "We can reach new, more immersive use cases such as IP," said H. Williams Aguirre B. "High dynamic range and next-generation video is also supported. The AMD EPYC embedded processors work better on more powerful appliances. Doing things like dynamic metadata for HDR or HDR10+ requires additional processing, and that's something we can achieve using high-performance Siselectron SR1 appliances powered by AMD EPYC™ Embedded processors."

"With AMD EPYC™ Embedded processors, we can spend more cycles refining the compression, which means lower bit rates and delivery footprints," he said. "We can look for more redundancy and greater encoding to reduce the bit rate to most IP connections. That also means higher quality, more immersive video experiences for the end user, which is important for serving audiences with premium live events."

Alonso added, "Every newcomer on the market is proposing things like UHD and HDR, so traditional customers need to get that in their portfolio as a competitive move to maintain viewership."

"Siselectron SR1 appliances, powered by AMD EPYC™ Embedded processors, take density to a new level," said H. Williams Aguirre B. "They also provide exceptional performance and lower power consumption for greater cost and operational efficiency."

"The AMD EPYC™ Embedded processor is versatile," he added. "You can use it for a dense application and exciting new use cases like UHD. Our DTT stations have higher compression efficiency which lowers the data rate, helping to reduce the delivery cost and power consumption of the satellite network."

WANT TO LEARN MORE?

About [AMD EPYC™ Embedded Processors](#)

About [Televisa](#)

About [Siselectron](#)

About Televisa

Televisa is a leading Spanish-language media company, a cable operator in Mexico and a satellite pay television network. Televisa distributes the content it produces through various broadcast television channels in Mexico and elsewhere through its pay-television channel brands and television channels, cable operators, and additional internet services.

About Siselectron

Siselectron is dedicated to providing products and services for implementing electronic, informatic and telecommunication systems. Siselectron optimizes its financial, human and material resources in order to achieve client satisfaction. The trust generated with clients has allowed Siselectron to establish strong relationships with its partners since the company's inception.

About AMD

For more than 50 years, AMD has driven innovation in high-performance computing, graphics, and visualization technologies. Billions of people, leading Fortune 500 businesses, and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the [AMD \(NASDAQ: AMD\) website, blog, LinkedIn, and Twitter](#) pages.

All performance and cost-savings claims are provided by Siselectron and Televisa and have not been independently verified by AMD. Performance and cost benefits are impacted by a variety of variables. Results herein are specific to Siselectron and Televisa and may not be typical. GD-181.

©2024 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow logo, and combinations thereof are trademarks of Advanced Micro Devices, Inc. Other product names used in this publication are for identification purposes only and may be trademarks of their respective owners. PID #1671659.