



# Shiron Satellite Reduces Product Costs with Wind River

Veteran Satellite Company Standardizes on VxWorks for  
Broadband Solutions

## Shiron Satellite Communications

### Company Profile

- Develops satellite broadband communication solutions and technologies
- Headquarters in Petach Tikva, Israel

### Industry

Broadband satellite

### Solutions

- Wind River Platform for Consumer Devices, VxWorks Edition
- Wind River Workbench

### Benefits

- Reduced product costs by 50%
- Decreased product size by 75%
- Reduced product weight by 90%
- Shortened development life cycle
- Increased productivity, standardization, and stability



Shiron Satellite Communications provides global broadband satellite services with InterSKY, its innovative system based on the Digital Video Broadcasting (DVB) open standard solution and on its patented technologies. InterSKY brings high-quality, low-cost Internet access, interactive multimedia, and a wide range of Internet protocol (IP) broadband applications to even the most remote locations.

Shiron's customers include major satellite operators, telecommunications companies, Internet service providers (ISPs), government agencies, and public and private companies. The company was the first in the market to deploy broadband DVB-S2 hubs globally, with thousands of remote terminals, even to regions with no terrestrial infrastructure. Because the system bypasses communication bottlenecks, it operates at unprecedented speeds.

## The Challenge

### Shiron Turns to Wind River for Real-Time Results

When Shiron began developing the InterSKY system, it relied upon a Windows-based operating system (OS) running on a PC. When the OS failed to provide the necessary results, the company decided to move to a real-time operating system (RTOS)—a change in direction that paved the way to Wind River.

"We investigated several options, including plug-in Silicon Operating System (pSOS), embedded Linux, and VxWorks," says Eyal Elhayany, Vice President for Research and Development (R&D), Shiron Satellite Communications. "We decided on VxWorks seven years ago, since it was—and still is—the best RTOS for the job."

Now all the company's solutions are based on Wind River Platform for Consumer Devices, VxWorks Edition. In addition, Shiron will soon upgrade to the VxWorks 6.x platform. "VxWorks' performance and scalability allows our devices to run faster and more reliably," Elhayany says. "The Wind River platform enables us to achieve real-time performance and to develop smaller, more stable products that are ideally suited to the growing interactive multimedia broadband satellite market."

*"Moving to VxWorks has reduced our product costs by more than 50% and has given us the ability to manufacture smaller products. Wind River has helped us increase our R&D productivity and speed up our development cycle with a flexible, standardized development suite. Everything is much easier when you have the right tools for the job"*

*— Eyal Elhayany, Vice President  
of Research and Development,  
Shiron Satellite Communications Project*

The original InterSKY remote gateway was a 19" 4U rack mount, about the size of a desktop computer, and weighed approximately 22 pounds. Using the Wind River platform, Shiron has been able to shrink its DVB-S2 remote gateway to a 19" 1U platform, followed by a 13" 1U platform, which weighs only 7 ounces.

Elhayany says Wind River Workbench, based on the Eclipse framework, has helped his team standardize on a common toolset and achieve a faster time-to-market. Workbench provided Shiron with an end-to-end, open standards-based collection of tools for all of its device software design, development, debugging, test, and management needs. "The ability to perform remote debugging on systems deployed around the world has been key, since our product line is developed entirely in Israel," he adds.

*"The Wind River team has shown us the difference between just developing products versus creating top-tier, industry-leading solutions."*

*— Eyal Elhayany, Vice President  
of Research and Development,  
Shiron Satellite Communications Project*

## The Result

### The Bottom Line

Elhayany says the decision to use Wind River Platform for Consumer Devices, VxWorks Edition has made a tremendously positive impact on Shiron's bottom line.

"Moving to VxWorks has reduced our product costs by more than 50% and has given us the ability to manufacture smaller products," he explains. "Wind River has helped us increase our R&D productivity and speed up our development cycle with a flexible, standardized development suite. Everything is much easier when you have the right tools for the job."

According to Elhayany, Wind River has played a key role in shaping Shiron's product development strategy and overall success.

"The Wind River team has shown us the difference between just developing products versus creating top-tier, industry-leading solutions," he says.

For additional information about the products mentioned in this case study, visit [www.windriver.com](http://www.windriver.com) and [www.shiron.com](http://www.shiron.com).

